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CICLO XXXI

**THE FIRST MIDDLE ENGLISH TRANSLATIONS OF
GALEN'S *DE METHODO MEDENDI***

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ABSTRACT

This thesis takes into consideration the first vernacular translations of Galen's *De methodo medendi*. The first translation is found in London, British Library, Sloane MS 6, ff. 180^v-203^v: a surgical compendium translated for the most part from Latin, which contains both surgical and philosophical information. The English text of *De methodo medendi* comes from *De ingenio sanitatis*, the twelfth-century translation by Gerard of Cremona of the Arabic version of the treatise published for the first time in volume two of the Venice 1490 edition of Galen. The Greek text, taken from Johnston-Horsley's edition of 2011, has been compared with the Latin text found in a previously unstudied manuscript (London, Wellcome Library MS 287), and with the English text in manuscript Sloane 6. Another Middle English translation of *De methodo medendi* is found in the *Questyonary of Cyrurgyens*, a compilation published in 1533 in Montpellier and then translated in English and printed into English by Robert Copland in 1542. From the analysis of these translations it emerged that, despite the great number of practitioners with no training or qualification, the line that divided the literate and unlearned healers was not so clear as could be imagined or as many scholars stated. Undoubtedly many barbers, surgeons and apothecaries learned their art over a number of years of apprenticeship and without attending university courses, but at least part of surgeons' guild could read English and even some Latin, and sought to get the texts of the ancient medical authorities in order to climb the medical *cursus honorum*. Far from being illiterate, many of them knew some Latin and longed to learn some Greek words: a desire that clearly emerges in reading the translation of Galen's fourth book in the *Questyonary of Cyrurgyens* and especially in analysing the differences from the translation in manuscript Sloane 6. These differences show how English surgeons increasingly wanted to acquire Galen's original medical knowledge and medical vocabulary albeit anglicised, and they preferred this to Latin, which was used as a prerogative by literate physicians. Literate surgeons encouraged the copying of Galenic treatises in a learned vernacular anglicised language, as they wanted to obtain an easier access to them than that given by rare and unaffordable manuscripts. Their aim was to read at least some parts of the ancient medical works, and to improve their medical approach especially through Galen's method of medical practice, which they could find only in *De methodo medendi*.

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Quotations of works other than English are translated.

Translations are mine unless otherwise indicated.

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FOREWORD

During the Middle Ages the first great advances in medicine took place through the mediation of the Arabic translations of ancient medical treatises. In the twelfth century medical practice was led by the clergy, but when the role of the Church in healing declined, because of the rise of the universities and the distancing of the Church from such a profitable profession, clerical physicians left their role of healers, passing it to secular physicians and barbers.

From the second half of the thirteenth century, many epidemics interested Europe, like the plague (a generic term to define both the bubonic plague and other endemic pathologies), tuberculosis and *morbus Gallicus* (congenital syphilis), so that European medical practitioners had to face many new emergencies. It was in this period that the medical profession started developing in England, and a great number of medical treatises was written and published. These works paid specific attention to *practica*, i.e. practical aspects and elements taken from direct experience. Even though Italy was still the centre of medical humanism, “from England there emerged some of the finest vernacular medical works in Europe”¹. The medical practice was shared among a few graduate physicians and many surgeons and apothecaries who were believed to be unlearned and forced to work separately in their own guilds. However, there was probably only one thing that could combine all English medical practitioners: their respect and blind faith in ancient medicine, especially the method of healing developed by Galen (129-216/217? AD), who was one of the most renowned and prolific authors of classical antiquity. Almost everyone agreed with the Galenic point of view that a well-trained healer had to be an intelligent, clever, honest man, devoted to his hard work. He was also expected to have a good knowledge first of all of the Hippocratic writings and then of those by other ancient physicians and to be fond of anatomy, surgery and pharmacology. All these qualities would have granted him the possibility to perform his art in every situation and to face every medical case even if complicated.

¹ Pelling, Margaret - Webster, Charles, “Medical Practitioners”, in *Health, Medicine and Mortality in the Sixteenth Century*, edited by Charles Webster, Cambridge: Cambridge University Press, 1979, p. 165.

To do this, medical practitioners could rely on many Galenic treatises but one of them was particularly important, at least in England: *De methodo medendi*. There, Galen established a method of medical practise based on the medical theory he himself had developed. Although in this rational methodological work many anecdotal observations and digressions can be found, the aim of this treatise is to set up a clear method to help professional doctors to choose the appropriate treatment according to the different types of diseases and patients. Knowing the principles and their method of application, physicians, surgeons and apothecaries of every age would have been able to practice medicine in a rational and successful way.

This is why this thesis takes into consideration the first vernacular translations of Galen's *De methodo medendi*. The first is found in London, British Library, Sloane MS 6, ff. 180^v-203^v: a surgical compendium translated for the most part from Latin, which contains both surgical and philosophical information. The English text of *De methodo medendi* comes from *De ingenio sanitatis*, the twelfth-century translation by Gerard of Cremona of the Arabic version of the treatise published for the first time in volume two of the Venice 1490 edition of Galen. Although manuscript Sloane 6 covers only two books of *De methodo medendi*, the third, and three and a half chapters of the fourth, however the role of the Galenic *De methodo medendi*, which is placed at the end of the manuscript, is very important: it has to supply the theoretical principles for learned surgery and wound treatment. I have compared the Greek text, taken from Johnston-Horsley's edition of 2011², with the Latin text I found in an previously unstudied manuscript (London, Wellcome Library MS 287), and with the English text in manuscript Sloane 6. First of all I have taken into consideration the initial parts of each chapter of books three and four, the only two that are present in manuscript Sloane 6, then I have also provided the first transcription of book four. Although this fourth book enjoyed great fortune in England, it has been neither edited nor compared with the Latin.

Then I concentrate my attention on the second Middle English translation of *De methodo medendi*, which I found in the *Questyonary of Cyrurgyens*. This compilation was published in 1533 in Montpellier and then translated into English by Robert Copland in 1542. It is composed of four different essays on medicine among which there is the translation of the fourth book of the Galenic treatise. Even though physicians were supposed to have studied all ancient medical theories and especially

² Johnston, Ian - Horsley, Greg H. R., eds, *Galen: Method of Medicine Books 1-4*, Cambridge: Harvard University Press, 2011.

those by Galen and to know them perfectly, they were not supposed to put their knowledge into practice: this was the field of barbers, surgeons and apothecaries. Despite the great number of practitioners with no training or qualification, the line that divided learned and unlearned healers was not so clear as could be imagined or as many scholars state. Undoubtedly many barbers, surgeons and apothecaries like Robert Recorde, John Dee and Timothie Bright learned their art over a number of years of apprenticeship and without attending university courses, but they were highly qualified because during their training they could read textbooks and abridged treatises on various subjects³.

In my thesis I tried to stress that there was at least a section of the surgeons' guild who could read both English and Latin and who sought to get the texts of the ancient medical authorities in order to climb the medical *cursus honorum*, inside their guilds or even in the College of Physicians. For these surgeons Galen was always fundamental to long for a recognised position in the medical field, even in the sixteenth century. Far from being illiterate, many of them knew some Latin and wanted to learn some Greek words: a desire that clearly emerges in reading the *Questyonary of Cyrurgyens*, and especially the translation of Galen's fourth book that presents some interesting differences from that in manuscript Sloane 6. These differences made me think that English surgeons increasingly meant to acquire for Galen's own medical vocabulary, and that they preferred Greek medical terms instead of Latin words, which were often employed by literate physicians. Moreover, they encouraged the copy, the translation and printing of the Galenic treatises in a learned vernacular, as they wanted to have an easier access to them than that given by rare and unaffordable manuscripts: their aim was to read at least some parts of these works, and to improve their medical approach especially through Galen's method of healing, which was explained in his *De methodo medendi*. Knowing or even quoting Galen, in fact, had to be the perfect *viaticum* to every medical leading role that these groups of English learned surgeons wanted to achieve.

³ Pelling - Webster, "Medical Practitioners", pp. 182-183.

I

MEDICAL WRITINGS IN CLASSICAL ANTIQUITY

I.1. GREEK AND ROMAN PHYSICIANS AND THEIR WORKS

Primitive men considered those things they could not explain as the work of the gods, but with the fifth century BC the Greeks tried to cast aside these supernatural forces in favour of scientific explanations. Nevertheless, this process was really slow in the art of medicine as it was very difficult not to think of a divine origin of diseases like epidemics, epilepsy or pernicious fevers¹. Both the divine element, and that philosophy that superseded religion in explaining medical phenomena through ὑποθέσεις, impeded the developing of a scientific approach to medicine. According to Celsus², a Greek philosopher of the second century, it was only with the Greek physicians that medicine separated from any other meddling discipline, as could be seen in Hippocrates' best works. The most ancient witness to Greek medicine is found in an iconographic document that represents the *aryballos*, a small perfume jar preserved in the Louvre (Inv. CA 2183)³ and dated to the first half of the fifth century BC.

In the same years this jar was made, one of the most important physicians was born: Hippocrates. With him Greek medical literature began to flourish and in a few centuries a great number of Greek and Latin treatises on medicine and science became available. However, as Vivian Nutton notices, "much of Greek and Roman medicine never made it into writing at all"⁴, and many works or authors are known only through other authors who used, or more often denigrated their predecessors. Among those who are well attested there are Hippocrates of Cos and Galen of Pergamum, probably the two most famous physicians of ancient Greece, who wrote enormous *corpora* that, once established, became the most renowned and used throughout the whole Middle Ages. It

¹ Hippocrates, *Volume I, Ancient Medicine. Airs, Waters, Places. Epidemics 1 and 3. The Oath. Precepts. Nutriment*, translated by W.H.S. Jones, Cambridge: Harvard University Press, 1923, Introduction, pp. IX-LIX.

² Celsus, *De medicina*, translated by Walter G. Spencer, Cambridge: Harvard University Press, 1935, p. 5: "Hippocrates Cous, primus quidem ex omnibus memoria dignis, ab studio sapientiae disciplinam hanc separavit, vir et arte et facundia insignis" (But it was Hippocrates of Cos, a man first and foremost worthy to be remembered, notable both for professional skill and for eloquence, who separated this branch of learning from the study of philosophy).

³ Beazley, John D., *Attic Red-Figured Vases*, Oxford: Clarendon Press, 1968, p. 813.

⁴ Nutton, Vivian, *Ancient Medicine*, London: Routledge, 2013, pp. 1-2.

is from the description given by these two authors that the figure of the physician took shape.

I.1.1. HIPPOCRATES OF COS

Hippocrates of Cos, the Asclepiad, was a Greek physician of the age of Pericles. He was, and still is considered, an outstanding figure in the history of medicine. His name is composed by his home country, Cos, and his family name that comes from the god Asclepius⁵. I list here the most important steps in Hippocrates' life as can be reconstructed from *Presbeutikos* (the ambassadorial oration of Hippocrates' son, Thessalus)⁶:

Table 1⁷

Battle of Salamis, 479 BC

Delian Lique, 478 BC

Pericles, 461/460-429 BC 460 BC, 27 *Agrianos*: Hippocrates is born in Cos; then he left Cos for Thrace. He refuses the invite of Artaxerxes I to become a court physician.

Greek plague, 419-416 BC 420 BC: Hippocrates leaves Cos for Thessaly. Hippocrates is said to have cured the Macedonian King Perdicca II of melancholia⁸.
375/351 BC: Hippocrates dies at Larissa (Thessaly).

The most ancient record about Hippocrates is preserved in *Protagoras*, where Plato makes the young physician talk with the great Socrates about Protagoras, the Sophists

⁵ Gorrini, Maria E., "The Hippocratic Impact on Healing Cults: the Archaeological Evidence in Attica", in *Hippocrates in Context*, edited by Philip J. Van der Eijk, Leiden: Brill, 2005, pp. 135-156.

⁶ Nelson, Eric D., "Hippocrates, Heraclids, and the 'Kings of the Heracleidai': Adaptations of Asclepiad History by the Author of the 'Presbeutikos'", *Phoenix* 61, 2007, pp. 234-246; Pinault, Jody R., *Hippocratic Lives and Legends*, Leiden: Brill, 1992, pp. 61, 123-126.

⁷ Hippocrates, *Volume I*, Introduction, pp. IX-XII; Jouanna, Jacques, *Hippocrates*, Paris: Librairie Arthème Fayard, 1992, pp. 5-26.

⁸ Maisano, Maria Rosaria, "Ippocrate e Perdicca II. Esame storico di un 'topos' medico-letterario", *Annali della Scuola Normale Superiore di Pisa. Classe di Lettere e Filosofia* 22, 1992, pp. 71-83.

and the teachability of virtue:

Μετὰ ταῦτα ἀναστάντες εἰς τὴν αὐλὴν περιῆμεν· καὶ ἐγὼ ἀποπειρώμενος τοῦ Ἱπποκράτους τῆς ῥώμης διεσκόπουν αὐτὸν καὶ ἡρώτων, Εἰπέ μοι, ἔφην ἐγώ, ὃ Ἱππόκρατες, παρὰ Πρωταγόραν νῦν ἐπιχειρεῖς ἰέναι, ἀργύριον τελῶν ἐκείνῳ μισθὸν ὑπὲρ σεαυτοῦ, ὡς παρὰ τίνα ἀφιζόμενος καὶ τίς γενησόμενος; ὥσπερ ἂν εἰ ἐπενόεις παρὰ τὸν σαντοῦ ὁμώνυμον ἐλθὼν Ἱπποκράτη τὸν Κῶον, τὸν τῶν Ἀσκληπιαδῶν, ἀργύριον τελεῖν ὑπὲρ σαντοῦ μισθὸν ἐκείνῳ, εἴ τίς σε ἤρετο· “Εἰπέ μοι, μέλλεις τελεῖν, ὃ Ἱππόκρατες, Ἱπποκράτει μισθὸν ὡς τίνι ὄντι;” τί ἂν ἀπεκρίνω; - Εἶπον ἄν, ἔφη, ὅτι ὡς ἱατρῷ. - “Ὡς τίς γενησόμενος;” - Ὡς ἱατρός, ἔφη. Εἰ δὲ παρὰ Πολύκλειτον τὸν Ἀργεῖον ἢ Φειδίαν τὸν Ἀθηναῖον ἐπενόεις ἀφικόμενος μισθὸν ὑπὲρ σαντοῦ τελεῖν ἐκείνοις, εἴ τίς σε ἤρετο· “Τελεῖν τοῦτο τὸ ἀργύριον ὡς τίνι ὄντι ἐν νῷ ἔχεις Πολυκλείτῳ τε καὶ Φειδίᾳ;” τί ἂν ἀπεκρίνω; - Εἶπον ἄν ὡς ἀγαλματοποιοῖς. - “Ὡς τίς δὲ γενησόμενος αὐτός;” - Δῆλον ὅτι ἀγαλματοποιός⁹.

From this passage it emerges that at the end of the fifth century before Christ, when Plato wrote this dialogue, Hippocrates was already well known for his teachings. Plato mentioned Hippocrates even in his *Phaedrus* and *Politicus*: a philosopher was, in fact, expected to refer to medicine as this was the science of bodies, and for this reason it was useful to philosophy, the science of souls¹⁰. Other witnesses of this figure are present in Hippocrates' *Corpus* and in Soranus of Ephesus' *Life of Hippocrates*¹¹.

Hippocrates is sometimes referred to as the ‘father of medicine’ as he found the Hippocratic School of Medicine that revolutionised medicine in ancient Greece. He established this art as a professional discipline distinct from other fields with which it

⁹ Plato, *Protagoras*, 311 b-c: Burnet, John, ed., *Platonis Opera*, Oxford: Clarendon Press, 1968, vol III, p. 311. “So then we got up and strolled in the court; and I, to test Hippocrates' grit, began examining him with a few questions. Tell me, Hippocrates, I said, in your present design of going to Protagoras and paying him money as a fee for his services to yourself, to whom do you consider you are resorting, and what is it that you are to become? Suppose, for example, you had taken it into your head to call on your namesake Hippocrates of Cos, the Asclepiad, and pay him money like your personal fee, and suppose someone asked you - Tell me, Hippocrates, in purposing to pay a fee to Hippocrates, what do you consider him to be? How would you answer that? A doctor, I would say. And what would you intend to become? A doctor, he replied. And suppose you had a mind to approach Polycleitus the Argive or Pheidias the Athenian and pay them a personal fee, and somebody asked you - What is it that you consider Polycleitus or Pheidias to be, that you are minded to pay them this money? What would your answer be to that? Sculptors, I would reply. And what would you intend to become? Obviously, a sculptor”. Plato, *Plato in Twelve Volumes*, translated by W.R.M. Lamb, Cambridge: Harvard University Press, 1967, p. 311.

¹⁰ Jouanna, *Hippocrates*, pp. 5-26.

¹¹ One of the most famous anecdotes about Hippocrates involves Artaxerses I, Serse's son. He sent to Hippocrates a letter that is preserved in *Epistulae* in which, through Istanes, governor of Hellespont, he requested the presence of Hippocrates at the Persian court to face a plague that lashed his soldiers with the promise of a great amount of gold and silver and the possibility of asking for everything he needed. Nevertheless Hippocrates rejected this call replying that a Greek physician could not help those Barbarians who were enemies of the Greeks. Cfr.: Littré, Émile, *Oeuvres complètes d'Hippocrate*, vol. 9. Paris: Baillière, 1861 (repr. Amsterdam: Hakkert, 1962), pp. 312-428.

had traditionally been associated. Therefore, he is commonly portrayed as *The Ancient Physician*, and credited with coining the Hippocratic Oath, still relevant and in use today. He is also credited with greatly advancing the systematic study of clinical medicine, summing up the medical knowledge of previous schools, and prescribing fixed practices for physicians through the Hippocratic *Corpus* and other works¹².

It is certain that Hippocrates wrote many works: “some sixty medical writings in the Ionian language have been passed down to us by tradition under the name of Hippocrates”¹³, nevertheless, in his *Corpus*, despite its inner cohesion, there are many differences in the use of words, and even some doctrinal contradictions between one treatise and another. Various in origin, the Hippocratic treatises are also different in date of composition: in fact, even if many were contemporary to Hippocrates, a great number of them was completed in the Aristotelian age or even later, in over two hundred years from the middle of the fifth century by a number of different hands¹⁴. This problem of the authenticity of the Hippocratic works has been felt since antiquity. Galen of Pergamum, in fact, devoted an entire treatise to the *Authentic and Illegitimate Writings of Hippocrates* that has been unfortunately lost as he knew that the achievements of the writers of the *Corpus*, the practitioners of Hippocratic medicine, and the actions of Hippocrates himself were often commingled: thus, very little is known about what Hippocrates actually thought, wrote, and did. However, some glances at the Hippocratic idea of the perfect physician can be found in treatises like *On Decorum* or *On Honourable Conduct* (probably pseudo-Hippocratic) and *On the Physician*.

First of all, for a fifth-century physician it was necessary to combine the art of persuasion with the art of medicine because he had to be a public figure (an idea that we would also find in the Galenic treatise *On Examining the Best Physician*¹⁵). Obviously doctors of antiquity needed competence in their medical skills, but there is much evidence that they also argued with each other in theoretical debates where they were expected to be able “to use rhetoric in the public displays and debates in order to defend

¹² Jouanna, Jacques, “Hippocrates as Galen’s Teacher”, in *Hippocrates and Medical Education*, edited by Manfred Horstmanshoff, Leiden: Brill, 2010, pp. 1-21; Jouanna, *Hippocrates*, pp. 5-26.

¹³ Jouanna, *Hippocrates*, p. 57.

¹⁴ Lloyd, Geoffrey E.R., *Methods and Problems in Greek Science*, Cambridge: Cambridge University Press, 1991, pp. 564-577.

¹⁵ Nutton, Vivian, “The Patient’s Choice: A New Treatise by Galen”, *Classical Quarterly*, 40, 1990, pp. 236-257; Petit, Caroline, “The Fate of a Greek Medical Handbook in the Medieval West: the *Introduction, or the Physician* ascribed to Galen”, in *Medical Books in the Byzantine World*, edited by Barbara Zipser, Bologna: EIKASMOS, 2013, pp. 57-78.

their theories, their reputation and the art of medicine”¹⁶. Healers were also conceived as religious figures, called καθαρκαί, purifiers, who were more accustomed to rites than to medicine. The most common view was, in fact, that the doctor’s task was simply to heal, as a minister did. Even in the Hippocratic view medicine and religious healing practices presented some points of convergence: first of all that there were sanctuaries where physicians and priests regularly met. According to Gorrini “it indicates two things: that medical doctors respected Asclepius among the healing deities; and that, on the other hand, rational medical practises may have been echoed in the temple healing practises, like a consequence of the intercourse of priests and medical doctors”¹⁷. For these reasons many medical practitioners believed it was either impossible or useless to inquire into the physical constitution of the body. Even though in his *Physician* Hippocrates indicated those things treated in surgery as the starting point of medical instruction and described the equipment needed by this *physician* with great accuracy, neither Hippocrates nor the Hippocratic physicians practiced a direct observation of human bodies through the dissection of corpses. They believed, in fact, that the only way to reconstruct the inner structures of the human body was from what they perceived from the surface. This means that, although they knew that there were brain, heart, lungs, liver, kidneys, spleen and bladder, they did not know that these were organs: they called them ‘structures’ because of their shape rather than their function¹⁸. Nevertheless, if we take into consideration the whole Hippocratic collection, we find no superstitious practices in it, even if many treatises are very “philosophical” with some sophistic rhetoric. Some of them are merely technical handbooks, “while others show the severity of the Periclean period, which, without being distinctively original, transformed the best tendencies in Greek medicine into something which has ever since been the admiration of doctors and scientific men”¹⁹. In the *Corpus*, in fact, it is many times restated that it is not enough to learn the τέχνη by λόγος: it is necessary to participate in association (ὁμιλίῃ ὁμιλεῖν) with the master.

¹⁶ Agarwalla, Pankaj K., “Training Showmanship. Rhetoric in Greek Medical Education of the Fifth and Fourth Centuries BC”, in *Hippocrates and Medical Education*, edited by Manfred Horstmanshoff, Leiden: Brill, 2010, pp. 73-85.

¹⁷ Gorrini, “The Hippocratic Impact on Healing Cults: the Archaeological Evidence in Attica”, p. 145; Lloyd, G.E.R., “Methods and Problems in the History of Ancient Science. The Greek Case”, *ISIS*, 83, 1992, pp. 564-577.

¹⁸ Craik, Elizabeth, “The Teaching of Surgery”, in *Hippocrates and Medical Education*, edited by Manfred Horstmanshoff, Leiden: Brill, 2010, pp. 223-233. Cfr.: Hippocrates, *Volume III, On Wounds in the Head. In the Surgery. On Fractures. On Joints. Mochlicon*, translated by E.T. Withington, Cambridge: Harvard University Press, 1928.

¹⁹ Hippocrates. *Ancient Medicine. Airs, Waters, Places. Epidemics 1 and 3. The Oath. Precepts. Nutriment*, translated by W.H.S. Jones, Cambridge: Harvard University Press, 1923., Introduction, p. XIV.

From the first century AD, Hippocratic thought circulated all over Europe through the wide circulation of his treatises. Furthermore, in this century a physician was going to emerge among the others, a person who would disseminate Hippocrates' teachings and define his great predecessor the "divine" physician. He is Galen of Pergamum, who, according to Charles Daremberg, "ne s'est pas moins illustré par son admiration pour Hippocrate, qu'il appelle son maître, que par les progrès considérables qu'il a fait faire aux sciences médicales"²⁰. Galen, in fact, mentioned his master at least two thousand and fifty hundred times²¹ and most of these citations are open charges to his contemporaries who praised Hippocrates without applying his methods and teachings, which he, conversely, quoted through precise references to his *Corpus*²². Even though Galen in his writings brought innovations to the Hippocratic thought, nevertheless he sought never to get in direct contrast with his master; on the contrary, he always replied harshly to those who criticised Hippocrates. He also wrote many commentaries to the Hippocratic treatises and a *Glossary* of rare words he found in the twenty-five Hippocratic works that he listed in *De propriis libris*.

I.1.2. GALEN OF PERGAMUM

Galen came from Pergamum in Asia Minor, where there was a renowned sanctuary of the healing god Asclepius. His date of birth and death are not known, but he lived in a period of peace and order as a member of the pagan society still hostile to Christianity²³. His father Nicon (an architect), along with many other eminent teachers, taught him philosophy and medicine. He travelled a lot, being at Alexandria to learn human anatomy through the dissection of cadavers with his Corinthian teacher Numesianus, and in Rome as a physician of the emperor Marcus Aurelius²⁴.

I list here the most important steps in Galen's life:

²⁰ Daremberg, Charles, ed., *Oeuvres Anatomique, Physiologiques et Médicales de Galien*, Paris: J.B. Baillière, 1854, Introduction, pp. I-II.

²¹ Jouanna, *Hippocrates*, p. 358.

²² Nutton, "The Patient's Choice: A New Treatise by Galen", pp. 236-257.

²³ For Galen's life see Sarton, George, *Galen of Pergamon*, Lawrence: University of Kansas Press, 1954; Moraux, Paul, *Galien de Pergame. Souvenirs d'un médecin, coll. d'Études anciennes*, Paris, Les Belles Lettres, 1985; Nutton, Vivian, "The Chronology of Galen's Early Career", *Classical Quarterly*, 23, 1973, pp. 158-171, reprinted in Nutton, Vivian, ed., *From Democedes to Harvey. Studies in the History of Medicine*, London: Variorum Reprints, 1988.

²⁴ Kühn, Karl G., *Claudii Galeni Opera Omnia, De anatomicis administrationibus*, pp. 280-339; Edelstein, Ludwig, *Ancient Medicine. Selected paper of Ludwig Edelstein*, Baltimore: Johns Hopkins University Press, 1967, pp. 247-301.

Table 2²⁵

Trajan, 98-117	
Hadrian, 117-138	129: around the fall equinox in September: Galen is born
Antoninus Pius, 138-161	143/144: Galen begins his education with tutors in philosophy 145/146: Nicon's dream; Galen begins to study medicine with Satyrus and others 146, fall: Galen's serious illness begins 148: Nicon's death 150?: Galen leaves Pergamum to study with Pelops in Smyrna; travels to other cities seeking out the students of Quintus and Numisianus 151/157: Galen's serious illness cured by dream from Asclepius 157: Galen returns to Pergamum
Marcus Aurelius, 161-180	161: Galen is physician to the gladiators at Pergamum
Lucius Verus, 161-169	161: Galen departs from Pergamum 161/162?: Journeys to Lycia, Syria Palestina, and Cyprus 162, spring/summer: Galen arrives in Rome 162/163: showdown with Martianus over the plethoric young woman. Winter: cure of Eudemus; showdown with Martianus over Eudemus 164, summer: wrestling injury 166, summer?: Galen leaves Rome for Pergamum 168: Galen summoned to Aquileia 168-169, winter: Galen treats victims of "the great plague" at Aquileia 169: Galen appointed personal physician to emperor's heir Commodus; begins receiving imperial

²⁵ Johnston - Horsley, *Galen: Method of Medicine Books 1-4*, Introduction, Introduction, pp. XII-XXIII; Nutton, Vivian, "The Chronology of Galen's Early Career", *Classical Quarterly*, 23, 1973, pp. 158-171.

salary?

169-176: Galen professedly retires from public life. Appointed official maker of theriac for Marcus. Cure of Commodus. *On the Usefulness of the Parts of the Body*.

176: Cure of Marcus Aurelius

Commodus, 177-192

192, late winter/early spring: great fire at Rome

Pertinax, 193

Didius Julianus, 193

Septimius Severus, 193-211

Caracalla, 197-217

Geta, 209-211

Macrinus, 217-218

216/217?: Galen's death

Elagabalus, 218-222

In March 192, under Emperor Commodus, a fire destroyed the Temple of Peace in Rome and many storehouses and libraries of the Palatine Hill. Galen lost everything he had stored in his warehouses of Via Sacra: gold, silver, documents, many drugs of all kinds, and a priceless collection of books.²⁶ Galen mentions this fire in many treatises like his *De propriis libris*, *De antidotis* and *De indolentia*, a work to an anonymous friend who had asked him how he could be so stolid even in such a great misfortune²⁷.

Galen practiced medicine in the Roman Empire for more than fifty years, but his authority in medical matters lasted about thirteen hundred years. In his own lifetime he achieved so much prestige through his reputation as a healer, through his social standing, his prolific writing, and his ruthless demolition of his enemies in every debate and showdown, that he virtually became the last word on medicine. For this reason his works are preserved in manuscripts located in scattered European places; they were translated in Arabic, in Latin, and in many vernacular languages, and then they were

²⁶ Galien, *Ne pas se chagriner*, 10. Boudon-Millot, Véronique, ed., *Galien, Tome I. Introduction générale sur l'ordre de ses propres livres. Sur ses propres livres - Que l'excellent médecin est aussi philosophe*, Paris: Les Belles Lettres, 2007, pp. 129-234.

²⁷ In *De indolentia*, Galen informs his reader that he, together with many other philosophers of his time, had paid large sums to preserve his books and other belongings in the deposits (ἀποθήκη) of the Sacred Way, but they got lost when the fire burnt them. Galen's loss was terrible because he had already transferred in those stores all his household accessories, tools, drugs, works and a small amount of silverware to keep them safe during his absence since he had planned a long permanence in his summerhouse in Campania. Cfr.: Stramaglia, Antonio, "Libri perduti per sempre: Galeno, *De indolentia* 13; 16; 17-19", *Rivista di filologia e di istruzione classica*, 139, 2011, pp. 118-147.

collected in massive Renaissance editions. Therefore, they have been perceived as the highest point and the summary of ancient medical science for such a long time as to become a pre-modern medical paradigm. The modern edition of the Galenic corpus runs to twenty-two volumes, including about 150 titles, and it is one-eighth of all the classical Greek literature that survives.

Galen was a tireless questioner of nature, an attentive inquisitor of patients and reader of diagnostic clues, a ruthless critic of those ideas unsupported by experience, sceptical of nearly all received medical knowledge, and an aggressive and competitive public figure. Even when Andreas Vesalius “used dissection to disprove many of Galen’s assertions about anatomy and then mercilessly skewered the followers of his remote predecessor for their mistakes, he was imitating the very methods that Galen had delighted in hundreds of years before”²⁸. Galen spent his whole life writing an incredible number of treatises about medicine, philosophy, philology and medical history. As Ian Johnston writes in his edition of *De methodo medendi*, Galen synthesized the entirety of Greek medicine as a basis for his own doctrines and practice, which comprehensively embraced theory, practical knowledge, experiment, logic, and a deep understanding of human life and society²⁹.

I.1.2.1. GALEN’S IDEA OF THE PERFECT PHYSICIAN: THE IMPORTANCE OF *DE METHODO MEDENDI*

As Galen himself says in his *De sectis ad eos qui introducuntur*³⁰, he trained in medicine and at the same time in philosophy, and for this reason he considered himself superior to his contemporary physicians. He divided the medical world into two categories: those who know and those who do not, and assumed that everyone could be educated out of their ignorance if they really wanted it. Galen, in fact, seemed to be fighting “a lonely battle against a world populated by ignorant, often unjustifiably influential, people”³¹:

οἱ πολλοὶ δὲ τῶν νῦν ἰατρικὴν ἢ φιλοσοφίαν μετιόντων οὐδ’ ἀναγνῶναι καλῶς
δυνάμενοι φοιτῶσι παρὰ τοῦς διδάζοντας τὰ τε μέγιστα καὶ κάλλιστα τῶν ἐν

²⁸ Mattern, Susan P., *The Prince of Medicine. Galen in the Roman Empire*, Oxford: Oxford University Press, 2013, pp. 3-4.

²⁹ Johnston - Horsley, *Galen: Method of Medicine Books 1-4*, Introduction, pp. LVII-LXXVIII.

³⁰ Wilkie, J.S. - Lloyd, G.E.R., “The Arabic Version of Galen's *De Sectis ad eos qui introducuntur*”, *The Journal of Hellenic Studies*, 98, 1978, pp. 167-169.

³¹ Rosen, Ralph M., “Galen, Satire and the Compulsion to Instruct”, in *Hippocrates and Medical Education*, edited by Manfred Horstmanshoff, Leiden: Brill, 2010, pp. 328-329.

ἀνθρώποις, τὰ θεωρήματα, ἃ φιλοσοφία τε καὶ ἰατρικὴ διδάσκουσιν. ἦρκετο μὲν οὖν ἡ τοιαύτη ῥαδιουργία πρὸ πολλῶν ἐτῶν, ἡνίκ' ἔτι μειράκιον ἦν ἐγώ, οὐ μὴν εἰς τοσοῦτόν γ', εἰς ὅσον νῦν ἠϋξῆται, προεληλύθει τὸ κατ' ἐκείνους τὸν χρόνον³².

But who could be defined “physician”? As the Greek word φυσικός (i.e. what pertains to nature) shows, the ancient Greek form φυσικὴ ἐπιστήμη and its Latin counterpart *physica* strictly refer to the knowledge of nature³³: therefore, at first a physician has to be someone who was able to deeply understand human nature. In *On My Own Books*, he emphasized “the importance, for physicians, of profound knowledge of philosophy and logic, as well as geometry and mathematics, both theoretical and applied”³⁴ and he also considered it essential to be fond of grammar and rhetoric. This high level of instruction was granted both by the study of books, which were then discussed with a teacher, and by practice. According to Galen, in fact, to acquire medical knowledge it was necessary to learn the art of medicine along with surgical techniques (τὰς τοιαύτας χειρουργίας τέχνην)³⁵ as it happened in the era of Hippocrates. Nevertheless in his own days “the majority attempt to teach others things that they themselves never practised nor demonstrated to others”³⁶ so that they “do not bring either to a successful issue. For they did not have good natural ability, or they were not educated as appropriate, or they did not persist in the training”³⁷. Many Galenic books deal with the characteristics of a model physician: all of them highlight the importance of balancing the theoretical and the practical aspects of the medical art: in his *Anatomical Procedures* Galen writes that bones have to be preliminarily studied in books, but then seen with the student’s own

³² “Many of those who embark on a career in medicine or philosophy these days cannot even read properly, yet they frequent lectures on the greatest and most beautiful field of human endeavour, that is, the knowledge provided by philosophy and medicine. This kind of laziness existed many years ago too, when I was a young man, but it has not reached the extreme state it has now”: Rosen, “Galen, Satire and the Compulsion to Instruct”, p. 329.

³³ This specific word was translated in the Old French words *fisque*, art of healing, and *fiscien*, physician (modern French *physicien*). In Middle English *fiscien* displaced the Old English form *læce* (physician, medical doctor), the native Middle English words *læche*, *leche*, and the archaic Modern English *leech*, physician: cfr.: *OED Online*. Oxford University Press, June 2017, <http://www.oed.com>.

³⁴ Quoted in Marasco, Gabriele, “The Curriculum of Studies in the Roman Empire and the Cultural Role of Physicians”, in *Hippocrates and Medical Education*, edited by Manfred Horstmanshoff, Leiden: Brill, 2010, pp. 205-219, p. 206.

³⁵ Kühn ed., *Claudi Galeni Opera Omnia*, vol. 18a, p. 349.

³⁶ Kühn ed., *Claudi Galeni Opera Omnia*, vol. 10, p. 609: νυνὶ δ'οἱ πλεῖστοι διδάσκειν ἄλλους ἐπιχειροῦσιν ἃ μήτ' αὐτοὶ ποτ' ἔπραξαν μήτ' ἄλλοις ἐπεδείξατο, translated by López Férez, J.A., “Some Remarks by Galen about the Teaching and Studying of Medicine”, in *Hippocrates and Medical Education*, edited by Manfred Horstmanshoff, Leiden: Brill, 2010, p. 390.

³⁷ Kühn, *Claudi Galeni Opera Omnia*, vol. 19, pp. 59-60: ἐν οὐδετέρῳ κατορθοῦσιν· ἡ γὰρ οὐκ ἔφυσαν καλῶς ἡ οὐκ ἐπαιδεύθησαν ὥς προσῆκεν, ἡ οὐ κατέμειναν ἐν ταῖς ἀσκήσεσιν translated by López Férez, J.A., “Some Remarks by Galen about the Teaching and Studying of Medicine”, in *Hippocrates and Medical Education*, edited by Manfred Horstmanshoff, Leiden: Brill, 2010, pp. 391-392: “Galen points out that all that he learnt would have been of no use to him without constant training”.

eyes. In *The Best Physician is Also a Philosopher* Galen declares that a good physician had to be a scholar as well as a sage, and a philosopher with anatomical knowledge³⁸. Following Hippocrates, in fact, Galen thought that accurate knowledge of the body was the starting point for the whole of medicine because, without anatomical knowledge, one cannot become an effective physician. However, it was not sufficient to be a good healer because the physician had also to be interested in and to know perfectly all parts of philosophy and ethics. According to Galen, as the aim of medical art was the common good, the best physician had to be virtuous and he had to be interested in preserving people's health rather than in making money "for it is impossible, he wrote, at the same time to engage in money-making, and to practise so great an Art; it is necessary to despise one of them, if you are to press on with all speed towards the other"³⁹.

Another treatise in which Galen describes the best healing figure, is *On Examining the Best Physician*. As Nutton points out⁴⁰, this treatise does not survive in the original Greek and it is not mentioned by Galen in any other of his works, but it was translated into Arabic by Ḥunain ibn Ishāq in the ninth century. The translator worked with great accuracy, checking Greek manuscripts against the Syriac and Arabic versions to produce a translation focused on the sense of passages rather than on literal correspondences of words⁴¹. In Galen's idealised description, in the small country towns there were no problems in choosing a physician because all healers there were supposed to be capable and their patients were supposed to have a personal medical knowledge. Instead, the inhabitants of larger towns had to choose between a much wider number of healers and on the basis of their own skills. This implies that those fashionable healers, who attended the best patients, were not always the best physicians, but often the most attractive. For this reason in this treatise Galen wishes for a medical practitioner who "is not only able to tell the nature and the course of a disease quickly, but makes very few mistakes (*On Examining the Best Physician*, 5.5). He does not rely on one sign only, but

³⁸ Nutton, Vivian, "Beyond the Hippocratic Oath", in *Doctors and Ethics: The Earlier Historical Setting of Professional Ethics*, edited by Andrew Wear - Johanna Geyer-Kordesch - Roger French, Amsterdam: Rodopi, 1993, pp. 10-37.

³⁹ Kühn, *Claudi Galeni Opera Omnia*, vol. 1, p. 57: οὐ γὰρ δὴ δυνατόν ἅμα χρηματίζεσθαι τε καὶ μυρμηκίζεσθαι καὶ οὕτω μεγάλην ἐπασκεῖν τέχνην, ἀλλ' ἀνάγκη καταφρονῆσαι θατέρου τὸν ἐπὶ θάτερον ὁρμήσαντα σφοδρότερον. Lee, Eric A. - Kimbriel, Samuel, eds, *The Resounding Soul*, Cambridge: James Clarke, 2015, pp. 95-98.

⁴⁰ Nutton, "The Patient's Choice: A New Treatise by Galen", pp. 236-237.

⁴¹ "The translator considers a whole sentence, ascertains its full meaning and then expresses it in Arabic with a sentence identical in meaning, without concern for the correspondence of individual words. This method is superior, and hence there is no need to improve the works of Ḥunain ibn Ishāq", Rosenthal, Franz, *The Classical Heritage in Islam*, London - New York: Routledge, 1992, p.17.

often on a whole concatenation of signs, and, as a result of his deep knowledge, he is able to impose his will on the patient rather than tamely submit to his whims (5.16)”⁴². A well-trained healer had to show his intelligence, logical ability, honesty, and hard work. He had to be devoted to medicine and to demonstrate a good knowledge first of all of the Hippocratic writings and then of those by other ancient physicians (9.3-9.5). The perfect physician was also expected to be fond of anatomy, surgery and pharmacology: this would have granted him the possibility to perform his art in every situation and to face every medical case even if complicated. To do this, the medical practitioners could rely on one of the most widespread and renowned Galenic treatises: *De methodo medendi*. In this work Galen declares he wants to establish a method of medical practise based on the medical theory he himself had developed, and for this reason he exposes a systematic and complete way of healing and he gives a comprehensive account of the principles for treating injury and disease. His rational methodological work is by no means a therapeutic recipe book listing diseases and treatments. Even if one can find here many anecdotal observations and digressions, the aim of this treatise is to set up a clear method to help professional doctors to choose each time the appropriate treatment according to the different types of diseases and patients. Knowing the principles and their method of application, each physician would be able to practice medicine in a rational and successful way with the aid of other Galenic pharmacological texts and specific treatises.

De methodo medendi is composed of fourteen books; the first six are dedicated to Hiero, the rest (Books 7-14) to Eugenianus because, as Galen himself writes at the beginning of Book 7, after Hiero’s death he abandoned the writing of the text, but then he returned to it at the end of the 190s. Even if the two parts were separated in time of composition by approximately two decades, the transition is relatively seamless and the latter part takes up where the former left off in terms of Galen’s scheme of classification, with only a minor preamble to the new dedicatee.

Almost twelve books analyse various diseases caused by different disorders, whereas the first and part of the second book establish the theoretical foundation of Galen’s system of medicine and his method of treatment. Here Galen considers the important aspect of causation, touches on the basic division between *homoiomeres* and organic parts, and gives some account of the theory of the four elemental qualities and the role of their imbalance in the creation of disease. A particular feature of these two

⁴² Nutton, “The Patient’s Choice: A New Treatise by Galen”, p. 245.

books is their polemical nature, incorporating vicious and at times *ad hominem* attacks on individuals and sects whose theories run counter to Galen's own: as Nutton says, they give the impression of "a doctor battling, if not always against disease, at least against his fellow doctors"⁴³. Such attacks are especially directed to Thessalus and the Methodic sect, but the followers of Erasistratus and the Empirics are by no means immune. The polemic is adorned with literary flourishes and it is followed by lamentations about the overall decline of the standards of medical practice.

The other books are concerned with diseases due to disorders of continuity; to *δυσκρασία*, including fevers; to abnormal swellings and diseases of organic parts.⁴⁴ Galen's *De methodo medendi* is, then, a systematic account of medical treatments and their underlying theory and methodology. The assumption is that if the student has grasped the principles, their knowledge and expertise, if he has access to Galen's pharmacological texts and to other specific treatises, and if he studies them assiduously, finally he will be equipped to practice medicine in a rational and successful way.

In this work, as in many others, but here in a deeper and stronger way, Galen declares that the good physician had to understand the fundamental components of the human body, and its structural organisation. To do so, the methodical practitioner was expected to study not only the most important Galenic works, but also those by the masters of classical antiquity. According to Galen, in fact, the only true method was that by Hippocrates of Cos, the great figure who first established the right way of analysing a disease and who settled the road that he, Galen, would improve on and clarify. To support his thesis and to disparage the boastfulness and self-confidence of his opponent Thessalus⁴⁵ Galen brings evidence from the past, for example the testimony of Plato in his *Phaedrus*, 270C:

ὄνειρον Ὀρέστειον διηγῇ Θεσσαλέ. οἷον τοῦτο τὸ θέατρον, ἐν ᾧ νικᾷς Ἱπποκράτην; τίνες οἱ κριταὶ καθεδοῦνται; τίνες οἱ ἀγωνοθετοῦντες; ἄρα βούλει πρώτου Πλάτωνος ἀναγνῶμεν τὴν ψῆφον; ἴσως γὰρ οὐκ ἀναίνη τοιοῦτον ἐλέσθαι κριτὴν· ἀλλὰ τοί φησιν οὗτος αὐτοῖς ὀνόμασι·
ψυχῆς οὖν φύσιν ἀξίως λόγου κατανοῆσαι οἷε δυνατόν εἶναι ἄνευ τῆς τοῦ ὅλου φύσεως;

⁴³ Nutton, Vivian, "Style and Context in the Method of Healing", in *Galen's Method of Healing*, edited by Fridolf Kudlien - Richard J. Durling, Leiden: Brill, 1991, pp. 1-25.

⁴⁴ Nutton, "Style and Context in the Method of Healing", pp. 1-25.

⁴⁵ According to Galen (*Methodus medendi*, X 8, Kühn) he was a charlatan who "established a new sect [Methodism] and, as all doctors who came before passed on nothing useful regarding either the preservation of health or the relief of disease, it is the only true sect" cfr.: Johnston - Horsley, *Galen: Method of Medicine Books 1-4*, Introduction, pp. LVII-LXXVIII. Galen quotes Thessalus' works many times to disparage them as methodless.

εἰ μὲν Ἱπποκράτει τῷ τῶν Ἀσκληπιαδῶν δεῖ τι πείθεσθαι, οὐδὲ περὶ σώματος, ἄνευ τῆς μεθόδου ταύτης.

καλῶς γὰρ, ὦ ἑταῖρε, λέγεις· χρή μὲν πρὸς τῷ Ἱπποκράτει τὸν λόγον ἐξετάζοντας σκοπεῖν εἰ συμφωνεῖ. (Pl. *Ph.* 270C-D)⁴⁶.

Here Plato makes Phaedrus recognise Hippocrates as the creator of the only system (μέθοδος) that can bring to knowledge. Galen's treatise on method seems to be an introduction to the Hippocratic writings whose harshness and obscurity were due to the difficult task of exposing for the first time every medical situation clearly and completely. Actually Galen reuses the Hippocratic humoral system described in *De natura hominis* of which he gives a systematic explanation as he considered it fundamental for methodical practitioners.

De methodo medendi is peculiar: unlike the other Galenic treatises, in this work the author displays his abilities not only in the art of medicine or philosophy, but also in τέχνη ῥητορική, the art of rhetoric: an art that was essential in Rome to be successful in any field. Therefore, it can be said that *De methodo medendi* is the work that sets out Galen's method of medical practice most completely. Buried in the middle of the ninth book of this treatise, there are the following statements about how this work was composed:

Οὐκ οὖν χρή θαυμάζειν εἰ μαρτυροῦντες Ἱπποκράτει τὴν εὕρεσιν τῆς θεραπευτικῆς μεθόδου γράφειν ἐπεχειρήσαμεν αὐτοὶ τήνδε τὴν πραγματείαν. οὐ γὰρ ὡς οὐδ' ὅλως εὐρεθείσης αὐτῆς, ἀλλ' ὡς δεομένης ὧν ὀλίγον ἔμπροσθεν εἶπον, ἐπὶ τήνδε τὴν συγγραφὴν ἦκον οὐδένα τῶν πρὸ ἐμοῦ συμπληρώσαντα τὴν μέθοδον εὐρών. ἔνιοι μὲν γὰρ οὐδ' ἔγνωσαν ὅλως αὐτήν, ἔνιοι δὲ γνόντες οὐκ ἠδυνήθησαν προσθεῖναι τὸ λείπον· εἰσὶ δ' οἱ καὶ κατακρύψαι καὶ συσκιάσαι προείλοντο καὶ ἀφανῆ ποιῆσαι παντάπασιν· οἵτινες δ' εἰσὶν οὗτοι προϊόντος ῥηθήσεται τοῦ λόγου. νυνὶ δ' ὅπερ ὑπεσχόμην ἤδη ποιήσω· πάντας ἐξῆς ἐκθήσομαι τοὺς θεραπευτικοὺς σκοποὺς. (*Meth. Med.* IX, 633K)⁴⁷.

⁴⁶ “You describe an Orestean dream, Thessalus. Where is this theatre in which you vanquish Hippocrates? Who are the judges who will be sitting? Who are those presiding at the contest? Do you wish us to recognise the vote of Plato first? Perhaps you do not refuse to select such a man as judge. But surely he says in these very words: [Socrates] Do you think, then, it is possible to understand the nature of the soul in a way that is worth discussing without understanding the nature of the whole? [Phaedrus] If, in fact, we must put our trust in Hippocrates, one of the Asclepiads, we have no understanding of the body without this method. [Socrates] You are right, my friend. We ought to examine closely the argument in addition to Hippocrates to see if it is consistent.

⁴⁷ Kühn ed., *Claudi Galeni Opera Omnia*, vol. 10, p. 633; Johnston - Horsley, *Galen: Method of Medicine Books 1-4*, Introduction, p. LXIX: “You shouldn't be surprised, then, that although I bear witness to

To conclude, *De methodo medendi* is probably the only ancient systematic exposition of a complete method of medical practice where the author establishes a theory and also a precise method of healing all types of diseases, a method that is based on his own theory. If a student had been able to gain a thorough grasp of these principles, clarified by the examples of their application, he would then be able to compare and to analyse every disease he faced in a reasoned and effective manner.

I.1.2.2. THE MANUSCRIPT TRADITION OF *DE METHODO MEDENDI*

Galen mentions *De methodo medendi* in many works, as in the fourth chapter of *De libris propriis* and in the thirty-seventh chapter of *De constitutione artis medicae ad Patrophilum*. He mentions this treatise also in *De temperamentis*, *De simplicium medicamentorum facultatibus*, *De compositione medicamentorum*, *De elementis secundum Hippocratem*, *De locis adfectis*, *Ars medica*, *De differentiis febrium*, *De sanitate tuenda*, *De crisibus*, *De pulsibus*, *De Hippocratis et Platonis decretis*, *De marasmo*, *De naturalis facultatibus*.

De methodo medendi, Θεραπευτικῆς μεθόδου βιβλία ἰδ' in Greek, is peculiar even in its title, in fact it was known with many titles which created a great difficulty in identifying it without confusing it with other Galenic works. It was entitled *Therapeutica* in the Greek-Latin version, and *De ingenio sanitatis* in the Arabic-Latin translation by Gerard of Cremona, and Μεγάλη τέχνη/*Megategni* in Constantine the African's paraphrase. For this reason I have decided to use the Latin title *De methodo medendi* as it is, in my opinion, the most precise of all those used to define this work, and that does not meet with the risk of misunderstandings.

Whatever its name, this work now is preserved in a great number of Greek manuscripts, which I list here⁴⁸:

- Athens, National Library of Greece, Atheniensis MS 1494; s. XVIII no. I;
- Athos, Library of Mt. Athos, Monastery of Iviron MS 164; s. XIII⁴⁹;

Hippocrates' discovery of the therapeutic method, I myself turned my hand to writing this particular treatise. I came to this book, as I said a little earlier, not because it was lacking in some respects, since I found that none of my predecessors had completed the method. Indeed, some did not know it at all while who did know it were unable to add what was lacking".

⁴⁸ Diels, Hermann A., *Die Handschriften der antiken Ärzte, I. Teil: Hippokrates und Galenos*, Berlin: Königliche Akademie der Wissenschaften, 1905, pp. 91-93; Durling, Richard J., "Corrigenda and Addenda to Diels' Galenica, I. Codices Vaticani", *Traditio*, 23, 1967, pp. 461-476; Durling, Richard J., "Corrigenda and Addenda to Diels' Galenica, II. Codices Miscellanei", *Traditio*, 37, 1981, pp. 373-381; Kibre, Pearl - Durling, Richard J., "A List of Latin Manuscripts Containing Medieval Versions of the «Methodus medendi»", in *Galen's Method of Healing. Proceedings of the 1982 Galen Symposium*, edited by Fridolf Kudlien - Richard J. Durling - John Scarborough, Leiden: Brill, 1991, pp. 117-22.

- Cambridge, Caius College, Cantabrigensis MS 47; s. XV f. I (Lib. I-VI in fine mutil.); 360; s. XVI. p. 161 (Lib. VI-XIV);
- Florence, Biblioteca Medicea Laurenziana, Laurentianus pluteus MS 74, 6; s. XIV p. I; 74, 7; s. IX p. 81 (Lib. VI c. 5-6); 74, 12; s. XV p. 20 (Ex libb. I, II, VII, IX, XII, XIII);
- Leyden, Universitäts-Bibliothek, Miscellaneous MS 11; s. XIII, f. 29-44 (Init. et fine mutil.; fort. Therapeut. ad Glauconem); Universitäts-Bibliothek, Vossianus Graecus F 53⁵⁰;
- London, British Library, Additional MS 6898; s. XIII/XIV. f. I;
- Milan, Biblioteca Ambrosiana, Ambrosianus MS G 97 Sup.; s. XVI (XV). f. 57;
- Messina, Biblioteca Universitaria, Messanensis Graecus MS 111; s. XII (Lib. I);
- Moscow, Synodal Library, Mosquensis MS 464; s. XV. f. 127; 466; s. XV. f. 265;
- Oxford, Bodleian Library, Laudianensis MS 706; s. XV in.;
- Paris, Bibliothèque Nationale de France, Parisinus Graecus MS 2157; s. XV. f. 425 (Libri III primi fine mutil.); MS 2160; a. 1473. 1:1; MS 2162; s. XV-XVI. f. I; MS 2169; s. XVI. f. 83 (Libri IV); MS 2171; s. XVI. f. r. 2232; s. XV. f. 88 (Liber III fine mut.); MS 2274; s. XV; MS 2280; s. XVI. f. I; MS 2283; s. XVI; Supplementum Graecum MS 634; s. XIV. f. 257 (Lib. I-VI, XIII-XIV);
- Vatican City, Biblioteca Apostolica Vaticana, Reg. Suec. MS 174; s. XIV. f. I; Biblioteca Apostolica Vaticana, Vaticanus Graecus MS 1028; f. I;
- Venice, Biblioteca Nazionale Marciana, Marcianus Graecus MS 276; s. XII. f. 74; 284; s. XV. App. cl. V 4; s. XV; Monastery of S. Michaelis in Murano MS 93; s. XIV;
- Wien, Hofbibliothek, Vindobonensis Medicus Graecus MS 28; s. XV. f. 17^v;
- Wolfenbüttel, Herzog August Bibliothek, Guelferbytanus MS 369 (Gud. 69); s. XVII.

⁴⁹ Lorusso, Vito, "Tracce di esegesi alessandrina al De methodo medendi di Galeno in codici medievali", in *Storia della tradizione e edizione dei medici greci*, edited by Véronique Boudon-Millot - Antonio Garzya - Jacques Jouanna - Amneris Roselli, Napoli: M. D'auria, 2010, pp. 109-127: this manuscript together with Parisinus Supplementum Graecum MS 634 and London, British Library, Additional MS 6898 are part of the same family and present some annotations in Greek, or sometimes in Latin, by the iatrosophists of Alexandria. The great part of these annotations are quotations from other Galenic treatises or exegetical commentaries to explain the most difficult passages of *De methodo medendi* to medical students.

⁵⁰ Diels refers to this manuscript of Galen's *De methodo medendi* without any shelfmark: cfr. Touwaide, Alain, *A Census of Greek Medical Manuscript from Byzantium to the Renaissance*, London - New York: Routledge, 2016, p. 150.

According to Lorusso⁵¹, the most ancient and completed *codices* are British Library Additional 6898 (also used by Johnston); Paris Suppl. Graecum 634; Mount Athos 164, which seems to be part of the same family. Another list like this, or probably one much longer (at least eighty records), can be created with only the Greek and Latin versions of this work, and it would include the first and most famous *editio princeps* by Aldo Manuzio printed in 1500 with the title Γαλενοῦ θεραπευτικῆς μεθόδου λόγος πρῶτος. *De methodo medendi* was very important even in antiquity when it was included among those used either in their entirety or in various abridged forms, as textbooks in the Alexandrian school of medicine⁵².

I.2. THE LEGACY OF HIPPOCRATES AND GALEN IN LATE ANTIQUITY

After Hippocrates' death, his treatises immediately started being studied by his followers, and when they came to the Hellenistic physicians of Alexandria, those scholars began storing them in their library, editing them and compiling glossaries of the rarest and most difficult words of the Hippocratic *Corpus*. Many ancient authors quoted from Hippocrates, but only in the second century his works enjoyed a systematic writing realised by Artemidorus and Dioscorides. In the first century Dioscorides known as Pedanius wrote the most important Greek pharmacological work whose title was *Περὶ ὕλης ἰατρικῆς* (*De materia medica*). This work has always been renown: Cassiodorus knew it through an extract named *Herbarium Dioscoridis*, which dealt with medical plants, while in the sixth century it was translated in its entirety and in a literary way. In the eleventh century an alphabetic version was created in the Salernitan School and around 1300 Peter of Abano newly published this work changing the internal order. The already mentioned Artemidorus and Dioscorides were followed by the first attempt to write a history of medicine, i.e. the *De medicina* by Celsus (14 BC - 37 AD). This is what we can find in the preface of this treatise:

Primoque medendi scientia, sapientiae pars habebatur, ut et morborum curatio, et rerum naturae contemplatio sub iisdem auctoribus nata sit: scilicet iis hanc maxime requirentibus, qui corporum suorum robora quieta cogitatione, nocturnaue vigilia minuerant [...]

⁵¹ Lorusso, Vito, "Cinque nuovi frammenti di Galeno. Edizione critica, traduzione, commento", *Galenos* 3, 2009, pp. 45-66; Lorusso, "Tracce di esegesi alessandrina al *De methodo medendi* di Galeno in codici medievali", pp. 109-127.

⁵² Boss, Jeffrey, "The Methodus Medendi as an Index of Change in the Philosophy of Medical Science in the Sixteenth and Seventeenth Centuries", *History and Philosophy of the Life Sciences*, 1, 1979, pp. 13-42.

Hippocrates Cos, primus quidem ex omnibus memoria dignis, ab studio sapientiae disciplinam hanc separavit, vir et arte et facundia insignis [...] Iisdemque temporibus in tres partes medicina deducta est: ut una esset, quae victu; altera, quae medicamentis; tertia, quae manu mederetur. Primam Διαιτητικήν, secundam Φαρμακευτικήν, tertiam Χειρουργίαν Graeci nominarunt. Eius autem quae victu morbos curat, longe clarissimi auctores etiam altius quedam agitare conati, rerum quoque naturae sibi cognitionem vindicarunt, tamquam sine ea trunca et debilis medicina esset⁵³.

Such a portrait of the first steps of Greek medicine is not historically founded, however it is interesting because it shows how Hippocrates was already considered in the first century AD: Celsus, in fact, is depicting the physician of Cos as the first man who was worthy to be remembered both for his medical knowledge and for his literary inclination⁵⁴. Not much later, even Pliny the Elder traced a history of medicine, and it is very similar to that by his contemporary Celsus, because he reserves Hippocrates a pre-eminent position as a medical authority:

Naturae remediorum atque multitudo instantium ac praeteritorum plura de ipsa medendi arte cogunt dicere, quamquam non ignaros, nulli ante haec Latino sermone condita ancepsque, lubricum esse rerum omnium novarum exordium, utique tam sterilis gratiae tantaeque difficultatis in promendo. Sed quaestionem occurrere verisimile est omnium, qui haec noscant, cogitationi, quonam modo exoleverint in medicinae usu quae iam parata atque pertinentia erant, mirumque et indignum protinus subit, nullam artium inconstantiorum fuisse aut etiamnunc saepius mutari, cum sit fructuosior nulla. Dis primum inventores suos adsignavit et caelo dicavit, nec non et hodie multifariam ab oraculis medicina petitur. auxit deinde famam etiam crimine, ictum fulmine Aesculapium fabulata, quoniam Tyndareum revocavisset ad vitam - nec tamen cessavit narrare alios revixisse opera sua -, clara Troianis temporibus, a quibus fama certior, vulnere tamen dumtaxat remediis. Sequentia eius, mirum dictu, in nocte densissima latuere usque ad Peloponnesiacum bellum. tunc eam revocavit in lucem Hippocrates, genitus in insula Cos in primis clara ac valida et Aesculapio dicata. Is, cum fuisset mos, liberatos morbis scribere in templo eius dei quid auxiliaturum esset, ut postea similitudo proficeret, exscripsisse ea

⁵³ "At first the science of healing was held to be part of philosophy, so that treatment of disease and contemplation of the nature of things began through the same authorities clearly because healing was needed especially by those whose bodily strength had been weakened by restless thinking and night-watching. [...] Hippocrates of Cos, a man first and foremost worthy to be remembered, notable both for professional skill and for eloquence, who separated this branch of learning from the study of philosophy. [...] During the same times the Art of Medicine was divided into three parts: one being that which cures through diet, another through medicaments, and the third by hand. The Greeks termed the first Διαιτητική, the second Φαρμακευτική, the third Χειρουργία. But of that part which cured diseases by diet those who were by far the most famous authorities, endeavouring to go more deeply into things, claimed for themselves also a knowledge of nature, without which it seemed that the Art of Medicine would be stunted and weak", Celsus, *On Medicine Books 1-4*, translated by W.G. Spencer, Cambridge: Harvard University Press, 1935, *Praefatio*.

⁵⁴ Jouanna, *Hippocrates*, pp. 353-370.

traditur atque, ut Varro apud nos credit, templo cremato iis instituisse medicinam hanc, quae clinice vocatur⁵⁵.

In Celsus' and Pliny's time, in fact, the Hippocratic *Corpus* was well known to learned people, and not only to medical specialists.

For what concerns Galen, even his *corpus* came to the West through a number of stages. His works were preserved primarily by Byzantine compilers, who wrote a number of encyclopaedias by selecting relevant portions from the Galenic treatises, sometimes enriching them with personal notes. "The later authors assembled extracts from earlier writers, often verbatim, into a coherent mosaic of opinions, ideas, and remedies. [...] These medical encyclopaedias show learning, elegant organisation, and practicality, talents not to be despised or necessarily subordinated to novelty"⁵⁶. For example, according to Scarborough, Aëtius' medical apprenticeship in Alexandria "included study of the written sources of medicine, as well as training in criticism of those sources in light of actual clinical experience, particularly in surgery, gynaecology and obstetrics"⁵⁷.

Few physicians of the Late Antiquity thought that they could match Galen's daunting achievements, and for this reason they usually preferred either to summarise or to concentrate on single parts of the Galenic art of medicine. The most important of these compilers was Oribasius (325-403), who gathered the works of his predecessors at

⁵⁵ Pliny, *Natural History Books, VIII*, translated by Jones, W. H. S., Cambridge: Harvard University Press, 1989, p. 185: "The nature of remedies, and the great number of those already described or waiting to be described, medicine compel me to say more about the art of medicine itself, although I am aware that no one hitherto has treated the subject in Latin, and that the judgement passed on all new endeavours is uncertain, especially on such as are barren of all charm, and the difficulty of setting them forth is so great. But since it is likely to come into the minds of all students of the subject to ask why ever things ready to hand and appropriate have become obsolete in medical practice, the thought occurs at once that it is both a wonder and a shame that none of the arts has been more unstable, or even now more often changed, although none is more profitable. To its pioneers medicine assigned a place among the gods and a home in heaven, and even today medical aid is in many ways sought from the oracle. Then medicine became more famous even through sin, for legend said that Aesculapius was struck by lightning for bringing Tyndareus back to life. But medicine did not cease to give out that by its agency other men had come to life again, being famous in Trojan times, in which its renown was more assured, but only for the treatment of wounds. The subsequent story of medicine, strange to say, lay hidden in darkest night down to the Peloponnesian War, when it was restored to the light by Hippocrates, who was born in the very famous and powerful island of Cos, sacred to Aesculapius. It had been the custom for patients recovering from illness to inscribe in the temple of that god an account of the help that they had received, so that afterwards similar remedies might be enjoyed. Accordingly Hippocrates, it is said, wrote out these inscriptions, and, as our countryman Varro believes, after the temple had been burnt, founded that branch of medicine called 'clinical'".

⁵⁶ Nutton, Vivian, "Medicine in Late Antiquity and the Early Middle Ages", in *The Western Medical Tradition: 800 BC to 1600 AD*, edited by Lawrence I., Conrad - Neve, Michael - Nutton, Vivian - Porter, Roy - Wear, Andrew, Cambridge: Cambridge University Press, 1995, pp. 71-87, p. 80.

⁵⁷ Scarborough, John, "Teaching Surgery in Late Byzantine Alexandria", in *Hippocrates and Medical Education*, edited by Manfred Horstmanshoff, Leiden: Brill, 2010, pp. 235-261, p. 242; Jouanna, *Hippocrates*, pp. 5-26.

the request of Emperor Julian (fourth century BC). Another encyclopaedia was the *Tetrabiblion* written by Aëtius of Amida (550 ca.). It is made of sixteen books divided in four volumes, where it is clear that Aëtius attended an apprenticeship in Alexandria and he had an early acquaintance with the circulating texts of medical authorities that he used to present rather with his own words than by quotations. Another encyclopaedist was Paul of Aegina, who wrote a work less wide than those by Oribasius and Aëtius as it is made of seven books, where he presents numerous quotations from Hippocrates and Galen⁵⁸. Paul was both a theorist and a practitioner and he was particularly fond of those parts of the Galenic and Hippocratic treatises that dealt with surgery.

The great interest revealed by physicians of the Late Antiquity for the Hippocratic and Galenic treatises was primarily due to the enduring belief that “ignoring the centuries-old experiences of skilled physicians will lead to disastrous results”⁵⁹. As in the classical Greek period, even in Late Antiquity medicine had close connections with many other disciplines: grammar and poetry were needed to speak and write correctly and for the exegesis of ancient texts. Rhetorical skills were instead required to persuade patients and to grant physicians’ professional success and pre-eminence on other healers⁶⁰. Another fundamental skill was logic that was considered essential for diagnostics so that Galen could be considered a good physician only because he was primarily a philosopher. Furthermore, geometry, astrology and mathematics were deemed indispensable for physicians for what concerned more practical aspects.

This very ideal of the perfect “physician-philosopher” went through the ages and persisted even under Arab domination because the scientific and human aspects of medicine had always been strongly connected: “this situation contributed considerably to opening up the highest social and cultural levels of society to physicians, but also inspired physicians to adopt a less technical and more humane attitude in their contacts with patients”⁶¹.

I.2.1. THE ALEXANDRIAN CANON OF GALEN’S WORKS AND *DE METHODO MEDENDI*

⁵⁸ Jouanna, *Hippocrates*, p. 365. In Paul of Aegina we can count 44 citations of Hippocrates and 68 of Galen, while in Aëtius there are 36 citations of the first and 194 of Galen.

⁵⁹ Duffy, John M., *Stephanus the Philosopher: A Commentary on the Prognosticon of Hippocrates*, Berlin: Akademie-Verlag, 1983, pp. 230-233.

⁶⁰ “Make sure you are very clear in how you describe your ‘treatment’” suggested Stephanus of Athens to those who would read the *Prognosticon of Hippocrates*, “and do not confuse surgery as done with a knife with other methods of therapy that you perform with your hand” Duffy, *Stephanus the Philosopher*, p. 267.

⁶¹ Marasco, “The Curriculum of Studies in the Roman Empire and the Cultural Role of Physicians”, in *Hippocrates and Medical Education*, edited by Manfred Horstmanshoff, Leiden: Brill, 2010, pp. 214-216.

After studying anatomy in Pergamum, Galen travelled a lot: he was for example in Smyrna, in Corinth, and then he went back to Pergamum. However, before returning to his home country, he spent some time at the medical school of Alexandria. He was so admired in this city that he recommended to every physician to visit it. Around the second half of the sixth century the Galenic *corpus* became enormous because of a number of pseudo-Galenic works and of different versions of the same treatise. It was in this period that a *canon* of the most important treatises by Galen and Hippocrates was established at Alexandria of Egypt. For what concerns Galen, it consisted of sixteen works studied in schools among which there was also *De methodo medendi*.

Even in the Roman Empire the most advanced medical knowledge was in Greek, but only few Greek treatises were translated in Latin and even fewer physicians were able to read them in Greek. Therefore, Alexandria remained the only place where there was a continuing tradition of medical knowledge: there the medical *cursus studiorum* was based primarily on Hippocrates and Galen⁶². The medical school of Alexandria was founded in 332 BC near the famous Alexandrian Library, the greatest in the world, and it was attended by the two most famous anatomists of antiquity: Herophilus and Erasistratus⁶³. A syllabus of their treatises was used as *bibliographie de référence* for ease of memory for the medical students of the school. It was made of those Hippocratic texts that Galen had preferred and commented, and of a selected group of sixteen texts by Galen⁶⁴: “We have different versions of these *Sixteen Books*, but generally speaking they include a core of basic textbooks which Galen himself wrote specifically ‘for beginners’ (τοῖς εἰσαγομένοις, *li-l-muta ‘allimīn*)”⁶⁵. The first was *De sectis ad eos qui introducuntur*, followed by *Ars medica*, *De pulsibus ad Tirones*, *Ad Glauconem de methodo medendi*, *De elementis ex Hippocrate*, *De temperamentis*, *De naturalibus facultatibus*, *De musculorum dissectione*-*De nervorum dissectione*-*De venarum*

⁶² Bullough, Vern L., *Universities, Medicine and Science in the Medieval West*, Aldershot: Ashgate, 2004, pp. 1-14.

⁶³ Pormann, Peter E., “Medical Education in Late Antiquity From Alexandria to Montpellier”, in *Hippocrates and Medical Education*, edited by Manfred Horstmanshoff - Cornelis van Tilburg, Leiden: Brill, 2010, pp. 419-441.

⁶⁴ British Library, Oriental Manuscripts, Arundel Or 17, in *Qatar Digital Library*. It contains the epitome of the *Sixteen Books* of Galen, treatises by Galen for beginners selected to form the primary medical curriculum in late-antique Alexandria. The title page (f. 2) reads: *كتاب المختصر الست عشر الينوس*, *النحوي يحيى تلخيص*, *Epitome of the Sixteen Books by Galen summarised by Yahyā the grammarian*, who was a Christian philosopher of Alexandria (d. ca 570s). This copy contains only fifteen treatises, which is perhaps explained if we assume that Galen's two treatises on the pulse, mentioned separately in the introductory chapter (f. 2v, lines 6 and 9) have been combined in the *النبض كتاب* (*Kitāb al-Nabḍ* [Book of the Pulse], ff. 9r-17r). The compilation is closed by the *البرء حيلة كتاب* (*Kitāb Hīlat al-bur'* [Book of the Method of Healing], i.e. *Θεραπευτικῆς μεθόδου* or *Methodi medendi*, ff. 126r-140r).

⁶⁵ Pormann, Peter E., “Medical Education in Late Antiquity From Alexandria to Montpellier”, p. 424.

*arteriarumque dissectione, De causis morborum-De morborum differentiis-De symptomatum causis-De symptomatum differentiis, De lociis affectis, De pulsibus ad Tirones-De causis Pulsuum-De differentia pulsuum-De dignoscendis pulsibus, De febrium differentiis, De crisis, De diebus decretoriis, De methodo medendi, De sanitate tuenda*⁶⁶. Immediately before and after the Islamic conquest this medical curriculum was reorganised, as Ibn Riḍwān underlines in his treatise *Useful Book on the Quality of Medical Education*⁶⁷. These sixteen works and many others by Galen were commented and summarised many times by Alexandrian scholars to explain them to students in light of their current doctrine. The commentaries were probably written ἀπὸ φωνῆς, i.e. during lectures, and they were often lemmatic which means that they explained passages only after having quoted the original⁶⁸. Apart from elucidation, students could also benefit from abridgments. In *syllabus* and *summaria* made by the Alexandrians, Galen occupied a central place, the place that “he was to maintain even in Islamic medicine, in Western medieval medicine, and in medical education until the Renaissance, that is, for about a thousand years”⁶⁹.

As Iskandar has pointed out, it was the Nestorian translator and physician Ḥunayn Ibn Ishāq al-‘Ibādī (d. 873/877) who wrote for the first time about the Alexandrian medical curriculum in a detailed and precise way. In his *Missive to ‘Alī Ibn Yahyā on Galen’s Books* he also points out how Galen’s order of reading of his books was not always followed by scholars in Alexandria⁷⁰. Ḥunayn surely knew the

⁶⁶ Iskandar, A.Z., “An Attempted Reconstruction of the Late Alexandrian Medical Curriculum”, *Medical History* 20, 1976, pp. 235-258. Wilson, Nigel “Aspects of the Transmission of Galen”, in *Le strade del testo*, ed. by Guglielmo, Cavallo, Roma: Adriatica, 1987, pp. 45-64.

⁶⁷ Okka, Berrin - Demirci, Mustafa, “The Curriculum and Education of Medicine after Galen in Alexandria, Egypt”, *Saudi Med J*, 33, 2010, pp. 937-941; Iskandar, A.Z., “Development of Medical Education among the Arabic-Speaking Peoples”, in *The Light of Nature. Essays in the History and Philosophy of Science presented to A.C. Crombie*, edited by J.D. North - J.J. Roche, Dordrecht: Martinus Nijhoff Publishers, 1985, pp. 7-20; Iskandar, A. Z., “An Attempted Reconstruction of the Late Alexandrian Medical Curriculum”, *Medical History* 20, 1976, pp. 235-258. For Ibn Riḍwān see Lyons, M. C., “The kitāb al-nāfi‘ of ‘Alī Ibn Riḍwān””, *Islamic Quarterly*, 6, 1961, pp. 65-71.

⁶⁸ Nutton, “Medicine in Late Antiquity and the Early Middle Ages”, pp. 71-87; Pormann, Peter E., “Medical Education in Late Antiquity. From Alexandria to Montpellier”, in *Hippocrates and Medical Education*, edited by Manfred Horstmanshoff, Leiden: Brill, 2010, pp. 328-329.

⁶⁹ Prioreschi, Plinio, *A History of Medicine, Volume IV, Byzantine and Islamic Medicine*, Omaha: Horatius Press, 2004, p. 50; Pormann, Peter E., “Medical Education in Late Antiquity From Alexandria to Montpellier”, in *Hippocrates and Medical Education. Selected Papers read at the XIIth International Hippocrates Colloquium Universiteit Leiden 24-26 August 2005*, edited by Manfred Horstmanshoff, Leiden: Brill, 2010, pp. 419-442.

⁷⁰ Iskandar, “An Attempted Reconstruction of the Late Alexandrian Medical Curriculum”, p. 237; Bergsträsser, Gotthelf, ed., *Hunain ibn Ishaq, über die syrischen und arabischen Galen-Übersetzungen*, Leipzig: Abhandlungen für die Kunde des Morgenlandes, 1925, pp. 18-19; Pormann, Peter E., “Medical Education in Late Antiquity From Alexandria to Montpellier”, p. 432: These are the books, which were solely read at the place of medical instruction in Alexandria. They [sc. the Alexandrians] used to read them in the order just mentioned, and gathered each day to read and interpret one of the main works, just as our contemporary Christians gather at the places of learning known as scholē each day in order to

numerous summaries of Galenic treatises that circulated at his time, but he did not mention any “summaries of the treatises associated with the core group of books or ‘Canon’ taught by the Alexandrians”⁷¹ with the only exception of *De methodo medendi* which was probably the most important Galenic work for him as, he said, it was the first to be translated from the Greek to Syriac, by Ibrāhīm ibn al-Ṣalt: it corresponds to section 70 of his *Risālah* in which he discusses the Galenic treatises⁷².

Even though many scholars attributed to Ḥunayn the translation of the so-called *Summaria Alexandrinorum* or *Ġawāmi’ al-Iskandarānīyīn*, i.e., the summaries and commentaries of Galen’s sixteen books which were read in Alexandria, in his works Ḥunayn never referred to the Alexandrians, whereas he recorded that he himself made abridgments of some, at least eleven, Galenic texts made for a didactic purpose; they survive in Arabic and Hebrew translations only. It was the Arabic world, in fact, led by Ḥunayn Ibn Ishāq al-‘Ibādī, that proceeded in preserving almost all the Galenic writings through a great work of translation and selection⁷³, whereas the European knowledge of them was limited to a few treatises, many of which are spurious like *Alphabetum ad Paterum*, *De dunamidiis*, *De succedaneis*, and *Epistulae*⁷⁴.

When the knowledge of Greek began to decline, the necessity of translating ancient medical treatises arose. From the sixth century on a number of translations appeared: they were in Latin, retracing the Greek texts *de verbo ad verbum* with great care. The first of these translations was already current in the West when Cassiodorus wrote his *Institutiones*⁷⁵ where he gives an account of a Latin version of the *Ad Glauconem de medendi methodo*:

study one main book, be it by the Ancient or be it a different book. They [the Alexandrians] used to read [the other books by Galen] individually, each on its own, after they have been instructed in these books which we have just like our contemporaries read the commentaries of the ancients. Galen was not of the opinion that one ought to read the books in this order, yet he serves as a precedent insofar as [he says that one ought] to read his books *On Anatomical Procedures* after his book *On Sects for Beginners*

⁷¹ Savage-Smith, Emilie, “Galen’s Lost Ophthalmology and the *Summaria Alexandrinorum*”, *Bulletin of the Institute of Classical Studies*, 45, 2002, pp. 121-138. Apart from *De methodo medendi* Ḥunayn mentions many Galenic treatises, sometimes even in their different versions; Temkin, Owsei, *Galenism: Rise and Decline of a Medical Philosophy*, Ithaca - London: Cornell University Press, 1973, pp. 95-97.

⁷² Savage-Smith, “Galen’s Lost Ophthalmology and the *Summaria Alexandrinorum*”, p. 128.

⁷³ “Although Galen was by far the most important Greek doctor for Islamic medicine, the texts that became the most influential and diffused were the Arabic translations not of his original texts, but of compendia addressing selections from them”: Mavroudi, Maria, “Translations from Greek into Latin and Arabic during the Middle Ages: Searching for the Classical Tradition”, *Speculum. A Journal of Medieval Studies*, 90, 2015, p. 45.

⁷⁴ Durling, Richard J., “A Chronological Census of Renaissance Editions and Translations of Galen”, *Journal of the Warburg and Courtauld Institutes*, 24, 1961, pp. 230-305.

⁷⁵ Mynors, R.A.B. ed., *Cassiodori senatoris Institutiones*, Oxford: Clarendon Press, 1937, I, ch. 5.

Quod si vobis non fuerit Graecarum litterarum nota facundia, in primis habetis *Herbarium* Dioscoridis, qui herbas agrorum mirabili proprietate disseruit atque depinxit. Post haec legite Hippocratem atque Galienum Latina lingua conversos, id est *Therapeutica* Galieni ad philosophum Glauconem destinata, et anonymum quendam, qui ex diversis auctoribus probatur esse collectus. Deinde Caeli Aureli *De Medicina* et Hippocratis *De Morbis et Curis* diversosque alios medendi arte compositos, quos vobis in bibliothecae nostrae sinibus reconditos Deo auxiliante dereliqui⁷⁶.

The *Herbarium* by Dioscorides, a number of Latin translations of Hippocratic and Galenic treatises, Caelius Aurelius' *On Medicine*, Hippocrates' *On Herbs and Cures* and the *Therapeutics* of Galen were probably Cassiodorus' selected medical corpus.

"In a climate where medicine and philosophy were heavily intertwined, Alexandrian teachers used formal philosophical concepts in order to organise medical knowledge" and these concepts provided the tools through which Arabic medical authors wrote their medical encyclopaedias. Later on, these works, once translated in Latin, became the most important textbooks for medical students in the nascent European universities⁷⁷.

⁷⁶ Frampton, Michael, *Embodiments of Will. Anatomical and Physiological Theories of Voluntary Animal Motion from Greek Antiquity to the Latin Middle Ages, 400 B.C.-A.D. 1300*, Chicago: VDM, 2008, pp. 294-296: "But if the eloquence of Greek letters is unknown to you, you have first of all the *Herbarium* of Dioscorides, who has treated and portrayed the herbs of the fields with remarkable accuracy. After this read the Latin translations of Hippocrates and Galen; that is, the *Therapeutics* of Galen, addressed to the philosopher Glauco, and a certain anonymous work, which has been compiled from various authors. Finally, read Caelius Aurelius' *On Medicine*, Hippocrates' *On Herbs and Cures*, and various other works written on the art of medicine. I have left you these books, with God's help, stored away in the recesses of our library".

⁷⁷ Pormann, "Medical Education in Late Antiquity From Alexandria to Montpellier", p. 419.

II

MEDICINE IN THE MIDDLE AGES

II.1. GALENIC MEDICAL TREATISES IN THE MIDDLE AGES

“First of all, not only for the entire Middle Ages, but also on into the sixteenth century, they [the *auctores*] are technical authorities. There is as yet no modern science. Medicine is learned from Galen, as universal history is learned from Orosius”¹. During the Middle Ages, in fact, the Latin West derived its knowledge of Greek natural science from the Christian *Hexameron*, translated by Basilios the Great in the first half of the fifteenth century, and from the *Physiologus*, the most important treatise of Greek-Christian natural symbolism². However, unlike other sciences, medical art was studied even in the Middle Ages thanks to a great translation movement brought about by at least three factors: the growth of an educated medical elite who could afford the production and maintenance of collections of books; the belief that formal medical tradition could fill all specific needs of knowledge for physicians; the perception that it was also useful to scholarly work³. It was this translation movement that linked classical and medieval medical knowledge. “Medicine as taught in thirteenth-century Constantinople resembles that of second-century Alexandria. [...] John Zacharias Actuarius, a leading teacher and doctor at Constantinople in 1320, stands recognisably in the same tradition of Aristotelian philosophy and Hippocratic medicine as Galen himself. Byzantine surgeons performed complicated operations with specialist instruments, and may even have dissected, on the Galenic model”⁴.

¹ Curtius, Ernst Robert, *European Literature and the Latin Middle Ages*, translated by Willard R. Trask, Oxford: Oxford University Press, 1953, pp. 57-58.

² “The *Physiologus* is an early Christian writing, which appeared approximately in the second century A.D: in Greek, probably in Alexandria, and was widespread during the Middle Ages in various recensions [...] It consists of miniature stories, forty-eight at all, about the nature (φύσις) of real or mythical animals, plants and stones, with a religious interpretation of their peculiarities as an allegory of Christ, the devil, the Church or human beings”, Muradyan, Gohar, *Physiologus. The Greek and Armenian Versions with a Study of Translation Technique*, Leuven: Peeters, 2005, pp. 1-2.

³ Thorndike, L. A., “Relation Between Byzantine and Western Science and Pseudo-Science Before 1350”, *Janus* 51, 1964, pp. 1-48; Conrad, Laurence I., “The Arab-Islamic Medical Tradition”, in *The Western Medical Tradition: 800 BC to 1600 AD*, edited by Lawrence I. Conrad - Neve, Michael - Nutton, Vivian - Porter, Roy - Wear, Andrew, Cambridge: Cambridge University Press, 1995, pp. 101-104.

⁴ Nutton, “Medicine in Late Antiquity and the Early Middle Ages”, pp. 71-72.

For what specifically concerns Galen of Pergamum, a great number of his treatises survives only in those translations prepared during the Middle Ages, in the West and the East, like those by Nicholas of Reggio for Robert of Anjou or the translations into Arabic and Syriac of nearly all the Galenic *corpus*.

II.1.1. THE MEDIEVAL ISLAMIC RECEPTION OF ANCIENT MEDICINE: TRANSFORMATION THROUGH TRANSLATION

“Translation was fundamental to the formation of the Islamic medical tradition”⁵, and even if the already-mentioned Syriac translations can no longer be traced, there is a fair chance of finding some Arabic translations made from them. The Arabic medical tradition is also very important to restore the order of the leaves in the archetypes and to recover lost passages of known texts. However, with the incoming of Greek science, Arabs encountered many technical difficulties in translating from Galen’s sophisticated Greek into their culturally unprepared language, as did their Latin counterparts a few years later⁶. Nevertheless, Galen’s influence as the leading authority in medicine was yet undisputed and his books were considered essential for each medical practitioner: thus, the Arabs strove to translate as many of the ancient medical treatises as possible⁷.

Until the twelfth century, in fact, the works of ancient medical authors had fallen in oblivion in the West, excepting few places (like Anglo-Saxon England) where the early medieval translations of some Galenic writings were still present. It was the translation of Arabic works in Latin that provided the West with medical material that was derived in great part from Hippocratic and Galenic writings⁸. One of the most important is the *Isagoge* of Ḥunayn ibn Ishāq (known in Europe with the name of Johannitius) available in Latin from ca 1100. It became the first book in *Articella*, an anthology of medical treatises, which was also used as an introduction to Galen’s *Ars medica*⁹. This translation movement was dominated by Arabic-Christians, as they knew both Greek and Syriac. The first translations of Galen, in fact, were in Syriac by the priest-doctor Sergius of Resaina (d. 536), who was probably the first who translated

⁵ Pormann, Peter E. - Savage-Smith, Emilie, *Medieval Islamic Medicine*, Edinburgh: Edinburgh University Press, 2007, p. 23.

⁶ French, Roger K., “*De Juvamentis Membrorum* and the Reception of Galenic Physiological Anatomy”, *ISIS*, 70, 1979, pp. 96-109.

⁷ Wilson, “Aspects of the Transmission of Galen”, pp. 45-64.

⁸ Ullmann, Manfred, *Islamic Medicine*, Edinburgh: Edinburgh University Press, 1978, pp. 52-53.

⁹ Olson, Glending, *Literature as Recreation in the Later Middle Ages*, Ithaca and London: Cornell University Press, 1982, pp. 40-55.

medical treatises from Greek to a Middle East vernacular language. The account of this author is written by a Miaphyste anonymous monk from Amid who translated the chronicles of Zachariah of Mytilene from Greek into Syriac: at chapter 19, Book IX of his chronicle he wrote:

It happened that Sergius, a chief physician of Reshaina, in those days went up to Antioch in order to accuse Asylus, the bishop there [i.e. of Reshaina], making known to Patriarch Ephraem that he had been armed by him. He was a man of eloquence and trained in the reading of many books of the Greeks, and in the teaching of Origen. He had studied the interpretation of books by other teachers in Alexandria for some time. He knew Syriac, both reading and speaking, and the books of medicine¹⁰.

Sergius was a physician and he was foremost renown as a translator of Galen¹¹: he worked on twenty medical books (sixteen by Galen and four by Hippocrates) that were used in Alexandrian schools as textbooks during the sixth and seventh centuries¹².

However, the most important figure was the already-mentioned Ḥunayn ibn Ishāq/Johannitius, who continued and developed the Greek medical tradition through his activity of translation. He proved his translation skills first with the Old Testament that he translated into Arabic, and then with the Galenic medical treatises. In his *Risālat* (*Ḥunayn Ibn Ishāq ilā ‘Ali Ibn Yaḥyā fī dhikr mā turjima min kutub Jālīnūs bi-‘ilmih wa ba‘ḍ mā lam yutariam*, i.e., Ḥunayn Ibn Ishāq’s missive to ‘Ali Ibn Yaḥyā on Galen’s books which, so far as he [Ḥunayn] knows, have been translated, and some of those books which have not been translated), Ḥunayn listed all the Galenic works Sergius translated into Syriac: they were at least 37, though five of them are duplicates, but most of these writings are now lost. Although Sergius’ effort had been remarkable, Ḥunayn knew that Greek medicine was far more sophisticated than that practiced by the Arab-Islamic medical tradition, and for this reason it continued to hold sway for several centuries¹³.

Ḥunayn was a Nestorian physician and dean of translators from Greek during the ‘Abbāsid period of renaissance. He lived in the ninth century, when various caliphs like al-Mā’mūn (d. 833) promoted a great translation effort, first into Syriac and then into Arabic. Helped by his son Ishāq and his nephew Hubaish, he translated a great number

¹⁰ Quoted in Iskandar, Albert Z., “An Attempted Reconstruction of the Late Alexandrian Medical Curriculum”, *Medical History* 20, 1976, pp. 235-58; Iskandar, Albert Z., “Development of Medical Education among the Arabic-speaking Peoples”, in *The Light of Nature*, edited by J. D. North - J. J. Roche, Dordrecht: Martinus Nijhoff Publishers, 1985, pp. 7-21.

¹¹ Aydin, Sami, *Sergius of Reshaina: Introduction to Aristotle and his Categories, Addressed to Philotheos*, Boston: Brill, 2016, pp. 3-9, 21-25.

¹² Pormann - Savage-Smith, *Medieval Islamic Medicine*, pp. 24-29.

¹³ Conrad, “The Arab-Islamic Medical Tradition”, pp. 106-110.

of medical treatises, nine of which are works by Galen that he said he translated after the collation of many Greek manuscripts to produce correct texts. These are *Ars parva* or *Kitāb al-Šinā'ah al-Šahīrah* (*The Book of the Minor Art*); the *Kitāb al-Buḥrān* (*The Book on Crises*), known with the Latin title *De crisis*; the *Kitāb Aṣnāf al-Ḥummayāt* (*The Book on the Different Kinds of Fever*) called in Latin *De differentiis febrium*; the *Tadbīr al-Aṣiḥḥā'* (*The Régime of the Healthy*), better known as *Hygiene*; the *Firaq al-Aṭibbā'* (*Schools of Physicians*), also called *Medical Sects*; the *Kitāb al-Nabaḍ ila Tūtharun* (*The Book of the Pulse Addressed to Teuthras*), commonly known as *The Pulse for Beginners*, written for a compatriot named Teuthras; the *Shifā' al-Amrāḍ ila Ughlūqin* (*The Cure of Diseases Addressed to Glaucon*), called in Latin *Therapeutics to Glaucon*, a friend of Galen; the *Kitāb al-Iṣṭaqsāt 'ala Ra'y Buqrāṭ* (*The Book of the Elements According to Hippocrates*), that is the Latin work entitled *The Elements According to Hippocrates*; the last is *De methodo medendi* with the Arabic title *Ḥīlat al-Bur'*¹⁴.

In the already-mentioned *Letter to 'Ali ibn Yahya* he pointed out that at least 129 Galenic works were available in Arabic before the tenth century, including that on logic and philosophy, in addition to those on medicine. In many places Ḥunayn described his translation technique, disparaging the previous literal word-for-word renderings: he believed that “scientific translations needed to convey the sense of the original, if not precisely the same words or phrasing”¹⁵. However the widest and the clearest illustration of the practicalities of translation is at the beginning of *De methodo medendi*:

Galen's *Book on the Method of Healing* [*Therapeutikē methodos*, consisting of 15 books]: The first six books of this work were translated into Syriac by Sergius when he was still a very weak translator. After he had acquired experience as a translator, he translated the remaining eight books and produced a better translation than that of the earlier books. Salmawaih urged me to correct the second part of Sergius's translation for him in the hope that this would be easier and better than the production of a new translation. So he sat down opposite me with part of the seventh book, he with the Syriac text and I with the Greek text, and we collated it. He read the Syriac text aloud and whenever I noticed something that conflicted with the Greek text, I drew his attention to it and he would then begin to correct it. Yet in the end, this became too much for him, and he realized that an entirely fresh translation would be simpler and would turn out better stylistically as well as produce a much tidier result. So he asked me to translate these books, and I translated them all. [...] A

¹⁴ Conrad, “The Arab-Islamic Medical Tradition”, pp. 106-110; Pormann - Savage-Smith, *Medieval Islamic Medicine*, pp. 24-29.

¹⁵ Conrad, “The Arab-Islamic Medical Tradition”, p. 106.

few years later I translated the work from the beginning for Bukhtīshū^c b. Jibrīl. For the last eight books a number of Greek manuscripts were at my disposal. These I collated and produced a single correct copy from them which I then translated with the utmost accuracy and in the best style I was able to master. For the first six books only a single manuscript, and besides a very faulty one, was at my disposal at the time. I was therefore unable to produce these books in the manner required. Later I came across another manuscript and collated the text with it and corrected it as much as possible. It would be better if I could collate a third manuscript with it if only I were fortunate enough to find one. For Greek manuscripts of these work are rare, since it does not belong to the works that were read in the school of Alexandria¹⁶.

The passage testifies that Ḥunayn consulted previous translations when they existed, that prominent patrons commissioned his work and that hundreds of Greek works were translated into Arabic, but primarily works by Galen: at least 60 titles are recorded. “The quest for and translation of ancient texts proceeded at a frenetic pace, encouraged by official sanction, generous patronage, and the immediacy of the debate at hand. [...] But beyond the factor of quantity was that of selection - as the favoured author was Galen, it was his works which set the standards for Arabic medicine in centuries to come. It was his system which prevailed throughout the Islamic lands, and even the works of the Hippocratic corpus were known primarily through the prism of Galen’s commentaries”¹⁷. Even when the Arabic language and medical literature gained some independence from the Greek models, Galen lasted as representative of medical knowledge¹⁸.

Through the mediation of the Arabic world, the dissemination of ancient medical learning proceeded quickly and widely, and while treatises in other fields of knowledge rapidly became rare, medical texts were copied and recopied many times and even translated into Latin, although they were expensive and they required specific skills. The medical profession in medieval Europe was probably influenced by the Arabic world, which in turn was inspired by the Galenic one.

¹⁶ Quoted in Rosenthal, Franz, *The Classical Heritage in Islam*, translated by Emilie Marmorstein - Jenny Marmorstein, Berkeley-Los Angeles: University of California Press, 1975, pp. 20-21. See also Pormann - Savage-Smith, *Medieval Islamic Medicine*, pp. 23-25.

¹⁷ Conrad, “The Arab-Islamic Medical Tradition”, pp. 106-108.

¹⁸ For example al Rāzī, physician and philosopher who lived between 854 and 935, though he wrote works in which he rejected Galen’s ideas (as *Shukūk (alā Djlīnūs* or *Doubts about Galen*), like Galen was speculatively interested in the art and profession of medicine and wrote many essays on this subject such as *The Reason for People’s Preference of Inferior Physicians*, coming to affirm the Galenic principles. See Pinès, Shlomo, “Razi critique de Galien”, in *Actes du VIIe Congrès International d’Histoire des Sciences, Jérusalem, 4-12 Août 1953*, edited by F.S. Bodenheimer, Paris: Académie internationale d’histoire des sciences, 1953, pp. 480-487; Pasha, Azeez M., “Biographies of Unani Physicians Found in al-Hawi of Rhazes”, *Bulletin of the Indian Institute of the History of Medicine* 7, 1977, pp. 38-40.

II.2. THE TRANSMISSION OF THE ANCIENT MEDICAL KNOWLEDGE INTO MEDIEVAL WESTERN EUROPE

In medieval western Europe, medicine was not included among the liberal arts and official medical teaching was exceptional. The school of Salerno was outstanding in this context. Allegedly, it was founded by a Latin, a Jew, an Arabic man and a Greek master (distinguishable for his Hippocratic treatises), who symbolically represented the intersecting position of Salerno. The most important intellectual centre of the eleventh century was close: it was Montecassino abbey, which preserved a great collection of medical texts. Thank to their relationships with Byzantium and with Arabic Sicily, monks became acquainted with Greek and Arabic medical texts. The earliest Salernitan teaching texts of medicine dealt with the exploration of Greek ideas in Latin, and with Arabic medicine: “Salernitan masters used the tools of scholastic exegesis to construct from these new sources a body of medical knowledge which, they claimed, served as the basis for proper medical practice”¹⁹.

The greatest figure here was the Tunisian monk Constantine the African, who insisted that medicine had to be treated as a fundamental constituent of natural philosophy and who translated many Arabic and Greek medical texts in Latin at the end of the eleventh century²⁰. His translations of Arabic works like Haly Abbas’ *Pantegni* (also known with the title *Liber regius*) were focused on sense and not on a word-for-word rendering, as he thought, like Ḥunayn ibn Ishāq before him, that it was better to preserve the force and figures of the language rather than translating *verbum pro verbo*²¹. In fact, Constantine’s translations of Greek medical treatises via Arabic provided the West with an enlarged theoretical medical knowledge: new concepts and a new technical vocabulary, new techniques to diagnose a patient and organise therapies²². For this purpose Constantine translated Galen’s *Tegni* and *Megategni*. The first was the title given in the Middle Ages to Galen’s τέχνη ἰατρική (*Ars medica*) and it was also entitled *Ars parva*, *Microtegni* or *Articella* to distinguish it from the other treatise, i.e. *Methodus medendi* (θεραπευτική μέθοδος), universally known with the title

¹⁹ O’Boyle, Cornelius, *The Art of Medicine. Medical Teaching at the University of Paris, 1250-1400*, Leiden: Brill, 1998, p. 263.

²⁰ Bullough, *Universities, Medicine and Science in the Medieval West*, p. 8. On Constantine the African see also Burnett, Charles - Jacquard, Danielle, *Constantine the African and ‘Ali ibn al-Abbas al-Magusi. The Pantegni and related texts*, Leiden: Brill, 1994.

²¹ Copeland, Rita, “The Fortunes of ‘non verbum pro verbo’: or, why Jerome is not a Ciceronian”, in *The Medieval Translator: The Theory and Practice of Translation in the Middle Ages*, edited by Roger Ellis - Jocelyn Price - Stephen Medcalf - Peter Meredith, Cambridge: D.S. Brewer, 1989, pp. 15-35.

²² Nutton, “Medicine in Medieval Western Europe 1000-1500”, pp. 139-205.

Megategni. For at least one century, both of these works circulated in the Latin West in Constantine's translations, as it was with the Latin version of Hunain ibn Ishāq's (Johannitius) *Isagoge ad Tegni Galieni*, which was newly translated towards the end of the twelfth century by Marco from Toledo. Constantine also translated the great encyclopaedia of 'Alī ibn 'Abbās, *Kitab al-malikī*, entitled *Pantegni*, and worked on Hippocrates' *Aphorisms* and *Prognostic*, and on Philaretus' and Theodoretus' treatises, writing commentaries on them. All these titles can be found among those adopted as textbooks by medical schools:

Studium medicinae usibus filiorum Ade perutile subire quis desiderans audiat Ihohanniciū et tam aphorismos quam pronostica Ypocratis et tegni Galieni et pantegni. Huius operis auctor est Galienus sed translator Constantinus. Legat etiam tam particulares quam universales dietas Ysaac et librum urinarum et viaticum Constantini cum libro urinarum et libri pulsum et Dioscoridem et Macrum in quibus de naturis herbarum agitur et libros Alexandri²³.

Even if many were the stages in the translation into Latin of earlier works, it was Constantine the African and his Italian colleagues who paved the way to the translation phenomenon. The numerous translations realised in this period and later encouraged a renewed access to ancient medical treatises, the formalisation of the art of medicine and its rise to university subject. This does not mean that before the statutory creation of medical classes there was no sophisticated teaching²⁴. In fact, in Salerno and in many other European cities like Paris or Montpellier clerical or secular students devoted themselves to medicine long before it was included in university *curricula*.

The majority of the physicians in the Middle Ages were members of the clergy, as the already-mentioned monk Constantine the African shows: "medieval preachers

²³ Quoted in Haskins, Charles H., "A List of Text-books from the Close of the Twelfth Century", *Harvard Studies in Classical Philology*, 20, 1909, pp. 75-94, p. 93: this passage is taken from Neckam's *Sacerdos ad altare*, so-called for its opening phrase, "Sacerdos ad altare accessurus" ("A priest who is about to approach the altar"). Its main text was written in the first decade of the thirteenth century. It survives in only one known manuscript, MS Cambridge, Gonville and Caius College 385/605, a grammatical collection from the second half of the thirteenth century containing many works by John of Garland. The text is accompanied by extensive grammatical, lexicographical, etymological, or literary and historical glosses clearly linked by *lemmata* to particular sections, and often quoting or referring to other works by Neckam. "Everyone who want to undertake the useful study of medicine to use it on human beings has to listen Johannitius and both Hippocrates' *Aphorisms* and *Prognostics* and Galien's *Tegni* and *Pantegni*. Galen is the author of this work, while the translator is Constantine. He should also join both the individual and the universal provisions by Isaac and the books about urine and provisions by Constantine together with the book about urine and pulse, and Dioscorides abd Macro whose books deal with the different kinds of medicinal herbs, and Alexander's books".

²⁴ Nutton, "Medicine in Medieval Western Europe 1000-1500", p. 153.

often used medical references in their sermons”²⁵, for example Christus Medicus who was described as “the most sovereign leech [surgeon] ... [who] devised a regimen for each of his patients who by following it might purge his diseased soul of the corruption of sin”²⁶. However, many scholars, like Lopez and Margotta²⁷, write that from the twelfth century on the Church started forbidding members of the clergy to become professional doctors and to practice medicine, adducing the edict of Tours entitled *Ecclesia abhorret a sanguine* and issued in 1163. However, the ban was probably applied only to some clergymen and restricted to the study of surgery, while medicine was permitted. As Christianity developed, in fact, Hippocratic physicians tended to turn to a model of Christian medical charity, but the Church never rejected secular medicine, and although there were different strands of opinion, the Galenic and Christian schools of medicine were often complementary. This is testified, for example, by Cosmas and Damian, patron saints of medicine, who were often said to have “thoroughly mastered the healing of Hippocrates and Galen”²⁸. In fact, prohibiting clerics the study of medicine would not make sense, as it would not have prevented them from practising the art, or from obtaining clerical advancement. Moreover, during the twelfth century “there was a shift in values within the traditional scheme of the cardinal vices”²⁹ and the sin of avarice displaced pride as the supreme vice. This meant that most of the clerics felt authorised to practice a passive form of medicine (which could imply less responsibility in case of unsuccessful treatments) when there was a genuine need of it because in doing so they could prove their generosity and selflessness³⁰. It was a typical medieval commonplace to associate the duties of the learned physician and those of the priest as “the moral uprightness of the priest, who ideally would take no money for this learned advice, was a useful model for the learned physician aspiring to promote his skills”³¹.

The niche medical practitioners occupied in medieval society varied greatly from one place to another. They can be divided into two groups: tradespeople or

²⁵ Bagwell, Charles E., “Respectful Image: Revenge of the Barber Surgeon”, *Annals of Surgery*, 241, 2005, pp. 872-878.

²⁶ Rawcliffe, Carole, “God, Mammon and the Physician: Medicine in England Before the College”, *Journal of the Royal College of Physicians of London*, 34, 200, pp. 266-272.

²⁷ Lopez, Robert S., *The Birth of Europe*, New York: Evans Lippincott, 1967, p. 373; Margotta, Roberto, *The Story of Medicine*, New York: Golden Press, 1968, p. 146.

²⁸ Nutton, “Medicine in Late Antiquity and the Early Middle Ages”, p. 75.

²⁹ Amundsen, Darrel W., “Medieval Canon Law on Medical and Surgical Practice by the Clergy”, *Bulletin of the History of Medicine* 52, 1978, p. 29.

³⁰ Amundsen, “Medieval Canon Law on Medical and Surgical Practice by the Clergy”, pp. 22-44.

³¹ Getz, Faye Marie, “Charity, Translation, and the Language of Medical Learning in Medieval England”, *Bulletin of the History of Medicine* 64, 1990, pp. 1-17.

ordinary practitioners, and clerical or elite practitioners, but these were not rigid categories, but polarities. Medieval tradespeople practised medicine in the same way people did any other trade: they sold care and drugs sometimes as a member of a guild or with the license of a municipal authority. Otherwise they worked for monasteries or in royal or noble households. In northern Italy, for example, only few physicians were clerics, and from the thirteenth century onward, with the institution of medical teaching at the university, they started distinguishing themselves from other categories. The English situation contrasted sharply with that described above, because the figure of the physician was always assimilated to that of a minister, and because of a peculiar medical tradition that was slightly independent from that of the Continent. The most distinctive feature of medieval English medicine was the variety of people who practiced it. Unlike other medieval professions that survive today - the ministry, legal and notarial arts - English medieval medical practice embraced men and women, serfs and free people, Christians and non-Christians, academics and tradespeople, the wealthy and the poor, the educated and those ignorant of formal learning.

II.3. THE INTRODUCTION OF SCIENTIFIC TEXTS INTO ENGLAND: RESCUING CLASSICAL MEDICAL SOURCES

From the beginning of the eighth century medicine enjoyed a formal status in Anglo-Saxon England. As has been noted³², the Norman conquest of England led to the refurbishment of the libraries of English monasteries as it occurred in the same years as the reconquest of Muslim-held territory, and among the books imported and copied, there would have been the corpus of Arabic medical texts, which the Benedictine monk Constantine the African is said to have brought to Salerno and translated in the monastery of Montecassino in the last years of the eleventh century. “Early English medicine [...] has been frequently described as a backwater in which superstition flourished until the mainstream of more rational and advanced Salernitan practices flowed into the country in late medieval times”³³. Nevertheless, it appears that Anglo-Saxon physicians were “as able according to the conditions of their times as were any

³² Burnett, Charles - Murray Jones, Peter, “Scientific and Medical Writings”, in *The Cambridge History of the Book in Britain vol. II, 1100-1400*, edited by Nigel J. Morgan - Rodney M. Thomson, Cambridge: Cambridge University Press, 2008, pp. 446-462; Payne, Joseph F., *The Fitz-Patrick Lectures for 1903. English Medicine in the Anglo-Saxon Times*, Oxford: Clarendon Press, 1904, pp.94-142.

³³ Cameron, M. L., “The Sources of Medical Knowledge in Anglo-Saxon England”, *Anglo-Saxon England* 11, 1982, p. 135.

who had preceded them in the Greek and Roman world”³⁴, and that many medical works, which were supposed to be imported from the Continent, were used in Anglo-Saxon times as early as they were in Europe or even earlier.

We can already find the first glimpses of the first English physicians in Bede’s *Ecclesiastical History of the English People* and *De Temporum Ratione* of the early eighth century. To define the physician’s role and his healing task, Bede quotes many ancient medical texts such as Cassius Felix’ *De Medicina* or *Epistula Hippocratis ad Antiochum Regem*, which were rare works even on the Continent³⁵. However, the earliest Anglo-Saxon medical text we know is Bald’s *Leechbook*, a vernacular medical compendium of the mid-tenth century, so called because of the colophon in Latin hexameters, which occurs at the end of the first part of MS London, British Library, Royal 12 D XVII: “Bald is the owner of this book, which he ordered Cild to write down”. It is worth saying that this work presents direct quotations from Oribasius’ *Synopsis* and *Euporistes*; from the *Epistula Hippocratis ad Antiochum Regem*; from Philagrius of Epirus, Theodorus Priscianus, Pliny and so on³⁶. Other information about earlier medical practices can be drawn from non-medical sources such as, for example, Aldhelm of Malmesbury’s *Enigmata*³⁷. Thus, Anglo-Saxons seems to have had a wide acquaintance with the medical learning available in Latin, from which they borrowed with a high level of competence in selection and arrangement and using them together with native materials. Moreover, Latin compilations often contained many medical terms of Greek origin. In the *Canterbury Classbook*, for example, there is a set of glosses for each medical term in Old English, which are taken from the *Questiones medicinales*, derived in turn from the pseudo-Galenic *Ῥοι ἰατρικοὶ*. Thus, it emerges that “Anglo-Saxon medicine could take from the Greeks and Romans some of their best they had to offer and integrate that borrowing into an English tradition”³⁸.

The latest Anglo-Saxon medical treatise has been considered for a long time the *Peri Didaxeon*, which is a twelfth-century-translation to Old English of parts of the Latin *Practica* attributed to Petrocillus or Petronius, a Salernitan writer who lived in the eleventh century, and preserved in MS London, British Library, Harley 6258 B, ff. 51v-66v (Figure 2). Moreover, there are also some indications that the *Peri Didaxeon* is indebted in part to another writer of the same Salernitan school, Gariopontus, who wrote

³⁴ Cameron, M. L., *Anglo-Saxon Medicine*, Cambridge: Cambridge University Press: 1993, pp. 21-22.

³⁵ O’Boyle, “Learning Medieval Medicine: The Boundaries of University Teaching. Introduction”, p. 19.

³⁶ Cameron, “The Sources of Medical Knowledge in Anglo-Saxon England”, pp. 145-149.

³⁷ Cameron, *Anglo-Saxon Medicine*, pp. 25-26.

³⁸ Cameron, *Anglo-Saxon Medicine*, p. 186.

before the middle of the eleventh century³⁹. In these two texts, the *Leechbook* and the *Peri Didaxeon*, we would have the two extremes of Anglo-Saxon medicine both in date and in content.

According to Payne the *Peri Didaxeon* is “very different in character and origin from the rest” of the Anglo-Saxon medical production because “the Salernitan book has a clear superiority over the Anglo-Saxon”: for this reason this learned medical treatise would testify to the introduction of Salernitan medicine into England⁴⁰. However, as Talbot showed⁴¹, the *Practica* is a collection of medical works that cannot be assimilated with the Petrocellus text, and for this reason it could not be directly linked with Salerno. In fact, the so-called Petrocellus’ text already existed as a separate work in the ninth century with no title whatsoever, and certainly no attribution to Petrocellus, whose name appears only in a late manuscript. The oldest manuscript of the text is known to have been in the possession of the monastery of Echternach (Luxembourg), which was founded by an Anglo-Saxon missionary named Willibrord. Other fragments of the same text survive in Germany, but the best and most complete manuscript of the Petrocellus text is in the British Library. The German manuscript London, British Library Sloane, 2839 eleventh century gives not only the Salernitan text printed by Salvatore De Renzi in 1854⁴², but also another part, which is composed of a list of chapter headings and of two complete chapters. “The obvious inference from this is that the Petrocellus text was not uncommon in Anglo-Saxon circles” and “contrary to all previously held views, that England was, in the ninth and tenth century, in no way inferior to its continental neighbours in the assimilation of classical medicine”⁴³. To conclude: medical material available to the earliest writers of the Salernitan school was already in use in England at a considerably earlier date⁴⁴.

³⁹ Talbot, C. H., “Some Notes on Anglo-Saxon Medicine”, *Medical History* 9, 1965, pp. 156-69.

⁴⁰ Payne, *The Fitz-Patrick Lectures for 1903. English Medicine in the Anglo-Saxon Times*, Oxford: Clarendon Press, 1904, pp.94-142. See also Burnett - Murray Jones, “Scientific and Medical Writings”, pp. 446-462; Talbot, “Some Notes on Anglo-Saxon Medicine”, pp. 156-69.

⁴¹ Talbot, “Some Notes on Anglo-Saxon Medicine”, pp. 156-69.

⁴² De Renzi, Salvatore - Henschel, G.E.T. - Daremberg, Charles (eds), *Collectio salernitana, ossia Documenti inediti, e trattati di medicina appartenenti alla Scuola medica salernitana*, Napoli: Filiiatre-Sebezio, 1852-1859.

⁴³ Talbot, “Some Notes on Anglo-Saxon Medicine”, pp. 168-169

⁴⁴ Cameron, “The Sources of Medical Knowledge in Anglo-Saxon England”, pp. 135-155.

[illegible]

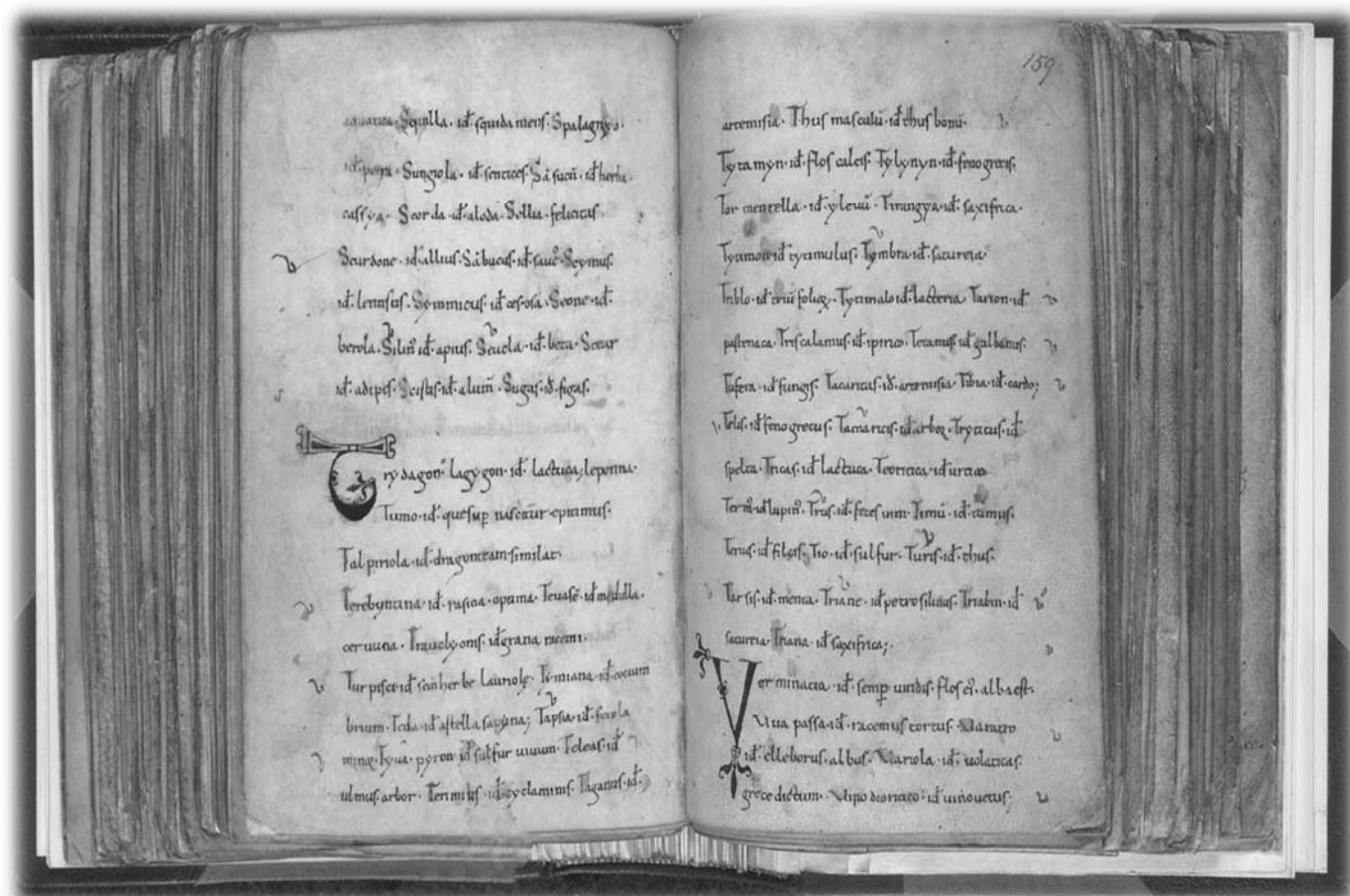
As testified by the letter written by Cyneheard, bishop of Winchester, and sent to Lull, bishop of Mainz, in the middle of the eighth century, English libraries owned a few Latin medical collections even though their use was often difficult because “the foreign ingredients [...] prescribed in them are unknown and difficult to obtain”⁴⁵. In fact, even if Hippocrates and Galen were still the medical authorities, very little of their authentic treatises were available in Greek or in Latin in this period, and the great majority of their teaching was preserved and transmitted through second-hand quotations and summaries by authors of the late antiquity.

Manuscripts containing medical writings could be compilations including non-medical texts with recipes or medical annotations copied on the margins, or manuscripts devoted to medical material alone. In this last case they usually were collections of various texts. For example the second part of MS London, British Library, Sloane 475, ff. 125-231 (Figure 3) contains different medical treatises, such as the fourth book of Isidore’s *Etymologiae*; Galen, *Epistola de febribus*; recipes; medical glosses, and a treatise on urine written in a Caroline minuscule with large initials in red, green, or brown, and some with penwork decoration. This Latin manuscript was copied in the last quarter of the eleventh century from an antigraph of a codex in Anglo-Saxon minuscule, as it is testified by the confusion of *r* and *n* and by some formulas of *compendium*⁴⁶.

⁴⁵ Cameron, “The Sources of Medical Knowledge in Anglo-Saxon England”, p. 137, n. 8.

⁴⁶ Cameron, “The Sources of Medical Knowledge in Anglo-Saxon England”, pp. 144-145.

Figure 2



MS London, British Library, Sloane 475, ff. 158v-159r

Although before the fourteenth century there is no evidence of any form of medical teaching in England and many physicians were educated abroad, medical treatises were present in a considerable variety, and British scholars predominated among the translators of medical works from Arabic and from Greek because England provided a fruitful ground for copying⁴⁷. Anglo-Saxon England surely knew Oribasius' *Synopsis* and *Euporistes*; Vindicianus' *Epistula ad Pentadium Nepotem* and *Epitome Altera*; Theodorus Priscianus and pseudo-Theodore; pseudo-Apuleius; the *Herbarium* complex; Marcellus' *De Medicamentis*; Cassius Felix' *De Medicina*; Alexander of Tralles; the *Latin Alexander* with fragments of Philumenus and Philagrius of Epirus, and Gariopontus' *Passionarius Galeni*⁴⁸. This last work contains material at a second or third hand from Galenic treatises such as *Galenus ad Glauconem de medendi methodo Liber I*, *Galenus ad Glauconem de medendi methodo Liber II*, the pseudo-Galenic work *Galenus Liber tertius*, and *Galenus de podagra*. These medical treatises were all available to Anglo-Saxons as testifies, for example, MS Cambridge, Peterhouse 251 of the end of the eleventh century⁴⁹. Many other medical treatises appeared to be available in a few decades. Therefore, the English physicians seemed to use the same texts available to their European colleagues, "borrowed directly from the Classical Greek and Latin background which was later to be the source of the Salernitan School"⁵⁰. For what concerns the number and circulation of these works, there would have been only a handful of scientific and medical manuscripts in each place, and most of them were collections of different *libelli* filled up with *marginalia* of all kinds. In fact, as the readership of scientific texts would have been restricted to scholars, scientists or students, almost all the scientific and medical treatises of this period presented no dedications, suggesting that they were used as textbooks for pupils or handbooks for teachers⁵¹.

Even if England enjoyed its own tradition of medical texts, nevertheless its relationships with the Salernitan school helped to promote Greek studies in thirteenth century England⁵². An example of this phenomenon is given by Robert Grosseteste (1168-1253), bishop of Lincon and one of the greatest supporters of the Greek studies in

⁴⁷ French, Roger K., "Where the Philosopher Finishes, the Physician Begins: Medicine and the Arts Course in Thirteenth-century Oxford", *Dynamis* 20, 2000, pp. 75-106.

⁴⁸ Cameron, "The Sources of Medical Knowledge in Anglo-Saxon England", pp. 151-152.

⁴⁹ Gneuss, Helmut, "A preliminary list of manuscripts written or owned in England up to 1100", *Anglo-Saxon England* 9, 1980, pp. 1-60.

⁵⁰ Cameron, "The Sources of Medical Knowledge in Anglo-Saxon England", p. 152.

⁵¹ Burnett - Murray Jones, "Scientific and Medical Writings", pp. 446-462.

⁵² Berschin, Walter, *Medioevo greco-latino da Gerolamo a Niccolò Cusano*, Napoli: Liguori, 1989, pp. 309-314.

the West between the Early and the late Middle Ages. He translated *De fide orthodoxa* (already translated by Burgundio of Pisa⁵³), many works of John of Damascus, *Testamenta XII patriarcharum*, Aristotle's *Nicomachean Ethics*, *De virtutibus et vitiis* and *De passionibus* by pseudo-Andronicus⁵⁴. A small group of English friends, followers and students took part to his Greek studies: "...vocavit Graecos et fecit libros grammaticae graecae de Graecia et aliis (regionibus) congregari"⁵⁵. The most famous of them was Roger Bacon (1215-1292) who said that

non sunt quatuor Latini, qui sciant grammaticam Hebraeorum et Graecorum et Arabum: bene enim cognosco eos, quia et citra mare et ultra diligenter feci inquiri, et multum in his laboravi. Multi vero inveniuntur qui sciant loqui Graecum et Arabicum et Hebraeum inter latinos, sed paucissimi sunt, qui sciunt rationem grammaticae ipsius, nec sciunt docere eam: tentavi enim permultos. Sicut enim laici loquuntur linguas quas addiscunt et nesciunt rationem grammaticae, sic est de istis. Vidimus enim multos laicos qui optime loquebantur Latinum, et tamen nihil sciverunt de regulis grammaticae; et sic est modo de omnibus Hebraeis fere, et similiter de Graecis veris, non solum de Latinis qui sciunt Graecum et Hebraeum⁵⁶.

The Greek language suffered a great crisis in the thirteenth century, as is testified for example by Eberhard of Béthune's *De nominibus exortis a Greco*. The following lines show how Latin or Hebrew words might be taken as Greek:

Armenis interpretes, ut peryarmenias.
Bucolon est cultura boum; bucolica monstrant.
Quod sententia sit bole probat amphibolia,
quodque fides broge fit, hoc probat Allobroga.
Materiamque baton dicas; sit hyperbaton inde.
Est quoque dulce cymen; inde cymiterium.
Universale Catha; fit catholicus inde.

⁵³ An Italian jurist and Greek scholar of the twelfth century. Cfr. Durling, Richard J., ed., *Galenus latinus. I: Burgundio of Pisa's Translation of Galen's ΠΕΡΙ ΚΡΑΤΕΩΣ, 'De complexionibus'*, Berlin: De Gruyter, 1976.

⁵⁴ Powicke, Frederick M., "Robert Grosseteste and the Nicomachean Ethics", *Proceedings of the British Academy*, 16, 1930, pp. 85-104; Dunbabin, Jean, "Robert Grosseteste as Translator, Transmitter and Commentator: The «Nicomachean Ethics»", *Traditio*, 28, 1972, pp. 460-472.

⁵⁵ Brewer, John S., ed., *Fr. Rogeri Bacon opera quaedam hactenus inedita*, Cambridge: Cambridge University Press, 2013.

⁵⁶ Brewer, *Fr. Rogeri*, pp. 33-34. "There are not even four Romans who know the grammar of the Hebrews and the Greeks and of the Arabs: I know them very well because I carefully tried to find them on one side and beyond the sea, and I strove very much in these things. We found many people among the Romans who speak Greek, Arabic and Hebrew, however, very few are those who know the grammar of those languages, nor do they know how to teach them: in fact, many of them only attempted to do it. As in fact, many laymen speak languages that they had learnt and they do not know not the rules of grammar, so it is for these. In fact, we saw many laymen, who spoke Latin perfectly, but who knew nothing about the rules of grammar; and so it is for almost all the Hebrews, and likewise for the Greeks, not only for the Romans who knew Greek and Hebrew".

Atque *fecem calcon auricalcon* probat esse.
 En *contra* signat; hinc et *elencus* erit.
 Est *egle capra*; hinc *egloga* nomen habet.
 Est *lectos requies*; *allecto* dicitur inde.
 Estque *melos dulcis*, ac inde *melodia* dicas.
 Immutat *morphos*; hinc *metamorphoseos*.
Orge cultura est; dic inde *georgica* nasci [...]
 Estque *bonum manon*; *immanis* comprobatur illud.
 Dic *pitos* esse viam; dicas hinc *compita* nasci.
 Quod *bar* filius est, probatur illud *Bartolomeus*⁵⁷.

The same phenomenon can be seen in Bacon's *Brito metricus*, which is full of Hebrew and Greek words matched with many wrong and true etymologies:

Fanum dic templum cui fano (φαίνω) prebuit ortum sue fone (φωνή) aut Funus; fert hoc a fando Latinus. Dicas fantasma de fano iungeque fasma (φάσμα) cum fantasia, tribus istis vis datur una⁵⁸.

But the appearance of university-trained physicians soon after these words were written led to the establishment of a new learned medical élite in Europe, who based every diagnosis or prognosis on a rational understanding of the nature and course of illness through the deep knowledge of Greek medical texts, which became the centre-pieces of the medical curriculum of official medical classes.

II.4. TEACHING MEDICINE IN THE MIDDLE AGES

It is now necessary to abandon England and go back in time and to a wider European perspective, in order to gauge the relationship of the transmission of medical lore with medical teaching practice.

⁵⁷ Berschin, Walter, *Greek Letters and the Latin Middle Ages: from Jerome to Nicholas of Cusa*, translated by Jerold C. Frakes, Washington: Catholic University of America Press, 1988, p. 253. "The Armenian translator is called *peryarmanias*. *Bucolon* is the tending of the bulls, from which *bucolics* takes its meaning. What a *sententia* is, it is proved by *amphibolia*, and what is *fides broge* is shown by *allobroga*. And you call matter *baton*, whence *hyperbaton* comes. There is also a *dulce cymen* from which comes *cymiterium*. A *universal Catha* becomes a *Catholic*. And *auricalcon* seems to be *fecem calcon*, a sediment. Here the signs; and from here there will be *elencus*. There is the *egle capra*; and from here comes the name *egloga*. There is the *lectos requies*, the rest in the bed from which comes the word *allecto*. And there is the sweet song, or *melos dulcis* and, as a consequence, you say *melody*. *Morphos* changes; from which *metamorphoseos*. There is the phrase *orge cultura*, from which comes *georgica* [...] the words *bonum manon* justify the word, then you say that *pitos* is the road; from here the word *compita* is tell to be born. That *bar* means son is explained *Bartolomew*".

⁵⁸ Berschin, *Greek Letters and the Latin Middle Ages: from Jerome to Nicholas of Cusa*, p. 253. "Fanum is a temple, for which *fano* offers the origin or *fone* or *Funus*; the Latins derive it from *fari*. You may say *fantasma* comes from *fano* and join *fasma* with *fantasia*, all three words have the same meaning".

Until the eleventh century, medicine was still seen as a mechanical art, but later on it increasingly came to be perceived as an intellectual discipline for at least three reasons: first of all it was derived from principles and demonstrated by reason; then it was closely related to the branch of Aristotelian philosophy dealing with the fundamental principles of change in the natural world; and last but not least, the contents of medical knowledge were best conveyed by formal instruction based upon texts. This led medical education to a new approach with medical students: the aim was no longer to tell practitioners what they should do, but to explain what physicians should think and know⁵⁹. This process began in twelfth-century Salernitan schools, which “put together a corpus of material for the purposes of teaching this new medicine which eventually became the basis of the medical curriculum in the new universities”⁶⁰. Doctors used the rediscovered ancient learned medicine to transform themselves from “mercenary treaters of disease” into speculators on the natural philosophical principles of health and disease, grounding them in Aristotelian natural philosophy, “even to the extent of eventually overcoming the traditional suspicion of the greedy and less than honest doctor”⁶¹. Teachers, who wanted to show how medicine was subordinated to natural philosophy, were forced both to explain many of the fundamental principles of medicine to their students, and to make numerous references to the basic works of the medical curriculum where the theoretical principles of medicine were clearly laid out. Thus, students in medicine were introduced to a surprisingly large body of medical knowledge, most of which came from antiquity. Medieval medical masters knew (from Haly Ridwan’s commentary on Galen’s *Tegni*) that to teach medicine was an activity by which the master could enrich the soul of his pupil projecting his own intentions into the student’s soul, and this could happen either when the pupil listened to the words of the master in the classroom, or by reading the master’s words in his absence in a textbook or in an ancient source. For this reason it was essential for a master to teach his students what body of medical texts they had to study and how to read them⁶².

In the first half of the thirteenth century medicine became a university discipline, an event which granted the continuity and stability of a unique way of teaching

⁵⁹ O’Boyle, Cornelius, “Learning Medieval Medicine: The Boundaries of University Teaching. Introduction”, *Acta Hispanica ad Medicinae Scientiarumque Historiam Illustrandam* 20, 2000, pp. 17-29; French, “Where the Philosopher Finishes, the Physician Begins: Medicine and the Arts Course in Thirteenth-century Oxford”, pp. 75-80.

⁶⁰ O’Boyle, Cornelius, *The Art of Medicine. Medical Teaching at the University of Paris, 1250-1400*, Leiden: Brill, 1998, p. 263.

⁶¹ French, “Where the Philosopher Finishes, the Physician Begins: Medicine and the Arts Course in Thirteenth-century Oxford”, pp. 78-79.

⁶² O’Boyle, “Learning Medieval Medicine: The Boundaries of University Teaching. Introduction”, p. 264.

medicine, and that led to the establishment of a new medical élite in Europe united by common studies. These university-trained physicians rooted their rational understanding of illness in classical Greek or Islamic medicine as it had been assimilated in the medical schools of Salerno. In fact, “Salernitan masters used the tools of scholastic exegesis to construct from these new sources a body of medical knowledge [...] emphasizing its connexion with Aristotelian natural philosophy. They also put together a corpus of material for the purposes of teaching this new medicine which eventually became the basis of the medical curriculum in the new universities”⁶³. Medical scholars of the thirteenth century started from these ancient sources to promote a new idea of medicine where theory-teaching and practice were not exclusive or alternative, but inextricably connected. Moreover, lecturing became a means to convey a conception of medicine in terms of knowledge of books: thus, to know medicine meant to know authoritative sources, and the attempt to fix a syllabus of medical textbooks aimed at defining the substance of medicine itself. The Salernitan *Ars medicine*, for example, was often considered the starting point for medical masters to define their *corpus* of medical texts. From its very title, it emerges that this collection was considered the foundation of the art of medicine. However, as *Ars medicine* was heterogeneous and lacked an authoritative source, even references to Galen’s *Ars medica* and Haly Ridwan’s commentary on Galen were introduced. Whereas *Ars medicine* was based in great part on Hippocratic works, the commentaries were almost all Galenic. When Galen’s commentaries were introduced in the university *curricula*, masters of medicine found frequently cross-references to other Galenic works where the topic was better explained. In seeking to fully understand the commentaries masters started investigating as many treatises mentioned by Galen as possible, thus underlining his central position as the ultimate *auctoritas* in medical education⁶⁴.

Even in the English context, we can find many early examples of this tendency to bookish medicine hinged on the unimpeachable authority of Galen. In fact, in the thirteenth-century copies of Aristotle’s *De sensu et sensatio* there are many quotations from Ḥunayn ibn Ishāq’s (Johannitius) *Isagoge*; and *marginalia* of the pseudo-Aristotelian *De differentia spiritus et anime* in Oxford refer to Hippocrates’ *Prognostics*. Many were also the copies of the *Ars medicine*, as it was the main corpus of teaching medical texts, and of the *Ars commentata*, a version of the *Ars medicine* with Galenic commentaries. These texts were often used in classrooms as is testified by

⁶³ O’Boyle, *The Art of Medicine*, p. 264.

⁶⁴ O’Boyle, *The Art of Medicine*, pp. 264-267.

the numerous glosses, to which the *magister* often provided corrections⁶⁵. A characteristic feature of medieval medicine in England was the enthusiasm for the ownership of medical books and compendia of practical medicine, as the thirteenth-century *Compendium* of Gilbertus Anglicus testifies⁶⁶. Another example comes from the extant will of Simon Brendon, Doctor of Medicine by 1355, who left to Merton his whole medical library, which was composed of the already-mentioned *Ars medicine*, Avicenna's *Canon*, two books written by the Persian physician and philosopher al-Rāzī (865-930), two volumes of Galen, five volumes with table of contents for medical books, and many other medical compilations⁶⁷.

II.5. WHERE DID *DE METHODO MEDENDI* GO?

With the gradual decline in Greek studies, and a growing demand for Latin versions of Greek authors, the first Latin translations of Galen were made in the sixth century. One of the most ancient testimonies is found in *Institutiones* by Cassiodorus, the former minister to Theodoric the Ostrogoth, where the author informs us that a Latin version of the *Therapeutica Galieni ad philosophum Glauconem destinata* was already current in the West. This is probably a two books treatise on the care and treatment of fevers that is an abridgement of the larger work *De methodo medendi*, which apparently was not translated into Latin until the late eleventh century. It is worth noting that the titles *De methodo medendi* or *Therapeutica* specifically refer to Galen's *magnus opus* addressed to Hiero or Hero in fourteen books, for which there were also in use the alternative titles *De ingenio sanitatis* and *Megategni*. It should be noted that in the early Middle Ages the titles *De methodo medendi* or *Therapeutica* were also attached to two other Galenic works: *On the Care and Cure of Fevers*, addressed to the philosopher Glauco, and *Ars parva/Microtegni/Tegni* in three books. This sort of mistakes is another proof of the circulation of Galenic medical texts, which were alternatively confused with each other, or associated with wrong titles⁶⁸.

⁶⁵ O'Boyle, "Learning Medieval Medicine: The Boundaries of University Teaching. Introduction", pp. 17-29: copies of the *Ars medicine* are MS Cambridge, Peterhouse, 14; MS Cambridge, Peterhouse, 247, opening flyleaf; twelve different mss at St Augustine's Abbey given by eight donors; MS London, British Library, Royal 12.

⁶⁶ Talbot, C. H., *Medicine in Medieval England*, London: Oldbourne, 1967, pp. 72-73.

⁶⁷ Burnett - Murray Jones, "Scientific and Medical Writings", pp. 446-462.

⁶⁸ Kibre, Pearl - Kelter, Irving A., "Galen's Methodus Medendi in the Middle Ages", *History and Philosophy of the Life Sciences*, 9, 1987, pp. 17-36. See also Thorndike, Lynn - Kibre, Pearl, *A Catalogue of Incipits of Mediaeval Scientific Writings in Latin*, London: the Mediaeval Academy of America, 1963, coll. 272, 380, 475, 480, 742, 910, 970, 1163, 1212, 1289, 1297, 1417, 1419, 1495, 1563.

Beginning in late eleventh century the body of medical writings available in Latin was greatly enlarged by translations, first from Arabic and subsequently from Greek, which restored substantial parts of the *corpus* of Greek medical texts, especially of treatises attributed to Hippocrates and Galen together with the most recent Arabic contributions. During the Middle Ages the majority of Latin translations was made from Arabic versions and only a few of them were made directly from the original Greek texts. The most renowned translators of the time were the already-mentioned Costantinus Africanus, Gerard of Cremona and Burgundio of Pisa. The first two translated from Arabic, the third from Greek. They were interested in translating many ancient medical treatises like those by al-Rāzī, Abū l-Qāsim and Ibn Sinā, but the most appreciated medical treatises were those by Galen, while the best known pharmacological work was Dioscorides' *De materia medica*, which became available in this period in an enlarged and alphabetized Latin version⁶⁹.

The already-mentioned *De methodo medendi* can be taken as a case study for all that has been written in previous paragraphs. Studied in various contexts, not only medical, it enjoyed an enormous and widespread circulation during the Middle Ages and the Renaissance and it has been transmitted in a huge number of translations. Many eminent scholars like Durling or Diels have tried to list and analyse as many translations of the Galenic works as possible, but without claiming to be complete, as the diffusion of his enormous *corpus* thwarted the compiling effort⁷⁰.

As has already been noted, *De methodo medendi* was included in the Syriac and Arabic translations listed as the first two stages of the translation and preservation process. Then, it was among the earliest of the Galenic works brought from Alexandria to the Latin West. The Latin manuscript tradition of *De methodo medendi* survives in a multitude of copies that testify to three different Latin versions, the earliest of which is an eleventh-century paraphrase from Arabic made by the already-mentioned Constantine the African (d. 1087), the Carthaginian monk of the Abbey of Montecassino, who translated the whole *De methodo medendi* with the title of *Megategni*, writing a dedicatory letter to his pupil Johannes. This work comes from an Arabic *compendium* of the Greek treatise, probably by Ishāq ibn Sulaimān al-Isrā'īlī,

⁶⁹ Bullough, *Universities, Medicine and Science in the Medieval West*, pp. 1-14.

⁷⁰ Durling, Richard J., "A Chronological Census of Renaissance Editions and Translations of Galen", *Journal of the Warburg and Courtauld Institutes*, 24, 1961, pp. 230-305; Durling, "Corrigenda and Addenda to Diels' Galenica. I. Codices vaticani", pp. 461-476; Diels, Hermann A., *Die Handschriften der antiken Ärzte, I. Teil: Hippokrates und Galenos*, Berlin: Königliche Akademie der Wissenschaften, 1905; Diels, Hermann A., *Die Handschriften der antiken Ärzte. Griechische Abteilung*, Berlin: Königliche Akademie der Wissenschaften, 1906.

who was a Jewish philosopher and royal physician of Kairouan⁷¹. Copies of Constantine's translation are extant throughout Europe as can be seen from the following list. This list, as the followings, is taken from Kibre-Kelter's work on Galen's *De methodo medendi* of 1987, integrated with some additions by Kibre (1991) and Manni (2013):

- Basel, Öffentliche Bibliothek der Universität Basel, D III 8, s. XIII exeunte, ff. 146rA-184rA;
- Berlin, Staatsbibliothek zu Berlin, Preußischer Kulturbesitz, lat. f. 638, s. XIII exeunte, ff. 168v-191r;
- Boulogne-sur-Mer, Bibliothèque Municipale, 197, s. XIII, ff. 88rA-144rA;
- Brugge, Grootseminarie, 93/61, second half s. XIII, ff. 176v-196r;
- Cambrai, Bibliothèque Municipale, 907, s. XIV, ff. 1r-37r;
- Cambridge, Gonville and Caius College, 98, s. XIV exeunte, ff. 7a-80b;
- Cambridge, Peterhouse, 33, s. XIII exeunte, ff. 1rA-23rB;
- Cambridge, St. John's College, 78, s. XIII exeunte, ff. 32r-61r;
- Chartres, Bibliothèque Municipale, 284 (340), s. XIII exeunte, ff. 164vB;
- Edinburgh, University Library, 166, s. XIII exeunte, ff. 48vA-75rA;
- Erfurt, Universitäts und Forschungsbibliothek Erfurt/Gotha, Amploniana F 249, s. XIII exeunte, ff. 1rA-25vA;
- Eton, Eton College Library, 132, s. XIII exeunte, ff. 83vB-110rA;
- Leipzig, Universitätsbibliothek, 1184, s. XIII exeunte, ff. 68rA-105rA;
- Lüneburg, Ratsbücherei, D 2° 5, 01/08/1423-31/12, ff. 113rA-170rB;
- Nürnberg, Stadtbibliothek, Cent. III, 16, s. XIII exeunte, ff. 144vA-157vB;
- Oxford, Balliol College, 231, s. XIII exeunte, ff. 107v-135v;
- Oxford, Bodleian Library, Canon. misc. 504, s. XV, ff. 131rA-140vB;
- Oxford, Merton College, 218, s. XIV ineunte, ff. 99r-129r;
- Paris, Bibliothèque de l'Université, 125, s. XIII exeunte, ff. 173r-207r;
- Prague, Národní Knihovna České republiky, VIII.A.1, mid s. XIV, ff. 72vB-99vB;
- Rome, Biblioteca Angelica, 1456, s. XV, ff. 114v-119r;
- Salzburg, Salzburg Museum, 2164, s. XIII exeunte, ff. 1r-28r⁷²;

⁷¹ Boss, "The Methodus Medendi as an Index of Change in the Philosophy of Medical Science in the Sixteenth and Seventeenth Centuries", pp. 13 - 42.

⁷² Kibre - Kelter, "Galen's Methodus Medendi in the Middle Ages", pp. 17-36; Kibre, Pearl, "A List of Latin Manuscripts Containing Medieval Versions of the Methodus Medendi", in *Galen's Method of*

- Vatican City, Biblioteca Apostolica Vaticana, Pal. lat. 1097, s. XIII, ff. 1rA-20vB;
- Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2378, s. XIV first half, ff. 121rA-142vB.

It emerges that the great majority of these manuscripts is quite old (17 of 24 records are dated to the thirteenth century). It is also remarkable that one third of the copies of Constantine's work are extant in England, i.e. more than in any other country.

Then, in the twelfth century Gerard of Cremona (1114-1187) made a second translation of the work from the Arabic with the title of *De ingenio sanitatis*. It is testified in many copies of the thirteenth and fourteenth century, scattered in all the greatest European libraries:

- Berlin, Staatsbibliothek zu Berlin, Preußischer Kulturbesitz, lat. f. 638, s. XIII exeunte, ff. 83v-134v;
- Bernkastel-Kues, Bibliothek des Sankt Nikolaus-Hospitals, 296, 1356-1358, ff. 27r-71v;
- Bernkastel-Kues, Bibliothek des Sankt Nikolaus-Hospitals, 297, s. XIII exeunte ff. 45v-109v;
- Brugge, Grootseminarie, 93/61, s. XIII second half, ff. 89r-135r;
- Cambridge, Peterhouse, 33, s. XIII exeunte, ff. 241vB-258vB;
- Cesena, Biblioteca Malatestiana, D.XXV.2, s. XIII exeunte, ff. 1rA-47vA;
- Cesena, Biblioteca Malatestiana, S.V.4, s. XIV second half, ff. 219rA-261vB;
- Chartres, Bibliothèque Municipale, 284 (340), s. XIII exeunte, ff. 80v-129v;
- Chartres, Bibliothèque Municipale, 293 (351), s. XIV, ff. 59r-79r;
- Darmstadt, Hessische Landes- und Hochschulbibliothek, 329, s. XIII exeunte, ff. 91rA-100rB;
- Edinburgh, University Library, 166, s. XIII exeunte, ff. 213rA-241vB;
- Eton, Eton College Library, 132, s. XIII exeunte, ff. 110r-160r;
- Florence, Biblioteca Medicea Laurenziana, Gaddi 58, s. XIII second half, ff. 1rA-67rB;
- Kassel, Murhardsche Bibliothek der Stadt Kassel und Landesbibliothek, 8° med. 10, 19/08/1331-10/10/1336, ff. 53v-105r;
- Klosterneuburg, Stiftsbibliothek, 126, s. XIV first half, ff. 1rA-79r;

Healing, edited by Fridolf Kudlien - Richard J. Durling, Leiden: Brill, 1991, pp. 117-122; Manni, Elisa, "Il libro IV del *De ingenio sanitatis* di Galeno: note alla traduzione di Gerardo da Cremona alla luce dell'esame di quattro testimoni", *Galenos*, 7, 2013, pp. 125-136.

- Kraków, Biblioteka Jagiellonska, 800, s. XIII exeunte, ff. 152r-207r;
- London, British Library, Harley 3748, s. XIV exeunte, ff. 42rB-112vB;
- London, Wellcome Library, 287, s. XIV exeunte, ff. 1rA-52vB;
- Madrid, Biblioteca Nacional de España, 1198, s. XIV, ff. 99rA-147vB;
- Munich, Bayerische Staatsbibliothek, Clm 11, s. XIV, ff. 16rA-35vA;
- Munich, Bayerische Staatsbibliothek, Clm 13026, s. XIV first half, ff. 12rA-65rA;
- Napoli, Biblioteca Nazionale Vittorio Emanuele III, VIII D 34, s. XIV first half, ff. 57rA-72vA;
- Nürnberg, Stadtbibliothek, Cent. III, 16, s. XIII exeunte, ff. 90rA-123vA;
- Oxford, All Souls College, Codrington Library, 68, s. XIII, ff. 113rA-189rB;
- Oxford, Balliol College, 231, s. XIII exeunte, ff. 330r-390v;
- Oxford, Bodleian Library, Canon. misc. 366, 1101-1500, ff. 143r-150v;
- Oxford, Bodleian Library, e Museo 19, s. XIV exeunte, ff. 68vA-86vB;
- Paris, Bibliothèque de l'Arsenal, 1080, 27/03/1333-03/09/1343, ff. 2v-6v;
- Paris, Bibliothèque de l'Université, 125, s. XIV exeunte, ff. 99vB-121vA;
- Paris, Bibliothèque Mazarine, 3598, s. XIV, ff. 1r-233r;
- Paris, Bibliothèque nationale de France, nouv. acq. lat. 2381, s. XIV, ff. 25r-26v;
- Paris, Bibliothèque nationale de France, Par. lat. 9331, s. XIV exeunte, ff. 1rA-36rB;
- Paris, Bibliothèque nationale de France, Par. lat. 14389, s. XIV exeunte, ff. 207rB-279vB;
- Paris, Bibliothèque nationale de France, Par. lat. 15456, s. XIII, ff. 61rA-115vB⁷³;
- Prague, Národní knihovna České republiky, VIII.A.1, mid s. XIV, ff. 1rA-62rA;
- Salzburg, Salzburg Museum, 4004, s. XIV, ff. 84r-161v;
- Tours, Archives départementales de l'Indre-et-Loire, 4, s. XIV, ff. 1rA-vB;
- Vatican City, Biblioteca Apostolica Vaticana, Pal. lat. 1097, s. XIV first half, ff. 22rA-114rA;

⁷³ This manuscript has never been catalogued as a witness of *De ingenio sanitatis*, but it is dated back to the thirteenth century and it is openly attributed to Gerard in the *colophon* at the end of the work: “Explicit liber de ingenio sanitatis Galenii, qui continet quattuordecim particulas, translatus a magistro Gerardo Cremonensi in Toletum de arabico in latinum. Deo gratias”: Manni, “Il libro IV del *De ingenio sanitatis* di Galeno: note alla traduzione di Gerardo da Cremona alla luce dell'esame di quattro testimoni”, p. 127.

- Vatican City, Biblioteca Apostolica Vaticana, Reg. lat. 1305, s. XIV first half, ff. 81rA-107rA;
 - Vatican City, Biblioteca Apostolica Vaticana, Urb. lat. 235, s. XIV first half, ff. 1rA-39rB;
 - Vatican City, Biblioteca Apostolica Vaticana, Urb. lat. 236, s. XIV, ff. 1rA-23vB, 25rA-31vB;
 - Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2131, s. XIII first second half, ff. 60r-v;
 - Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2369, mid s. XIV ff. 81rA-95rB;
 - Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2375, s. XIII exeunte, ff. 304rA-398v;
 - Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2377, s. XIII exeunte, ff. 1rA-51vB;
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- Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2378, s. XIV first half, ff. 1rA-42vB;
 - Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2379, s. XIV, ff. 1rA-63vB;
 - Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2385, s. XIV first half, ff. 187vA-217vB;
 - Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 4421, s. XIV, ff. 55rA-vC;
 - Wien, Österreichische Nationalbibliothek, Cod. 2273, s. XIV, ff. 13rA-56vB;
 - Wrocław, Biblioteka Uniwersytecka, IV F.25, s. XIV ineunte, ff. 168vA-186rB;
 - Wrocław, Biblioteka Uniwersytecka, IV F.26, s. XIII, ff. 88vB-107vB;
 - Würzburg, Universitätsbibliothek, M. p. med. f. 2, s. XIII exeunte, ff. 5rA-60rA;⁷⁴.

As noted above, this translation comes from the Arabic version that translated the Greek text in a complete way, sometimes expanding the Galenic text or adding explanations. On the contrary, Gerard's translation tends to summarise, omitting some paragraphs, especially where Galen goes into a detailed description on how the work would be developed and gives references to other medical treatises. Gerard also omits the original invocation to the gods, but the most evident mistake is the complete misunderstanding

⁷⁴ Kibre - Kelter, "Galen's Methodus Medendi in the Middle Ages", pp. 17-36; Kibre, "A List of Latin Manuscripts Containing Medieval Versions of the Methodus Medendi", pp. 117-122.

of the Arabic texts about the names of the different medical schools: οἱ ἐμπειρικοὶ becomes *methodoyci*, while οἱ δογματικοὶ is wrongly translated as *loyci*, and οἱ λογικοὶ can be both *loyci* and *empirici*⁷⁵.

Even Burgundio of Pisa (c. 1110-1193) created a translation from Greek, with the title *Θεραπευτικά*, which was limited to Books 7-14⁷⁶. Burgundio was a lawyer and a diplomatist, he went to Constantinople twice, in 1136 and in 1169, and there he could read various Byzantine manuscripts of *De methodo medendi* by Ioannikios⁷⁷. The *Θεραπευτικά* lacked the last few paragraphs that were completed by Peter of Abano (1257-1316).

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- Cesena, Biblioteca Malatestiana, D.XXIII.1, s. XIII exeunte, ff. 1rA-46rA;
 - Cesena, Biblioteca Malatestiana, D.XXV.2, s. XIII exeunte, ff. 48rA-110vB;
 - Cesena, Biblioteca Malatestiana, S.V.4, s. XIV second half, ff. 159rA-198rB, completed by Peter of Abano;
 - Cortona, Biblioteca del Comune e dell'Accademia Etrusca, 109, s. XIV first half, ff. 40rA-79vB;
 - Erfurt, Universitäts- und Forschungsbibliothek Erfurt/Gotha, Amploniana F 278, s. XIII exeunte, ff. 118r-171r, completed by Peter of Abano;
 - Florence, Biblioteca Nazionale Centrale, Conv. Soppr. J.III.8, s. XIV first half, ff. 1rA-53rA, completed by Peter of Abano;
 - Florence, Biblioteca Nazionale Centrale, Conv. Soppr. J.V.45, mid s. XIV, ff. 1rA-54vB;
 - Kraków, Biblioteka Jagiellonska, 800, s. XIII exeunte, ff. 209r-257v;
 - London, British Library, Add. 22669, s. XIV, ff. 1rA-27vB, completed by Peter of Abano;
 - London, Wellcome Library, 285, s. XIV ineunte, ff. 1rA-40rA, completed by Peter of Abano;
 - Madrid, Biblioteca Nacional de España, 1978, s. XIV first half, ff. 2rA-45vA, completed by Peter of Abano;
 - Metz, Bibliothèque Municipale, 178, s. XIV, ff. 53vB-70vB;
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⁷⁵ Manni, “Il libro IV del *De ingenio sanitatis* di Galeno: note alla traduzione di Gerardo da Cremona alla luce dell'esame di quattro testimoni”, pp. 127-128.

⁷⁶ Fortuna, Stefania - Urso, Anna Maria, “Burgundio da Pisa traduttore di Galeno: nuovi contributi e prospettive”, in *Sulla tradizione indiretta dei testi medici greci*, edited by Ivan Garofalo - Alessandro Lami - Amneris Roselli, Pisa-Roma: Fabrizio Serra, 2009, pp. 139-175.

⁷⁷ Durling, Richard J., ed., *Galenus latinus. I: Burgundio of Pisa's Translation of Galen's ΠΕΡΙ ΚΡΑΧΕΩΝ, 'De complexionibus'*, Berlin: De Gruyter, 1976.

- Montecassino, Archivio dell' Abbazia, 70, s. XIV;
- Monza, Biblioteca Capitolare, f-8/165, 23/12/1285-10/10/1288, ff. 405A-419A;
- Munich, Bayerische Staatsbibliothek, Clm 35, 1279, ff. 116rA-144v;
- Paris, Bibliothèque nationale de France, Par. lat. 9331, s. XIV exeunte, ff. 37rA-90vB, completed by Peter of Abano;
- Salzburg, Salzburg Museum, 4004, s. XIV, ff. 84r-161v, completed by Peter of Abano;
- Vatican City, Biblioteca Apostolica Vaticana, Barb. lat. 178, 06/05/1329-14/03/1330, ff. 3rA-44vA, completed by Peter of Abano;
- Vatican City, Biblioteca Apostolica Vaticana, Urb. lat. 235, s. XIV ineunte, ff. 41rA-82rB;
- Vatican City, Biblioteca Apostolica Vaticana, Urb. lat. 247, s. XIII exeunte, ff. 205rA-242vB;
- Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2375, s. XIII exeunte, ff. 511rA-575rB;
- Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2381, s. XIV second half, ff. 134rB-182vB, completed by Peter of Abano;
- Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2385, s. XIV first half, ff. 217vB-265vA, completed by Peter of Abano;
- Venice, Biblioteca Nazionale Marciana, Lat. Z 531 (=1812), 1305, ff. 68rA-106vA, completed by Peter of Abano;
- Wien, Österreichische Nationalbibliothek, Cod. 2272, s. XIV, ff. 93rA-126vB;
- Wien, Österreichische Nationalbibliothek, Cod. 2294, mid s. XIV, ff. 1r-82v, completed by Peter of Abano⁷⁸.

Books 1-6 were translated into Latin by Niccolò from Reggio (1280-1350) a few years later. This translation was often attributed to Gerard of Cremona as is testified for example by the first Latin version of Galen printed in Venice in 1490 by Diomedes Bonardo, which has Niccolò's translation for the first six books while for the last six there is the translation made by Burgundio with the conclusion of Peter of Abano. Niccolò worked also on about fifty Galenic writings, always starting from the Greek text and translating *de verbo ad verbum*⁷⁹.

⁷⁸ Kibre - Kelter, "Galen's Methodus Medendi in the Middle Ages", pp. 17-36; Kibre, "A List of Latin Manuscripts Containing Medieval Versions of the Methodus Medendi", pp. 117-122.

⁷⁹ See Ogden, Margaret S., "The Galenic Works Cited in Guy de Chauliac's *Chirurgia magna*", *Journal of the History of Medicine and Allied Sciences*, 28, 1973, pp. 24-33: Guy de Chauliac who was a French

- Berlin, Staatsbibliothek zu Berlin, Preußischer Kulturbesitz, lat. f. 638, s. XIII exeunte, ff. 83v-134v;
- Bernkastel-Kues, Bibliothek des Sankt Nikolaus-Hospitals, 296, 1356-1358, ff. 27r-71v;
- Bernkastel-Kues, Bibliothek des Sankt Nikolaus-Hospitals, 297, s. XIII exeunte, ff. 45v-109v;
- Brugge, Grootseminarie, 93/61, s. XIII second half, ff. 89r-135r;
- Cambridge, Peterhouse, 33, s. XIII exeunte, ff. 241vB-258vB;
- Cesena, Biblioteca Malatestiana, D.XXV.2, s. XIII exeunte, ff. 1rA-47vA;
- Cesena, Biblioteca Malatestiana, S.V.4, s. XIV second half, ff. 219rA-261vB;
- Chartres, Bibliothèque Municipale, 284 (340), s. XIII second half, ff. 80v-129v;
- Chartres, Bibliothèque Municipale, 293 (351), s. XIV, ff. 59r-79r;
- Darmstadt, Hessische Landes- und Hochschulbibliothek, 329, s. XIII exeunte, ff. 91rA-100rB;
- Edinburgh, University Library, 166, s. XIII exeunte, ff. 213rA-241vB;
- Eton, Eton College Library, 132, s. XIII exeunte, ff. 110r-160r;
- Florence, Biblioteca Medicea Laurenziana, Gaddi 58, s. XIV first half, ff. 1rA-67rB;
- Kassel, Murhardsche Bibliothek der Stadt Kassel und Landesbibliothek, 8° med. 10, 19/08/1331-10/10/1336, ff. 53v-105r;
- Klosterneuburg, Stiftsbibliothek, 126, s. XIV first half, ff. 1rA-79r;
- Kraków, Biblioteka Jagiellonska, 800, s. XIII second half, ff. 152r-207r;
- London, British Library, Harley 3748, s. XIV exeunte, ff. 42rB-112vB;
- London, Wellcome Library, 287, s. XIV exeunte, ff. 1rA-52vB;

physician and surgeon of the fourteenth century quoted Galen thousands of times in his *Chirurgia magna* (1363). As he writes at the beginning of his work: “Et ego . . . vidi . . . multa scripta predictorum precipue Galieni quia quot reperiebantur libri in utraque translatione habui et eos cum diligentia qua potui studui” (Ms. Paris, Bibliothèque nationale de France, 7132, f. 2v) that means that he could see many treatises of those authors he had previously mentioned, especially of Galen, inasmuch as he had as many books of either translation as were to be found and he studied them as diligently as he could. Here he refers to Latin translations made directly from the Greek text as opposed to Latin translations from the Arabic translations of the Greek clearly preferring the former than the latter. As Ogden points out, Guy's most explicit statement of preference concerns the translations of his elder contemporary, Nicholas of Reggio, about which he writes that “In hoc tempore in Calabria magister Nicholaus de Regio in lingua greca et latina perfectissimus ad requestam regis Roberti multos libros G(alieni) translavit et eos nobis in curia transmisit qui altioris et perfectioris stili videntur quam translati de arabica lingua” (Ms. Paris, Bibliothèque nationale de France, 7132, f. 2v), which means that at this time in Calabria Master Nicholas de Regio, who was skilled both in Greek and Latin, translated at the order of King Robert many of Galen's books and sent them to the (Papal) court. They seem to be closer to the sources and more refined than the translations from the Arabic tongue. Therefore, the excellence of Nicholas' translations liay in the exactness with which they reproduce the original Greek texts, word for word, and even preserving its syntactic constructions.

- Madrid, Biblioteca Nacional de España, 1198, s. XIV, ff. 99rA-147vB;
- Munich, Bayerische Staatsbibliothek, Clm 11, s. XIV, ff. 16rA-35vA;
- Munich, Bayerische Staatsbibliothek, Clm 13026, s. XIV first half, ff. 12rA-65rA;
- Naples, Biblioteca Nazionale Vittorio Emanuele III, VIII D 34, s. XIV first half, ff. 57rA-72vA;
- Nürnberg, Stadtbibliothek, Cent. III, 16, s. XIII exeunte, ff. 90rA-123vA;
- Oxford, All Souls College, Codrington Library, 68, s. XIII, ff. 113rA-189rB;
- Oxford, Balliol College, 231, s. XIII exeunte, ff. 330r-390v;
- Oxford, Bodleian Library, Canon. misc. 366, 1101-1500, ff. 143r-150v;
- Oxford, Bodleian Library, e Musaeo 19, s. XIV exeunte, ff. 68vA-86vB;
- Paris, Bibliothèque de l'Arsenal, 1080, 27/03/1333-03/09/1343, ff. 2v-6v;
- Paris, Bibliothèque de l'Université, 125, s. XIII exeunte, ff. 99vB-121vA;
- Paris, Bibliothèque Mazarine, 3598, s. XIV, ff. 1r-233r;
- Paris, Bibliothèque nationale de France, nouv. acq. lat. 2381, s. XIV, ff. 25r-26v;
- Paris, Bibliothèque nationale de France, Par. lat. 9331, s. XIV exeunte, ff. 1rA-36rB;
- Paris, Bibliothèque nationale de France, Par. lat. 14389, s. XIII terzo quarto, ff. 207rB-279vB;
- Prague, Národní knihovna České republiky, VIII.A.1, mid s. XIV, ff. 1rA-62rA;
- Salzburg, Salzburg Museum, 4004, s. XIV, ff. 84r-161v;
- Tours, Archives départementales de l'Indre-et-Loire, 4, s. XIV, ff. 1rA-vB;
- Vatican City, Biblioteca Apostolica Vaticana, Pal. lat. 1097, s. XIV first half, ff. 22rA-114rA;
- Vatican City, Biblioteca Apostolica Vaticana, Reg. lat. 1305, s. XIV first half, ff. 81rA-107rA;
- Vatican City, Biblioteca Apostolica Vaticana, Urb. lat. 235, s. XIV ineunte, ff. 1rA-39rB;
- Vatican City, Biblioteca Apostolica Vaticana, Urb. lat. 236, s. XIV, ff. 1rA-23vB, 25rA-31vB;
- Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2131, s. XIII second half, ff. 60r-v;
- Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2369, mid s. XIV, ff. 81rA-95rB;

- Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2375, s. XIII exeunte, ff. 304rA-398v;
- Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2377, s. XIII exeunte, ff. 1rA-51vB;
- Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2378, s. XIV first half, ff. 1rA-42vB
- Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2379, s. XIV, ff. 1rA-63vB;
- Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2385, s. XIV first half, ff. 187vA-217vB;
- Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 4421, s. XIV, ff. 55rA-vC;
- Wien, Österreichische Nationalbibliothek, Cod. 2273, s. XIV, ff. 13rA-56vB;
- Wrocław, Biblioteka Uniwersytecka, IV F.25, s. XIV ineunte, ff. 168vA-186rB;
- Wrocław, Biblioteka Uniwersytecka, IV F.26, s. XIII, ff. 88vB-107vB;
- Würzburg, Universitätsbibliothek, M. p. med. f. 2, s. XIII exeunte, ff. 5rA-60rA⁸⁰.

Among these medieval translations, those made from Greek had at first lesser fortune than those from Arabic because the former were considered too harsh and complicated for their literality, and for this reason the latter were preferred at least until the end of the fourteenth century. In fact, the Arabic translators hoped to pick out the essence of Galen's anatomy and physiology and they consequently omitted many of those passages in which Galen passionately and extensively refuted the opinions of his predecessors, preferring simple statements with Galen's viewpoint, without its elaborate cross-references or practical proofs. They were also interested in Galen's concrete statements about the structure and function of the human body and less focused on the relationship between these ideas and the rest of Hellenistic culture, whether historically or philosophically. Thus, the Galenic texts lost their inner strength and cohesion because of the omissions by the Arabic translators, and this process was also inevitably furthered by the difficulties in translating technical Greek words in Arabic.

Both at the Greek-Arabic and Arabic-Latin stages the target language was technically ill equipped to receive the complex ideas and terminology of the work, and translators faced the double difficulty of understanding and of expressing the original in their own language. In fact, since in scientific writings technical terms were

⁸⁰ Kibre - Kelter, "Galen's *Methodus Medendi* in the Middle Ages", pp. 17-36; Kibre, "A List of Latin Manuscripts Containing Medieval Versions of the *Methodus Medendi*", pp. 117-122.

unavoidable, scientists, and physicians in particular, were expected to know them to operate within the field, but, although they might understand the original technical term, they often found nothing comparable in the target language. For this reason translators would be obliged either to use words of general application in a technical sense or to coin new equivalents from native elements. Otherwise, if the translator did not understand the original, then he would probably either use the source language term as such, or adapt it according to the rules of the target language, thus transliterating it⁸¹. Both procedures are often used even in the Latin translations of Greek texts.

Nevertheless, with the beginning of the sixteenth century new Latin translations of Galen appeared: they were based on recent manuscripts, philologically inferior to those used before, but they were more refined in their language and style, and for this reason they replaced the previous ones.

To come back to the list of manuscripts presented before, it clearly emerges that surviving examples of the translations of *De methodo medendi* are extant in good numbers throughout Europe, but it also immediately appears that the majority of the copies are preserved in Italy, and particularly in Biblioteca Apostolica Vaticana, or in France, in Paris and Chartres. This is not surprising if we consider that Gerard of Cremona, Burgundio of Pisa and Niccolò from Reggio were Italian physicians, that medical academic lectures were given only in Italy and France in this period, and last but not least that these translations were used at schools as textbooks, and required in medical programs. For example, at the University of Paris, candidates for the medical licence in 1270-1272 were required to have read or studied at least the *Ars medicine* (and the *Ars parva/Microtegni* in it); Johannitius' *Isagoge*, and the commentary of Ali ibn Abbas al'Magusi in Constantine the African's translation. At Montpellier, Pope Clement V's bull of 1308 suggested lecturing in *Ars parva/Tegni*, *Isagoge*, *De ingenio sanitatis/Megategni/De methodo medendi* up to the eighth book and *De methodo medendi/De febribus ad Glauconem*⁸².

For what concerns England, the presence of many thirteenth-century Latin, Italian or French medical manuscripts can be easily explained, as they were bought by scholars and upper-class young men during their *Grand Tour*. Nevertheless it is surprising to find that many translations from the Greek, even in English, were already present in particular in Oxford, Cambridge and London in the fourteenth and fifteenth century, although independent medical faculties would not appear to have taken place earlier

⁸¹ French, "De Juvamentis Membrorum and the Reception of Galenic Physiological Anatomy", p. 95.

⁸² Kibre - Kelter, "Galen's *Methodus Medendi* in the Middle Ages", pp. 22-23.

than the beginning of the fourteenth century. Even if we know that in mid-fourteenth-century Oxford these Galenic treatises were mandatory for the Master's degree in Medicine, and all masters had a copy, and that in the library of Balliol College there were many copies of Galen's *De methodo medendi* (which belonged to Nicholas Thynchewke, who was lecturer in medicine and fellow of that renowned medical college), however we know nothing about faculties of Medicine or medical classes in thirteenth-century-England. Moreover, "throughout the Middle Ages the Faculty of Medicine at Oxford appears to have been small and undistinguished" and "in some Oxford Colleges the study of medicine was discouraged"⁸³, and a similar state of affairs existed also at Cambridge. Actually, when medicine attained the dignity of a separate faculty cannot be exactly stated.

Therefore, from the presence of this remarkable number of manuscripts dealing with one of the longest and most difficult Galenic treatises it can be argued that *De methodo medendi* was renowned all over Europe in Latin, in various vernaculars and also in Greek (as it emerges from the list of the Greek manuscripts at pp. 33-34), even in those places where medical faculties or masters of medicine had not made their appearance yet. This means that not only learned physicians used this work during their medical apprenticeship and practice, but also that the great majority of those who approached medicine were acquainted with *De methodo medendi* and followed its theoretical and practical teachings. In fact, as has already been said⁸⁴, such a long treatise set out Galen's method of medical practice most completely and established a precise method of healing all types of diseases. Galen always "stroved for a unified art of medicine, in which the effective treatment of the sick depended on a profound understanding of the body coupled with a broad acquaintance with all types of therapy. Although he acknowledged the existence of specialists [...] the practitioners for whom he wrote were of necessity generalists and were required to know how all the constituent parts of the medical art came together"⁸⁵.

For all these reasons, whoever wanted to become a healer felt the compelling need to gain a thorough grasp of the Galenic principles explained and clarified by the examples of their application: only after that the healer would have been able to compare and to analyse in a reasoned and effective manner the diseases he faced.

⁸³ Talbot, C. H., *Medicine in Medieval England*, London: Oldbourne, 1967, pp. 68-69.

⁸⁴ See pp. 27-34.

⁸⁵ Nutton, Vivian, *Ancient Medicine*, London: Routledge, 2013, p. 236.

III

LATIN AND VERNACULAR IN LATE MEDIEVAL MEDICINE:

THE CASE OF *DE METHODO MEDENDI*

III.1. THE FOURTEENTH AND FIFTEENTH CENTURIES AS A FUNDAMENTAL PERIOD IN EUROPEAN MEDICINE

From the last quarter of the fourteenth century there was a great change in European scientific and medical books. The request for practical and informational books quickly overtook that for books for university purposes.

The balance between *doctrina* and the provision of useful information shifts decisively in favour of the latter, at least as measured in terms of production, if not of prestige. Translation from Latin into vernacular of scientific and medical texts is one component of the change, and translation often involves a process of editing out the more theoretical parts of the original. The use of the booklet, the presence of diagrams and illustrations, and the appearance of informal and cursive scripts alongside formal book hands are the codicological and palaeographic markers for this transition⁸⁶.

First of all, it has to be said that there is no separation between medieval Latin culture and the first production of vernacular texts, as both vernaculars and Latin contributed to the creation of new corpora during the whole period. For what concerns science, Latin texts were still seen as the most prestigious of the scientific corpora, but it was from these works (which could be new Latin treatises, or, in turn, translations from Greek or Arab) that vernacular texts arose. In fact, in the late Middle Ages the vernacularisation

⁸⁶ Burnett - Murray Jones, "Scientific and Medical Writings", pp. 461-462.

of scientific texts became a pan-European phenomenon: most of them were translations or adaptations from Latin, whose aim was to imitate and to transfer into English, German, French, Catalan or Portuguese the already established scientific principles conveyed by ancient texts. This translation process allowed the vernaculars to increase their scientific lexicon thanks to the entrance of Latinisms, Graecisms and Arabisms borrowed from medieval Latin scientific works.

For what specifically concerns medicine, the development of vernacular handbooks began with the end of the thirteenth century, which marked “the rise of the multitext volume: miscellanies, anthologies, make-up collections and commonplace books”⁸⁷. Because of its antiquity, an important example is Cambridge, Trinity College, MS 0.1.20, a volume made of 322 folios dating from 1230-1260, which is one of the earliest collections of medical texts in the vernacular⁸⁸. This volume can be considered a little medical library: we do not know whether it was composed in England or not, but it was certainly copied there⁸⁹.

As has already been said, the choice of what works were worth translating was not simple, and it was not always determined by specific scientific requirements: instead, it was easily conditioned by the availability or the shortness of texts. It commonly happened that Arabic or Spanish translations compromised the adherence to the original Greek or Latin text. In the thirteenth and fourteenth centuries great translators such as Gerard of Cremona, Michael Scot, or William of Moerbeke worked on famous Aristotelian treatises and provided translations of them. However, these translations

⁸⁷ Edwards, Anthony S. G. - Hunt, Tony - Boffey, Julia - Huws, Daniel, “Vernacular Literature and its Readership”, in *The Cambridge History of the Book in Britain vol. II 1100- 1400*, edited by Nigel J. Morgan - Rodney M. Thomson, Cambridge: Cambridge University Press, 2008, pp. 367-397, p. 373.

⁸⁸ Hunt, Tony, *Anglo-Norman Medicine. I Roger Frugard's Chirurgia and the Practica brevis of Platearius*, Cambridge: D.S. Brewer, 1994, pp. 3-24. The manuscript contains: ff. 1^{ra}-21^{rb} the versified collection of receipts known as the ‘Physique rimée’; ff. 21^{rb}-23^{rb} *Les secrés de[s]femmes*, verse fragments of a gynaecological treatise based on the *Trotula maior*; ff. 23^{rb}-24^{va} miscellaneous prose receipts beginning with a charm; ff. 24^{va}-30^{rb} a fragment of a prose translation of Roger Frugard's *Chirurgia* (books I, 1-3, 5-8, 11-22, 26; III, 27); ff. 30^{rb}-36^v various prose receipts; ff. 37^r-44^v the collection of prose receipts known as the ‘Lettre d'Hippocrate’; ff. 45^r-52^v a medical treatise composed of prose receipts; ff. 53^r-55^v the Introduction and the sections on humours and urines; ff. 55^r-194^r a translation, acephalous, of the *Practica* of Johannes Platearius; f. 194^r a single prose receipt; ff. 194^v-195^v blank pages; ff. 196^r-213^v a prose translation of the Salernitan treatise *De instructione medici* in French; ff. 213^v-215^v a series of brief descriptions in prose of the properties of herbs; ff. 216^r-235^v a gynaecological treatise in verse translated from the *Trotula maior*; ff. 236^r-239^v a set of 172 octosyllabic verses on beauty treatments for women (the same occurring in Cambridge, St John's College MS D. 4 of the XIV century); ff. 240^r-299^v an Anglo-Norman translation of Roger Frugard's *Chirurgia* with 47 medical drawings; ff. 300^{ra}-324^{va} the Latin text of Roger's *Chirurgia* as far as Book III, 18; ff. 324^{vb} four medical receipts; ff. 325^r-330^v an incomplete treatise on confession.

⁸⁹ Hunt, *Anglo-Norman Medicine*, pp. 19-20.

were charged with an excessive literalism (as pointed out by Roger Bacon⁹⁰), and their method of translation *verbum pro verbo* was not a sign of adherence, but of ignorance of the contents and sometimes of the deficiency of their mother tongue⁹¹. The great translations in Latin of Greek and Arabic scientific thought, realised from the late Middle Ages, were encouraged by the awareness of the inadequacy of the versions used until then. In a few decades the interest for science rapidly crossed the boundaries of the universities and involved a large part of society, thanks to works that combined basic theories, empirical and practical knowledge relevant in everyday life. Practical necessities led to simplified reformulations of scientific and medical knowledge, but they often led also to the search for practical methods and original uses of what had been elaborated elsewhere⁹².

During the late Middle Ages the medical profession acquired great prestige and it was quite profitable, but the majority of healers “were from heterogeneous backgrounds and only a very small proportion received university education; others were trained in monasteries, households, and guilds through apprenticeship and practical experience”⁹³. Therefore, they were excluded from Latin culture and from the lecturing of the most important classical medical texts, which had been translated or written in Latin, because universities were still monolingual and Latin was the only language allowed in the scientific and medical discourse: only a small group of learned healers could attend university classes⁹⁴. This situation led to the separation of literate and illiterate healers, which affected also medical literature. Even medical literature was of two types: “one reflecting the study of *theorica* and *practica* as a university subject, and another which provided the practitioner with guidance on diagnosis, preventive medicine, *materia*

⁹⁰ Bourgain, Pascale, “Le sens de la langue et des langues chez Roger Bacon”, in *Traductions et traducteurs au Moyen Âge. Actes du Colloque international du CNRS organisé à Paris, Institut de recherche et d'histoire des textes, les 26-27 mai 1986*, edited by Geneviève Contamine, Paris: CNRS, 1989, pp. 317-331; Chiesa, Paolo, “Le traduzioni”, in *Lo spazio letterario del medioevo. I: Il medioevo latino, vol. III*, Roma: Salerno editore, 1995, pp. 165-196.

⁹¹ Librandi, Rita, “Il lettore di testi scientifici in volgare”, in *Lo Spazio Letterario del Medioevo, 2. Il Medioevo volgare, vol. III*, edited by Paolo Boitani - Mario Mancini - Alberto Vàrvaro, Roma: Salerno Editrice, 2003, pp. 125-154.

⁹² Librandi, “Il lettore di testi scientifici in volgare”, pp. 125-154.

⁹³ Taavitsainen, Irma - Pahta, Päivi - Mäkinen, Martti, “Towards a Corpus-Based History of Specialized Languages: Middle English Medical Texts, Early Modern English Medical Texts”, in *Corpus-based Studies of Diachronic English*, edited by Roberta Facchinetti - Matti Rissanen, Bern: Peter Lang, 2006, pp. 79-94, p. 83.

⁹⁴ Taavitsainen - Pahta - Mäkinen, “Towards a Corpus-Based History of Specialized Languages: Middle English Medical Texts, Early Modern English Medical Texts”, p. 83.

medica and therapeutics”⁹⁵. With the end of the fourteenth century there was both a wider circulation of classical works, whose texts were improved by scholars, and an increase of medical treatises that dealt with practical aspects learned from everyday practice. Classical Greek and Latin medical texts widely circulated among noble and learned men who strove to own scientific texts in their libraries, but they often preferred the vernacular translations. For example Martin de Saint Gilles, physician of the Queen of France Joanna of Bourbon, translated and dedicated Hippocrates’ *Aphorisms* to Guy de Chauliac⁹⁶; while Evrard de Conty translated for Johanna’s husband, King Charles V, *Problemata* by Pseudo-Aristotle together with Peter of Abano’s commentary written in 1310⁹⁷. Although we can find many *Experimenta* in Latin, dealing with the most interesting pathological cases faced by a physician, and many *Consilia*, listing diagnoses, therapies and rare cases⁹⁸, this kind of work was easily translated or even written in the vernacular, because the illiterate public needed them. The growing number of medical and surgical vernacular texts and anatomical illustrations contributed to the improvement of the knowledge of practical doctors, especially those who placed themselves in an intermediate level between *physici* and extemporary hirelings⁹⁹.

In the fifteenth century the most renowned medical curriculum in Europe was that created in Bologna, on which almost all the other universities shaped their medical teaching. The university of Bologna defined this educational path in the statute of 1405: clearly it was very ambitious and probably not all the books recommended were actually read, but it gives an idea of which books were considered fundamental for becoming a healer. There were three different medical courses: the theoretical, the practical and the surgical; the first two used four years, the third one year only. Theoretical medicine was primarily based on Avicenna’s *Canon I, IV* and *De viribus cordis*; on Hippocrates, *Prognostica*, *Aphorismata*, *De natura* and *De morbis acutis*; on Averroës, *Colliget*. However, if we check the books listed in the statute, it highlights

⁹⁵ Murray Jones, Peter, “Medicine and Science”, in *The Cambridge History of the Book in Britain vol. III, 1100-1400*, edited by Nigel J. Morgan - Rodney M. Thomson, Cambridge: Cambridge University Press, 2008, pp. 433-445.

⁹⁶ Jacquart, Danielle, “Hippocrate en français. Le *Livre des amphorismes* de Martin de Saint-Gille (1362-1363)”, in *Les voies de la science grecque. Études sur la transmission des textes de l'Antiquité au dix-neuvième siècle*, edited by Danielle Jacquart, Genève: Droz, 1997, pp. 293-327.

⁹⁷ Jacquart, Danielle, “Theory, Everyday Practice, and Three Fifteenth-century Physicians”, *Osiris*, 6, 1990, pp. 140-160.

⁹⁸ Crisciani, Chiara, “L’‘individuale’ nella medicina tra medioevo e umanesimo: i ‘Consilia’”, in *Umanesimo e medicina. Il problema dell’«individuale»*, edited by Roberto Cardini - Mariangela Regoliosi, Roma: Bulzoni, 1996, pp. 1-32; Agrimi, Jole - Crisciani, Chiara, *Edocere medicos. Medicina scolastica nei secoli XII-XV*, Napoli: Guerini, 1988, pp. 160 sgg.

⁹⁹ Park, Katharine, *Doctors and Medicine in Early Renaissance Florence*, Princeton: Princeton University Press, 1985, pp. 58-76.

Galenic treatises, which were widely used both in theoretical medicine and in surgery, while in practical medicine they seem to be absent and replaced by the translations of Avicenna's *Canon*, a coherent summary of the greatest teaching of Galen and Hippocrates fitted into Aristotle's natural philosophy¹⁰⁰.

The only exception is an apparently unknown work by Galen: *Chirurgia*. In all probability this is not an independent text, but sections on wounds, ulcers, and fractures of Galen's *De methodo medendi*, which sometimes appeared separately in Latin manuscripts as they were considered as an independent work in itself, distinguished from the other books because they dealt specifically with surgical methods and practices. Diels lists three different versions of *Chirurgia*: the most important is contained in Vatican City, Biblioteca Apostolica Vaticana, Vat. lat. 2369, ff. 81^r-95^r, which finishes "Explicit Cyrurgia vulnerum Galeni". However a copy of this *Chirurgia* is also found in Oxford, Bodleian Library, e Musaeo, MS 19 from the fourteenth century, which contains a series of surgical Latin extracts from *De ingenio sanitatis* and in particular from the fourth book: it begins, in fact, with the title "Galenī Chirurgia, sive Capitula varia ex Operibus eius Collecta"¹⁰¹.

III.2. THE ENGLISH CONTEXT: LATIN OR ENGLISH?

"The vernacular medical tradition in England is probably the oldest in Western Europe"¹⁰². A relatively large number of medical writings survive from the Anglo-Saxon period when the vernacular tradition started to co-exist with the Latin one. Latin had always been the language of learning, and in particular of university learning, but "in the history of the English language, the register of scientific writing is one that shows almost unbroken continuity from the earliest period to the present"¹⁰³ because Latin and vernacular medical texts developed together from the end of the fourteenth century up to the end of the Modern Age.

Medicine has always been practised by people who speak and read of medicine in different languages from those used with their patients: Greek in ancient Rome, Latin in the Middle Ages and the Renaissance. In England the great majority of technical

¹⁰⁰ Howell, Trevor H., "Avicenna and his Regimen of Old Age", *Age and Ageing*, 16, 1987, pp. 58-59.

¹⁰¹ Thorndike - Kibre, *A Catalogue of Incipits of Mediaeval Scientific Writings in Latin*, 1963, col 1495; Touwaide, *A Census of Greek Medical Manuscript*, n. 0808; Durling, "Corrigenda and Addenda to Diels' Galenica. I. Codices vaticani", p. 474.

¹⁰² Getz, "Charity, Translation, and the Language of Medical Learning in Medieval England", pp. 3-4.

¹⁰³ Taavitsainen, Irma - Pahta, Päivi, *Medical and Scientific Writing in Late Medieval English*, Cambridge: Cambridge University Press, 2004, p. 1.

subjects was almost always conveyed in Latin, however from about 1375 “medicine and science as transmitted at the universities leapt the walls and found a readership outside. We can register this change by looking at the numbers and kinds of texts written; by looking at the change in language use for medicine and science, and at the selection and editorial process involved in the creation of new manuscripts”¹⁰⁴. In fact, in less than a hundred years the number of medical manuscripts in vernacular increased more than six times. Middle English medical texts rose sevenfold from the thirteenth to the fourteenth century (from 20 to 140 English manuscripts recorded), while Latin works doubled (from 974 to 1948 Latin manuscripts recorded) as they did also from the fourteenth to the fifteenth century (from 1948 to 3729 manuscripts recorded), whereas Middle English manuscripts increased sixfold (from 140 to 872), becoming one fifth of the Latin¹⁰⁵.

As has already been said, with the end of the fourteenth century England experienced a remarkable increase in the amount of practical texts available to readers in vernacular¹⁰⁶. Nevertheless, even though texts of all kinds started to be translated and composed in vernacular in late medieval English, nowhere was this growth more striking than in medicine. During the Middle Ages, in fact, medicine was the only science studied at the university, although it was included in mechanical arts, as it was both a science and a craft, which combined theory and practice: for this reason it enjoyed great circulation among people who wanted to gain access both to medical theoretical learning and useful knowledge. In England “there may have been some 166000 medical books still in use in 1604, one for every twenty people or so, had they been equally distributed”¹⁰⁷. The roots of this wide presence lay in the manuscript tradition, and the printing press then would only satisfy an already-existing book market.

Middle English medical texts could be found alongside Latin copies from the thirteenth century when English occurred in bi- or trilingual manuscripts with the stable presence of Latin. Linda Voigts’ survey of medical texts produced in England between 1375 and 1500 reveals that 29.2% of them were monolingual Latin, 22.5% monolingual

¹⁰⁴ Murray Jones, “Medicine and Science”, pp. 433-434; Robbins, Rossel H., “Medical Manuscripts in Middle English”, *Speculum*, 45, 1970, pp. 393-415.

¹⁰⁵ Waley Singer, Dorothea, “Survey of Medical Manuscripts in the British Isles Dating from before the Sixteenth Century”, *Proceeding of the Royal Society of Medicine*, 12, 1918-1919, pp. 96-107.

¹⁰⁶ Getz, Faye Marie, “Gilbertus Anglicus Anglicised”, *Medical History* 26, 1982, pp. 436-442, p. 436.

¹⁰⁷ Slack, Paul, “Mirrors of Health and Treasures of Poor Men: the Uses of the Vernacular Medical Literature of Tudor England”, in *Health, Medicine, and Mortality in the Sixteenth Century*, edited by Charles Webster, Cambridge: Cambridge University Press, 1979, pp. 239-243.

English, 42.1% bilingual Latin and English and 6.2% trilingual Latin, English, and French¹⁰⁸. However, towards the end of the fifteenth century English manuscripts became more common. Many scholars “have seized on the difference in language to divide such works into opposing teams, with Latin, universities, physicians, and learned tradition on one side, and English, empiricism, surgeons and popular superstition on the other”¹⁰⁹ because, according to them, the distinction between Latin and English medical manuscripts matched that between university-trained physicians and surgeons, barber-surgeons, apothecaries and all the illiterate healers¹¹⁰. Although many scholars have shared this position, I think, following Faye Marie Getz¹¹¹, that the situation had to be more complex, and the distinctions less clear-cut. Graduate physicians, in fact, are found owning medical texts in English, while less formally educated healers sometimes read texts containing Latin extracts and literate quotations.

Even though practical textbooks such as surgeries, phlebotomies, recipes, and herbals used to be in English more than theoretical works, which remained quite often in Latin, “the supposed polarity between Latin and learned medicine on one hand and English and folk practice on the other does not hold up under close examination”¹¹². Middle English medical literature, in fact, relied on the same manuscript authorities as the Latin, as it consisted of translations of the most important and widely circulated Latin texts. The Duke of Bedford, for example, requested an English translation of Guy de Chauliac’s *Surgery*, and the nobleman Robert Thornton prepared a recipe collection in English entitled *Liber de diversis medicinis*¹¹³. Moreover the legacy of Humphrey, Duke of Gloucester included medical books in Latin by Avicenna, Bernard Gordon, Costantinus Africanus, Dioscorides, Galen, Gilbertus Anglicus, Hippocrates, and Rhazes¹¹⁴, and provided translations of these texts, testifying that medical literature in

¹⁰⁸ Voigts, Linda, “Scientific and Medical Books”, in *Book Production and Publishing in Britain 1375-1475*, edited by Jeremy Griffiths - Derek Pearsall, Cambridge: Cambridge University Press, 1989, pp. 345-402.

¹⁰⁹ Getz, “Gilbertus Anglicus Anglicised”, p. 436.

¹¹⁰ Robbins, “Medical Manuscripts in Middle English”, p. 394

¹¹¹ Getz, “Gilbertus Anglicus Anglicised”, pp. 436-442.

¹¹² Getz, “*Charity, Translation, and the Language of Medical Learning in Medieval England*”, p. 5. See also Premuda, Loris, “Tradizione greco-romana e pensiero medico medievale”, in *Acta Medicae Historiae Patavina V*, edited by Loris Premuda, Padova: Istituto di storia della medicina, 1958-1959, pp. 95-122.

¹¹³ Keiser, George R., “Robert Thornton’s *Liber de Diversis Medicinis*: text, vocabulary and scribal confusion”, in *Rethinking Middle English: Linguistic and Literary Approaches*, edited by Nikolaus Ritt - Herbert Schendl, New York: Peter Lang, 2003, pp. 30-41. For the text see also Ogden, Margaret S., *The ‘Liber de Diversis Medicinis’ in the Thornton Manuscript (MS. Lincoln Cathedral A.5.2)*, London: Oxford University Press, 1969.

¹¹⁴ Craster, H. H. E., “Index to Duke Humphrey’s gifts to the old library of the university in 1439, 1441 and 1444”, *Bodleian Quarterly Record*, 1915, 1, pp. 131-135; Petrina, Alessandra, *Cultural Politics in Fifteenth-Century England: The Case of Humphrey, Duke of Gloucester*, Leiden: Brill, 2004, p. 158.

English or in Latin “was not solely the province of the graduate physician”, but it was “the subject of a general interest among the literate and wealthy upper and middle classes, who could afford such books”¹¹⁵. If we take into consideration British Library, Harley MS 2378, f. 121^r, which begins

Here begynnyth medicynis þat good lechis have made and drawn out of his bokys, Galien, Asclapius, and Ipocras. þes were the beste lechis of the world, of al maner sorys and woundys, cancrys, gowtys, festrys, felons, and for sodeyn sorys, and al maner luelys in the body with-In and with-oute¹¹⁶.

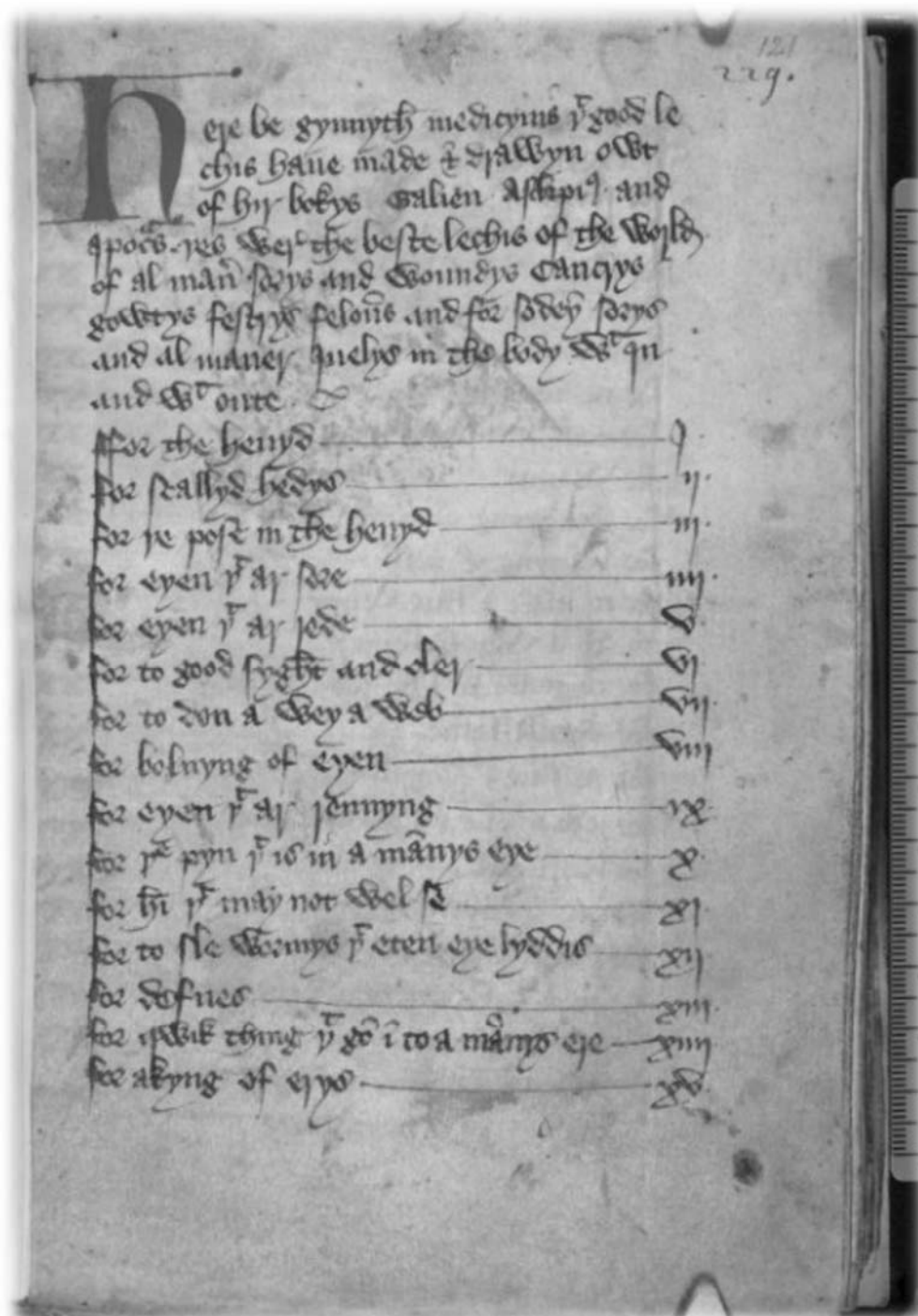
It clearly emerges that all healers relied on the same classical authorities and probably used the same textbooks, whether they were written in Latin or in English. “The choices of rendering learned texts [...] into the vernacular indicate a conscious choice and the desire for more open access to knowledge among professionals who were familiar with these materials in Latin”¹¹⁷.

¹¹⁵ Getz, “Gilbertus Anglicus Anglicised”, pp. 436-442.

¹¹⁶ The manuscript is a miscellany of medical, culinary and alchemical texts and recipes. It was probably assembled by Nicholas Spalding, its owner in the fifteenth century. The two larger collections of medical recipes in the book (ff. 17r-61v and ff. 121r-135v, 137r-154v) were apparently compiled by him or for his use. The other medical recipes were added to leaves originally blank by a number of fifteenth-century hands.

¹¹⁷ Taavitsainen - Pahta, *Medical and Scientific Writing in Late Medieval English*, p. 16.

Figure 3



III.2.1. TRANSLATING INTO ENGLISH: THE GREAT EFFORT OF THE FIRST TRANSLATORS

Many fourteenth- and fifteenth-century translators highlighted the difficulty in rendering medical Latin or French terms in English because “English had never before accommodated a wide range of literary or scientific matter, and merely anglicising words from Romance languages seldom made matters much clearer”¹¹⁸. For example one of the earliest major Middle English medical translations is Henry Daniel’s *Liber Uricrisianum*, a compendium on uroscopy (the most basic skill of the medieval physician), extant in 22 manuscript copies. The preface of the work was originally in Latin, and then it was translated into English by the author himself. This preface contains all the rhetorical commonplaces of late medieval English: the writer’s unworthiness, the prayer to the reader for indulgence, the assurance of loyalty to the sources (“I do not want it said of me that I write novel things, but that I write them in a novel way”), the wish that copyists won’t misinterpret his words (“keep to my words, unless they speak the language of another country [...] And if the copyist does not understand what I say, then he should not try to interpret it”)¹¹⁹.

Undoubtedly translating Latin knowledge into Middle English raised several difficulties, but the translators’ centuries-old effort to make English a technical medical language made the vernacular able to cover “a wide range of material, a range comparable to, and [...] identical with, that of its Latin counterparts”¹²⁰. The writers of Middle English medical texts had often to create new terms for defining cases never discussed before: they could replace a technical word with a more colloquial vernacular one, or they could coin an equivalent using English elements. The last possibility was to use the source language for literal borrowings or for “turning the original foreign term into an anglicised variant”¹²¹. Through the adoptions of words from a number of foreign languages, and especially from Latin and Greek, through the extensions in the applications of a non-medical word, and through new coinages made by the writer or the translator, the meanings of the late Middle English medical lexemes “run the gamut from very general to highly technical and erudite”¹²². However, single Latin, and sometimes even Greek terms continued to be incorporated into the English texts and

¹¹⁸ Getz, “Charity, Translation, and the Language of Medical Learning in Medieval England”, pp. 14-15.

¹¹⁹ Getz, “Charity, Translation, and the Language of Medical Learning in Medieval England”, pp. 14-16.

¹²⁰ Getz, “Gilbertus Anglicus Anglicised”, p. 438.

¹²¹ Taavitsainen - Pahta, *Medical and Scientific Writing in Late Medieval English*, pp. 81-82.

¹²² Taavitsainen - Pahta, *Medical and Scientific Writing in Late Medieval English*, p. 137.

they could also be accompanied by vernacular synonyms, as the Latin words were used by the author for reasons of style and technicality, or sometimes for didactic and instructive purposes, and not to fill gaps in English lexicon. Many lexicologists highlighted the fundamental importance of the sixteenth century for the creation of an English medical vocabulary, but most new terms had already made their appearance in the last quarter of the fourteenth century. Nevertheless, many of these new lexemes had a short life, and only 56% of them have been recorded in texts written after 1550: this is proof of the great effort of the late Middle English writers to create an English medical terminology. In fact, despite many losses, hundreds surviving words became medical technical terms¹²³.

However, by the end of the fifteenth century vernacular material included sophisticated university medical treatises and also institutional writings (such as *The Guild Book* of the Barber-Surgeons of York of 1486), handbooks, compendia and new compositions. Many Middle English texts, in comparison with their Latin counterparts, show the translators' efforts in abridging models, simplifying technical terms, and explaining the most complex parts: however this cannot mean "that the difference between a Latin and a Middle English text necessarily implied ownership by people of different social status"¹²⁴ because catalogues of Middle English private libraries testified that they were owned by a variety of people, and not only by a group of unlatined medical practitioners.

III.2.2. SOME EXAMPLES OF ENGLISH MEDICAL TEXTS

According to Getz, in the fifteenth century all scientific subjects were presented in Latin, and whenever English was used, it had a second-class position or it was employed for making simplified copies of works that were in Latin in their original form¹²⁵. However this slowness was not ascribable to medical texts. Thomas Plawdon, for example, citizen and barber of London, embodied quite all the tendencies of the period. He is probably to be identified with Thomas Plouden, who died in 1413 and who practised bloodletting and minor surgery, but he was also interested in the theoretical basis of medicine: "He seems to have wanted [...] a distillation of some of the theoretical and practical material which would have been covered in the six-year

¹²³ Taavitsainen - Pahta, *Medical and Scientific Writing in Late Medieval English*, p. 138.

¹²⁴ Getz, "Gilbertus Anglicus Anglicised", p. 442.

¹²⁵ Robbins, "Medical Manuscripts in Middle English", p. 393.

medical curriculum in a university medical faculty”¹²⁶, and he probably wanted these texts in Middle English so that they would be comprehensible both to him and to his clientele. He arranged for a friend to translate into English many theoretical medical texts among which there is a lengthy compendium of two hundred pages. It deals with the origins of illness, humours and urines, and it contains references to many medical authorities like Johannitus, Costantine’s *Pantegni*, Galen’s *Tegni*, and the *Canon* of Avicenna. This elaborate compilation, contained in Gonville and Caius MS 176/97 (a manuscript created for university purposes) begins with an interesting prologue that justifies the dedication of this English translation for a barber-surgeon, with the lack of wise physicians. This meant that fourteenth- and fifteenth-century English surgeons and barber-surgeons like Plawdon were interested in medical readings and could have access to the ideas transmitted through the universities without holding a university degree thanks to the translation process. In this way they would not have appeared as mere unlearned empirics¹²⁷.

Almost all healers, both learned and unlearned, had “to construct their own guides to practice, by excerpting from their reading and combining that reading with the fruits of personal experience”¹²⁸. The most renowned Latin medical texts like John of Arderne’s *Fistula in ano* or Gilbertus Anglicus’ *Compendium medicinae* might be translated many times with each translation reflecting the particular interests of the healer or of his clientele: these translations, in fact, were generally not as detailed as the Latin in their treatment of the *philosophy* of diagnosis, even though some manuscripts, belonging to reasonably sophisticated healers, included wide theoretical sections. An example is found in British Library, Sloane MS 965, which presents the theory of the humours “with their ‘physiology’ and relation to the various parts of the body”¹²⁹. This manuscript is very interesting as it is a medical miscellany including a lunary (ff. 6v-7), some anonymous texts on humours, elements, and urines, a calendar (ff. 11-21v), Guy de Chauliac’s *Anatomy*, and a treatise on complexions. Similar to this manuscript is British Library, Sloane MS 120, which deals with both botany and medicine. At ff. 75-83 it presents a treatise on urines that begins with a verse statement declaring that the choice of turning the Latin text into English was aimed to a wide diffusion among those

¹²⁶ Murray Jones, “Medicine and Science”, p. 435.

¹²⁷ Voigts, Linda E. - McVaugh, Michael, *A Latin Technical Phlebotomy and Its Middle English Translation*, Philadelphia: American Philosophical Society, 1984, pp. 25-27.

¹²⁸ Murray Jones, “Medicine and Science”, p. 436.

¹²⁹ Robbins, “Medical Manuscripts in Middle English”, p. 399.

who were illiterate: “Herknes of me, I lytyll spekyn, | for urenes I woll you tellyn, | and turne latyn into Engglyche, | for simpull þat ar un-wyse”.

These manuscripts, together with dozens of other Middle English prose urinologies, testify to the importance of the inspection of urine to diagnose illnesses: such an importance justifies the use of the English language that could be clearer and easier to understand for every healer. The same necessity of accessibility prompted the creation of manuscripts dealing with the treatment of the diseases, i.e. the preparations of remedies starting from herbs (listed according to their medical qualities), bloodletting, phlebotomy and the posology of plasters¹³⁰. Collections of recipes and prescriptions were often written in English as they might have been used by apothecaries and professional healers, who were often unlatined, or even by physicians who wanted handy textbooks. An example is British Library, Harley MS 950, written in Middle English, a really small manuscript (three by four inches) suitable to be carried by the healer¹³¹. As is testified by Singer’s massive survey¹³², for the same aim of clarity even the treatises on plagues were very common in Middle English versions, which were “made in ynglys owt of latyne” to “techis þe helpe and þe defens agaynes þe seknes of þe pestilens”¹³³. Middle English medical manuscripts also consisted of tracts on specialised areas of medicine like childbirth and women’s diseases, and they were often used by midwives: “Many of these treatises are translated directly from Latin, and [...] some of them are by known physicians [...] The majority are after 1450, and show the gradual broadening of the availability of technical information”¹³⁴.

Last but not least there are the treatises on surgery that enjoyed many Middle English translations, as testified by Lanfranc of Milan’s *Cirurgie*, John of Arderne’s, *Fistula*, Guy de Chauliac’s *Surgery*, and Roger of Salerno’s *Chirurgia*, translated many times in the fourteenth century. Greek, Latin and even French prescriptions with technical words could be too difficult for non-university-trained healers, but they might be too hard even for lettered physicians. In fact, although many of the medical manuscripts written in English were probably used by “leeches”, i.e. non-professional healers who would “helpe pore folke þat falleþ in to sykenesse and beþ unconnyng to

¹³⁰ Robbins, “Medical Manuscripts in Middle English”, pp. 402-404.

¹³¹ Robbins, “Medical Manuscripts in Middle English”, p. 404; Robbins, Rossel Hope, “The Physician’s Authorities”, in *Studies in Language and Literature in Honour of Margaret Schlauch*, edited by Mieczyslaw Brahmer, Stanislaw Helsztynski, Julian Krzyzanowski. New York: Russell & Russell, 1971, pp. 335-341.

¹³² Singer, Dorothea Waley - Anderson, Annie, *Catalogue of Latin and Vernacular Plague Texts in Great Britain and Eire in Manuscripts Written before the Sixteenth Century*, London: Heinemann, 1951.

¹³³ British Library, Egerton MS 1624, f. 216^r.

¹³⁴ Robbins, “Medical Manuscripts in Middle English”, p. 406.

helpen hem selve and of unpower to hire hem leches”¹³⁵ vernacular manuscripts owned by Middle English noblemen or graduate physicians¹³⁶.

In addition to their practical aim, there is another feature common to these Middle English practical miscellanies: the wide presence of a rhymed introduction naming the physicians’ authorities, as it is testified by British Library, Sloane MS 2584, f. 13r:

þus seith ypocraas þe goode surgeon,
and socrates and Galean,
þat wore ffilosophers alle þre
þat tyme þe best in any cuntre,
in þis world were noon hure peere
as fer as any man might here,
and practiseden medycyns be godus grace
to save mannus lyf in dyvers place.

These prefaces underline that whether they were in Latin or not, and whether they were devoted to learned physicians or to non-university-trained healers, each medical manuscript (and therefore every healer) had to refer to the same classical authorities and be placed under the protection of the great masters of the past: Hippocrates and Galen¹³⁷. Their names can be traced in all the introductions of Middle English medical texts because they were considered inspiring muses who could ensure the worth and

¹³⁵ British Library, Ashmole MS 1481, f. 4^v.

¹³⁶ Robbins, “Medical Manuscripts in Middle English”, p. 408 reports some examples like Oxford, Bodleian Library, Ashmole MS 1437, a composite manuscript which contains: *De quercu et ejus virtutibus, tractatus magistri Arnolzi Doctoris artis medicine; Modus graduandi medicinas receptas secundum mentem Jacobi Alkindi; De corio serpentis; De corio serpentis; De urinis; De pulsu*; the description of various drugs according to the illnesses or their effects; *De generibus medicamentorum notandum secundum Averoy in libro suo quem nominavit colliget*; some anonymous treatises on cures and a work on surgery by Raymundum; John Argentine’s *Loci Communes*¹³⁶ in English, with a great number (at least forty) of ancient authorities frequently quoted; *Oleum secretum Alberti Magni*, and three fragments of other works on remedies in English and Latin; John Argentine, physician to the two Princes in the Tower, probably owned this manuscript in 1476; Oxford, Bodleian Library, Ashmole MS 1500, which contains: a translation of a treatise on the Caesarean birth and seventy advices concerning the treatment of sundry diseases; medical and surgical collections by the surgeon John Harvey; a short tract describing “three kinds of dropsies”; Andreus de Creuse’s opinion “in the couching of the catteracke”; a collection of medical Prescriptions for various diseases, partly in Latin with some alchemical experiments; a treatise of critical days in agues and fevers; a “tabula philosophiae naturalis per analysin subtilissimam elaborata”; Joseph Webb’s *Meicinae tabula analytica*, and a treatise entitled *Certayne controversies concerning the duggs*; this manuscript was probably owned by John Harvey because there are many medical and surgical notes attributed to him; British Library, Sloane MS 403, which includes a *Corpus Medicinae* and *Additions* to it by William Hattecliffe, physician to Henry VI and Edward IV; and prescriptions for Royal and noble patients; Cambridge University MS li. 5. 11, which is a French collection for the care of the body owned by Henry VII and Elisabeth of York; Emmanuel College Cambridge MS 69, which is a manuscript containing John Arderne’s complete works in Middle English with some authentic notes; other miscellaneous remedies, and a plague tract¹³⁶; Wellcome Historical Medical Museum manuscript of John of Arderne’s *De Arte Phisicali et Cirurgia*, which is a replica of the Stockholm roll in English.

¹³⁷ Robbins, “Medical Manuscripts in Middle English”, p. 404.

usefulness of the text. Nevertheless, the role of Galen was particularly significant because he was the only ancient physician who could design his method of healing in an ideally systematic way with the theoretical elements cleverly intertwined with the practical. Galen knew and implied the traditional medical knowledge of previous medicine together with the fundamentals of anatomy and physiology, and theological principles: all these elements to pursue a healthy equilibrium¹³⁸.

III.3. *DE METHODO MEDENDI* IN MIDDLE ENGLISH

The first English translation of Galen appears in British Library, Sloane MS 6 (fifteenth century). This manuscript is part of the Sloane Group, produced in London or Westminster in the mid-fifteenth century, which consists of a number of medical, alchemical, and astrological manuscripts written for the great majority in Latin, but sometimes in English¹³⁹. Sir Hans Sloane, inspired by a childhood interest in natural history, and his Protestant upbringing, studied medicine and botany in London, Paris and Montpellier. In 1687, he was admitted a fellow of the College of Physicians. Sloane's success as a physician continued to grow, culminating in his appointment as physician to Queen Anne in 1712 and then to George I and George II. In 1719, he was made president of the Royal College of Physicians. His career as a collector really began in 1687 when he sailed for Jamaica as physician to the colony's new Governor, the Duke of Albemarle. Sloane worked as a doctor on slave plantations and, with assistance from both English planters and enslaved West Africans assembled a collection of 800 plant specimens, as well as animals and curiosities. These would form the basis for his encyclopaedic work of natural history, *A Voyage to the Islands Madera, Barbados, Nieves, S. Christophers and Jamaica* in two volumes written between 1707 and 1725. On returning from the Caribbean, Sloane married Elizabeth Langley Rose, heiress to sugar plantations in Jamaica, profits from which contributed substantially to his ability to collect in the ensuing years, in addition to his medical income. Sloane died at the age of 92 in 1753 and among his many natural specimens and artificial curiosities, his collection included: 32,000 coins and medals; 50,000 books, prints and manuscripts (now in the British Library); a herbarium of 334 volumes

¹³⁸ Premuda, "Tradizione greco-romana e pensiero medico medievale", p. 105.

¹³⁹ Taavitsainen - Pahta, *Medical and Scientific Writing in Late Medieval English*, pp. 217-218; Walker, Alison - MacGregor, Arthur - Hunter, Michael, *From Books to Bezoars. Sir Hans Sloane and his Collections*, London: The British Library, 2012.

of dried plants from around the world (now in the Natural History Museum); 1,125 'things relating to the customs of ancient times'.

In his will, Sloane bequeathed his entire collection to King George II for the nation in return for the payment of £20,000 to his heirs, and on condition that Parliament create a new and freely accessible public museum to house it. Parliament accepted Sloane's terms, and an Act of Parliament established the British Museum. Sloane's collections, together with several additional libraries and collections, thus became the foundation of the British Museum.

The Sloane manuscripts collection covers a wide range of subjects: medicine, alchemy, chemistry, botany and horticulture, exploration and travel, mathematics and natural history, magic and religion. It represents one of the three foundation collections of the British Library. The collection of medical manuscripts has been described as the greatest ever assembled by a single individual, not just in quantity and variety but also in the exceptional quality of the individual items. Most of the manuscripts from this collection have numbers from 1 through to 4100. Two further groups of manuscripts are from Sloane's collection but bear Additional MS numbers. These are Add MS 5018-5027 and Add MS 5214-5308. The Sloane charters and rolls are numbered XXXI.1 - XXXIV.1.

Galenic and pseudo-Galenic treatises (as *De dinamidiis*, *De febribus*) occur many times in Sloane collection:

- Hunain Ibn Ishak, Al-'Ibadi: *Isagoge in parvam artem Galeni* occurs at least in three manuscripts; Sloane MS 1124 which contains *Isagoge in Parvam Artem Galeni, cum scholiis marginalibus et interlinearibus* on ff. 5-11, presents also Claudii Galeni *Ars Parva sive 'Liber Tegui' cum scholiis marginalibus et interlinearibus* in Latin on ff. 11b-27
- More than ten manuscripts deals with treatises known as the *Books of Galen*, *Hippocrates*, *Socrates* and *Æsculapius*

Sloane MS 3032 is the only book in British library that presents the text of Galen's *De methodo medendi*. It is the Arabic version of Book Three of Galen's *De methodo medendi* (Θεραπευτική μέθοδος) realised in the 14th century. The Arabic translation from the Greek was made by Ḥubaysh ibn al-Ḥasan known as Ḥubaysh al-A'sam AD 9th century), and partially revised by his uncle, Ḥunayn ibn Ishāq al-'Ibādī who had previously translated the work from Greek into Syriac. A note in Latin pasted to front paper 2 verso mistakenly identifies the text as the third book of Galen's *De facultatibus*

naturalibus (i.e. *Περὶ δυνάμεων φυσικῶν*). The same incorrect title appears on the volume's spine. Four owners' inscriptions are present on title page (f. 1r), one of which is a name in Hebrew.

Manuscript Sloane 6 is a surgical compendium translated for the most part from Latin, which contains both surgical and philosophical information. The contents of manuscript Sloane 6 are as follows:

- ff. 1-9 Hunain ibn Ishāq's: *Isagoge in parvam artem Galeni*, 13th-15th centuries in Latin and English. Incipit: *Medicyne is divided in two partys, þat is theory and practys*;
- ff. 10-18 anonymous: *Table of knowinge of simple medicynez*, in English (Avicenna is cited on f. 14);
- ff. 18-19^v anonymous: Table on the four elements, humours, complexions, and related topics, in English (Galen's *De complexionibus* and Seneca are cited on f. 19). Incipit: *Element is a simple and leste particle*;
- ff. 20^v-21^v anonymous: Table of Aristotelian causes, in English;
- ff. 22-32^v Richardus (Anglicus): *Pe knowing of medicynies after þer operacion* (i.e. after their effects on the body), in English. Incipit: *Calefactives. Al medicine þat is hote*;
- ff. 33-40^v Bernard Gordon: *The mirror of flebotomie*, in English. Incipit: *Flebotomye is ane universale evacuacion*;
- ff. 41-42^v anonymous: Treatise on cupping, in English. Incipit: *Ventosyngez forsoþe bene done*;
- ff. 43-50^v Haly Abbas: *Liber regius* (excerpts concerning laxatives, astrology and prognosis), in English. Incipit: *No man oweþ to take a purgyng*¹⁴⁰;
- Table of contents to the last three works;
- ff. 53-140^v William of Parma (Saliceto): *Treatise on surgery*, in English. Incipit: *It is purposid to the my gode frend*;
- ff. 141-174^v John of Arderne: *Tretise on fistula in ano, haemorrhoids*, in English. Incipit: *I, John Arderne fro the first pestilence*;
- ff. 175-177^v Drawings illustrative of the history of medicine and of various methods of healing, including spiritual healing, pharmacy, herbalism, astrology, bloodletting, and cupping, in English;

¹⁴⁰ According to the British Library catalogue, this part has to be attributed to Abu al Hasan Ali Ibn Abi Al-Rajjál, Al Kurtubi Al-Shaibání, a famous Arab astrologer who was commonly known as Haly Albohazen.

- ff. 178-179^v anonymous: How to make medicinal syrups, in English. Incipit: *About þe confeccion of surypes ben 7 canons*;
- ff. 180-182 179^v anonymous: Tables for uroscopy, in Latin;
- ff. 180^v-203^v Galen: *De ingenio sanitatis*, books III and three and a half chapters of book IV, in English. Incipit: *Rit dere frende Nero*;
- ff. 203^v-205^v 179^v anonymous: *Charms and Receipts. Orationes et receptæ medica*, in Latin.

On ff. 180^v-203^v there is the first vernacular translation of Galen's *De methodo medendi*. The English text comes from *De ingenio sanitatis*, the twelfth-century translation by Gerard of Cremona of the Arabic version of the treatise. Although manuscript Sloane 6 covers only two books of *De methodo medendi*, the third, and three and a half chapters of the fourth, the role of the Galenic *De methodo medendi*, which is placed at the end of the manuscript, is very important: it has to supply the theoretical principles for learned surgery and wound treatment.

Figure 4



MS London, British Library, Sloane 6, ff. 175v-176, ink drawings

We are not sure about the exact Latin manuscript from which the Middle English text was taken. According to Faye Marie Getz¹⁴¹ a good exemplar may be British Library, Harley MS 3748 (fourteenth century): it deals with many medical treatises among which there is *De methodo medendi* in the Latin translation by Gerard of Cremona, to whom the text is clearly ascribed in titulus and colophon. Gerard entitled its translation *De ingenio sanitatis*, retracing the Arabic *ḥilat al bur'*: his work was of fundamental importance for the diffusion of the Galenic treatise in the Latin West. Nevertheless, there is no modern edition of the text as the only printing is found in Galen's *Opera* published by Diomedes Bonardo in 1490¹⁴². This *editio princeps* was published by Filippo Pinzi in two volumes in Venice in 1490 and, according to Elisa Manni¹⁴³, it was realised through the comparison of Gerard's translation with at least two manuscripts.

Harley 3748 was probably made in France, but from the second half of the fifteenth century it was used at the hospital of St Nicholas in Cues, on the Mosel, in Germany (*Liber hospitalis sancti Nicolai prope cusam*, f. 1^r). The bookseller Nathaniel Noel, employed by Edward Harley for buying books and manuscripts chiefly on the Continent where his agent was George Suttie, sold it to Edward Harley on 18 January 1723/4, together with other manuscripts formerly in the hospital library¹⁴⁴. This manuscript is a collection of medical works by Galen, translated into Latin partly by Gerard of Cremona. The manuscript contains:

- ff. 1^r-24^v *De crisis*;
- ff. 24^v-42^r *De criticis diebus*;
- ff. 42^r-112^v *De ingenio sanitatis*, translated by Gerard of Cremona;
- ff. 113^r-135^v *De accidenti et morbo*;
- ff. 135^v-168^r *De interioribus*;
- ff. 168^r-190^r *De iuvamentis membrorum*;
- ff. 190^v-208^r *De complexionibus*;
- ff. 208^v-210^v *De malitia complexionis diverse*.

¹⁴¹ Getz, "The Method of Healing in Middle English", p. 148.

¹⁴² Ullmann, *Islamic Medicine*, pp. 7-40; McVaugh, Michael, "The Lost Latin Galen", in *The Unknown Galen*, edited by Vivian Nutton, London: Institute for Classical Studies, 2002, pp. 153-164; Pizzamiglio, Pierluigi, "Il contributo di Gerardo da Cremona alla rinascita del secolo XII", *Cultura e scuola*, 61-62, 1977, pp. 376-383.

¹⁴³ Manni, "Il libro IV del *De ingenio sanitatis* di Galeno: note alla traduzione di Gerardo da Cremona alla luce dell'esame di quattro testimoni", pp. 125-127.

¹⁴⁴ Robert Harley Earl of Oxford, Edward Harley Earl of Oxford, Humphrey Wanley, *A Catalogue of the Harleian Manuscripts in the British Museum*, London: Eyre and Strahan, 1808-12, III (1808), no. 3748; Ullman, Berthold L., "Manuscripts of Nicholas of Cues", *Speculum: A Journal of Medieval Studies*, 13, 1938, 194-197, p. 196.

By the end of the thirteenth century these texts became the core of the Galenic corpus known as the ‘new Galen’, which was used as part of the teaching curriculum in medical university faculties. The manuscript includes marginal notes, glosses and variants copied by the scribe, there are also *maniculae*, human profiles and many corrections added by fifteenth-century-readers, such as the reader who added the title of the first work, *Liber galieni de Crisi etc* at f.1, or the titles in the upper left margins at the beginnings of works and next to the running titles.

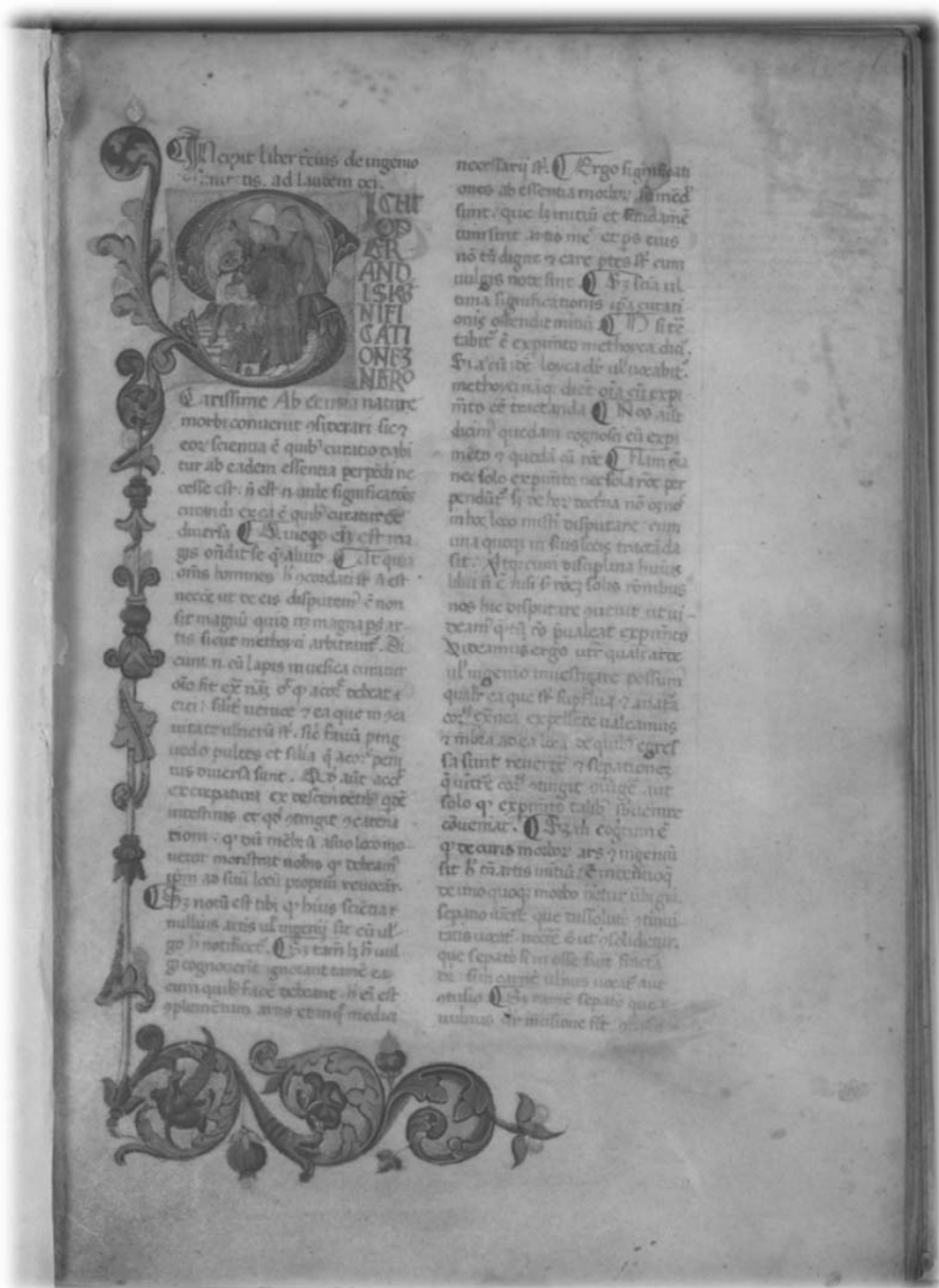
For what specifically concerns ff. 42^r-112^v, they contain the whole Latin translation by Gerard of Cremona of *De ingenio sanitatis* book 1 to 14. On f. 42^r there’s the rubric: *Incipit liber de ingenio sanitatis Galieni translatus a magistro Girardo Crenonensis in Toletum de arabico in latinum. Causa i.e. quaerere tantum distulit facere librum. Rubrica. Nero karissime a te et a multis multis viribus rogatus...* The text is divided into fourteenth *particulae* or books that begin on ff. 42^r, 47^v, 53^r, 59^r, 65^r, 72^r, 77^r, 82^v, 87^v, 92^v, 97^r, 102^r, 105^v, 109^v. Each book contains a number of *causae* or sections marked by a colour initial or rubric with some mistakes in the numbering of the sections.

Figure 5



MS London, British Library, Harley 3748, f. 42r - *De ingenio sanitatis*

Figure 6



We do not know the antigraph of manuscript Sloane 6: Harley 3748 (**H**) has a very similar text, but I found another manuscript that preserves Gerard of Cremona's translation of *De methodo medendi* in England: it is Wellcome Library MS 287 (**W**), and it seems to me to be better than Harley 3748. It covers books III-VII only, and it presents an illuminated initial on f. 1 in gold and colours with marginal floriated decorations, containing a miniature of a physician with two assistants operating on the head of a seated patient. This manuscript is written in double column and from leaf 33 to the end, the leaves are palimpsest with traces of an earlier script that may be of the thirteenth century and include lists of office-holders in an unknown Italian city. Although the text in Wellcome Library 287 is very similar to the text in Harley 3748, and even though these two manuscripts seem to have been written more or less in the same period (the late fifteenth century), I chose the text of Wellcome Library 287 as it presents fewer mistakes than Harley 3748, and in many places it is closer to manuscript Sloane 6 than Harley 3748. For example, the chapter headings, which are present in manuscript Sloane 6, do not have an exemplar in Harley 3748, while they are extant in the Latin MS used for comparison.

Thus, after having collated Wellcome Library 287 and Harley 3748, I have decided to compare the Greek text, taken from Johnston-Horsley's edition of 2011¹⁴⁵, with the Latin and with the English text in manuscript Sloane 6¹⁴⁶. Here I take into consideration the initial parts of each chapter of books three and four, the only two that are present in manuscript Sloane 6, then I will also provide the whole transcription of book four as it enjoyed great fortune in England and many Middle English translations, among which there is the one that is the kernel of this thesis.

Johnston-Horsley	Wellcome Library 287	Sloane MS 6
p. 242 [157K] Εἴπερ οὖν, ὃ Ἰέρων, ἡ ἔνδειξις ἐκ τῆς τοῦ πράγματος φύσεως ὀρωμένη τὸ δέον ἐξευρίσκει, τὴν ἀρχὴν τῆς τῶν ἰαμάτων εὐρέσεως	f. 1^{ra} Incipit liber tercius <i>De ingenio sanitatis</i> ad laudem dei. Sicut operandi significationes Nero carissime ab essentia nature morbi convenit	f. 183^r In þis book ben VII chapitres contened. And in þe first he putteþ vnder what þing out of kynde a sekenes is conteyned. Riȝt dere frende Nero, as it

¹⁴⁵ Johnston - Horsley, *Galen: Method of Medicine Books 1-4*, pp. 1-461.

¹⁴⁶ Getz, "The *Method of Healing* in Middle English", pp. 148-154.

ἐκ τῆς τῶν νοσημάτων αὐτῶν ἀνάγκη γίνεσθαι·	considerari, sic et eorum sciencia cum quibus curatio dabitur ab eadem essentia perpendi necesse est.	acordeþ þe significaciouns of wyrchyng for-to be considered of þe essencion or being of kynde and of þe connyng of þo þings with which curacioun or helyng schal be giffen.
p. 248 [162K] Πρόδηλον δ' ὡς ἀπὸ τῶν ἀπλουστάτων ἄρξεται. τί δ' ἀπλούστερον ἔλκους ἐπιπολῆς ἐν σαρκώδει μορίῳ;	f. 1^{vb} Capitulum secundum in quo determinat de cura vulnerum carnosorum. Unde incipiam a quibusdam simplicibus, verbi gracia, vulnus in superficie carnosorum membrorum existens simplicissimum est.	f. 184^r Þe II chapitre in which he determineþ of cure of wondes þat bene in fleschy members repreuyng þe worchyng of Tesyle. Wherfore I schal bigynne at som simple woundes as þus. A wonde beyn in þe ouerparty of fleschy members is most simple.
p. 266 [173-174K] Εἵπωμεν οὖν ἡμεῖς ἤδη τὴν Ἱπποκράτειόν τε ἅμα καὶ ἀληθῆ μέθοδον ἐλκῶν κοίλων ἰάσεως· ἄρχεσθαι δὲ δήπουθεν αὐτὴν ἐκ τῆς οὐσίας χρὴ τοῦ πράγματος.	f. 3^{ra} Capitulum tercium in quo agit de cura vulnerum concavorum et in quibus debeant curari. Incipiamus ergo quando ¹⁴⁷ ab ea doctrina et sciencia vulnerum quas ab Ypocrate suscepimus. Dico ergo quod ingenium et initium huius artis ab essencia nature rerum sumi debeant.	f. 186^r Þe III chapitre in which he treteþ of þe cure of holowe woundes and howe þei schalle bene cured. Þerfor bigyn we of þat doctrine and science which we haue taken of Ypocras. Þerfor I sey þat þe wytte and þe bygynnyng of þis craft owe to be taken of þe essencion and being of nature of þingis.
p. 286 [186K] Ἐπὶ δὲ τὴν τοῦ ἔλκους θεραπείαν μόνου μετέρχεσθαι καιρός·	f. 4^{vb} Capitulum quartum in quo determinat de curis vulneris in eo quo vulnera sunt. Hic autem incipiam	f. 189^r Þe IV chapitre in which he determineþ þe cure of woundes in as miche as woundes. Here

¹⁴⁷ quando *omittit* H.

	de curis eorum que sola vulnera sunt.	forsope schal I begynne of þe cures of þam þat al only bene woundes.
p. 300 [197K] Ἐπὶ δὲ τὸ τῆς οὐλῆς δεόμενον ἔλκος ἐπάνειμι, περὶ οὗ μικρὸν ἔμπροσθεν ἔλεγον ὡς ὁ πρῶτος μὲν εἶη καὶ τούτου σκοπὸς ἐκ τούτου γένους τοῦ κοίλου.	f. 6^{rb} Capitulum quintum in quo docet ingenium curandi solutionem in qua est amissio cutis. Hic autem volumus disputare de vulneribus que necesse est solidari et sanari.	f. 191^v Þe V chapitre in which he techep þe wytte of cure solucion in þe which þer is lesyng of skynne. Were forsope will He dispute of woundes which bene needful for-to be sounded and heled.
p. 306 [200K] ἀλλὰ γὰρ ἐπὶ τὸ λεῖπον ἔτι τῆς περὶ τῶν ἐλκῶν ἀπιέναι χρὴ μεθόδου. Λεῖπει δ', ὡς οἶμαι, τὸ περὶ τῶν ὑπεραυξανομένων σαρκῶν εἰπεῖν, ὃ δὴ καὶ ὑπερσάρκωσιν ὀνομάζουσιν οἱ πλείους τῶν ἱατρῶν.	f. 6^{va} Capitulum VI ^m in quo docet modum et ingenium curandi superflua de vulneribus. Nunc autem oportet nos ad ea que de curandis vulneribus dimissimus reddere ¹⁴⁸ , id est, ostendere qualiter que in ¹⁴⁹ vulneribus sunt superflua possumus evellere.	f. 192^r Þe VI chapitre in which he techep to remove superflue flesh of woundes. Now forsope bihouep vs to turne agayne to þe þings which we lefte of woundes to be cured, and for-to schew how we mow drawe out þo þings whiche bene superflue in woundes.
p. 310 [204K] δῆλον δ', οἶμαι, καὶ τούτων ἐστὶν ὡς ὁ μὲν ἐμπειρικὸς, εἰ καὶ ὅτι μάλιστα διωρισμένη χρήσαιο τῇ πείρᾳ, τό γε μεταβαίνειν ἐπὶ τὸ προσηκόν εὐμηχάνως οὐκ ἔχει.	f. 7^{ra} Capitulum septimum in quo reprehendit methoycos thesilicos et eriphilicos et confirmat logycos. Quare dico methoycos omni studio in suis experimentis imposito nequaquam posse de una ad aliam verti medicinam.	f. 193^r Þe VII chapitre in which he reprehendeþ or reproueþ metoycens, þat is experimentours, and confermeþ logiciens. Wherfor I sey þat metoycens all þair studie putte in þair experiments may nowise be turned fro one medicine to anoþer.

¹⁴⁸ reddire] redire H.

¹⁴⁹ in *omittit* H.

p. 320 [211K]

Ἐπεὶ δὲ καὶ περὶ τούτων
αὐτάρκως διώρισταί, πάλιν
ἐπὶ τὴν ἀρχὴν ἀνέλθωμεν
τοῦ λόγου, μιγνύντες
ἀπάσας τὰς συμπιπτούσας
ἔλκει διαθέσεις, ἀπὸ
πρώτης ἀρξάμενοι τῆς
δυσκρασίας.

f. 8^{ra} Capitulum VIII in quo
determinat Galenus de cura
vulnerum ratione eorum
que superveniunt vulneri.
At cum hec ratio, ut video,
bene a me sit diffinita,
revertor ad ea que prius
disputavi, dicens
unumquemque morbum
qui in vulneribus solet
evenire. Et incipiam a mala
complexione.

f. 194^v De VIII chapitre in
which Galiene determineþ
of cure of woundes and of
þe maner of þo þings
which comeþ aboue in
woundes. Bot siþe þis
resound as me þink is wele
diffinite, þus of me I-turne
aþeyn to þo þinge which I
disputed first, saying euery
sekenes which is wonte
for-to come in woundes.
And I schal bigyn at euyll
complexioun.

p. 326 [214-215K]

Τὸ μὲν οὖν καὶ τὰς κράσεις
τῶν σωμάτων καὶ τὰς ὥρας
τοῦ ἔτους καὶ τὰς φύσεις
τῶν μορίων ἐπιβλέπειν
χρῆναι τὸν μέλλοντα
καλῶς ἔλκος ἰάσασθαι
δεδεῖχθαί μοι νομίζω
σαφῶς· καὶ ὥς μὲν πρῶτος
σκοπὸς τῆς ἰάσεως ἐκ τῆς
διαθέσεως λαμβάνεται
μόνης

f. 8^{va} Capitulum nonum in
quo determinat qualiter
curandum sit vulnus in quo
apparent contrarie
signones. Qua de re
patenter, ut video,
medicinas vulnerum prout
oportuit ostendi nam quod
primitius oportet
considerari ab assentia
morbi sumendum est.

f. 195^v De IX chapitre in
which is schew how a
wounde is to be cured
when þere appereþ
contrary significacions. Of
which þing as me semeþ I
haue schewed as it bihoued
openly þe medicynes of
woundes, for why þat
bihoueþ first to be
considered is to be taken of
þe essencion or being of þe
sekenes.

p. 336 [221-222K]

Ἐν γὰρ τῇ παρόντι
συγκεφαλαιώσασθαι
βούλομαι τὸν ἐνεστῶτα
λόγον ἐπὶ τὰς οἰκείας
διαφορὰς τῶν ἐλκῶν
ἐπανελθόν· ἵν' εἴ τις

f. 9^{rb} Capitulum X in quo
docet firmum ingenium
curandi ab ipsis
notationibus vulnerum.
Rubrica. Hic autem volo de
te notationibus vulnerum
disputare. Dico ergo quod

f. 197^v De X chapitre in
which he techeth forto
knowe þe witte of curyng
of þe self denotacions of
woundes. Here forsoþe wil
I dispute of þe denocacions
of woundes. I sey þerfor

κἀντεῦθεν ἔνδειξις	si aliquis dixerit quod	þat if any man sey þat
ιαμάτων ἐστὶ, μηδὲ ταύτην	vulnera, alia sunt tumida	wounds som bene bolnes
παραλίπωμεν. τὸ μὲν οὖν	alia putrida alia corrosiva	oþer erisipilar oþer with
φλεγμαῖνον ἔλκος καὶ τὸ	alia erisipilata alia	akyng and oþer without
σηπόμενον	cancerosa alia cum dolore	akyng and sich oþer.
ἀναβιβρωσκόμενόν τε καὶ	alia sine dolore et similia.	
γαγγραινούμενον		
ἐρυσιπελατῶδες τε καὶ		
καρκινῶδες ἀνώδυνόν τε		
καὶ ὀδυνῶδες, τά τ' ἄλλα		
τοιαῦτα λέγουσιν ὡς		
διαφορὰς ἐλκῶν.		

Although the exact Latin exemplar for the text of manuscript Sloane 6 is not known, it is a very important witness of the transmission and dissemination of medical knowledge and of Middle English translation techniques. It is the witness of two important processes: translation and compilation. In fact, the compiler of the manuscript took excerpts from different books, coping or translating them, and after that he assembled the pieces according to his needs. For what specifically concerns the Middle English translation of *De ingenio sanitatis*, manuscript Sloane 6 shows that Galenic medicine, and more precisely Galenic surgical teachings were alive in fifteenth-century England and, through translation and compilation, they could be used also by a non-Latinate readership, whose language and knowledge was not that of university professors¹⁵⁰.

I have matched the Middle English chapter headings and incipits with the Latin and Greek texts to compare them and to make some considerations about the translation process. First of all, as noted above, the headings are present neither in Harley 3748, nor in the Greek text. However, Wellcome Library 287, together with the great majority of the manuscripts of Gerard's translation in Europe, includes them because they were thought to be useful devices for the reader who could leaf through the pages of the manuscript and retrace the chapters and their contents without reading the text in its entirety. As manuscript Sloane 6 was meant to be a useful booklet for surgeons, it shows the same headings of the Latin, which have been faithfully translated by the copyist. Moreover, at chapter ten Harley 3748 omits not only the rubric but also the

¹⁵⁰ Getz, "The *Method of Healing* in Middle English", p. 156.

Galenic statement “Hic autem volo de te notationibus vulnerum disputare”, which translates the Greek Ἐν γὰρ τῷ παρόντι συγκεκριαίωσασθαι βούλομαι τὸν ἐνεστώτα λόγον ἐπὶ τὰς οἰκείας διαφορὰς τῶν ἐλκῶν ἐπανελθόν. This omission is probably due to the fact that the statement can be easily confused with a rubric. Manuscript Sloane 6 seems to me to present many similarities with the Latin text of Wellcome Library 287, which I assumed as exemplar for the English text.

Furthermore, the incipits transcribed above show that the transmission through translation of the Galenic text is complete and very precise. The Arabic version, which I did not give here, as my main focus is the translation from the original Greek text to Middle English, translated the Greek in a complete way, sometimes expanding and clarifying it with explanations and examples included in the main text. Gerard’s translation, on the other hand, tended to simplification and sometimes he also omits some elements that he judged not useful to be translated or that he did not understand in the Arabic text¹⁵¹. An outstanding example is the Greek word ἔνδειξις. This is a very important scientific term that can be translated in Latin with *indicatio* and that, together with its derivative forms, has more or less the same meaning as the modern term advice. It occurs very often in Galen, and particularly in his *De methodo medendi*, his chief work on therapy, as it was from this very word that he distinguished himself from other medical sects such as Methodics and Empiricists. In fact he felt himself in a somewhat privileged position as he was the only one who could ἐνδεικνοῦναι, i.e., find the “scientific proof offered by the nature of the disease”¹⁵². The first Latin translation of the term ἔνδειξις in the Middle Ages is found in Burgundio of Pisa’s unpublished translation of *De interioribus* (another title for *De locis affectis*) where he translates it 17 times with the term *indicatio*; the same term is used by Niccolò of Reggio in his translation of Galen’s *Subfiguratio empirica*¹⁵³. On the contrary Gerard of Cremona preferred the term *significatio*, but more commonly he omitted the word, as in Wellcome Library 287 f. 9^{rb}, probably because he did not understand its importance in the Galenic theoretical method. Consistently, manuscript Sloane 6 lacks the term both when Gerard omits it, but even when it has, as on f. 12vb and 13 rb. The Middle English

¹⁵¹ Garofalo, Ivan, “Le traduzioni arabo-latine di Galeno; un esempio di commento: il *De inequali intemperie*”, in *Il bilinguismo medico fra tardoantico e medioevo*, edited by Anna Maria Urso, Messina: EDAS, 2012, pp. 105-119; McVaugh, Michael, “Towards a Stylistic Grouping of the Translations of Gerard of Cremona”, *Medieval Studies*, 71, 2009, pp. 99-112.

¹⁵² Kudlien, Fridolf, “‘Endeixis’ as a Scientific Term: Galen”, in *Galen’s Method of Healing*, edited by Fridolf Kudlien - Richard J. Durling, Leiden: Brill, 1991, pp. 103-111.

¹⁵³ Durling, Richard J., “‘Endeixis’ as a Scientific Term: B) ‘Endeixis’ in Authors Other than Galen and its Medieval Latin Equivalents”, in *Galen’s Method of Healing. Proceedings of the 1982 Galen Symposium*, edited by Kudlien Fridolf - Richard J. Durling, Leiden: Brill, 1991, pp. 112-113.

text appears to be complete and precise, and its regular structure is strictly related to Gerardo's Latin text. Only two additions are found in the *rubricae*: at f. 183^r, where manuscript Sloane 6 indicates the division in seven chapters and summarises the content of the first, and at f. 184^r where the copyist specifies that Galen dwells on "repreuyng þe worchyng of Tesyle". However, these additions can be easily explained with the compiler's will of being thorough and as useful as possible to his readers providing them with a more complete summary of the chapters.

For a more specific analysis of the English text I will provide the transcription of the four paragraphs of Book IV from manuscript Sloane 6 and I will compare them with the Latin text in Wellcome Library 287. I have focused on the fourth book only because it will be also the subject of the next two chapters as in the mid sixteenth century another Middle English translation was realised. I do not include the Greek text because in this way the English rendering of Gerard of Cremona's Latin version of *De methodo medendi* will clearly emerge and because Gerard's translation technique remains the same in the whole work. His inclination to synthesise led him to omit some passages, particularly where Galen explained how his work was proceeding or made cross-references with other works. He also omitted the invocations to the gods and he totally misunderstood the names of the different schools of medicine: οἱ ἐμπειρικοί is always translated *methodoyci*, οἱ δογματικοί *loyci*, and οἱ λογικοί *loyci* and *empirici*¹⁵⁴. This is testified in the incipit of the seventh chapter where ἐμπειρικὸς is translated *methoycos* by Gerard, followed by the English translator who writes *metoycens*.

III.3.1 THE FOURTH BOOK OF *DE METHODO MEDENDI* IN SLOANE MS 6 AND WELLCOME LIBRARY MS 287

In addition to the whole third book, manuscript Sloane 6 preserves also part of the fourth book, and specifically sections I-II-III and part of the fourth (232-253K), while it omits paragraphs V-VI-VII (254-304K)¹⁵⁵. These first four Galenic sections continue the discussion on the processes of the healing of wounds and ulcers (diseases that Galen defines as 'dissolution of continuity'), which was the main argument of book III. Galen makes here general remarks on simple and compound conditions, on the causes of

¹⁵⁴ Manni, "Il libro IV del *De ingenio sanitatis* di Galeno: note alla traduzione di Gerardo da Cremona alla luce dell'esame di quattro testimoni", pp. 125-127.

¹⁵⁵ Kühn, Karl G., ed., *Claudii Galeni Opera Omnia*, Leipzig: Knobloch, 1821-1833, vol. X, pp. 232-253, 254-304.

wounds and ulcers, and their cure. Then, in the second section, he deals with the swellings associated with wounds or ulcers, the prevention of the flow of bad humours into the affected parts and the reestablishment of the balance of the four qualities. After that Galen distinguishes between therapy and prophylaxis, stating that external antecedent causes do not contribute to diagnosis, as it comes only from the condition itself because “it is not possible to take an indication of any value from something that does not still exist”¹⁵⁶. Paragraph IV begins with two long quotations from Thessalus’ method of treatment of chronic and intractable ulcers. Galen harshly criticises Thessalus’ approach to these diseases and describes his colleague as an ignorant healer¹⁵⁷.

I am sure that this preliminary analysis would require a deep survey, and I hope I will supply it in a specific study. Here, I have decided to transcribe the whole fourth book preserved in manuscript Sloane 6 following the text in Wellcome Library 287 (**W**) as it seems to me to be the nearest to the Middle English text in manuscript Sloane 6. I have compared it with Harley 3748 (**H**), Bonardo’s *editio princeps* (**B**), Cesena, Biblioteca Malatestiana, MS D.XXV.2 (**M**), Paris, Bibliothèque nationale de France, MS Par. lat. 14389 (**V**), Paris, Bibliothèque nationale de France, MS Par. lat. 15456 (**P**). Through some *loci paralleli*¹⁵⁸ I noticed that **H** and **W** are closer to **P** than to every other manuscript. They appear to be later than **V** or even **B**, as Bonardo’s edition presents variant readings in the margins that he probably derived from the comparison between two different manuscripts that we do not know. The English text of manuscript Sloane 6 has to come from Gerard’s translation as both the Latin and English text misunderstand Greek names, lack some passages that are present in the Arabic translation, and omit some Galenic quotations or cross-references to other books¹⁵⁹.

¹⁵⁶ Johnston - Horsley, *Galen: Method of Medicine Books 1-4*, p. 369.

¹⁵⁷ Johnston - Horsley, *Galen: Method of Medicine Books 1-4*, Introduction, pp. CLIV-CLVI.

¹⁵⁸ Some of these *loci paralleli* are taken from Manni, “Il libro IV del *De ingenio sanitatis* di Galeno: note alla traduzione di Gerardo da Cremona alla luce dell’esame di quattro testimoni”, pp. 125-136. However in her study she does not take into consideration manuscript **H**.

¹⁵⁹ Bold mine.

f. 10^{va} Explicit tercius. Incipit quartus, continens VIII. Capitulum I in quo premitit quedam communia de accidentibus et morbis supervenientibus vulneri. Quamquam notum sit quod separatio iuncture que in pari **f. 10^{vb}** tatis dissolutione dicitur sit morbus unicuique membro eveniens non tamen uno vocabulo denotatur. Nam si in carne contingerit vulnus dicitur, si ossibus fractura si in nervo contusio. Aliquando quoque in ligamentis sit proprio quoque vocabulo nominates, similiter eo in venis, arteriis, lacertis contingente aliter nominabitur. In hiis tamen fit vel ex contusione vel ex causa vel motu nimio. In lacertis autem fit vel ex ictu forti. Praeterea sanguinem de venis exeuntem et infra cutim existente dicitur ex contusionis occasione plurimum evenire. Venarum aliquando ore parvarum venarum aperto sanguinis ab eis quodam quasi sudore emittitur. Unde morbus iste non videtur quod dissolutio imparitatis sit. Item non numquam membrum aliquod eam cuiusdam rosore separatur morbus tamen compositus est, nam separatio iuncture¹⁶⁰ tunc considerata consequens accidens morbi vocari videtur. Omnis eidem morbus qui separatio dicitur iuncture si in

f. 198^v Here endeth þe þird boke of Galiene *De ingenio sanitatis*, þat is, of witte of hele. f. 199^r Here begynneþ þe ferþe boke contenyng VII chapitres. In þe furþe he setteþ bifore some comoun þings of accidents and sekenes comyng to woundes. Of al it be knownen þat separacione of iuncture which is called dissolucion or lousyng of uneuenhed be a sekenes coming to every membre, neþerles it is noȝt noted with one worde. For why if it be in þe flesch it is seid a wound, if it be in þe bones it is said brekyng, in þe synews brussyng and somtyme it is¹⁶¹ in þe ligaments et named with [approved] worde also it bifallyng in þe veynes or on þe lacertes it schal oþerwise be named. Neþerles in þe veynes it is made of brusyng or fallyng or ane much manyng in þe lacertes forsothe it is made of a strong stroke. On þat þe blode goyng out of þe veynes and beyng with in þe skynne it is said of tymes to come of brusyng of þe veynes. Bot somtyme þe mouþe of litel veynes opned blode is sent out of þam, as it war swetyng whai for it serueþ noȝt þat þis sekenes be dissolucion¹⁶² of uneuenhede. Also som membre is neue separate bicause of schaving or grawyng of þe same neþerles

¹⁶⁰ iuncture tunc considerata consequens accidens morbi vocari videtur. Omnis eidem morbus qui separatio dicitur] *omittit* H.

¹⁶¹ it is *in supralineam addidit ipsa manu*.

¹⁶² dissolvam] *in supralineam* or lousyng *ipsa manu scripsit*.

morbo contigerit aliquid a mittente duobus
 efficitur modis, aut propter ferrum aut
 propter rosuram qui autem sit a ferro in
 propatulo est a rosura autem contingens et
 de eam interiori necessario eam humoris
 maligni et pessimi erit. Quod si de eam
 exteriorori extiterit ¹⁶³ aut erit incisive
 medicina aut ustio ignis. Unde oportet te
 bene investigare et inquirere morbos ut
 scias qui finit composiri et qui simplices.
 Nam simplicibus simplex et compositis
 composite convenit medicina. Sed viam et
 ingenium artis compositorum morborum
 superius denotavi. Que tamen videtur mihi
 non sufficere eo quod ibi universalis
 disputavi. Ideoque in hoc loquo
 particulariter denotabo. Unde dico quod
 omne vulnus aut est solum aut
 compositum cum alio est. Id etiam cum
 quo compositur aut erit solum aut multi f.
11^{ra} plex, hii quoque non solum cum
 vulnere contingunt sed etiam culnere iam
 facto superveniunt, quorum quedam
 occasione aut vulnus augmentatur aut
 medicina sine illorum consideratione
 nullatenus perficitur: ut superius dictum
 est. Ideoque nunc tractandum de cura
 eorum quibus vullnus augmentatur et
 maius efficitur. Dico ergo duobus modis
 hoc fieri. Autem enim a corpore sunt
 expellenda aut nocumentum eorum
 mitigetur; hoc tamen fieri non poterit nisi

þe sekenes is componed. For why þe
 separacion of þe iuncture considered it
 someþ to be called ane accidens of þe
 sekenes. Every sekenes forsoþe which is
 seid separacion of iuncture or roynnyng, if
 it falle in a membre losyng anyþing it is
 made on tuo maniers ouþer for yren or for
 grawyng or fretyng which for soþeys made
 of yren is in opne schewyng þat forsoþ þat
 falleþ of fretyng or of inwarde cause,
 necessarily schal be bicause of wiked
 humour or worste þat if it fal for utter
 cause ouþer it schal be for brynnyng
 medicine or brynnyng of fire. Wher for it
 bihoueþ þe to serch inquire sekenes þat
 þou knowe which bene componed and
 which symple. For whi symple medicyne
 acordeþ or symple sekenes and componed
 to componed et noted above þe waye and
 þe witte of þe crafte of componed sekenes.
 Whiche neþerles me semeþ nozt for to
 suffice for þi þat þer I disputed universaly
f. 199^v and þerfor in þis place I schal note
 tham particularly wharfore sey þat every
 wounde ouþer it is alon or componed with
 anoþer and þerfor with which it is
 componed ouþer it schal be symple or
 manyfalde and þise nozt only falleth with a
 wounde bot also a wounde new made þai
 come above. For þe occasion for soþe of
 which ouþer þe wounde is augmented or
 þe medicyne without þe consideracion of

¹⁶³ extiterit in H is closer to Sloane than contingit in MS W.

causa fuerit pauca¹⁶⁴. Nam ea quidem
 existente multa vulnus¹⁶⁵ cicatrizarī non
 poterit nisi prius illa curetur. Oportet
 igitur investigari quot et que vulnerum
 sint accidentia consequentia, nam carnem
 uniuscuiusque vulneris sive non sit
 concavum sive non necessario sanam
 secundam suam naturam convenit esse.
 Confert essenciam ut nihil in labris
 vulneris solidandi quodlibet incidat, sicut
 multotiens evenit. Unde labra coniungi et
 conglutinari non possunt ex pilo oleo
 pulvere et similibus. Nam consequentibus
 accidentis existentibus impossibile est
 vulnus posse curari vel solidari¹⁶⁶ quamvis
 non consequatur ex ipsis non existentibus
 semper esse etiam solidabile. Complexio
 enim subterioris carnis est tale quid quod
 sine ea neque caro generari neque vulneris
 labra consolidari vel conglutinari poterunt
 qua de re cognitum est eam secundam
 suam naturam conservari, quatenum
 utrumque¹⁶⁷ in sanando vulnere perfici
 valeat. Oportet ergo eam secundam suam
 complexionem esse temperaturam et
 sanguinem ad membrum vulneris
 defluentem nam hec ut video magis ceteris
 sunt necessaria, sanguinis enim
 þam is nowise perfetely done as it is seid
 above and þerfor now it is to trete of þe
 cure of þam to whom þe wounde is
 augmented and made more. Þerfor I sey
 þat to be done on tuo maners ouþer
 forsoþe þai bene to be putte out of þe
 body or effect¹⁶⁸ þe namyng of þam de
 alleged¹⁶⁹ and sostened. Neþerles þai
 may noȝt be done bot when þe cause is
 litel, for whi if it be mych þe wounde may
 noȝt be cicatrized bot if it be first cured¹⁷⁰.
 Þerfor it behoneþ to serch how and which
 bene þe folowyng¹⁷¹ of woundes. For
 whi it acordeþ þe flesch of every wounde
 necessarily for to be hole after his owne
 nature wheþer have holowe or not. It
 helpeþ also þat noþing falle in any maner
 in þe lyppes of the wounde to be sondeð
 as it oftymes falleth wher for þe lyþes may
 noȝt be royned and glewed þat is to sey of
 here it oilet pondre and sich like for whi
 þe consequents¹⁷² beyng þe antecedents¹⁷³
 it is impossible a wounde to now be cured
 þereof al it folow noȝt þam noȝt beyng
 evermore for to be sondeable þe
 complexion for soþe of flesch underneþ is
 such a þing þat withouten it nouþer flesch
 may be engendred neþe lippes of a

¹⁶⁴ pauca] modica H.

¹⁶⁵ nam ea quidem existente multa vulnus] nam causa existente quidem vulnus H.

¹⁶⁶ vel solidari *omittit* W

¹⁶⁷ utrumque] utrum velle B, H, M, P, V, W.

¹⁶⁸ effect *in supralineam ipsa manu adiunxit*.

¹⁶⁹ legged *in supralineam al ipsa manu adiunxit*.

¹⁷⁰ if t *in supralineam ipsa manu adiunxit*.

¹⁷¹ or consequences *in supralineam ipsa manu scripsit*.

¹⁷² or folowyngs *in supralineam ipsa manu scripsit*.

¹⁷³ or foregoyngs *in supralineam ipsa manu scripsit*.

corruptione caro generari et vulnus solidari prohibentur. Item aliud in corpore foedore ¹⁷⁴ **f. 11^{rb}** roditivo et pustulis supervenientibus et sanguine multo existente sanies in vulnere internum augmentatur quod neque caro generatur neque labia consolidabuntur hoc namque sunt ille tres vulnerum species que difficilis curationis existunt in mala complexio carnis vulnerate et corruptio sanguinis ad membrum vulneratum defluentis, et quantitatis illius sanguinis. Item si vis vulnus aliter dividere dicas, vulnus difficulter sanatur aut propter complexionis carnis corruptionem in qua vulnus existit aut propter corruptionem earum qui de malo chimo defluunt, sed mala complexio duobus modis est nam caro vulneris aliquando mutatur a sua natura secundam solam qualitatem et aliquando cum quadam duritia similiter etiam sanguinis defluens dupliciter consideratur in quantitate videlicet et qualitate. Item non numquam hec tria commiscuntur et aliquando duorum horum tamen compositorum curam non oportet ostendi et sigillatim de eis presencialiter disputare.

wounde sonde or glewed. For which þing it is knowen to be conserved et kepte after his nature þat our wille may be done perfite in a wunde to be healed. Perfor it behoveþ it after þe awne complexion for to be temperate, and blode flowyng to þe membre of þe wounde for whi þise as I see bene more necessarius þan oþer blode forsoþe is wittnesed fot ¹⁷⁵ to engendre flesch and a wounde without corruptione to be sonde also somtyme fretyng filth and [grysthis] comyng above in a body, and mych blode beyng quited is eftesome augmented in þe wounde þat nonþer flesch schal he engendred ne þe lippes sonde þise forsoþe bene þe þre spices of woundes **f. 200^r** which bene of harde curyng þat is yuel complexion of flesch wounded and corruption of blode flowyng to þe wounded membre and þe quantite of þe blode. Also if þus wille oþerwise divide a wounde, sey þus þat a wounde is heled of þe hende. Onþer for corruption of þe complexion of þe flesch in which þe wounde is or for þe corruption of þe þings which efloweþ of yuel chyme þat is humore. After þat unel complexion is on tuo maners. For whi þe flesch of a wounde samtyme in changed fro his nature after qualite alon, and somtyme with som hardnes. And also blode flowyng is double wise considered þat is to sey in

¹⁷⁴ foedore *omittit* H.

¹⁷⁵ fot] for

qualite or quantite.

**Capitulum secundum in quo docet
curare malam complexionis
subvenientem vulneri et obviare
superfluo sanguini venienti ad vulnus.**

Item nonnumquam hec tria commiscetur et aliquando duo eorum horum tamen sompositorum curam non oportet ostendi cum singulariter de is presentialiter disputem ¹⁷⁶ . Dico ergo corruptione complexionis carnis existente oportet medicum investigare utrum sit dura et sicca. Que si taliter fuerit fomentet eam cum aqua calida et temperata, donec rubea fiat et tumefieri incipiat, nam si amplius fomentetur magis eo quo coadunatum est dissolvetur medicinam quoque vulneris convenit humidiores esse quam ea que ponitur in sana carne; quod si caro humidior naturali fuerit siccior medicina fiat **f. 11^{va}** et ab aqua custodiatur vino enim si necesse fuerit lavetur, aut aceto cum aqua mixto aut cum aqua sciptic herbe cocte sunt. Similiter si caro calida fuerit refrigeretur et frigida calefiat. Quorum uniuscuiusque notitia ex colore carnis perpenditur ex tactu quoque et ex eo quo infirmus sentit, nam aliquando manifestat nimium calorem vel frigiditatem meo sentiri et quietem ex medicamine calido et frigido haberi, nam si vulnus calidum fuerit color superficiei rubeus erit, si autem frigidum albus est.

**Be II chapitre in which he techep to
eschewe yue complexion.** Also somtyme

þise þre bene medled togidre and somtyme tuo. Neþerles it bihoueþ noȝt to be schewed þe cure of þise componed, siþen I disputed in my presence singularly of þam. Þerfor I sey beyng þe corruption of þe complexion of þe flesch, it bihoueþ þe leche to serch if hym semeþ it hard or drie. Which if it be hard fomentet he it w^t warme water or temperate to it be made rede or bigyn to bolne, for why if it be more fomented þat þat is gedred schal more be dissolved, also it acordeþ þe medicyne of þe wounde to be after þe humido which is put or sette in þe hole flesch þat is þat flesch be more moist þan þe naturel, be þer made a more dri medicyne or be it kepte fro watre. For soþe if it be made be it wasched with wyne or with vinegre madled with watre or with watre in which sciptike herbes be soþen. Also if þe flesh be hote be it colded and colde hoted or y hotte of þe which þe knowyng of every ichore is perceyved of þe color of þe flesch of touchyng also and of þat þat þe seke feleþ. For why somtyme he schewen to mych hete or colde to be faled in hym and viste or quiete to be halde of {of} a hote medicyne or colde. For why if þe wounde be hote þe color of þe overpartie schal be rede. If for soþe it

¹⁷⁶ Item...disputem *omittit* H.

Cum autem duritia in vulnere esse naturam fuerit oportet ut primitius eam cures. Item cum labra vulneris mutantur aut in colore aut in duricia convenerit aut incidantur usque quo ad sanam carnem incisio penetravit. Sed si mutatio labrorum multum antea percuravit oportet ut constans sis et inquires utrum audeas eam totam abscindere. Sin autem curabis illam in longo tempore. Hoc tamen firmam voluntatem infirmi faciendum est, quidam enim carnis incisionem pati nolentes volunt longo tempore curari; aliquando vero converso. Similiter si sanguinis ad membrum vulneratum defluens temperamentum parum in quantitate egrediatur oportet ut ei repugnet quatenus ad temperamentum reducatur; constipetur ergo et refrigeretur superior pars membri vulnerari et ligamentum incipiat a vulnere usque ad sanum locum tendens sicut Ypocras precepit in *Fractura*; ponatur in vulnere quoque medicina fictior qua ea que in simplicibus vulneribus, quod si medicina fluxui repugnare non valeat eo quod multe quantitatis sit investigetur qualiter auferri debeat, quod si fluxus fuerit propter membri defectionem inter curabis eam; item si contingat ex plenitudine malorum humorum aut in toto **f. 11^{vb}** corpore existencium aut in aliquo membro supra vulneratum membrum be colde it schal be white when for say þer is hardnes out of kynde in þe wounde it behoveþ þat þan cure it first. Also when þe lippes of þe wounde ar changed ouþer in color or in hardnes it acordeþ þat þai be cutted unto **f. 200^v** þe kutting come to þe hole flesch bot if þe changyng of þe lippes perseþ mych inward it bihoveþ þat þou be stedfast and inquire wheþer þou darre cutte it all away or noȝt. If for soþe þan dar noȝt in long tyme þan schalt one it. Neþerles þis is to be done after þe wille of þe seke. Sam forsoþe willyng noȝt suffre kutting of flesch wille be cured in long tyme, oþer forsoþe continuily. Also if blode flowyng to þe membre wounded passe forþe in oportite out of temperance, it bihoveþ þat þan respigne a litel aȝeyns it. Þat it be broȝt aȝeyn to temperance þerfor þe ounperty of þe membre wounded be constipate or keled or þe byndyng begynne at þe wounde goyng un to þe hole place as Ypocras conmanded in *Brekyng*¹⁷⁷. And he þer put in þe wounde a drien medycyne, þan þat þat is put in symple woundes. Þat if þe medycyne may noȝt repugne to þe flowyng for þi þat it is of mych quantite, be it enschered how it owe to be done away þat if þe flowyng¹⁷⁸ of þe membre þus schal cure it. Also if it falle of fulnes of yuel humors beyng ouþer in all þe body or in any membre above þe

¹⁷⁷ My italic.

¹⁷⁸ flowyng] floweng.

convenit ut quodcumque eorum sit primitius curetur, sed defectio membri propter quam humores ad vulnus descendunt non est nisi eam sue male complexio quamvis non sequatur ut mnis mala complexio sit causa defectionis, ideoque videmus plurimum carnem vulneris malam complexionem humorem non tamen esse defectam quem defectio membri non sit nisi dum mala fui complexio multum a temperamento se mota est, quo sit existente decet curari sicut dixi tibi ut calidam in frigides frigidam calefaciat huiusdam deficcet et sicca humectes et composita compositis medicinis adiuves idest si due qualitates pervalent duabus aliis eis contrariis resistas. Nam robur que nobis talia ostendit hec est, quicquid enim versatur secundam rectam integritatem, non solum ex animalibus vel nascentibus verum etiam ex omnibus rebus necesse est temperatum et mediocritate inter duas extremitates eorum omnium esse que non directe currunt, illud enim quod neque minui neque crescere oportet neque proportionaliter neque qualitative necessario vituperabile ¹⁷⁹ est; sed ea quibus addi et diminui convenit necessario extra laudabilem compositionem sunt, nam ad ea nulatenus percerent nisi quod minus est perficiatur et quod superfluum auferatur est, ea vero de quibus quelibet

wounded membre, it acordeþ whatsoever of þise be þat it be first cured bot defailyng of a member for which humors descendþ to þe wounde is noȝt bot for cause of his yuel complexion, y of al it seweþ noȝt þat al yuel complexion because of defection or defailyng and þerfor we see ofte tymes þe flesch of þe wounde for to have yuel complexion. Neþerles noȝt to be defettyve, for defetton of a membre is noȝt made hot whiles his yuel complexion is mych removed fro temperance, which beyng so it is semely to beouned as I seid to þe þat kole þat is hote or hote colde^{nes} and drie moistned and moiste drines and help componed with comned þat is tuo qualites be to mizty agayn stand hem with tuo oþer contraries. For why þis is þe reson þat scheweþ sich þings. What sam ever forsoþe is tried or versed after riȝt or even halenes noȝt only of manuale þings et spungyng þings **f. 201^r** but also of al þings it is nede temperance or a mene for to bene in to þe tuo extremittez of all þose þat runneþ noȝt riȝtly [þayrofe] forsoþe þat nunþer bihoveþ for to be mynished ne for to wex or encrease nonþer proportionaly ne qualitatively, necessarily it is unblameable; bot þo þings to which it is convenient for to be addid or mynished necessarily þai bene out of lauveable composiciun. For it is noȝt comne to þam;

¹⁷⁹ vituperabile] intemperabile H, P.

persona minuitur vel adiungitur aliter
 considerata sunt. Quam eis quibus aliqua
 qualitas donatur necessarius est ut itaque
 utraque faciamus qualitati videlicet
 repugnanti repugnemus et id cui donatus
 adiuuamus, verbi gratia dum enim
 membrum in frigidatum calefaciamus et id
 quod ab eo diminutum est adiutur et quod
 superfluum est minuitur. Qua ratione
 membris naturalem qualitatem
 egredientibus et haliquam malam
 complexionem necessarium est ut cura **f.**
12^{ra} fiat ex adiutoriis ipsius complexioni
 contrariis. Similiter si caro vel membrum
 ex humoribus ad es propter fui
 defectionem defluentibus cedantur et mala
 eorum complexio primum sanetur
 posterius eius vulnus sana eius tamen
 medicina non erat alia quam si vulnus non
 esset unde monstratur nobis quod medicina
 eius non sit propizia vulneris sed solidus
 male complexionis. Ideoque si aliquid
 reuma ad membrum vulneratum ab aliquo
 membro vel a toto corpore pleno existere
 defluerit vel de malis humoribus primus
 tamen membrum primitus membrum¹⁸⁰
 de quo fluxerit curari oportet aut totum
 corpus si ab eo fluxus manaverit; propter
 hoc si in membro super membrum
 vulneratum existente crosse vene fuerint
 id est varices, primum vene curentur
 deinde vulnus. Similiter si splen infirmus
 bot if þat be performed¹⁸¹ þat is losse, and
 þat be take away þat is superflue. Þo þings
 forsoþ of which any parte is mynished or
 added bene oþerwaiez to be considered,
 for to þam to which any qualite hap
 lordschip it is necessary þat we do boþe
 þise þat is to sey for to repugne þe qualite
 havynge donacium and þat we help it þat is
 maistered. Verbi gratia when a membre is
 cold þat we chanse it and to þat þat is
 mynished of it þat it be added and þat is
 superflue be mynished. For which reson
 membris goyng out of þam natural qualite
 and þat for any yuel complexion, it is nede
 þat cure be done of helpings contrary to
 þat yuel complexiun. Also if flesch or a
 membre giffe stede for defailyng of hem
 self of humors flowyng to þam and þe
 yuel complexiun of þam be first heled. We
 may hele þe wonde neþerlesse þe
 medycyne of it schal be none oþer þan if
 þer war no wounde wher for it is schewed
 to be þat þe medycyne of it is noȝt propre
 of wounde bot of yuel complexion alay.
 Perfor if any thing of yuel humours flowe
 to a membre wounded fro any membre or
 fro al þe body þe complexion beyng it
 byhoveþ first þe membre to be cured of
 which þe flux is made or ellez al þe body
 if þe flux go forþe of it. For þis if in a
 membre beyng wouDED above þer be as it
 war grosse¹⁸² veynes, be þe veynez first

¹⁸⁰ doublet in W but not in S

¹⁸¹ performed] r in supralineam ipsa manu scripsit.

¹⁸² grosse in supralineam ipsa manu scripsit.

fuerit: nulla tamen harum medicinarum pertinet vulneri sed ei quod eam vulneris est.

Capitulum III in quo determinat quondam qualiter detur adiutorum in ingenio curamndi per causas primitivas. Preterea quedam alia volo diffinire. Dico ergo nichil primitivam significationem curationis ostendere cum ab essencia morbi et natura membri infirmi et ab aeris complexione nos circumdantur et similibus denotetur. Universaliter quoque dico quod nullam curandi significationem possumus ab eis habere scilicet que non sunt ignota. Sed quoniam aliquando morbus¹⁸³ non est in propatulo neque secundum sensum fiet secundum rationem et ratio ipsa cohibet nos de primitivis interrogare; arbitrati sunt antiqui quod ex eis eisdem curationis habitus cognoscatur. Quod falsum est morbos quos in propatulo cognoscimus hoc testificantibus¹⁸⁴, verbi gratia si in quodam membro sanguis fuerit a vena qualibet exiens et sub cute manens vel vulnus vel apostenia vel erisipila in eo fit, hoc eam eorum non sit vanum est tamen de eo interrogari; quod si eam hoc sit et faciat necesse est primum **f. 12^{rb}** quod factum est curetur et quod futurum est repugnemus sed si eius effectus ipsa non

cured and afterward þe wounde. Also if þe splene be seke. Neþerlez none of þise medicynez perteneþ to a wounde bot to þat þat is cause of a wounde.

þe III chapitre in which he techeth to hele woundez by her first causez. Ouer þat I will diffinich som oper þingz. I sey þerfor noþing forto schew þe primityue significacion of curyng, siþe it is bitukned of þe essencium of þe sekenes and of þe nature of þe seke member and of þe gode complexion **f. 201^v** of þat þat envyrowneþ us. And of sich oper. I sey universaly forsop þat we may have no significacion of curyng of þe þings that bene unknowen. Bot for þat somtyme sakenes is noȝt in opne schewewyng ne after witte or felyng. Neþerlesse it schal þe done after reson and þeself reson constreyned us for to aske of þe primytyvez; old men demed þat þe habite of þe same curyng be knowen of þise þing which is false in al þam wyttinessyng þose whom we know in opne schewyng verbi gratia if in any membre blode flowe goyng out of any veyne and [derkablyng] falle under þe skyn or þer be in it¹⁸⁵ a wounde or apostene or erisipila, þaf it be noȝt þe cause of þam, neþerlesse it is vayne for to aske of it þat if he know it ȝitte, it is nede þat hede þat þat cured first þat is made and þat we repugne to þat þat is to come,

¹⁸³ morbus] norbus.

¹⁸⁴ testificantibus B, M, P, V, W, testificationis H.

¹⁸⁵ it in supralineam ipsa manu scripsit.

existere maneat tunc ipse effectus curetur. Medicina enim non fit nisi in eis qui sunt futura oportet quod autem nec est nec erit medicine nullatenus pertinet; rerum erfo primitivarum scientia non confert nisi dum morbum cognosce non possumus. Verum methodici credunt res primitivas esse quasdam partes accidentium et cum eis scientiam medicine retineri, nam dum aliquis animali rabioso cane morsus fuerit vel ex alio arabiali rabioso dicunt non nisi solo experimento quidem posse curari. Similiter quidam logici manifestant humori infirmitatem experimento curari debere, unde hii omens primitiva accidentia cumtenplantur velut si partes accidentium essent. Sed qui providerit at intellexerit naturam veneni receptilium et id cum experimento in temperaverit et secundam illud curationem cognoverit primitivorum noticiam non indiget nisi ut passio qualis sit per eam agnoscatur. Verbi gratia si noverit quod venenum scorpionis sit intendet et nam eius qui morsus est eo quod passio eius frigida est licet nichil fit in infirmo per quos agnoscatur utrum frigida fit passio. Nam postquam manifestante ipso morsionem a scorpione fuisse cognoveris incipiens totum corpus indubitanter calefacere non expectans passionem cum experimento cognosci. Ea enim secundam naturam rerum percipiens sicut ostendi in libro que

bot if þe effecte of it abunde stil it noȝt beyng þan be þat effecte cured. Medicyne forsoþ is noȝt done bot in þe þings þat bene neþerlesse, it bihovēþ þe þings þat ar to {to} come to be preyed for and to be keped. For soth þat þing þat nunþer is ne schal noȝt be l† it pertineþ nownez to þe essencium¹⁸⁶ beyng of medicyne. Perfor þe scientie of primityve þings helpeþ noȝt bot whiles þat we may noȝt know þe sekene. Bot methoicens forsoþ troweþ primityve þings for to be certayne þingz of accidentz and with þe medycynyng of it for to with hole science. For why if any man war biten of a wode hounde or of anoþer wode best þei sey þat it may noȝt be heled bot with {bot with} experiment alon. On þe same wise som logiciens scheweþ sich man infirmite to awe to be cured with experiment. Wherfor al þise bihaldeþ primitive accidentz as if þai war parties of þe accident. Bot he þat seeþ bifore and understondeþ þe nature of venyn of crepyng bestez and assayez þat with experiment and after þat knoweþ þe curyng, nedeþ noȝt of knowyng of primitive þingz. Bot þat þe passion be knowen be it what tyme it be. Verbi gratia he knoweþ þat þe venym of a scorpion is of cold vertue intende þe cure of hym þat is bitten for þi þat þe passion of hym is cold þaf al þer be noþing to þe seke man bi which it be knowen wheþer

¹⁸⁶ essencion in supralineam ipsa manu addidit.

De simplicibus medicinis constitui, de quo precepi ut nullus eo nundum perlecto istum agredi presumat. Verum ibi dixi quod impossibile ut alicui rei virtutem preter experimentum posse cognosci vonum enim et mirabile quod si solo usu possemus cognoscere naturam litargiri castorei cantaridis et ceterorum. **f. 12^{va}** Sed sicut omnis errorum duorum modis est in quantitate videlicet si ultra temperamentum fuerit et in hoc due sicce sunt quarum quidem altera repugnat alteri sicut faciunt cantores dum unius et alter unum eundem cantent diversis tamen vocibus, quidam enim negavit medicinarum virtutem cum experimento cognosci altera vero cognosci altera vero dicit possibile esse quod virtus medicinarum cognoscatur eis nondum temptatis sed pessimum est istud dici; illud autem aliud aut est stultissimum aut perfidiosum. Non tamen interrogas me ut huius rationem ostendam complexio dicentem sit infra particula libri *complexionis* et in libro *simplicium medicinarum*. Preterea dico quod oportet sciri primitiva eo quod aliquando adiutorium in cognoscendo morbo sed filiosus morbi sit in propatulo et poterimus eum sensualiter cosnoscere non est necesse primitiva cognosci atque dixi inconueniens esse et due et diverse atque þe passion¹⁸⁷ be cold. For why after þat we have knowen þe bittyng of a scorpion. Hymself schewyng it þan schalt bigynne without dout for to chanse al þe body noȝt abydyng þe passion to be knowen with exprimient. Forsoþe þan schalt perceyve þo þing, after þe nature of þingz as I have schewed in þe libre which I ordeyned *De simplicibus medicinis* i.e. of symple medycynez **f. 202^r** in which I comanded þat no man persume for to assay or wen þis whilez þat he haþ noȝt redde þat forsopþ bar seid I þat it is impossible for to know þe vertu of any þing without experiment. It war gode forsopþ and wanderful þing it ware if we myȝt knowe wyþ sight alon þe nature of litarge of cantaridez of castory or of oþer as every error in quantite is in tuo manis þat is to sey if¹⁸⁸ it be one temperance or beneþ temperante. On þe same wise in þis bene tuo sectez of þe which þe tone repugneþ to þe taþer, as dome syngers which both þe tone and þe taþer synggez oneself þing neþerlesse in dyverse versez. One for soþ deneyed þer vertu of medycynez to be knowen without experiment þe toþer forsopþ seiþ þat it is possible þat þe vertu of medicinie be knowen his when thing noȝt assaied, bot þis is warst to be seid þat ouþer forsopþ ouþer it is most folysch or most wicheð or false. Neþerlesse aske me

¹⁸⁷ þe passion in supralineam alia manu addidit.

¹⁸⁸ if in supralineam alia manu addidit.

doctrine commisceantur debemus noȝt þat I schaw þe reson of þis þing siþe scientiam experimenti per se constituere; it is seid prolixelly i.e. longly in þe side et ea que rationas per se. Sed cum in hoc particule of þe boke of complexione¹⁹⁰ or loco sicut superius dixi intentio mea fit in libro *Simplicium medicinarum*, or in þe tota rationabilis doctrina si omnia que sunt buke of simple medicyne. On þat I sey necessatio dicenda reticebo, video non þat it bihoveþ primitive þing to be knowen omnino veritatem dixisse quam solum for þi þat þai sometym giffen helpyng in formam artificiale quidem ingenium knowyng sekenes but if þe place of curantibus naturam reliquis vero non vera sekenes be in opre schewynyn and we may dixisse ad plenum videbor. Si quis ergo sensibly i.e. felyngly know it {it} is noȝt librum istum legere voluerit sciat nede primityve þingz to be knowen. And intentionem eius id quod dixi fuisse hoc, as I seid it is inconvenient þat tuo doctrine hic ad idem quod nullum antecedens [[an]]or diverse be medled togidre. We aw significationibus curationis adiutorium for to sette þe science of experience bi inferat nisi quod aliquando cognoscendo itself and þat þat is of reson be itself bot morbo dat adiutorium. Sufficiunt igitur siþe in þis place as I said above myne ista ¹⁸⁹ . Redeamus ad priora et entencion is al only resonable doctrine if I constituamus eis fundamentum schal reherce al þings þat ar necessarily abnegatium. Dico ergo quod essencia be seid I see þat I have seid utterly morbi prima nobis intentionem insinuet et soþefastnes for why after artificial witte cetera posteriora per eam intelligantur. forsop in † þings is nature one in oper Nam bene poteris intelligere nichil þings forsop noȝt to fulnez. I schal be sene societatis inter **f. 12^{vb}** hanc intentionem et to have seid trewly. Þerfor who so will primitivas docens haberi maxime si rede þis boke knowe he þe curant of þat morbus fuerit vulnus de quo moto þat I have find it to have bene þos al I disputamus. Verbi gratia si vulnus sit in added [[þe]] have þat name antecedent aliquo morbo ex qualibus materia bene bryngeþ in helpyng to significacione of intendimus non esse nisi ex malis curyng bot þat sumtyme it giffeþ helpyng humoribus. Nam consuetudo naturale est in knowyng sekenez. Þerfor þise sufficeþ. talia in passionibus facere corpus videlicet Nowe agayn to þings afore and ardeyne mundificat et materiam erga cutim expellit

¹⁸⁹ “Capitulum IV in isto capitulo revertitur ad ostendendum quomodo et ad quid scientia causarum primitivarum est theorica IV”. This rubric is incorrect as there is not changing of chapter. Harley 3748 presents it, while Sloane 6 has not.

¹⁹⁰ inter particula libri complexionum in *supralineam alia manu addidit*.

unde vulnus efficitur corpus quoque mundificatur. Quapropter dico vulnus istud sicut et alia debere curari dum morbus aliud cum eis non est. Palam ergo nihil significationis sumi ab eo per quod hoc vulnus sit. Sed si chimi defluentes ad huc sint interioribus corporis ipsi erunt nobis significatio. Nam infamandum est quod medicina consideretur secundum ea que non sunt, non est igitur consideranda nisi ab eorum que sunt et constant significatione que significatio siccerius est nominando dicetur previsio si autem ab usum cutatio et nominabitur vulnus quando solum vel quod cum concavitate sit curari non possunt nisi fugiamus et ea que nisi et nature nociva sunt et maxime eis que propria sunt sue actionis sicuti est consolidatio et carnis generatio. Cuius rei studium et provisionem et custodiam appellamus a ceteris tamen hominibus curatio vocatur. Sed licet istud praevisio dicatur differt ab eo quod certiore praevisio; hoc enim quando compositionis morbi ex corpore derunt. Illud vero morbum nondum existente prohibet ut non veniat. Qua de causa moderni medici in solis nominibus littigare videntur ignorantes quod in nominibus tamen desiderantibus. Melius tamen esset si studerent in cognoscenda rerum essentia ut scient et cognoscerent intentionem medicorum duobus modis esse, id est curare morbos qui perfecti sunt expleti et

we abnegatyve grounde to þam. Þerfor I say þat þe essencium of þe sekenes scheweþ to be þe first intencion and þan schalt understand al oþer þings bi it þat þer is no þing of felawship to be had atuix þe entencion and primyivez occasions and most if þe sekenes be a wond of which we dispute now. Verbi gratia if a wounde be made in any membre of any man materia we understand wele þat it schuld noȝt be bot of yuel humors. For why costume of nature is for to make sich þings in passions, þat is to sey þat mundifieþ þe body and putteþ out without þe skynne **f. 202^v** wher for þer is made a wounde and þe body is mundifies. When for I sey þat þat wonde as oþer aw to be cured whiles þer is none oþer sekenes with þam þerfor it is opne no þing of significacion to be take of it by þat it is a wounde, bot if þer be ȝitte chymes fluyng in þe inner pertines of þe body þai schal be to us so significacion for why it is one infamacion þat a medicyne be considered after þo þings þat be noȝt þerfor it is noȝt to be considered bot of þe significacion of þo þings which bene and stand stedfast, which significacion if it be certane it schal be seid or it is to be named curacion. A wound þat is with concavite alone it may noȝt be cured bot if we flo þo þings þat bene noysome to nature and depose moste þat bene principalez or first of his wirchning as angendryng of flesch and

prohibere eos qui futuri sunt. Sed auferre morbos sive prohibendo ea que naturam sua in actione inpediunt sive cum f. 13^{ra} medicinis ab omnibus curatio vocatur. Prohibetur autem futurum morborum praevisio sive custodia dicitur, nam dum vulnus propter malos humores curare artificialiter volumus et hoc cum purgatione malorum illorum in humorum destruitur id quod nam in sua actione inpediebat unde certum huius nomen rei inquisitum pervisio dicitur. Purgatis enim humoribus corpus mundificabitur et putredo et fames in vulnere prohibentur augmentari.

consowdyng; þe studie of which þing we calle it provision and kepyng neþerlesse of oper men it is called curacion. Bat þof al þis be called provision it is different fro þat þat is more certane provision þis forsop doþ away fro þe body þe componed sekenes and þat oper defendeþ þe sekenes þat is noȝt ȝitte þat it came noȝt for which cause laches þat bene now in sene for to stryve in namez alon biknawying þat þat þai defire in þe namez neþerlesse it wai better to þam þai studied in essencion of þins to be knowen þat þai knew þe entencion of lechez to be on tuo maners þat is to cure sekenes þat bene perfite and complete and defende þam þat or to come. Bot for to take away sekes onþer in defendyng þo þings þat to defende a sekenes to come is called keping or provision. For why whilez we wille cure artificialy i.e. craftily a wounde þat is made for yuel humores and þat with purgacion of þase humors þat is destroyed þat letted nature in his wuching when for it is certayn þat þe soȝt name of þis þing is called provision þe humors; forsop y purged hope þe body schal be mundified and þe putrede¹⁹¹ and quantite? and augmentyng in þe waund is defended.

Capitulum IV in quo reprehendit opinionem Tesillus de cura vulnerorum pessimorum. Rubrica. Non enim est bonus medicus qui in verbis perniciose laborat, sed qui viam et

Be IV chapitre in which he techep of the cure of þe worst wondes after techyng of oper. He is no gode leche þat perniciously laboreþ in wordez bot also for he scheweþ þe crafte of woundez to be

¹⁹¹ i.e. rotten *in supralineam alia manu addidit*.

artificium curandorum vulnerum ostendit, sicut fecimus in precedenti particula. Ideoque miror de duritia et stultitia Thesilli cum in suis libris *De curis malorum et pessimorum vulnerorum* dixisset: necessarium enim inquit ubi a Thesilli scire noticiam universalium vulnerorum diuturnorum videlicet eorum que non sanantur sed cicatrizantur et postea addiderentur et differentiam eorum et cicatrizancium cognosci oportet et cognita causa cur cicatrix efficiatur mox auferatur. Ea vero que interpollendo efficitur converte ut continue et constanter permaneant commutatione percium infirmi membri aut universi corporis ut revertatur ad id quod passionis non est susceptivum cum eis videlicet que huius actionis sunt. Cumque talia in libro quem *De chirurgia* intitulavit Thesillius diceret reuersus ad eadem dicit. Diuturnis vulneribus que non sanatur necesse est ut audderat ea quibus sanitas prohibetur. Renovabis ergo loca infirma, cumque vicina fuerunt eis que sunt recentia curabis ea sicut recentia **f. 13^{rb}** et sanguinolenta, quod si labia non coniungantur et appropinquatur et refrigerabis hii sequendo ea omnia in quibus oportet studeri. Ea vero quibus cicatrix non sit in sui interpollatione et docet ipsa vulnera sunt debent curari sicut recentia et apostemata vulnera et cataplasmentur cum mitigativis ut cured. As we did in þe particle goyng afore and þerfor I wondre of þe durisenes? or fandnes of Tasile when he seid in his bokes of *þe curez and yuel and most wicked woundes* it is necessary he said for to kame þe knowlech of langlastyng woundes þat is to sey of þam þat ar noȝt heled bot cicatrized and afterward comeþ agayn to þe same and þe difference of þise cicatrizyngz to be knowen, and þe cause y knawen why it is noȝt made **f. 203^r** a cicatrice when it is alsone done away. Þo forsop þat bene made with interpolacion þat þai abide stille contumely and sted fastly with chamngyng of þe membre of partiez of þe seke man or of al þe body þat it be turned to þat þat is noȝt takyng of passion þat is to sey with þo þing which bene of dede or wirchyng. When Tesile seid sich þings in his boke þat he titeled of *Cirurgie* he turned ? agayne to þe same I seid. To longlastyng woundez þat be noȝt heled it is nede þat þan take away þo þings li which hele is defended or forben þerfor þan schalt renew þe þures and if þer be any durez þer þan schalt cure þam as fresch and bledyng. Þat if þe lippes be noȝt ioyned and neȝe togidre þan schalt mitigate and refresch or kold þe kalmyng in sewyng alpings in which it by haveþ for to study in. In þose forsop in which is made a cicatrice and now is wounded in interpolacion of itself as þe woundes

requiescat infirmus de inde oportet þamself techēþ þam aw to¹⁹³ be cured as
 adiuvari ut cicatrizetur; convenit quoque fresch woundes et apostemes ywounded.
 ut circundancia vulneris rubeant fiant Be it emplastred with mitigatynes þat þe
 unguentis in spatioso latere vulneris sike have reste afterward it by haved to be
 apostematis inquibusque sinapis mittitur helped þat it be cicattrized. Also it
 vel cum alio unguento quod eiusdem acordeþ þat þo þings þat environnez þe
 virtutis est. Item oportet auferri a corpore woundez be made rede with enoyntmentz
 velocitatem morbum recipientem, quod si putte to in þe spare of þe fidez of in
 vulnus per hoc non mittigetur neque wounde in which is putte senvey ?
 sanitatem recipiat convenit ut studium in mustard¹⁹⁴ or be þai enaynted with garlke
 toto corpore inducatur mutando partes put is of þe same virtue. Also it bihaveþ
 corporis coadunatas hoc tamen fiat cum for to be take away fro þe body¹⁹⁵ þe
 diversis ligamentis et equitando et hastmes or swiftenes receyvyng þe
 movendo et iubilando et dietando sekenes, þat if þe wonde be nozt mitigate
 secundum augmentum et detrimentus by þis ne receyve nozt helþe, it acordeþ
 primitus tamen vomitus fiat cum radicibus þat studie be brozt in in al þe body in
 et dabis farmaciam cumque elleboro albo channgyng þe partes of þe body ybrozt
 et fac omnia que diuturno et incurabili togedre, neþerlesse be þis done with
 morbo facienda sunt, in quibus verbis diverse ligamentez, and rydyng and
 duobus modis miror de Thesillo uno quia manyng and drynsyng and dietyng after
 stultus alio quia frontosus est et augmentyng et techyng. Neþerlesse be
 inverecundum nam si arbitratus est bonum first made a vomite with rotes and þan
 bonum quid dixisse amiramur de sua schalt giffe a farmacie with white ellebre.
 stultitia. Si autem dixit se nihil dixisse sed And do aw þings þat be to be done to a
 eum qui librum suum legit decepisse long et incurabile sekenez. In which
 miramur de sua audacia et verecundus. wordes I wonder of Tessile in tuo maners:
 Dic ergo tu sapientissime¹⁹² quid ergo o maner for he is a fole, anoþer for he
 significationis diuturnitas vulnerum et in bolde et unschameful for why if he deme
 curationibus ostendit tibi; nam ego it gade þat he said we wondre of his
 numquam significationem vulneribus fondnes, forsop he sey þat he seid nozt bot
 sumpsi in hoc quando sunt rencia vel for to have vigilad cydeceyned hym þat he

¹⁹² tu sapientissime *omittit* H.

¹⁹³ to *in supralineam ipsa manu correxit.*

¹⁹⁴ mustard *in supralineam ipsa manu addidit.*

¹⁹⁵ fro þe body *in supralineam ipsa manu addidit.*

vetusta. Nam a nullo morbo curationis
significationem secundum tempus accepi.
f. 13^{va} Nam qui impedit se in temporibus
morbi inquirendis ut significationem ab
eis suscipiat inuenietur significationem
primi diversa esse a significatione secundi
et secunda actione et tertia a quarta et sic
in infinitum unde si in cognoscendis hiis
studium dederimus si mittemus essenciam
morbi qui curari debet cum nihil magis
hoc sit infammandum et vituperandum.
Dic quoque universalis diuturnitas morbi
sit necessaria cum tempus solum igitur
nihil nobis ostenderet testatur hoc vulnus
cum rosura ex malis humoribus accidit
non enim alius transactis quatuor
mensibus ostendit quia primitus dum fit.
Ego autem dum huius vulnus inuenio non
permitto ut vetus efficiatur. Sed primum
incipio evellere ea que causa rosure sunt,
nam hec passio a primordio potest
cognosci. Tempus ergo nullum signum
curandi demonstrat membrum nisi
numerus dierum.

redde unto, we wundre of his boldenes et
his unschamefulnes. Þerfor sey þan most
wise man what significacion hap
longlastyng of wondez in curacions
schewed to þe for why I toke never
significacion of wondez in þat þat þai be
fresch i.e. new or old ne I take never
significacion of curyng of no sekenes after
þe tyme for why þat he seiþ in tyme of
sekenes to be inquired þat he take
significacion of þam, he schal fynde þe
significacion of þe first to be divise fro þe
significacion of þe secunde and þe second
fro þe þrid and þe þrid fro þe ferþe and so
in infinite, wherfor if we giffe our studie
in þise to be knowen we schal leve þe
essencion i.e. beyng of þe sekenes þat
away to be cured siþe þer is in þing more
to be infamed and blamed þan þis. Þerfor
sey {how þat} **f. 203^v** haw þat long
lastyng of sekenes is necessary, siþe tyme
alon schewep no þing to be þis witteþues a
wonde to which falleþ to fretyng of yuel
humours. It schewep no oper þing forsop
four moneþez ypassed þan which it was
first. I for sop I fynde fully awande I
suffred nocht that it be made alde but first
I begin for to draw on þe þing þat bene
cause of þe fretyng. For why þis passion
may be knowen fro þe bygynnyng. Þerfor
tyme giffeþ schewep ¹⁹⁶ no tokne of
curyng bot nombre of daies.

¹⁹⁶ schewep in supralineam ipsa manu correxit.

The Middle English translation of *De ingenio sanitatis* finishes here, in the middle of the fourth book, and then a different hand, more cursive, writes in the same page an anonymous Latin work entitled *Charms and Receipts Orationes et receptæ medica*. This interruption ‘ex abrupto’ is difficult to explain, possibly the scribe of the exemplar just ended at the end of the chapter and never came back to his task.

De methodo medendi has always been suitable for reductions or incomplete translations. As said, it was composed in two distinct stages, books 1-6 and books 7-14, separated by many years and deep differences in composition: in the later books there are many paradigmatic case-studies while in the first four books they are not necessary as Galen’s main aim here is to describe his theory. Even the first translators of the treatise worked on these two groups separately, in fact Gerard concentrated on books 1-6 and Burgundio on books 7-14¹⁹⁷. If we take into consideration the contents of *De methodo medendi*, we can divide it into four sections. The first covers books 1 and 2 and establishes the theoretical foundation of Galen’s system of medicine. The second goes through books 3-6 where Galen makes some considerations on the acquisition of medical knowledge both through theory and practice, on the diseases due to disorders of continuity, i.e. wounds and ulcers, and on their management. Books 7-12 create a third section about δυσκρασία, i.e. the imbalance between the four qualities (hot, cold, moist, dry), and about fevers. The last two books can be grouped in another section about those diseases of organic parts due to abnormal swellings.

The most renowned section was the second, as there Galen gives a complete account of the various types of ulcers and of their treatment. In these books he demonstrates a great interest in practical wound surgery describing his new discoveries, new techniques and new instruments and harshly criticising his opponents. In particular, books 3 and 4 could interest all healers, whether they were physicians, surgeons or practitioners. In fact Galen rapidly summarises the assumption of books 1 and 2 about the acquisition of knowledge through reason and experience, and deals with the management of simple, complex and chronic wounds and ulcers in both superficial and deep structure. This means all the basics to treat the so-called “dissolution of continuity”¹⁹⁸.

This is precisely the case of Wellcome Library 287, which includes books 3-6 and some excerpts of book 7, and of manuscript Sloane 6, which includes only books 3

¹⁹⁷ Nutton, Vivian, “Style and Context in the Method of Healing”, in *Galen’s Method of Healing*, edited by Fridolf Kudlien - Richard J. Durling, Leiden: Brill, 1991, pp. 1-25.

¹⁹⁸ Johnston - Horsley, *Galen: Method of Medicine Books 1-4*, Introduction, pp. LXXII-LXXVI.

and 4. The interruption at the beginning of the fourth chapter might be caused by a blank in the Latin exemplar, but I think it is more probably due to the complexity of the ending of the chapter; in fact the rubric at the beginning of the book accurately records the subdivision of seven chapters that the copyist had to know. Thus, after considering the various causes of wounds and ulcers and the basic requirements for their cure, Galen treats abnormalities in the underlying flesh and swellings associated with wounds. Then he underlines the difference between therapy and prophylaxis, and underlines that the primary indication for treatment comes from the condition itself and not from any external antecedent. In the fourth chapter Galen quotes and criticises Thessalus' method of healing. After that the translation stops. Chapter 4 goes on with Galen berating Thessalus for his ignorance and criticising Methodics, and chapters 5 and 6 include many cross-references to other Galenic treatises and quotations from Hippocrates, whose teaching on the treatment of wounds and ulcers is discussed. The book finishes with the description of various medications for ulcers. For this reason the copyist of manuscript Sloane 6, which was a surgical compendium probably intended as a handbook for students, might be interested neither in Galen's criticisms nor in drugs, which were apothecaries' tasks.

For what specifically concerns the text, it emerges that the Middle English translation is very precise and faithful to the Latin text. An omission is found in chapter 1 where the Latin text has "Item non numquam hec tria commiscuntur et aliquando duorum horum tamen compositorum curam non oportet ostendi et sigillatim de eis presencialiter disputare" that manuscript Sloane 6 does not have. In chapter 2, after having said that the doctor has to take into consideration the wishes of the patient (Hoc tamen firmam voluntatem infirmi faciendum est, quidam enim carnis incisionem pati nolentes volunt longo tempore curari; aliquando vero converso), the Latin text omits the Greek statement οὕτω δὲ καὶ πὶ τῶν ἐπιρρέοντων τοῖς ἡλκωμένοις μέρεσι μοχθηρῶν χυμῶν ἢ μὲν ὡς ἡλκωμένων ἴασις ἐν τῷδε λελέξεται, ἢ δ' ὡς κακοχυμίας ἢ πλήθους ἐν τοῖς ἰδίοις ἐκείνων λογισμοῖς, "The cure of bad humours flowing into the ulcerated parts as ulcerating agents has been addressed in this work; the cure of κακοχυμίας and abundance as ulcerating agents has been addressed in the specific considerations of those [conditions]"¹⁹⁹. Gerard of Cremona was used to omitting Galen's cross-references and quotations: consistently, they are leaved out even in manuscript Sloane 6. The only exception is found in chapter 3, where Gerard reports Galen's reference to his

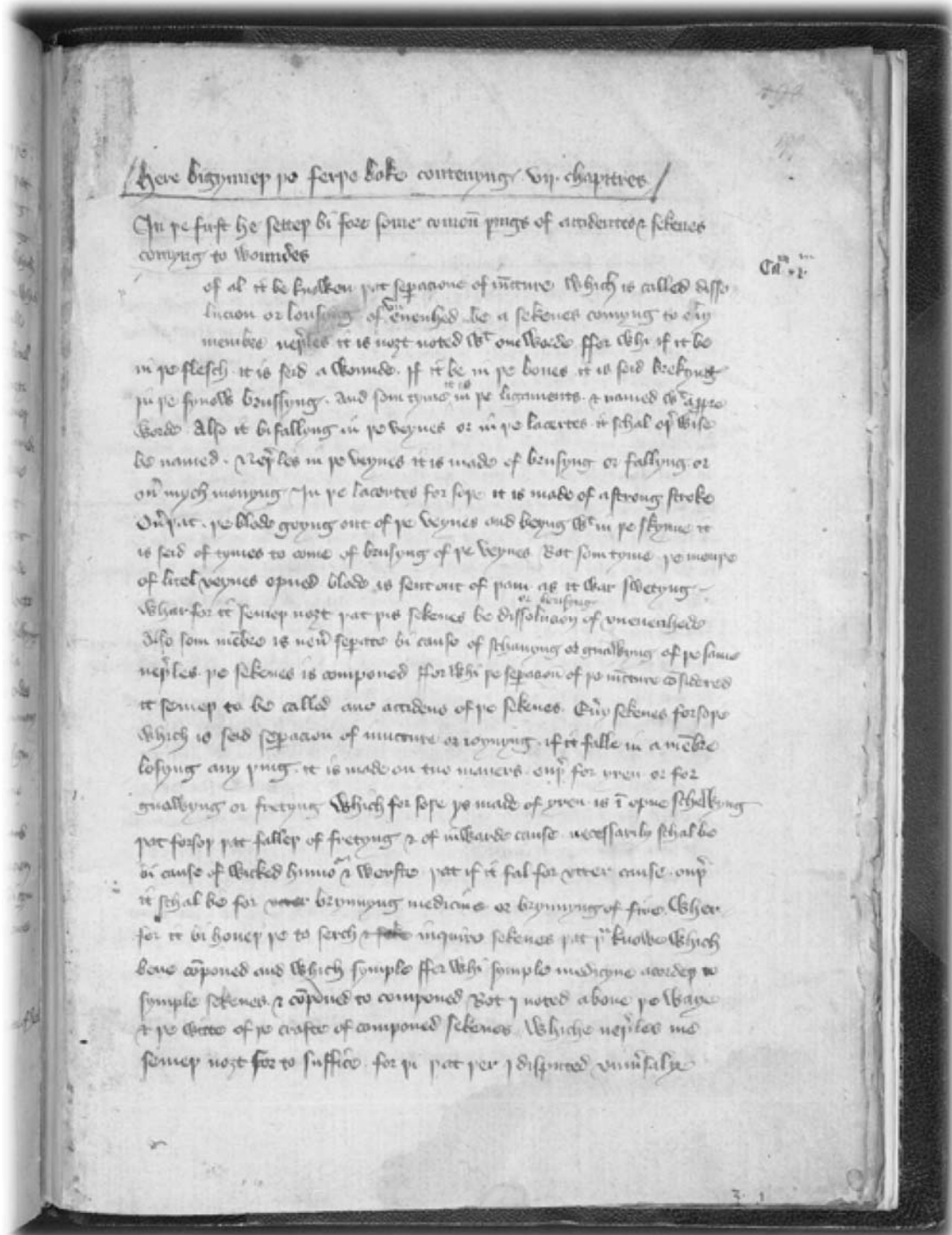
¹⁹⁹ Johnston - Horsley, *Galen: Method of Medicine Books 1-4*, p. 363. Here Galen refers to *De temperamentis*, I 664 Kühn and *De plenitudine*, VII 547 Kühn.

De simplicium medicamentorum temperamentis et facultatibus and to *De temperamentis (Liber complexionum)*. The English translator follows his exemplar also in these cases: he cites the authoritative texts by their Latin title but then he provides the English translations “of þe boke of complexione” and “þe buke of simple medicynez”. The Middle English translator seems to me to be very reliable as he tried to follow tightly the structure of his exemplar and to be as precise as possible in translating medical terms. When he does not find an English equivalent he does not use the resources of the vernacular for coining new terms, but he prefers to turn to Latin words adapting them into the phonological and morphological structure of English and creating anglicised variants²⁰⁰. For example in chapter 1 he reproduces the Latin “lacertes”, and in chapter 2 he adapts the verbs “fomented” and “dissolved” and then he uses the technical term “humido”. In the same chapter he has a problem with the Latin medical term “varices” that he translates with “grosse veynes” or just “veynes”, following the variant “crosse vene” provided by Gerard. In chapter 3 the translator has to face the necessity of many technical terms like “erisipila”, “litarge”, “cantaridez”, “castory”, “chimi” that he borrows from Latin, which in turn takes them from the Greek ἐρυσίπελας, λιθάργυρον, καστόριον, κανθαρίδας, κακοχυμία.

So, even if Wellcome Library 287 is only a possibile exemplar for manuscript Sloane 6, we can notice many similarities between the Middle English translation and its Latin counterpart. It is also very interesting to underline the accuracy of the English translator who clearly knew Latin and specific medical terms very well. This does not mean that the translation process was simple, first of all for the inner complexity of the Galenic text, then for the great effort for finding English equivalents to Latin and Greek technical terms. Thus, when the Greek words are preserved even by the Latin, the translator could do nothing but reproducing them without a Middle English translation, while in some other circumstances linguistic ‘doublets’ are used to translate a single Latin word to make it easy to understand for his reader. However, as I will show in the next chapters, this strict bond between English and Latin was not always preserved: sometimes, in fact, the desire for the original Galenic text reemerged leading to the rescue of a great number of Greek medical terms.

²⁰⁰ Taavitsainen, Irma - Pahta, Päivi, *Medical and Scientific Writing in Late Medieval English*, Cambridge: Cambridge University Press, 2004, pp. 73-99.

Figure 7



Here begynnet þe ferste booke conteynyng vii. chapitres.

¶ In þe first he setteth bi fore some comen prynces of accidentes & sicknesses
comyng to woundes

of al it be houlken þat separaunce of nature which is called dis-
lincon or lousing of ^{enough} be a sickness comyng to an
membres neyles it is not noted bi one worde for this if it be
in þe flesch it is said a wounde. If it be in þe bones it is said breaking
in þe finelle breaking. And som tyme in þe ligaments. & named to raffe
bonds Also it bi falling in þe veines or in þe lacertes & schal of this
be named. prynces in þe veines it is made of breaking or falling or
on mych mowung in þe lacertes for sope it is made of a strong stroke
On þat. þe blade goyng out of þe veines and beyng hit in þe skynne it
is said of tynes to come of breaking of þe veines. For som tyme þe mowpe
of lital veines opned blade is sent out of pain as it thar stedyng.
Wherfor it semet not þat þis sickness be dissolucyon of ^{breaking} vneuewshede
Also som neyles is ned sepete bi cause of stumung or gnawing of þe same
neyles þe sickness is compoued for this þe separaunce of þe nature considered
it semet to be called an accident of þe sickness. This sickness for sope
which is said separaunce of nature or lousing. if it falle in a neyle
losyng any prync. it is made on twe maners. on for vren or for
gnawing or fretting. Which for sope þe made of vren is to opne shalting
þat forsoþ þat faller of fretting & of murther cause. necessarily shal be
bi cause of thiked humors & vrenes þat if it fal for other cause. on
it shal be for vren. burninge medicines or burninge of fire. Wher
for it bi honey þe to sech & to inquire sickness þat þi knowe which
beare compoued and which simple for this simple medicine awarded to
simple sickness & compoued to compoued. For 7 noted aboue þe vren
& þe cause of þe cause of compoued sickness. Which neyles me
semet not for to suffice. for þi þat þe 7 diffined vnnatural

IV

EXPANDING THE BORDERS OF MEDICAL KNOWLEDGE: THE SIXTEENTH CENTURY AND THE *QUESTYONARY OF CYRURGYENS*

IV.1. THE *QUESTYONARY OF CYRURGYENS*: AN OUTSTANDING COMPILATION

Manuscript Sloane 6 was the first vernacular translation of Galen's *De methodo medendi* and it was realised at the end of the fifteenth century starting from the Latin text by Gerard of Cremona. Less than fifty years later another English translation of *De methodo medendi* appeared. It is found in *Questyonary of Cyrurgyens*, a compilation printed by Robert Wyer in 1542. The *Short-title catalogue* published by Pollard and Redgrave¹ lists ten reprints of this work, besides the copy preserved in the British Library (S.T.C. 12468). These copies are nowadays located in English and American libraries such as the Wellcome Library (shelf mark 63986) or the Henry Edwards Huntington Library (shelf mark 59472).

Questyonary of Cyrurgyens contains parts of four different works: the first section of *Chirurgia magna*, a fourteenth-century work compiled by Guy de Chauliac; then there is an anonymous work devoted to the treatment of leprosy and a manual of pharmacopoeia also attributed to de Chauliac; lastly, the translation of the fourth book of Galen's *De methodo medendi*. It is not specified why the translator preferred these four booklets among the numerous works of medicine and surgery available at his time: undoubtedly they had to have a particular importance for the neophytes of the medical art and for the attainment of the license of surgeon. This statement implies two problems: the first is that in sixteenth-century England the translation of classical medical works was extremely rare because of the lack of a school of medicine, and the second is that translating Galen in particular for a group of healers thought to be illiterate, was apparently unreasonable.

¹ Pollard, Alfred W. - Redgrave, Gilbert R., *A Short-title Catalogue of Books Printed in England, Scotland, & Ireland and of English Books Printed Abroad 1475-1640v*, London: Bibliographical Society 1976-1991.

Figure 8

The questyonary of
Cyrurgens, With the formulary of
Iytell Guydo in Cyrurgie, With
the spectacles of Cyrurgens
newly added, With the
fourth Boke of the
Terapentyke, or Methode curatyfe of
Claude Galven prynce of Physiciens,
with a Synguler treaty of the cure
of blceres, newly Enprynted at
London, by me Robert wyer,
And he for to sell in Poules
Churchyarde, at the
sygne of Iudyth.
Cum privilegio ad impri-
mendum solum. R.



Iudyth.



London, British Library, 12468, p. 1

IV.1.1. EARLY MODERN ENGLISH MEDICINE AND MEDICAL TEXTS

Early modern English medical texts are heterogeneous; they are printed or in manuscript form, and intended for different types of audiences. The advent of printing led to the production of books in different formats, especially pocket-size booklets that could be carried around by healers². However, the number of medical printings in England was for a long time lower than that in Europe and the great majority of the books were imported from the continent. Many of them were textbooks of medicine, regimen of health and collections of remedies derived from medieval Latin writings that were reprinted again and again, whereas new medical literature was very rare³.

Between the end of the fifteenth and the beginning of the sixteenth century Europe witnessed the rebirth of Galen and of Greek medicine, as it was believed that ancient Greek medical treatises were superior to everything that had been written after. As has been said, the Arabs had already translated many Greek works, often synthesising them, and then Latin scholars translated these works for the West, as did, for example, Gerard of Cremona with the already-mentioned *De ingenio sanitatis*. However, with the Renaissance, humanists felt the need for more accurate translations from the original Greek texts because all the intermediaries, including Arabs and Romans, might have corrupted the original. In 1537, for example, Michael Servetus wrote a booklet on syrups and he placed it under the light of the Galenic teachings by saying:

Compelled by wonder of the thing itself, we are forced to profess that the birth and rebirth of Galen were granted as a kind of divine gift for the assistance of various mortal needs. [...] In our happy age, he once shamefully misunderstood is reborn and re-establishes himself to shine in his former lustre; so that like one returning home he has delivered the citadel which had been held by the forces of the Arabs, and he has cleansed those things which had been bespattered by the sordid corruptions of the barbarians⁴.

It is impossible to specify who first decided to translate Galen afresh, but we know that in a century at least 590 different reprints of Galen's works were published, the great majority of which was in Latin. The Latin translations of Greek medical texts were a predominant part of the literary production of humanist physicians. Dioscorides, Aristotle, Hippocrates became the subject of a great interest, but it was Galen who

² Taavitsainen, Irma - Pahta, Päivi, *Medical Writing in Early Modern English*, Cambridge: Cambridge University Press, 2014, pp. 9-25.

³ Taavitsainen, - Pahta, *Medical Writing in Early Modern English*, pp. 9-25.

⁴ O'Malley, Charles D., *Michael Servetus: A Translation of His Geographical, Medical and Astrological Writings*, Philadelphia: American Philosophical Society, 1953, p. 60.

achieved resounding success among the humanists. In fact, the Galenic corpus was felt to be complete and fully comprehensive and medical humanists trusted in Galen when he said he had collected the ancient medical knowledge adding only those things that were necessary. This was why between 1490 and 1625, 27 printings of the whole Galenic corpus were published: 25 in Latin and 2 in Greek: the first was printed in Venice by the Aldine Press in 1525, while the second in Basel by Andreas Cratander in 1538 with the help of further manuscripts⁵.

Undoubtedly those who could read Greek were only a few, so the Latin translations realised in this period became “the first and necessary approach to ancient Greek medicine, which in turn was viewed as having ensured scientific and therapeutic progress against the barbarisms of dominant Arabic medical culture”⁶. The rediscovery of the so-called Greek Galen did not mean that the Arabic authors immediately fell into oblivion, as I found that they were used until the end of the sixteenth century, and only at that time their decline became relentless. Among the Latin printings of the *corpus Galenicum* it is worth mentioning the first that was realised by Diomedeo Bonardo and published in Venice by Filippo Pinzi in 1490. It preserved only medieval translations from Arab and Greek, which were later replaced with humanistic translations used in all *Giuntine*. These were probably the most important Latin printings of Galen planned by Lucantonio Giunta and then issued by Agostino Gadaldini following the order established by Giovanni Battista da Monte, Professor of medicine at the University of Padova⁷. In the second half of the fifteenth century at least three Italian humanists worked on Galen: Niccolò Leonicensis, who prepared eleven translations of Galen; Giorgio Valla, who collected Greek manuscripts and then translated five Galenic treatises; and Lorenzo Renzi who worked on five other works. Even Wilhelm Kopp, a famous physician who lived in Paris, studied and translated many books on diagnosis and pathology⁸.

For what specifically concerns England, “Middle English texts were first left

⁵ Fortuna, Stefania, “Le illustrazioni dei testi medici: le edizioni latine di Galeno del XVI-XVII sec.”, in *Scienza antica in età moderna. Teoria e immagini*, edited by Maraglino, Vanna, Bari: Cacucci Editore, 2012, pp. 311-338.

⁶ Fortuna, Stefania, “The Prefaces to the First Humanist Medical Translations”, *Traditio*, 62, 2009, pp. 317-335.

⁷ Wear, Andrew, “Medicine in Early Modern Europe, 1500-1700”, in *The Western Medical Tradition, 800 B.C. to 1800 A.D.*, edited by Lawrence I. Conrad - Michael Neve - Vivian Nutton - Roy Porter - Andrew Wear, Cambridge: Cambridge University Press, 1995, pp. 215-361; Fortuna, Stefania, “Giovanni Mercuriale editore di Galeno”, in *Giovanni Mercuriale. Medicina e cultura nell'Europa del cinquecento. Atti del convegno “Giovanni Mercuriale e lo spazio scientifico e culturale del Cinquecento (Forlì, 8-11 novembre 2006)*, edited by Alessandro Arcangeli - Vivian Nutton, Firenze: Leo S. Olschki, 2008, pp. 217-231.

⁸ Fortuna, “The Prefaces to the First Humanist Medical Translations”, pp. 139-175.

aside from editorial tradition at the time of the humanists on the grounds that they appeared to lack the literary qualities and moral values which by contrast were found in classical works”⁹. This particularly concerns scientific texts whose aim was to be truthful and accurate, so that the translators, whether they used Latin or the vernacular, did not spend their time reproducing the original author’s spelling or grammar but rather producing authoritative and useful readings. One of the most famous names is Thomas Linacre, who translated at least eight works by Galen. However, I found that some witnesses of the ancient medicine, and in particular of the Galenic, were scattered throughout the whole medical literature from at least the fourteenth century. In *The Physician's Tale*, for example, Geoffrey Chaucer surprisingly chose a physician to tell a story of abuse of power taken from Titus Livius’ *Ab Urbe condita libri*¹⁰. The *General Prologue* of the *Tales* had already defined this physician-pilgrim as the most skilled and learned surgeon of the world, expert of all the symptoms and all cures thanks to his wide knowledge that includes classical physicians such as Esculapius, Dioscorides, Hippocrates and Galen:

With us there was a doctor, a PHYSICIAN;
Nowhere in all the world was one to match him
Where medicine was concerned, or surgery;
Being well grounded in astronomy.
He’d watch his patient with the utmost care
Until he’d found a favourable hour,
By means of astrology, to give treatment.
Skilled to pick out the astrologic moment
For charms and talismans to aid the patient
He knew the cause of every malady,
If it were ‘hot’, or ‘cold’, or ‘moist’, or ‘dry’,
And where it came from, and from which humour.
He was a really fine practitioner.
Knowing the cause, and having found its root,
He’d soon give the sick man an antidote.
Ever at hand he had apothecaries
To send him syrups, drugs and remedies,

⁹ Marqués-Aguado, Teresa, “Editions of Middle English Texts and Linguistic Research. Desiderata Reading Palaeography and Editorial Practices”, *Variants* 10, 2013, pp. 17-317.

¹⁰ See Brown, Emerson Jr., “What is Chaucer Doing with the Physician and His Tale?”, *Philological Quarterly*, 60, 1981, pp. 129-143; Harbert, Bruce, “Chaucer and the Latin Classics”, in *Geoffrey Chaucer: Writers and their Background*, edited by Derek Brewer, Athens: G. Bell, 1975, pp. 137-153; Lee, Brian S., “The Position and Purpose of the Physician’s Tale”, *The Chaucer Review* 22, 1987, pp. 141-160; Smith, Kirk L., “False Care and the Canterbury Cure: Chaucer Treats the New Galen”, *Literature and Medicine* 27, 2008, pp. 61-81.

For each put money in the other's pocket –
 Theirs was no newly founded partnership.
 Well-read was he in Aesculapius,
 In Dioscorides, and in Rufus,
 Ancient Hippocrates, Hali, and Galen,
 Avicenna, Rhazes, and Serapion,
 Averroës, Damascenus, and Constantine,
 Bernard, and Gilbertus, and Gaddesden¹¹.

The fact that his physician appeals to authorities was a standard procedure for any medieval literate man who wanted to be reliable. As an example, at the end of the thirteenth century Jean de Armand wrote that “scholars do not sleep so feverishly are they searching Galen’s works [...] they are tired and thirsty because of the effort that unravelling these writings involves”¹². Even though Chaucer’s list was probably essentially literary¹³ as it presented every medical authority of the antiquity, those classical authorities were fundamental to make this physician the only person a sick man could rely upon for health problems or for operations¹⁴.

In fact, studying some of the most important English physicians, I saw that the great majority of them continued drawing on ancient medicine much longer than their European counterparts and up to the term of the sixteenth century. To appeal to the authorship of ancient medical authors became an unavoidable condition and it provided “a means to compose equivalents to canonical models by reproducing, rewriting and reimagining them”¹⁵. England witnessed a very peculiar phenomenon due to the fact that medicine entered the world of English university very late: for this

¹¹ Chaucer, Geoffrey, *The Canterbury Tales*, translated by David Wright, Oxford: Oxford University Press, 1998, pp. 13-14; Brown, Emerson Jr., “What is Chaucer Doing with the Physician and His Tale?”, *Philological Quarterly*, 60, 1981, pp. 129-143; Bullough, *Universities, Medicine and Science in the Medieval West*, pp. 263-266.

¹² Garcia-Ballester, Luis, “Medical Ethics in Transition in the Latin Medicine of the Thirteenth and Fourteenth Centuries: New Perspectives on the Physician-Patient Relationship and the Doctor’s Fee”, in *Doctors and Ethics: The Earlier Historical Setting of Professional Ethics*, edited by Andrew Wear - Johanna Geyer-Kordesch - Roger French, Atlanta: Rodopi, 1993, pp. 38-71.

¹³ As Dante’s list in *Inferno*, IV, vv. 143-144 with Avicenna, Averroes, Dioscorides, Galen, Hippocrates, and as Jean de Meun’s list in his *Roman de la Rose* with Avicenna, Costantinus Africanus, Galen, Hippocrates, Rhasis: see Jones, Ida, “Popular Medical Knowledge in XIV Century Literature”, *Bullettin of the Institute of the History of Medicine*, 5, 1937, pp. 405-451. Dante mentions Galen even in *Convivio* I, 8 when he writes about unsuitable gifts: “come quando un cavaliere donasse a un medico uno scudo, e quando il medico donasse a un cavaliere scritti gli Aforismi d’Ippocrate, ovvero il Tegni di Galeno”: Temkin, *Galenism*, p. 101.

¹⁴ Robbins, Rossel Hope, “The Physician’s Authorities”, in *Studies in Language and Literature in Honour of Margaret Schlauch*, edited by Mieczyslaw Brahmer - Stanislaw Helsztynski - Julian Krzyzanowski - New York: Russell & Russell, 1971, pp. 335-341.

¹⁵ Edwards, Robert R., “Authorship, Imitation, and Refusal in Late-medieval England”, in *Medieval and Early Modern Authorship*, edited by Guillemette Bolens - Lukas Erne, Tübingen: Narr Verlag, 2011, pp. 51-73.

reason there was a slower search for alternatives to classical authors among physicians, and literate healers declared themselves favourable to strictly follow traditional medicine at length, scarcely accepting modern proposals of the trend developed elsewhere¹⁶. Nevertheless, English learned medical ‘doctors’ who, like prelates and men of law, could travel and read classical treatises thank to their knowledge of Latin and Greek, had to be a few in the fourteenth century. This led to the more and more frequent translation and production of new medical works in vernacular: it has been calculated that between 1486 and 1605 at least 156 medical texts in vulgar were printed, half of which were miscellanies or manuals of pharmacopoeia. Unlike other sciences, in fact, medicine was of universal interest, and for this reason all those who could read might be readers of medical treatises. Thomas Linacre was one of the main characters of the English phenomenon and probably the most eminent of the new scholars, as Aldus Manutius clearly underlined in his dedication of Proclus’ *Sphere*:

I thought it well to add the Sphaera of Proclus, more especially because the Briton Thomas Linacre had of late translated it into learned and elegant Latin, and sent it to me to be set up in our type. [...] I hope indeed that he will some day give us these and other books of great importance in philosophy and medicine, so that from that same Britain whence once a barbarous and ignorant literature set out to capture Italy, and which still holds the citadels of learning, we may now welcome a scholarship which speaks the Latin of learned men, and which will drive out the barbarians and, by the help of the same Britons, give us back our citadels¹⁷.

I chose this prologue in particular as it let the European reputation of the British emerge: for centuries they had been considered barbarians, but with the beginning of the modern age they started losing their lower position to become European intellectuals.

Linacre certainly was a scholar of this new generation of humanists, he “studied the writings of ancient authors [...] searched for manuscripts of lost or rare classical texts, collected the works of classical writers, and attempted to learn Greek and write like the ancient authors of Rome”¹⁸. However, I wondered why a physician had to have such an interest for the Greek language, as his main focus was to provide cures and to understand symptoms. The answer came to me from the oration in praise of Greek studies made by Richard Croke, the first Greek reader at the University of Cambridge,

¹⁶ Heikki, Mikkeli - Ville, Martilla, “Change and Continuity in Early Modern Medicine (1500-1700)”, in *Early Modern English Medical Texts*, edited by Irma Taavitsainen - Päivi Pahta, Amsterdam: John Benjamins, 2010, pp. 13-27.

¹⁷ Quoted in Parks, George B., *The English Traveller to Italy*, Roma: Edizioni di Storia e Letteratura, 1954, pp. 454-458.

¹⁸ Weiss, Roberto, *Humanism in England during the Fifteenth Century*, Oxford: Blackwell, 1967, p. 1.

in 1519, where he underlined the deep connection between medicine and Greek language and texts, in whatever language they were translated:

Medicine urges me on and bids me to speak out against those unskilled in Greek, as she is about to exact a bitter punishment from them, who have so often turned her precepts, invented from mortal health, to its destruction, and have taken it so far that just as they once approved of her after good trial, now they condemn her before her experience, as if she were a butcher and executioner, with the many savage burnings and cuttings which those are accustomed to practise who have never read Galen, Hippocrates, Aeginetes or Dioscorides in the way in which these can be understood, that is in Greek. With their backslidings into barbarism and their too credulous belief in the delusions of translators, it is their fault that today the men of this most noble profession appear to be experimenting with our lives and to be learning at the peril of humanity¹⁹.

Moreover, in the English context many Renaissance translators stressed the great affinity between English and Greek. They felt these two languages nearer than, for example, English and Latin, at least in terms of word order: a similarity that arose precisely in the medical field. Reading Thomas Elyot's texts, it emerges that everywhere he disseminated proofs for the strict analogy between Greek and Middle English, both in syntax, morphology and etymology. In his translation of Isocrates' *Ad Nicoclem* he wrote that "the forme of speakyng, used of the Grekes, called in greeke, and also in latine, *Phrasis*, much nere approacheth to that, which at this daie we use: than the order of the latine tonge"²⁰. This peculiar inclination of the Englishmen to Greek is also testified by the fact that the editorial work for the Aldine edition of Galen was carried out by at least three English scholars: Anthony Rose, Thomas Lupset, and John Clement who also owned many manuscripts used for the Aldine²¹.

The most renowned Greek philologist of the sixteenth century was probably a medical specialist and an Englishman: Thomas Linacre. His outstanding figure has been analysed in many important studies²². Here I would concentrate only on his bent for the promotion of new printings of Greek Galen and its Latin translations to establish a new medical curriculum at the universities, and to professionalise English medical practice

¹⁹ Woolfson, Jonathan, *Padua and the Tudors: English Students in Italy, 1485–1603*, Cambridge: James Clarke, 1998, pp. 78-80.

²⁰ Trapp, Joseph B., "The Conformity of Greek and the Vernacular: The History of a Renaissance Theory of Language", in *Classical Influences on European Culture, AD 500-1500*, edited by Robert Ralph Bolgar, Cambridge: Cambridge University Press, 1971, pp. 239-244, p. 240.

²¹ Nutton, Vivian, "The Galenic Codices of Theodore Goulston", *Revue d'Histoire des Textes*, 1992, 22, pp. 259-268.

²² Durling, Richard J., "Linacre and Medical Humanism", in *Linacre Studies*, edited by Francis Madison - Margaret Pelling - Charles Webster, Oxford: Oxford University Press, 1977, pp. 84-106; Marrone, Daniela, *Thomas Linacre e altri inglesi laureati in medicina a Padova nei secoli XV e XVI*, (unpublished doctoral thesis), Padova: University of Padova, 2015, pp. 58-60.

on the Italian model. He contributed to the Latin translation of Galen publishing six treatises, among them *De methodo medendi* and *De sanitate tuenda*. All the Galenic works, and these two in particular, were considered very difficult to understand even in Greek, and for this reason they had never been translated before, or only in parts. Nevertheless, since he considered Galen one of the main medical authorities, he felt the necessity of providing a good translation of Galen's medical treatises, which had to be drawn from Greek. Focusing on the translation of *De methodo medendi* (1519), I have analysed the initial poem in elegiac couplets by the Greek scholar Janus Lascaris (1445-1535), the prefatory letter to Thomas Lupset written by the scholar Guillaume Budé, and Linacre's dedicatory letter to King Henry VIII. The first letter by Budé praised the translator's elegance and style after comparing selected passages of the translation with the Greek *editio princeps* of 1500. Instead, Linacre in his own letter disparaged both the previous translations of the treatise from Arabic or from Greek, judging them barbarous and untrustworthy ("barbaris quibusdam iisdemque malefidei in versionibus")²³, and the Latin excerpts translated from Arabic by Costantinus Africanus in the second half of the twelfth century, which were, according to him, completely wrong ("nudis rerum capitibus Arabum quorundam arbitrio excerptis")²⁴. As Linacre wrote to his readers, his translation had to be praised and taken into consideration because, before him, nobody had ever translated *De methodo medendi* in Latin, and if someone tried, he did it improperly:

Opus plane arduum et quod sive id ob subtilitatem suam sive prolixitatem, mille iam annis nemo satis latine ne dicam ex tanti operis dignitate vertere (quod sciam) est aggressus ut mihi plane dolenda studiosorum sors videatur, qui hactenus desyderio eius partim barbaris quibusdam iisdem que male fidei inversionibus, partim nudis rerum capitibus Arabum quorundam arbitrio excerptis omnique non modo ratione quae reluctantem lectorem ducere, sed etiam que hesitantem quoquo modo inhortari possit orbatis, incumbere sunt coacti²⁵.

This kind of prefaces was common in the sixteenth century. A few years later, for example, even Johann Winter of Andernach in his dedicatory letter of his Latin translation of the Galen's *De anatomicis administrationibus* highlighted the same

²³ Quoted in Marrone, *Thomas Linacre e altri inglesi laureati in medicina a Padova nei secoli XV e XVI*, p. 58.

²⁴ Quoted in Marrone, *Thomas Linacre e altri inglesi laureati in medicina a Padova nei secoli XV e XVI*, p. 58.

²⁵ Quoted in Marrone, *Thomas Linacre e altri inglesi laureati in medicina a Padova nei secoli XV e XVI*, p. 59. "A really difficult work, which, whether for its refinement or its length, was not translated (as far as I know) by anyone in Latin in a thousand of years, even in its great importance, so that it seems painful to me the destiny of those students that have hitherto to lean over in the desire, partly for the barbarous and untrustworthy translations, partly for the extracts made by some of the Arabs, which are deprived of any logic that can support the reluctant reader, but also to encourage the faltering in some way".

problem:

Quam tum sane ad nostras partes attinet, laboratum est in hoc commentario haud mediocriter: primum, quod fere nulli inter emunctos Latinae linguae scriptores habeantur, quos in Anatome explicanda aemulari potuerimus: deinde quod Graeci in ea potissimum Medicinae parte multo Latinis sint locupletiores, et in effigendis rerum vocabulis multo liberaliore natura, et beatiore: demum quod nec liceat nobis esse tam disertis, qui severiores Musas colimus. [...] Nam quisquis ille interpretes fuerit, si exordia librorum excipias, reliqua tam obscure vertit, ut a nemine queat intelligi, dum videlicet schemata Graeca pugnante Latinorum idiomate reddere totidem verbis nititur, idque Medicinae imperitus²⁶.

Therefore, nobody tried to translate these Galenic books because of the wide possibilities of the Greek language not reproducible in Latin, and last, but not least, because the Latin *Ars medica*, like all the Galenic works, needed *severiores Musas*²⁷. I also noticed that the last statement, “demum quod nec liceat nobis esse tam disertis, qui severiores Musas colimus”, is a learned quotation from Martial 9.11.16 who was blaming the harshness of Latin in comparison to Greek: if in fact to all Greek poets, every license was permitted, Romans, who court severer muses, dare not take such liberties²⁸.

Thus, far from being anachronistic as it was elsewhere, Galenism was considered a synonym of progress and it was not restricted to professionals: this is amply testified by those medical translations that were not meant to be published, but for private use only²⁹. Renaissance Galenism concerned not only medical knowledge, but also Galen’s ideal of the perfect physician who had to study and to believe in the value of both experience and observation. He had to be a philosopher drawing on rational education as well as practice. This position was clearly shared by sixteenth-century-physicians like Linacre, who printed on the title page of his translation of *De*

²⁶ Johann Winter of Andernach, *Clavdii Galeni Pergameni De anatomicis administrationibus libri nouem. De constitutione artis medicae liber. De Theriaca, ad Pisonem commentariolus. De pulsibus, ad medicinae candidatos liber*, Basileae: Cratander, 1531, p. 3.

“For what concerns at least our parts, in this commentary I have struggled very much: for the first time, and this commonly has not appended to any of the eminent Latin writers that we could emulate in explaining Anatomy, then as the Greeks are richer than Romans especially in Medical field, either because of wider and wealthier possibilities in using their language: finally because we are not allowed to be so eloquent, as we esteem more serious Muses. [...] In fact, whoever was the translator, if you withdraw the initial parts of the books, he translated the rest with such an inaccuracy that nobody could understand it, because he tried to render with the same number of words the phrases of the Greeks that fight with the language of the Latins, and he was also unskilled in medicine”.

²⁷ Marrone, Daniela, “Thomas Linacre and the Italian Humanism. Philological Aspects in Linacre’s Translations”, in *English Students of Medicine at the University of Padua during the Renaissance*, edited by Daniela Marrone and Gaetano Thiene and Linda Luxton, Padova: Padua University Press, 2016, pp. 45-76.

²⁸ Martial, *Epigrams, Volume II: Books 6-10*, edited by D. R. Shackleton Bailey, Cambridge: Harvard University Press, 1993, pp. 236-237.

²⁹ Temkin, *Galenism*, pp. 97-99.

temperamentis the statement: “Opus non medicis modo, sed et philosophis oppido quam necessarium”³⁰.

Another outstanding example is John Caius (1510-1573), an English physician who studied under Vesalius, and graduated at the University of Padua in 1541. Caius studied all the ancient medical physicians, but he preferred Galen to the others as he believed that he had treated every matter, becoming the only reliable teacher, especially in the medical field³¹. For this reason he had his own copy of *Corpus galenicum* that was a working copy in which he marked notes and comments for at least twenty years. This printed copy of the *Opera omnia* is now the so-called Eton Galen, IV 286³², which was collated with manuscripts Caius found in his travels around Europe and especially in Italy. Out of more than a hundred Galenic treatises in the codex, only three of them were not emended by Caius. Moreover, he concentrated in particular on the anatomical and therapeutic sections of the Galenic medicine as it can be seen for example in his work on *De methodo medendi* and *Ad Glauconem de methodo medendi* (an abridged version in two books of the first treatise in 14 books). He collated these two books with the manuscripts present in Biblioteca Marciana and with the copy left in the monastic library of San Giovanni da Verdara in Padua by Giovanni Calturnio, Professor of Latin and lecturer in Greek at the University of Padua³³. The codex, which had disappeared from the library by 1639, probably lacked books I-II and VI, as Caius did not emend them³⁴. Caius was fully convinced of the importance of the theories of the Greeks and especially of Galen and Hippocrates upon which centuries-old therapeutics were based.

To be a perfect physician and even a philosopher implied to have studied as many Galenic treatises as possible, and medical philologists like Linacre or Caius could discover new classical medical texts, could interpret and correct them through their deep knowledge of Greek, and could also provide Latin or vernacular translations to convey results to those who knew no Greek. Both, in fact, were perfectly aware of their importance in developing the vernacular through translations. In his translation of *De*

³⁰ Quoted in Woolfson, *Padua and the Tudors. English Students in Italy, 1485-1603*, pp. 73-76.

³¹ Ioannis Caii Britanni, *De canibus britannicis, liber unus. De rariorum animalium et stirpium historia, liber unus. De libris propriis, liber unus*, London: Gulielmum Seresium, 1570, pp. 67-111.

³² It is made up by the Latin Giuntine edition of 1565 and of the five volumes of the Greek edition published by Froben in Basle in 1538 bonded together in the end of the sixteenth century and with the loss of some letters and words as the edges were trimmed. Nutton, Vivian, “John Caius and the Eton Galen: Medical Philology in the Renaissance”, *Medizinhistorisches Journal*, 20, 1985, pp. 227-252.

³³ Many Galenic manuscripts were probably brought to Italy by Greeks. London, British Library, Additional 6898, for example, deals with Galen’s *De methodo medendi* with annotations and Hippocrates’ *Aphorismi*. This codex was owned by John son of Manuel Iatros, then by Cypriot Jannus Podocatharus, and then Francesco Barbaro’s family from about 1488. In the end it reached England thanks to some English physicians.

³⁴ Nutton, “John Caius and the Eton Galen: Medical Philology in the Renaissance”, pp. 227-252.

methodo medendi Linacre stated that he had frequently to face difficult technical terms so that he had sometimes to admit Greek loan-words or to coin new terms. However, this was only a last resort for him, as he preferred using Latin synonyms, even two or three if necessary, and clarifying the sense of the words in their context with Latin definitions. Even Caius thought about this question:

it followeth somoche English menne, to whom it is almoste proper, et also began here...
Which thing I suppose may the better be done, because I se straunge and no english names
both in Latine and Greke, by commune usage taken for Englishe³⁵.

Caius's medicine was certainly intended for an elite readership, but surprisingly in 1542, after having collated many Greek manuscripts of *De methodo medendi* with the Aldine edition and with the Latin *De sanitate tuenda*, he decided to write a treatise entitled *Method of Healing according to the Princes of Medicine, Galen of Pergamum and Giambattista da Monte of Verona*, which was his own version of Giovanni Battista Da Monte's lectures³⁶. Despite the problems he had with other Da Monte's students for the publication of this work, this work was very important as in this way Caius brought the sound Galenic 'method' of healing to everyone who could read English the doctrines of both the most famous medical professor of his time, and of the most important physician of antiquity. Galenism, in fact, separated the doctor from the quack and gave confidence to him and his patient, but it was also important in popular imagination. The absoluteness and purity of Galen's authority was repeatedly mentioned even by Shakespeare who frequently used "the most sovereign prescriptions of Galen"³⁷ taking for granted his audience's familiarity with them³⁸.

IV.1.2. THE ENGLISH PROFESSIONAL PYRAMID: PHYSICIANS, BARBERS AND SURGEONS BETWEEN PARTNERSHIP AND RIVALRY

Matters of health became of universal interest in sixteenth-century Europe and everyone could potentially become a simple healer, but to arise to the position of perfect physician-philosopher it was necessary to study as many Galenic treatises as possible. These two aspects led to an increasing interest in medicine both on a formal and an

³⁵ Quoted in Taavitsainen - Pahta, *Medical Writing in Early Modern English*, pp. 81-82.

³⁶ Nutton, Vivian, *An Autobiography by John Caius*, London: Routledge, 2018, pp. 38-39.

³⁷ *Coriolanus*, act 2, scene I, quoted in Temkin, *Galenism*, p. 125.

³⁸ Hoeniger, David F., *Medicine and Shakespeare in the English Renaissance*, Newark: University of Delaware Press, 1992, pp. 71-81.

informal level and to the great translation effort of ancient medical treatises³⁹. Thus, even a more formal medical hierarchy was established: it separated professional from lay healers, surgeons from barbers, and doctors from quacks. However, to understand in depth the dynamics between these healers I was forced to try to understand the differences between their work environment and their position inside the professional pyramid. This was not a slight effort because these terms were often interchangeable or difficult to define, as it clearly emerges from a simple search in Middle English Dictionary.

First of all, if we consider medieval legal documents, it appears that the most frequently encountered designations are the well-known titles *barber* (a haircutter who might perform bloodletting or minor surgery on the skin), *barber-surgeon* (a barber who also performed surgery), *leech*, *le mire*, *medicus*, *chirurgus* or *surgicus*, and *physicus*. A rare title is ‘archiater’. Even the designation ‘master’ or its Latin translation *magister* can be encountered; both used in reference to a master tradesman and to suggest a man who had a formal education or was a teacher⁴⁰. The broadest term was ‘doctor’, which derives from the Latin *docere*, to teach, and was applied in medieval universities to the graduates of the higher faculties, particularly theology, but also medicine, civil and canon law. It became a sign of a university degree as well as of learned men, especially ministers and teachers who had earned doctorates graduating from the higher faculties. Those entitled to use this title, in fact, were recognised as authoritative. It was for this reason that even the most respected healers could be called ‘doctors of physic’: to distinguish them from charlatans and to emphasize the fact that they were the only legitimised doctors⁴¹.

By the end of the sixteenth century this particular emphasis made the term ‘doctor’ almost a generic term for ‘physician’, which was one of the two ways to identify a healer in the Middle Ages: the other was *medicus*. The term *medicus* was most often used in the period before the ninth century, after which *physicus*, physician in English, became more common. Even in the early years there seemed to have been no real distinction between the two terms as they were sometimes used interchangeably,

³⁹ Nutton, “Medicine in Medieval Western Europe 1000-1500”, p. 204.

⁴⁰ Getz, “Charity, Translation, and the Language of Medical Learning in Medieval England”, pp. 1-17; Ackerknecht, Erwin H., “From Barber-Surgeon to Modern Doctor”, *Bulletin of the Institute of the History of Medicine*, 58, 1984, pp. 545-553.

⁴¹ Bullough, *Universities, Medicine and Science in the Medieval West*, pp. 267-268.

searching MEMT and EMENT⁴² I saw that later on the term *medicus* started referring exclusively to those who practiced medicine visiting patients, making diagnoses and prescribing treatments, while *physicus* to those who had a thorough theoretical knowledge of medicine and natural sciences: basically a philosopher. The title of *physicus* was a way of asserting that his “discipline was grounded in a rational understanding of the natural order, that it was not simply an empirical craft”⁴³, while simple practitioners had no grasp of the general principles. In the ninth century even the words apothecary and *cyrurgicus* made an appearance in English medical documents, but at the time the first was often used interchangeably with *physicus* and *medicus*, while the second was infrequently used⁴⁴.

However, the most difficult term to be classified is probably *cyrurgicus*. He was the healer who practised surgery and he was also defined *practicus* because his work was essentially manual. Even though many scholars state that surgeons were less educated than their colleagues, this is not true as those who had less education appeared to me to be defined in another way: they were called barbers or at least barber-surgeons (*barberus* or *rasorius*), and were mainly occupied by bloodletting, wound care, and simple surgical procedures; they might have learned their trade within their family or by apprenticeship. Unlike what Bullough stated in 2004⁴⁵, although little information is extant about the specific use of these words, I think that the proliferation of medical definitions is indicative of a growing division between the theoretical or clerical healers (*medicus*, *physicus*, or even *apothecarius*) and the empirical and non-clerical practitioners (leech, *le mire*, barber).

IV.1.2.1 SURGERY AND SURGEONS

This difficulty with the term *cyrurgicus* comes from a deep problem with the position of surgery towards medicine. *Cyrurgicus* derives from the Greek word χειρουργία, i.e. the work (ἔργος) of hand (χεῖρ), which was the term used to define medical practice in Greek as medicine was considered an art, a τέχνη. Allegedly, the terms came from the centaur Chiron (whose name derives from the same Greek root for ‘hand’) who was the

⁴² Taavitsainen, Irma - Pahta, Päivi - Mäkinen, Martti, *Middle English Medical Texts (MEMT)*, CD-ROM, 2005; Taavitsainen, Irma - Pahta, Päivi, *Early Modern English Medical Texts (EMENT)*, CD-ROM, 2010.

⁴³ McVaugh, Michael, *The Rational Surgery of the Middle Ages*, Firenze: Sismel, 2006, p. 14.

⁴⁴ Bullough, *Universities, Medicine and Science in the Medieval West*, pp. 267-268; McVaugh, *The Rational Surgery of the Middle Ages*, pp. 13-15.

⁴⁵ Bullough, *Universities, Medicine and Science in the Medieval West*, pp. 267-268.

first who taught τέχνη to humans, and among these τέχνη there were both medicine and surgery⁴⁶. In the second century Hyginus, listing inventors and their inventions, wrote that it was “Chiron centaurus Saturni filius that medicinam chirurgicam ex erbis primus instituit; Apollo autem oraculariam medicinam primus fecit; tertio autem loco Asclepius Apollinis filius clinicen repperit”⁴⁷: thus dividing theoretical, divine medicine from practical surgery.

The history of surgery is obscure and scarcely examined. The earliest surgical operations in history were probably devoted to the treatment of wounds or bone diseases. For example the famous *Codex of Hammurabi* preserves many rules about operations as, for example:

If a physician shall make a severe wound with the bronze operating-knife and kill the patient, or shall open a growth with a bronze operating-knife and destroy his eye, the physician's hands shall be cut off⁴⁸.

Also the Talmud and Egyptian papyri preserve a rich collection of surgical procedures, and numerous anatomical descriptions that implied the creation of new terms to designate precise structures of the bodies.

The first precise allusions to a surgical practice are found in Greek. *Iliad* and *Odyssey* present more than a hundred passages describing fractures and dislocations. Among the Greeks, Polidarius, Chiron and Machaon were not only brave and valorous soldiers, but also men very keen on surgical doctrines. As soon as Machaon was wounded by a spear, soldiers started praying Nestor to take care of him:

οὐδ' ἄν ποω χάζοντο κελεύθου δῖοι Ἀχαιοὶ
εἰ μὴ Ἀλέξανδρος Ἑλένης πόσις ἠὔκομοιο
παῦσεν ἀριστεύοντα Μαχάονα ποιμένα λαῶν,
ἰὼ τριγλώχινι βαλὼν κατὰ δεξιὸν ὦμον.
τῷ ῥα περὶδισαν μένεα πνείοντες Ἀχαιοὶ
μή πὼς μιν πολέμοιο μετακλινθέντος ἔλοιεν.
αὐτίκα δ' Ἴδομενεὺς προσεφώνεε Νέστορα δῖον:
‘ὦ Νέστορ Νηληϊάδῃ μέγα κῦδος Ἀχαιῶν
ἄγρει σὼν ὀχέων ἐπιβήσσο, παρ δὲ Μαχάων

⁴⁶ Craik, Elizabeth, “The Teaching of Surgery”, in *Hippocrates and Medical Education*, edited by Manfred, Horstmanshoff, Leiden: Brill, 2010, pp. 223-233.

⁴⁷ “Chiron the Centaur, son of Cronus, was first to practise surgery using plants, then Apollo was the first to carry out oracular medicine, and in the third place Asclepius son of Apollo innovated clinical medicine”: quoted in Craik, “The Teaching of Surgery”, p. 226.

⁴⁸ Rutkow, Ira M., “The Origins of Modern Surgery”, in *Surgery: Basic Science and Clinical Evidence*, edited by Jeffery Norton, R. Randall Bollinger, Alfred E. Chang, Stephen F. Lowry, New York: Springer, pp. 3-20.

βαινέτω, ἐς νῆας δὲ τάχιστ' ἔχε μώνυχας ἵππους:
 ιητρὸς γὰρ ἀνὴρ πολλῶν ἀντάξιος ἄλλων
 ἰοῦς τ' ἐκτάμνειν ἐπὶ τ' ἥπια φάρμακα πάσσειν.
 (Il. XI, 504-515)⁴⁹

The first organic description of some surgical techniques is found in Hippocrates' *Corpus Hippocraticum*. It is interesting to underline that in two of his most renowned works, *Decorum* and *Precepts*, Hippocrates underlined that the reliance in words alone could be a sign of ignorance and lack of professionalism: "speech that arises from taught action is good; clever speaking without action is bad"⁵⁰. Rational knowledge and diagnosis, in fact, were the basis for treatment, but without effective work, it would be nothing but word-spinning.

However, the most important surgical production was as usual that by Galen who wrote many works on surgery, considering this subject as adjunctive to internal medicine and not subordinate to it. Like Hippocrates, he perfectly knew the difference between experience and theoretical knowledge, but he believed in the importance of combining them. Galen was the first who clearly stressed the tension between λόγος and ἔργον, from theory and practice, which has always been the centre of the art of healing⁵¹. However, as Laes pointed out, it could be difficult to distinguish in antiquity those who were "literary-philosophical physicians from the classical medical schools and the vast majority of 'popular' practitioners (male or female) of medicine [...] thought to be craftsmen and belonged to the low strata of society"⁵².

This difference between theory and practice, between medicine and surgery passed to the Arabs and the equivalences medicine-theoretical knowledge-educated physicians and surgery-practical techniques-unlearned surgeons became more and more common. For example, Rhazes wrote that at his time it was impossible to find a doctor

⁴⁹ Ciani, Maria Grazia, ed., *Omero Iliade*, Venezia: Marsilio, 2007, p. 480. "Yet would the goodly Achaeans in no wise have given ground from their course, [505] had not Alexander, the lord of fair-haired Helen, stayed Machaon, shepherd of the host, in the midst of his valorous deeds, and smitten him on the right shoulder with a three-barbed arrow. Then sorely did the Achaeans breathing might fear for him, lest haply men should slay him in the turning of the fight. [510] And forthwith Idomeneus spake to goodly Nestor: 'Nestor, son of Neleus, great glory of the Achaeans, come, get thee upon thy chariot, and let Machaon mount beside thee, and swiftly do thou drive to the ships thy single-hooved horses. For a leech is of the worth of many other men [515] for the cutting out of arrows and the spreading of soothing simples'", translation by Murray, Augustus T., *Homer. The Iliad with an English Translation*, London: Harvard University Press, 1924.

⁵⁰ Craik, "The Teaching of Surgery", p. 229.

⁵¹ Garcia-Ballester, Luis, "Galen as a Medical Practitioner: Problems in Diagnosis", in *Galen: Problems and Prospectors and Ethics: The Earlier Historical Setting of Professional Ethics*, edited by Vivian Nutton, London: Wellcome Library, 1981, pp. 13-46.

⁵² Laes, Christian, "The Educated Midwife in the Roman Empire. An Example of Different Equations", in *Hippocrates and Medical Education* edited by Manfred Horstmannshoff, Leiden: Brill, 2010, pp. 261-286.

that had also studied surgery, because surgery was essentially in the hands of ignorant people, and Ibn Zuhr (also known as Avenzoar) at the beginning of the twelfth century wrote that doctors disdained manual practices, and also avoided the preparation of medicines. However, this separation was not absolute, and surgery was not universally despised to such an extent that it rapidly developed as its progress was essentially based on observation and experimental practice. Abulcasis' major work, for example, the *Kitab al-Tasrif*, was "a complete encyclopaedia of everything needed by surgeons to perform their art", but many chapters referred to Hippocratic and Galenic surgical theories⁵³. Furthermore, many Italian surgical authors of the Middle Ages defined surgery not as a mere craft, but as a respectable science that needed intellectual faculties in addition to manual skills⁵⁴. Thus, some complete physicians existed: they were actually the great masters of medieval medicine, such as Guy de Chauliac, who I will take into consideration in the next chapter and who was considered by all medical historians one of the most important surgeons of all time: Gabriele Falloppio compared him with Hippocrates. Nevertheless, it is evident that the ancient Galenic unity of theory and practice became more and more fragile in the Middle Ages. Galen, in fact, was less renown among healers; the Arabic detention of ancient medical knowledge led the clergy to declare that it was unclean and unholy to touch another human body with one's hands⁵⁵. During the Second Lateran Council, in fact, it seemed that those monks and regular canons who learned and practised civil law and medicine, neglected psalmodies and hymns and became stingily because of their work. Therefore the apostolic authority declared this behaviour absurd and reprehensible, since religion had to have nothing to do with money, and those who promised health in return for money and made themselves healers of human bodies had to be considered as lawbreakers⁵⁶.

⁵³ Dumas, Geneviève, "Surgery", in *Medieval Science, Technology, and Medicine: an Encyclopedia* edited by Thomas F. Glick - Steven Livesey - Faith Wallis, New York: Routledge, 2005, pp. 465-468.

⁵⁴ McVaugh, *The Rational Surgery of the Middle Ages*, pp. 53.

⁵⁵ Rutkow, *The Origins of Modern Surgery*, p. 5.

⁵⁶ "Prava autem consuetudo prout accepimus et detestabilis inolevit quoniam monachi et regulares canonici post susceptum habitum et professionem factam sprete beatorum magistrorum Benedicti et Augustini regula leges temporales et medicinam gratia lucri temporalis addiscunt. Avaritiae namque flammis accensi se patronos causarum faciunt. Et cum psalmodiae et hymnis vacare debeant gloriosae vocis confisi munimine allegationum suarum varietate iustum et iniustum fas nefas que confundunt. Attestantur vero imperiales constitutiones absurdum immo et opprobrium esse clericis si peritos se velint disceptationum esse forensium. Huiusmodi temeratores graviter feriendos apostolica auctoritate decernimus. Ipsi quoque neglecta animarum cura ordinis sui propositum nullatenus attendentes pro detestanda pecunia sanitatem pollicentes humanorum curatores se faciunt corporum. Cum que impudicus oculus impudici cordis sit nuntius illa de quibus loqui erubescit honestas non debet religio pertractare. Ut ergo ordo monasticus et canonicus deo placens in sancto proposito inviolabiliter conservetur ne hoc ulterius praesumatur apostolica auctoritate interdiciamus. Episcopi autem abbates et priores tantae enormitati consentientes et non corrigentes propriis honoribus spolientur et ab ecclesiae liminibus

It seemed to many scholars that with this law the Church wanted to prohibit the practice of medicine to all clergymen, but if we carefully read this rule, we can assume that this decision might be due only to limit the “return for hateful money”. The whole regulation was clearly focused on the problem of lust and boastfulness of monks and it forbade not the practice of medicine itself but the clergy to profit. Many other regional types of council, such as the council of Montpellier in 1162 and of Tours in 1163, limited the practice of surgery because of the risk of being responsible for someone’s death, a common situation especially for surgeons. For this reason the fourth Lateran council of 1215 forced at least Major Orders to abstain from every type of surgical practice, leaving it to non-religious people⁵⁷. In this situation the monks’ first heirs became the *barbers*, those who frequented monasteries to shave monks, because since 1092 bears had been banned from the clergy. In a few decades they became accustomed to performing minor operations without any regular education, a thing that got them the hostility of literate physicians. This precise division came from Alexandria, where

arceantur”, Ferngren Gary B. - Lomperis, Katerina N., *Essential Readings in Medicine and Religion*, Baltimore: Johns Hopkins University Press, 2017, p. 151: “Moreover, the evil and detestable practice has grown, so we understand, whereby monks and canons regular, after receiving the habit and making their profession, are learning civil law and medicine with a view to temporal gain, in scornful disregard of the rules of their blessed teachers Benedict and Augustine. In fact, burning with the fire of avarice, they make themselves the advocates of suits; and since they have to neglect the psalmody and hymns, placing their trust in the power of fine rhetoric instead, they confuse what is right and what is wrong, justice and iniquity, by reason of the variety of their arguments. But the imperial constitutions testify that it is truly absurd and reprehensible for clerics to want to be experts in the disputes of law courts. We decree by apostolic authority that lawbreakers of this kind are to be severely punished. There are also those who, neglecting the care of souls, completely ignore their state in life, promise health in return for hateful money and make themselves healers of human bodies. And since an immodest eye manifests an immodest heart, religion ought to have nothing to do with those things of which virtue is ashamed to speak. Therefore, we forbid by apostolic authority this practice to continue, so that the monastic order and the order of canons may be preserved without stain in a state of life pleasing to God, in accord with their holy purpose. Furthermore, bishops, abbots and priors who consent to and fail to correct such an outrageous practice are to be deprived of their own honours and kept from the thresholds of the church”.

⁵⁷ “De iudicio sanguinis et duelli clericis interdicto. Sententiam sanguinis nullus clericus dictet aut proferat sed nec sanguinis vindictam exerceat aut ubi exercetur intersit. Si quis autem huiusmodi occasione statuti ecclesiis vel personis ecclesiasticis aliquod præsumpserit inferre dispendium per censuram ecclesiasticam compescatur nec quisquam clericus literas scribat aut dictet pro vindicta sanguinis destinandas unde in curiis principum hæc sollicitudo non clericis sed laicis committatur. Nullus quoque clericus rottariis aut balistariis aut huiusmodi viris sanguinum præponatur nec illam chirurgiæ artem subdiaconus diaconus vel sacerdos exerceant quæ ad ustionem vel incisionem inducit nec quisquam purgationi aquæ ferventis vel frigidæ seu ferri candentis ritum cuiuslibet benedictionis aut consecrationis impendat salvis nihilominus prohibitionibus de monomachiis sive duellis antea promulgatis”, Tierney, Brian, *Sources of Medieval History*, New York: Knopf, 1983, p. 244: “No cleric may pronounce a sentence of death, or execute such a sentence, or be present at its execution. If anyone in consequence of this prohibition (huiusmodi occasions statuti) should presume to inflict damage on churches or injury on ecclesiastical persons, let him be restrained by ecclesiastical censure. Nor may any cleric write or dictate letters destined for the execution of such a sentence. Wherefore, in the chanceries of the princes let this matter be committed to laymen and not to clerics. Neither may a cleric act as judge in the case of the Rotarii, archers, or other men of this kind devoted to the shedding of blood. No subdeacon, deacon, or priest shall practice that part of surgery involving burning and cutting. Neither shall anyone in judicial tests or ordeals by hot or cold water or hot iron bestow any blessing; the earlier prohibitions in regard to dueling remain in force”.

medical disciples were divided in at least two categories: the ἀκουσταί, at the low level, and the μαθηταί, the advanced ones, but it was not a distinction between medicine and surgery. Actually it was from Alexandria that medical and surgical Galenic science spread towards the medieval West, through southern Italy, and towards the Byzantine and Arabic East.

After Abulcasis, the first medical treatise of operative surgery of the Middle Ages was written in 1170 by Roger Frugardi and it was entitled *Chirurgia*. This work was glossed in the next century by Roland of Parma and the so-called Four Masters on surgery who elevated surgery from a mere manual craft to a literary-based discipline⁵⁸. In the later thirteenth century the surgical literature incredibly grew with Bruno from Longoburgo, who discussed the qualities of the good surgeon in the introduction to his *Chirurgia magna*⁵⁹, Theodoric and his father, Hugo of Lucca, and William of Saliceto who wrote surgical treatises incorporating material from the Arabic translations of Greek scientific works and insisting that anatomical knowledge was the basis for surgical practice⁶⁰. From Italy this surgical tradition came to France with Lanfranc of Milan whose teaching was developed in the fourteenth century by Henri de Mondeville and Guy de Chauliac. Authors of surgical treatises “grew more and more insistent that their literacy, their scientific sophistication, their possession of anatomical knowledge were thing that set them apart from mere empirics while making them more comparable to learned physicians”⁶¹, and it was for this reason that they elected to write in Latin, to emulate academicism and distance themselves from unlearned practitioners. Like Lanfranc before him, even Henri de Mondeville considered surgery as a divine science since “God himself acted as a practicing surgeon when He shaped man from the dust of the earth”⁶². For this reason surgery had to be consider superior to medicine as it healed illnesses that could not be healed by anyone else and because “surgical works are visible and obvious, whereas medical works are hidden, which is a good thing for many

⁵⁸ Roland’s new text has become known as *Rolandina* or *Cyrurgia Rogerii cum additionibus Rolandi*. It is not known who were these four masters, but their text was edited by Charles Daremberg in *Collectio Salernitana* 2, pp. 156-236: see Hunt, Tony, “The Old French Translation of the ‘Four Masters Gloss’ in Wellcome MS 546”, in *Science Translated. Latin and Vernacular Translations of Scientific Treatises in Medieval Europe*, edited by Michèle Goyes - Pieter De Leemans - An Smets, Leuven: Leuven University Press, 2008, pp. 287-296.

⁵⁹ “Surgeons should be literate men, or at least should have learned the art from a literate teacher; I believed scarcely anyone can master this art if he cannot read”, quoted in McVaugh, *The Rational Surgery of the Middle Ages*, p. 53.

⁶⁰ McVaugh, Michael, “Cataracts and Hernias: Aspects of Surgical Practice in the Fourteenth Century”, *Medical History* 45, 2001, pp. 319-340.

⁶¹ McVaugh, “Cataracts and Hernias: Aspects of Surgical Practice in the Fourteenth Century”, p. 320.

⁶² Henri de Mondeville, *Chirurgia Magna* II, quoted in McVaugh, *The Rational Surgery of the Middle Ages*, p. 84.

physicians for if they have a mistake, it is not obvious”⁶³. These assertions about the superiority of surgery suggest that surgical books like Henri’s were intended for a specific group of learned healers who perfectly knew the principles of medicine and who believed in the superior merits of their work. However, according to McVaugh, this kind of specific orientation actually distanced surgeons from those “vain and illiterate surgeons” “from whom great dangers often come”⁶⁴, but in the end it also distanced practical and theoretical medicine⁶⁵.

The dynamics of division between medicine and surgery was particularly delicate in England: there, in fact, physicians promoted a rigid distinction from surgeons that endured till the seventeenth century. They firmly believed that only learned and scholarly men could attend inner diseases, while barbers, surgeons, midwives, and all those whom they considered ignorant had to respect the precept *nihil exhibeat per os*, which means that they had to deal only with few minor external operations such as broken bone sets or teeth extractions. Therefore, many scholars believed that medieval English medicine had few stages, switching rapidly from the highest level of the literate physicians to the lower of barbers or practitioners devoted to a sort of superstitious practices⁶⁶. Nevertheless, this image is due to the rareness of English surgical authors and texts, so that the gulf between physicians and surgical practitioners seems to gradually widen, but close reading of these few surgical texts provided me with a much more nuanced image of their more learned colleagues. As Margaret Pelling⁶⁷ has shown, and as I have proved before, medical practitioners were all but a homogenous group and the distinction between literate and illiterate healers was very difficult if not impossible. The Italianate London College of Physicians, founded in 1518 by Linacre, who petitioned the king Henry VIII to create a medical professional body similar to those found in other European countries, claimed the right to grant a certificate to those who could be defined physicians and, thus, of separating them from those who were judged ignorant and unfit to be included in the college or even to practice medicine. However, the powerful London College of Physicians was not a professional monopoly, but rather one of many competitors in England’s “medical marketplace”, albeit for some years the

⁶³ Henri de Mondeville, *Chirurgia Magna* II, quoted in McVaugh, *The Rational Surgery of the Middle Ages*, pp. 62-63.

⁶⁴ McVaugh, *The Rational Surgery of the Middle Ages*, p. 61.

⁶⁵ McVaugh, “Cataracts and Hernias: Aspects of Surgical Practice in the Fourteenth Century”, pp. 338-339.

⁶⁶ Hoeniger, *Medicine and Shakespeare in the Renaissance*, pp. 19-22; Bagwell, “Respectful Image: Revenge of the Barber Surgeon”, pp. 872-878.

⁶⁷ Pelling, Margaret, *Medical Conflicts in Early Modern London. Patronage, Physicians, and Irregular Practitioners 1550-1640*, Oxford: Clarendon Press, 2003, pp. 136-188.

most powerful one, whose fortunes rose and fell according not to superior healing abilities but to the growth in the monarchy's public power, which often assigned to the College the control of unlicensed practitioners. It was against the charge of ignorance of the College that Thomas Elyot had to reply, and he did so by using classical medical authors:

I was not all ignorante in physycke. Fore before I was XX years old, a worshipfull phisition, and one of the most renouined at that tyme in England, perceyvyng me by nature inclined to knowledge, rad unto me the workes of Galene⁶⁸.

This statement testifies that even though Elyot was not a member of the College and had no formal medical education, he was acquainted with ancient medicine and with the right books. A “worshipfull physician”, in fact, who some scholars identify with Linacre, had read to him the most renowned classical medical works, and from these lectures and from his studies he got his own *Castle of Health*. But the most interesting complaint against Elyot concerned the language he used for his works: English. A vernacular method of healing, in fact, would break the harshness of an alien tongue, and would allow everyone to take care of one's own health and not to depend on physicians. Thus, trying to maintain its leading position and its role of guardian of pure medical knowledge, and to define and differentiate itself from its opponents, the College of Physicians became particularly offensive with non-university trained practitioners, and endured in setting down its own medical prescriptions in Latin till the seventeenth century, and even to those patients who knew English only⁶⁹. Against this group of authoritarian and old-fashioned healers Elyot protested:

let them remember, that the grekes wrate in greke, the Romanes in latyne... And if they had bene as moche attached with envy and covaytise, as some nowe seeme to be, they wolde have devised somme particular language, with a strange syphre or fourme of lettres, wherein they wold have written their science, which language or letters no man shoulde have knowen that hadde not professyd and practiced physycke⁷⁰.

⁶⁸ Quoted in Swain, David W., ““Not lernyd in physicke”: Thomas Elyot, the Medical Humanists, and Vernacular Medical Literature”, in *Renaissance Historicisms. Essay in Honor of Arthur F. Kinney*, edited by James M. Dutcher - Anne Lake Prescott, Newark: University of Delaware Press, 2008, pp. 54-68, p. 62; Richards, Jennifer, “Useful Books: Reading Vernacular Regimens in Sixteenth-Century England”, *Journal of the History of Ideas*, 73, 2012, pp. 247-271.

⁶⁹ Pelling, Margaret, *Medical Conflicts in Early Modern London. Patronage, Physicians, and Irregular Practitioners 1550-1640*, Oxford: Clarendon Press, 2003, pp. 1-11; Webster, Charles, *The Great Instauration. Science, Medicine and Reform 1626-1660*, New York: Holmes and Meier, 1976, pp. 246-264; Slack, “Mirrors of Health and Treasures of Poor Men: the Uses of the Vernacular Medical Literature of Tudor England”, pp. 239-243; Pelling - Webster, “Medical Practitioners”, pp. 165-235.

⁷⁰ Swain, ““Not lernyd in physicke”: Thomas Elyot, the Medical Humanists, and Vernacular Medical Literature”, p. 63.

Galen's example, in fact, had already witnessed the necessity of disseminating medical information and for this reason he decided to publish his own works. In fact, both Galen and Elyot believed that instructing healers meant enabling them to face diseases in more convenient ways. If this entailed writing in the vernacular, it was worth using it, as long as every word written would come from the authority of Galen: the master who could grant every practitioner the right to become a real physician, whether he had a university licence or not.

This was the precise position of surgeons. During the later Middle Ages and the sixteenth century many surgeons were basically barbers who practiced bleeding, tooth-pulling, or simple surgery, but the more learned of them felt they deserved the same social status and wage the physicians had⁷¹. According to Garrison, in fact, every sound practitioner had to be based in theory, and since every surgeon was a practitioner, therefore every sound surgeon was based in theory⁷². This kind of thinking led scholars to distinguish non-academic, yet learned surgeons from the academic, or learned, and from the lay or empiric surgeons: academic surgeons were those who occupied a much more defined place in medical hierarchy than empiric or uneducated practitioners who were part of a large and fluid group, composed of many different types of healers. However, distinguishing these two categories one from the other and from the rest of the medical body would not always be easy because, although documents and some texts by physicians provide evidence of a sensitivity to status, this may have little adherence to the realities of medical life. In the thirteenth century, in fact, many barbers were accustomed to performing bleeding, cauterisation, and tooth drawing so that they acquired the name of barber-surgeons. Barbers were organised in a Company from 1308 and established by ordinance in 1376, while the small number of prominent surgeons precluded corporation as a guild. Both barbers and surgeons used this kind of organisations to establish their independence and freedom of operation. However, in few years barbers and surgeons established a Fellowship, and in exchange for promising that they would not practice 'barbery', shave, barber-surgeons had to declare to do no surgery save pulling of teeth. Surgeons, who nowhere depended on university training, were universally considered *manuels sans savoir*, except in England where they soon became specialists in their fields. An alliance between physicians and surgeons is recorded: when in 1423, in fact, Gilbert Kymer, dean of Oxford, petitioned Henry V to

⁷¹ Hoeniger, *Medicine and Shakespeare in the English Renaissance* pp. 21-22.

⁷² Garrison, F. H., *An Introduction to the History of Medicine*, Philadelphia-London: Saunders, 1929, p. 347.

regulate all medical practitioners under the directions of the literate healers, he created the Conjoint College of Physicians and Surgeons. From 1497 even diplomas to practise surgery were granted there⁷³. The earlier surgical writers in England were Thomas Vicary, John Hall, and Thomas Gale, immediately followed by William Clowes, George Baker, John Banister and John Read: in the sixteenth century, in fact, they wrote vernacular treatises to improve the educational standing of their colleagues, to raise their status and to acquaint them with Galenic theoretical principles. Thus, Pelling and Webster state “it is difficult to avoid the impression that the elite of the Barber-Surgeons’ Company were, in the last decades of the century, making a more active and original contribution to medicine than their colleagues in the College of Physicians”⁷⁴.

The fact that the gap between English surgeons and physicians was not as deep as has been thought till now, or at least it was not in the English context is pointed out even by Nutton, who wrote that “the gulf between surgeon and physician was not as wide as has been thought; that particularly when contrasted with the barbers and barber-surgeons, the two groups had much in common”⁷⁵ and that there was “little to chose between doctor and surgeon: both use the same arguments and the same examples and classical texts to prove their case”⁷⁶. Especially English scholars like Linacre and Caius, who were translators of the Galenic texts and leading figures of the College of Physicians, appeared to their contemporaries to be the promoters of the Galenic unit of doctors and learned surgeons⁷⁷. Certainly English surgeons felt they deserved as high a social status as the physicians, but in the meantime they knew they were closer to ordinary people than their university-trained colleagues. This was why they turned to any helpful medical treatise, and they were less concerned about purity of classical Latin, rather they engaged in the promotion of the printing of medical books in vernacular and the translation in English of many Continental medical works, while the great majority of the works by physicians continued to be in Latin⁷⁸.

One of the most important and authoritative works that provided surgeons with information about surgery was Galen’s *De methodo medendi*, and it was for the surgeons’ impulse that some sections of this treatise on wounds, ulcers, and fractures

⁷³ Bagwell, “Respectful Image: Revenge of the Barber Surgeon”, pp. 872-878.

⁷⁴ Pelling - Webster, “Medical Practitioners”, p. 177.

⁷⁵ Nutton, *From Democedes to Harvey*, p. 75.

⁷⁶ Nutton, Vivian, “Humanist Surgery”, in *The Medical Renaissance of the Sixteenth Century*, edited by Andrew Wear - Roger K. French - Iain M. Lonie, Cambridge: Cambridge University Press, 1985, p. 76.

⁷⁷ See for example Sir Walter Langdon-Brown’s or William Bullein’s opinion on Caius: Nutton, “Humanist Surgery”, p. 97. See also Nutton, “The Galenic Codices of Theodore Goulston”, pp. 259-268.

⁷⁸ Hoeniger, *Medicine and Shakespeare in the English Renaissance* pp. 21-22.

were early translated in Latin at first and then in vernacular, and they even appeared separately from the other parts of the Galenic work under the title *Galen's Chirurgia*. The illiterate practitioner, in fact, usually bought a *practica*, a hand book in which he could find various affections of the parts of the body associated with symptoms, causes and cures. There were also the descriptions of different types of fevers. *Practica* was very widespread because it supplied the practitioners' need "to have a ready guide to diagnosis and a good list of cures"⁷⁹. However, in such a way no rational connection between the cause of the disease and the therapy was granted. Thus, retrieving the Galenic method became of fundamental importance both to differentiate learned healers who had a method from those who had not, and to lead them to choose the correct cure considering the cause of the illness, the aspects of the patient and environment⁸⁰.

It clearly emerges that the rescue of the classical medical literature in early modern Europe passed through translation. However, the problem was in which language it was better to translate these Greek texts. Latin was widely used not only in translations, but also in scientific culture both to teach, to preserve ancient texts, and to write new treatises and textbooks. It was also the means the College of Physicians used to perpetuate Galen's medical authority and to maintain medical discourse in the hands of the medical humanists⁸¹. Nevertheless, in the medical field those who practiced the τέχνη ἰατρική were a heterogeneous group of people with the most different cultural backgrounds. Those who had studied in their own families, learning the art from their relatives were probably used neither to Latin nor to Greek, even though they could understand some common medical words and although they were not necessarily less able than learned physicians. Otherwise those who studied in monasteries or guilds were undoubtedly more accustomed to general Latin, but they probably couldn't understand the medical-scientific explanations in that language. So, why did this wide mass of healers have to be excluded from the teaching of the masters, the teaching of Galen? This question became the starting point for the debate on the medical profession of the early modern period, which involved primarily French and English.

Against this background, we must consider the English translation of the fourth book of *De methodo medendi* placed in the end of the compilation entitled the

⁷⁹ Wear, "Medicine in Early Modern Europe, 1500-1700", pp. 215-361.

⁸⁰ Wear, "Medicine in Early Modern Europe, 1500-1700", pp. 255-256; Wightman, William P. D., "Quid sit Methodus? 'Method' in Sixteenth Century Medical Teaching and 'Discovery'", *Journal of the History of Medicine and Allied Sciences*, 19, 1964, pp. 360-376; Bates, Donald G., "Sydenham and the Medical Meaning of 'Method'", *Bulletin of the History of Medicine*, 5, 1977, pp. 324-338.

⁸¹ Charles, *The Great Instauration. Science, Medicine and Reform 1626-1660*, pp. 250-260.

Questyonary of Cyrurgyens. Now I will proceed analysing the compilation and in the next chapter I will provide also the comparison between the English translation in manuscript Sloane 6 (overall the first vernacularisation of Galen), and the printed translation in the *Questyonary of Cyrurgyens*.

IV.2. THE FIRST PRINTING OF THE COLLECTION: STC 12468

The first English printing of Galen appeared in 1542 as part of the already mentioned *Questyonary of Cyrurgyens*. The work was probably conceived as a surgical textbook, and it actually appeared soon after the amalgamation of Barbers' and Surgeons' companies in 1540. As I have already said, during the medieval and early modern period, Galen was a desideratum for all physicians, but this particular compilation, I think, clearly shows his importance also for surgeons, who always tried to place themselves in a liberal position in the long struggle over control of medical knowledge. Ancient authors and Galen in particular were revered so that their prestigious works passed to modern physicians in their entirety and, as far as possible, unchanged. Nevertheless, it was customary at all levels of the medical pyramid to create new texts by assembling extracts from others, creating compilations or patchwork texts. The *Questyonary of Cyrurgyens* is a good witness of this phenomenon as the title defines it a compilation:

The Questyonary of Cyrurgyens, with the formulary of lytell Guydo in Cyrurgie, with the spectacles of Cyrurgyens newly added, with the fourth Boke of the Terapentyke⁸², or Methode curatyfe of Claude Galyen prynce of Physyciens, with a Synguler treaty of the cure of vlcres, newly Enprynted at London, by me Robert wyer, And be for to sell in Poules Churcheyarde, at the sygne of Iudyth. Cum priuilegio ad imprimendum solum⁸³.

The so-called *compilationes* were nothing but lists of quotations from other books, with no final conclusions. They differ from commentaries because in these works the author takes a side and gives some conclusions. Both compilations and commentaries were important for the dissemination of knowledge, and they were usually written in the vernacular. Thus, learned compilations, like *Questyonary*, provided easy access to authoritative texts and to ancient authors. In the prologue to the Middle English version

⁸² The printed edition has "Terapentyke".

⁸³ De Chauliac, Guy, *The Questyonary of Cyrurgyens with the Formulary of Lytell Guydo in Cyrurgie, with the Spectacles of Cyrurgyens Newly Added, with the Fourth Boke of the Terapentyke [sic], or Methode Curatyfe of Claude Galyen Prynce of Physyciens, with a Synguler Treaty of the Cure of Vlcres*, London: Robert Wyer, 1542, *The Title*.

of Guy de Chauliac's *Chirurgia magna* we find a passage in which he clearly explains the usefulness of such compilations⁸⁴:

The resoun of þis exposicioun or gadryng togedre was noght defaute of bookes. but rapen onhede and profit. Euery man may not haue alle bookes, and if he hadde, it were irkesome or noye to rede hem and goodly to holde all þing in mynde⁸⁵.

Thus, the fact that the first part of the *Questyonary* was precisely Chauliac's first volume on anatomy, although in a simplified question-answer formula, is perfectly coherent with what I have just said.

For what concerns the date of translation of the *Questyonary*, it presents two discordant dates: the opening page of the Galen translation reads the fourth day of February 1542, while the colophon has the twelfth day of November 1541, which means that the date written at the beginning of Galen's text is later than that at the end of the book. Looking at the whole compilation and at its French models, I think that it was probably assembled mostly in 1541, when even the preface and the colophon were included, but the translation of the Galenic work, probable the most difficult of the whole volume, was still proceeding and it was finished by the translator, Robert Copland, only in 1542, when the work was first published⁸⁶.

The *Questyonary* became popular enough to be reprinted many times before the end of the century. This is why copies can be found in Bethesda, National Library of Medicine; Cambridge, Trinity College Library; Glasgow, Library; London, British Library; London, Royal College Library; London, Wellcome Library; Oxford, Bodleian Library; New York, Academy of Medicine; Yale, Sterling Memorial Library; Williamstown, Chapin Library; San Marino CA, Huntington Library⁸⁷. It was also reissued in 1579 as *Guido's Questions* (STC 12469). However, the compilation was not assembled in England but in France, probably in Montpellier, where it was published twice in 1533 and in 1537, with some differences from one reprint to the other.

⁸⁴ Taavitsainen - Pahta, *Medical and Scientific Writing in Late Medieval English*, pp. 42-43.

⁸⁵ Taavitsainen - Pahta, *Medical and Scientific Writing in Late Medieval English*, p. 43.

⁸⁶ Erler, Mary C., "The First English Printing of Galen: The Formation of the Company of Barber-Surgeons", *Huntington Library Quarterly*, 48, 1985, pp. 159-172.

⁸⁷ Erler, "The First English Printing of Galen: The Formation of the Company of Barber-Surgeons", p. 159.

IV.2.1. *LE QUESTIONNAIRE DE CIRURGIENS ET BARBIERE*: SIMILARITIES AND DIFFERENCES WITH THE *QUESTYONARY*

The *Questyonyary of Cyrurgyens*⁸⁸ is made up by four separate surgical works; it starts defining what surgery is, the qualities of a good surgeon, the reasons for studying anatomy, the different parts of the body and their functions and it is also illustrated with drafts of surgical instruments, which the publisher recuts from the French sometimes printing them upside down.

This English reprint, in fact, is based on a French work realized for the students of Montpellier in 1533 and entitled *Le Questionnaire des Cirurgiens et Barbiers*⁸⁹. One copy is preserved in the Countway Library of Medicine of Boston, 1 Mx 444, another in Bibliothèque nationale de France, it was written by Guillaume de Bossozel and printed in 8° by Pierre Sergent. The *Questyonyary of Cyrurgyens* follows the French compilation even in the order of the four parts, except for the last section that presents *Les lunectes des chirurgiens et barbiers* written by Symphorien Champier, instead of the Galenic work. The title of *Le Questionnaire* reads:

Le Questionnaire des chirurgiens et barbiers avec le Formulaire du petit Guydon en chirurgie veu et corrige et les Lunettes des chirurgiens de nouveau adjoustez et imprimez nouvellement a Paris⁹⁰.

The word “questionnaire”, translated in English with “questyonyary”, is very important as it identifies the question-answer formula, which was more suitable for didactic purposes and textbook use⁹¹. The first record of *Le questionnaire des Cirurgiens et Barbiers* dates it to 1533 even if there are many catalogues like *Tableau chronologique des ouvrages et des principales découvertes d’anatomie et de chirurgie, par ordre des matieres*⁹², which testify to a reprint five years earlier. The French compilation, like the English one, begins with the description of its first part: it is Guy de Chauliac’s *Le questionnaire des Cirurgiens et Barbiers* followed seamlessly by a short anonymous work on the treatment of leprosy:

⁸⁸ De Chauliac, *The Questyonyary of Cyrurgyens*.

⁸⁹ De Chauliac, Guy - Champier, Symphorien, *Le Questionnaire des Cirurgiens et Barbiers avec le Formulaire du petit Guydon en chirurgie veu et corrige. Les Lunettes des Cirurgiens de nouveau adioustez*, Paris: Pierre Sergent, 1533.

⁹⁰ De Chauliac - Champier, *Le Questionnaire des Cirurgiens et Barbiers*: “Here begins [...] the little questionnaire according to those that the surgeons and barbers of Montpellier use to examin those who wish to become masters in surgery and barberie in Montpellier, and contain four treatises [...] Here finishes the text on the way of examining and proving the diseases according to the intention of the healers”.

⁹¹ Taavitsainen - Pahta, *Medical Writing in Early Modern English*, pp. 63-67.

⁹² Portal, Antoine, *Tableau chronologique des ouvrages et des principales découvertes d’anatomie et de chirurgie, par ordre des matieres*, Paris: Didot, 1773.

cy commence ... petit questionnaire selon la teneur duquel les maistres cyrurgiens et
barbiere de Montpellier ont de coustume de examiner les comignons quils veullent passer
maistres esdicts ars de chirurgie et barberie audit Montpellier et contient quatre traictiers

cy finit la maniere de examiner et approuver ladies selon l'intention des docterurs.

What follows is a book of medical recipes known as “la petite chirurgie” or “petit Guydon”, which was divided in two parts: the first devoted to wounds, the second to abscesses⁹³. From the preface of this “petit Guydon” we can infer the date of printing: it is declared, in fact, that in 1533 the work was printed “nouvellement”. The information is correct, in fact, searching the list published in *French Vernacular Books*, I found that *Le formulaire du petit guidon en chirurgie* had already been printed in 1525 in Paris by Alain Lotrain⁹⁴. However, since the date refers only to this particular portion, it is possible neither to date the whole compilation precisely to 1533, nor to describe it as a reprint.

⁹³ “Cy commence le formulaire ses aydes des apostemes et pustulles ordonne a paris par maistre Guidon de Caillac cyrurgien et maistre en medecine en l’an mille troys cens quarante. Pource que selon la doctrine de Galien in tertio De ingenio sanitatis ainsi comme la science de ouvrier est prinse de la essence de la mala due aussi de la science des choses des quelles elle est donnee convient que procede dicelle. [...] Cy finie formulaire ses aydes des apostemes et pustulles ordonne a Paris par maistre Guydon de Caillac cyrurgien et maistre en medecine (rasura di due parole) en l’an mille troys cens quarante. Imprime nouvellement a Paris pour Pierre sergent demourant en la rue neufve nostre Dame a l’enseigne Saint Nicolas. En l’an mil cinq cens XXXIII”: De Chauliac - Champier, *Le Questionnaire des Cirurgiens et Barbiers*.

⁹⁴ Pettegree, Andrew - Walsby, Malcolm, Wilkinson, Alexander, eds, *French Vernacular Books. Books Published in the French Language before 1601*, Leiden: Brill, 2007, pp. 731-732.

Figure 9

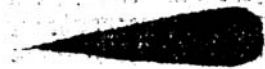
Cultere be the superfluous fleshes cut, and ap-
stumes are opened, and the sores bleeres rectified.
Of the which Culteres the shayes oꝝ fourmes are
suche as be here figured. ¶

 ¶ The seconde canter is na-
med Olyuare because it resem-
bleth a bynnell of Olyue, as
sayeth Haly abbas in his .iij.
boke de regali dispositione in
the seconde party, and chapp-
ter of doctions of the heade, and nat lyke to Olyue
leafe as twened Lanfranche, Salicet, and Henry.
Also his operacpon declareth it, the shape is thus.

 ¶ The thynde Cantere is called
Dacteler because it is in semblaū-
ce of a Date stone / and it is byg-
ger than is the Olyuare / and the
fourme is suche. ¶

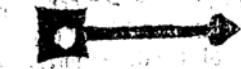
 ¶ The fourth is named punctuall,
which hath the poynte sciendze and
ronnde / it is of two maners. One
is made with a rest oꝝ platte, because it shall nat
beere thozow the skynne / and with this there be
Canteres to the dysleases called knottes in the fou-
renelles / and in the armes and legges. The other
is playne & longe in maner of a beine of the sone /
whiche is applyed with a quyle / The fourmes of
them are suche. ¶

¶ The

 ¶ The fyrste is called a
cantere subtil to hertwith
the Cetons are applyed
with small tonges brode
and perced. And this is
lyghter and moze dura-
ble. ¶

¶ The quyle.

¶ The plate.

 ¶ The fourme of the se-
conde is suche / that the
punctualles because the
name of punctualles do
fall often, & haue nede of
byndyng more tydeous
than these be / the fourme
is suche.

 ¶ The .viij. is called Cyrculare /
whiche hath .v. adiutories to
make .v. canteres ad modum
with plate perced of .v. holes af-
ter this fourme folowynge.

¶ The tonges.

¶ Demande.

The last treatise included in the compilation is not present in the English compilation. It was written by Symphorien Champier (1471-1539)⁹⁵, doctor of medicine at Montpellier:

le myrouel des apothicaires et pharmacopoles par lequel demonstre comment apothicaires communement errent en plusieurs simples medicines contre l'intention des Grectz, de Hypocrats, Galien, Oribase, Paule Egynette et autres Grectz. Et par la mauvaïse et faulx intelligence des auteurs arabes lesquelz ont falcifié la doctrine des grectz par leur mauvaïse et non entendue interpretation et intelligence faulce. Item les Lunettes des Cyrurgiens et Barbiers ausquelles dont demonstrees les regles et ordonnances et la voye par lesquelles se doivent reigler les bons Cyrurgiens lesquelz veullent vivre selon dieu et la religion crestienne. Compose par messire Symphorien Campese chevalier et docteur regent de l'universite de Pavie seigneur de la faverge premier medecin de monsieur le duc de Lorraine et de Bart⁹⁶.

It is worth noting that the author was the personal physician of Antoine duke of Lorraine⁹⁷. In Lyon, where the majority of French medical books of the sixteenth century were printed, Champier worked with François Rabelais; he established the *College of Doctors* of the city and he promoted numerous medical foundations as *Ecole des medecins*. He also studied Greek and Arab, concluding that all Arab translations of Greek medical texts were by no means faithful, and so condemning them. This is why Champier decided to create an epitome in French of the most serious mistakes in translating the precepts, the *dicts* of Hippocrates, Galen and others⁹⁸. His aim was to

⁹⁵ Cooper, Richard, "Les dernières années de Symphorien Champier", *Bulletin de l'Association d'étude sur l'humanisme, la réforme et la renaissance*, 47, 1998, pp. 25-50.

⁹⁶ Champier, Symphorien, *Le Myrouel des Apothiquaires et Pharmacopoles, par Lequel il Est Démonstré Comment Apothiquaires Communément Errent en Plusieurs Simples Médicines Contre l'Intention des Grectz, de Hypocras, Galien, Oribase, Paule Egynette et Aultres Grectz. Item les Lunettes des Cyrurgiens et Barbiers Ausquelles Sont Démonstrées les Reigles et Ordonnances et la Voye par Lesquelles se Doybvent Reigler les Bons Cyrurgiens Lesqueulx Veullent Vivre Selon Dieu et la Religion Crestienne*, Lyon: Mareschal, 1525. "The mirror of the apothecaries and pharmacopoles that show how apothecaries commonly make mistakes in many simple medicines against the teaching of the Greeks, Hippocrates, Galen, Oribase, Paul of Aegina and other Greeks. And because of the wickedness and false intelligence of the Arab, who counterfeited the doctrine of the Greeks because of their wickedness and wrong interpretations and false intelligence. Also the Glasses of surgeons and barbers to whom are demonstrated the rules and ordinances and the vow by which must be ruled the good surgeon, who want to live according to god and cristian religion. It was composed by Sir Symphorian Campese knight and doctor regent of the University of Pavia, Lord of faverge, first doctor of the Duke of Lorraine and Bart".

⁹⁷ Copenhagen, Brian P., *Symphorien Champier and the Reception of the Occultist Tradition in Renaissance France*, The Hague: Mouton, 1979; Cooper, "Les dernières années de Symphorien Champier", pp. 25-50.

⁹⁸ Champier, *Le Myrouel des Apothiquaires et Pharmacopoles*,: "A ceste cause en mon livre des corrections des Apothiqueres et medecins Arabes, Persiens, Aphricans, Israelites ay voulu en latin escrire les erreurs que communément se font en médecine par ignorance des apothequeres à cause de la secte Arabique et Mahométiste laquelle a rempli les Latins et Chrestiens de leurs erreurs Arabiques, et ont fait leur couverture et platris leurs ignorances de la couverture des dits des Grecz, comments de Hypocrates, Galien, Alexandre, et Paulus Egyneta, mal entendu et très mal interprétés et commentés, pource que les barbares ne peuvent que barbariser et les balbuciens ne peuvent droicement parler, comment est dit au proverbe commun: 'Balbi non nisi balbos intelligunt'. Et pource que les chyrurgiens françoys, lesquelz sont et prennent leur chirurgie de Montpellier, communément n'entendent ny scavent

write a book to correct the mistakes that Arabic, Persian, African and Hebrew apothecaries and physicians had made in practicing their art: mistakes due to wrong translations made by Arabic scholars when they worked on Galen, Hippocrates, Alexander, Paulus Egineta and many other physicians of the antiquity. And initially he did so in Latin. However, the problem was that even French surgeons were interested in the works of ancient physicians, but they did not read Latin fluently as they did not attend university: for all these reasons Champier decided to translate part of his collection in French. Even if he devoted only an abridged work to medical practitioners, it clearly emerges that both learned and unlearned *médecins* of his time needed to know what these “erreurs arabiques” of translation were, and since the aim of his work was to avoid “ignorance envers dieu et le monde”, all medical practitioners, learned and unlearned, should know how to make their plasters and drugs, and this was very difficult to learn for both of them if in a foreign language.

Moreover, Champier showed a particular attitude towards the Galenic treatises, which had just been rediscovered in their original Greek text, and he tried to create a new system to reconcile Hippocrates, Galen, Plato and Aristotle’s theories in medicine. At the same time he also cultivated a strange passion for occultism justifying this passion, as even Galen had never rejected it.⁹⁹ Champier wrote many other medical historical and biographical works as, for example, *Symphonia Platonis cum Aristotele et Galeni cum Hippocrate* published in Paris in 1516, *Speculum Galeni* printed in Lyon in

parler latin, mais ont leurs livres comme Guidon de Vigo Gourdon, translâtés en françoys, et aussi la plupart des apothiquaires sont ignorant la grammaire et n’entendent latin, si ce n’est latin de cuisine ou bien passe par le crible et non par l’estamine. J’ay bien voulu rédiger les erreurs par eulx faicts, lesquelles jay escript en latin à mon livre Castigationum, et réduire par manière de épithomé en nostre langue gallicane: afin que les <a>ppothiquaires et chiryrgiens Barbiers n’ayent cause de ignorance envers Dieu et le monde. Des erreurs que communement font les apothiqueres jeunes médecins et autres en leur grande composition de Tyriaque et Methrydat quant au simples” “For this reason in my book on the corrections of Arabs, Persians, Aphricans, Israelites apothecaries and physicians, in Latin I wanted to deal with those mistakes that are commonly made in medicine by ignorance of the apothecaries because the Arabs and Islamic filled Latin and Christian works with Arabic errors and they have hidden themselves and plastered their ignorance with quotations from Greeks like Hypocrates, Galen, Alexander, and Paulus Egineta that they misunderstood, and translated and interpreted very badly because barbarians can only barbarise and the stutterer can not easily speak as it is said by the common proverb: ‘Balbi non nisi balbos intelligent’. And since French surgeons that come from Montpellier are not commonly used to speaking Latin, but they attend classes on treatises as, for example, those by Guy de Vigo Gourdon translated into French, and also most of the apothecaries do not know anything about grammar, and do not understand Latin, except for the Latin words used for cooking or at least a language passed through sieve and not through muslin. I wanted to write down their mistakes in Latin in my book *Castigationum* and I also wrote an abridged version of this work in French so that apothecaries, surgeons and barbers would not charge God or the world with their ignorance. I wrote these those mistakes that young apothecaries and physicians commonly make and others in making theriac and Mithridatis theriac (This is a particular antidote so called because Mithridates, king of Pontus, used it to prevent poisoning. Galen describes it in the second book of his *Περὶ ἀντιδοτῶν*) and simple plasters”.

⁹⁹ Nutton, Vivian, s.v. “Symphorien Champier”, in *Dizionario biografico della storia della medicina e delle scienze naturali*, Ricci: Milano, 1985.

1517. In 1525 he published a work entitled *Le Myrouel des Apothicaries item les lunectes des chirurgiens et barbiers* to instruct the barbers and to teach them reverence for physicians. *Myrouel* means mirror while *lunectes* glasses: both words are metaphorically used in Champier's book: *apothicaires* in fact, should look at medical science while surgeons, because of their intellectual inferiority, could only appreciate its greatness. Champier, basing on the authority of Greek physicians, encourages and gives suggestions at first to *apothicaires* than to surgeons avoiding negative judgments¹⁰⁰. For this very reason *Le questionnaire des Chirurgiens et Barbiers*¹⁰¹ presented in its first edition Champier's work as the fourth portion of the miscellany. *Le Myrouel* began with a dedicatory epistle in Latin and then proceeded with an interesting introduction to the history of surgery.

In Champier's work, surgery acquires a fundamental importance: first of all because it was already praised by Galen, Paul of Aegina, Oribasius, then because it was "la plus ancienne" among the healing practices, as it was created by Asclepius' sons. Despite its noble origin, this art had experienced phases of decline due to the rivalries inside medical pyramid. Champier clearly outlines as those who had studied medicine little by little concentrated "en voluptez corporelles et plaisances mondaines", leaving their work to incompetent "ministers". He also criticises the exchanges of tasks contemporary healers made: physicians were interested in speculative learning, surgeons wanted to give advice without having read ancient texts and did not practise surgery, and barbers and apothecaries dealt with in medicine and surgery being ignorant. According to Champier the only possible solution was for all medical practitioners to "estre doctes et scavans bien instruyctz en meurs et vertuz comme estoient leurs anciens predecesseurs"¹⁰².

¹⁰⁰ Nutton, Vivian, "Symphorien Champier and the Reception of the Occultist Tradition in Renaissance France", *Medical History*, 24, 1980, pp. 361-362.

¹⁰¹ De Chauliac - Champier, *Le Questionnaire des Chirurgiens et Barbiers*.

¹⁰² "Mais depuys cinq ou six cens ans enca quel es princes ont dedigne et delaisse les Sciences et se sont occupez en voluptez corporelles et plaisances mondaines ont voulu avoir Medecins cyrurgiens et appothiquaires et separer non la Science mais l'operation cyrurgique de la medecine et ont voulu come leurs princes viure en delices et ont voulu avoir ministres pour composer et assembler leurs medecines et faire leurs compositions pur eviter la peine et laveur et les ont nommez Appothiquaires ou Aromatheres et pharmacopoles qu'est une des principales causes que les Appothiquaires errent en leurs compositions par faulte de scavoir et ne cognoissent les simples et quel es cyrurgiens sont la pluspart non scavant empericques et ignorans quest cause de plusieurs maux et homicides et destrucion des hommes par la ignorance des cyrurgiens et appothiquaires lesquels devueroyent estre doctes et scavans bien instruyctz en meurs et vertuz comme estoient leurs anciens predecesseurs. Et en sont cause les seigneurs et princes et gens de iustice quilz voyent toutes iours les inconveniens et abutz homicide par medecins voulans sans doctrine empericques et par Cyrurgiens non cyrurgiens mais simples Barbiers [...] qui abusent de medecine et cyrurgie que aultres gens qu'est un des plus grands maux que pourroit estre en la chose publique car les Appothiquaires veuillent tailler du medecin. Les cyrurgiens qui n'entendent lettre ny latin

Nevertheless, such an important piece of work was not intended to remain in the first reprint of *Le Questionnaire*. In 1537 in fact, Jean Canappe, physician for Francis I, known with the surname of Philiatros, who had lived in the same city and who had worked with Champier, decided to translate *Le Quatriesme livre de la Therapeutique ou methode curative de Claude Galien, prince des Medecins, auquel est singulieremet traictee la cure des viceres* from Latin into French¹⁰³. This was the first French translation of at least part of *De methodo medendi*, and it allowed the illiterate barbers and surgeons to approach ancient surgical teaching. After the translation in 1539 of books concerning ulcers and sores, which were, in addition to book four, books three, five and six, Canappe translated books thirteen and fourteen and the second book of the *Ad Glauconem* in 1538¹⁰⁴. Canappe's translations of *De methodo medendi* began the series of humanist versions, published in Lyons, for students or apprentices of surgery.

Le Quatriesme livre de la Therapeutique immediately replaced *Le Myrouel* in the new French version of *Le Questionnaire des Chirurgiens et Barbiers* and it is also found in the English reprint translated by Robert Wier. However, when I tried to find this particular text at the Bibliothèque Nationale de France, I found that no copies were preserved there. As far as I know, the only extant copy is at Wellcome Library and it has shelfmark 3025/A, on the contrary I could not find any English copies of *Le Questionnaire* published in 1533. All these things made me think about the importance that this second print had to have for medical practitioners of the time, and that it is very probably that the copy at Wellcome was used by Wier for printing the English version of the compilation. The 1537 version begins with a title and a prologue very close to those in the previous one:

Le Questionnaire des chirurgiens et barbiers avec le Formulaire du petit Guydon en chirurgie veu et corrige et les Lunettes des chirurgiens de nouveau adjoustez. Avec le Quatriesme livre de la therapeutique ou methode curative de Claude Galien prince des Medecins auquel est

veullent donner medecine sans conseil du medecin. Et seroit necessaire a toute cite que avant que permettre medecine un nouveau medecin quil monstrast comme il a estudie en universite fameuse et ses lettres de degre et tenir conclusions ou quil fust interrogué devant gens de iustice par aultres medecins avant que permettre de practiquer en la cite. Et ce que dis du medecin i e dis aussi du cyrurgien quil veult exercer la premiere et plus ancienne partie de medecine. Et quant aux appothiquaires ils devueroyent estre iures aux cives et estre interrogués par medecins et aultres appothiquaires avant que tenir et lever leurs voutiques”: De Chauliac - Champier, *Le Questionnaire des Chirurgiens et Barbiers*.

¹⁰³ This work is preserved in Paris, Bibliothèque nationale de France, Rés. TE17 275 (1); Paris, Bibliothèque Sainte Geneviève, 8o T 815inv. 2697 (2) Rés.

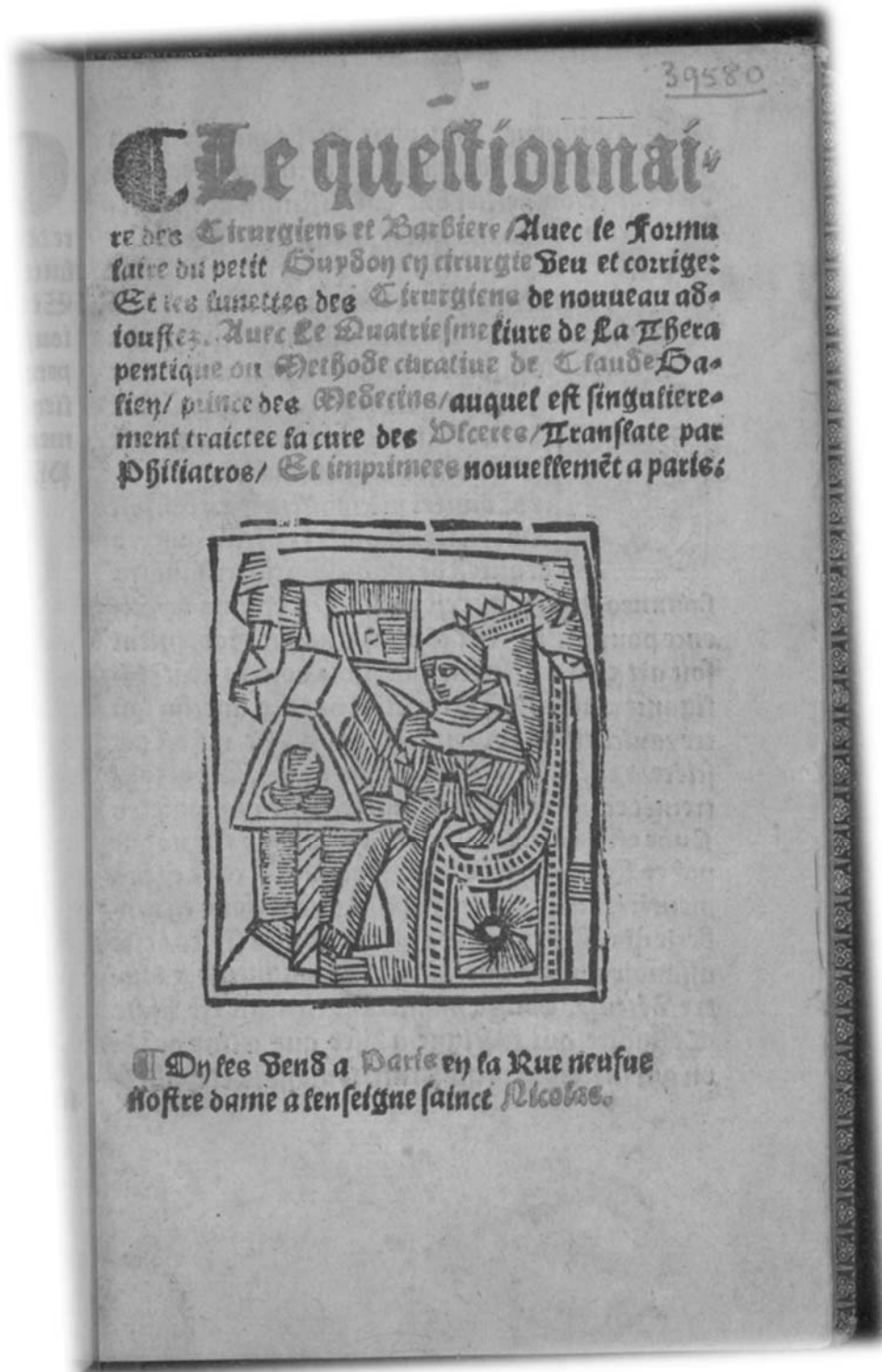
¹⁰⁴ Nutton, “Humanist Surgery”, pp. 75-99.

singulierement traictee la cure des Ulceres translate par Philiatros et imprimez
nouvellement a Paris¹⁰⁵.

If it is true that it included the first three parts present in the 1533 version, however Champier's treatise (*Les lunettes des chirurgiens*), announced in the title, does not appear in this copy, as it was replaced by the Galenic work. This discrepancy may be due to two reasons: either this volume is a copy of another of the same year (as the *terminus post quem* is the publication of the translation of the Galenic treatise, which is dated 1537), which was made of all the four parts present in the 1533 plus *Le Quatriesme livre de la Therapeutique*, or the two French printers, Guillaume de Bossozel and Pierre Sergent, who added florets, initials, characters and different surgical instruments, as "cauterres", "plate", "cannulle", "tenailles" only to the first part of the volume, might have decided with their customer to cut off *Les lunettes* and to substitute them with the Galenic work.

¹⁰⁵ De Chauliac, Guy, *Le Questionnaire des chirurgiens et barbiers avec le Formulaire du petit Guydon en chirurgie veu et corrige. Les Lunettes des chirurgiens de nouveau adjoustez. Avec le Quatriesme livre de la therapeutique ou methode curative de Galien*, Paris: Pierre Sergent, 1537.

Figure 10



IV.3. PROLOGUS AND EPILOGUS: ROBERT WYER AND HENRY DABBE

Going back to the English *Questyonary of Cyrurgyens*, issued five years after the last French version, it was first of all an important witness of the contemporary medical controversy. The compilation, in fact, appeared in 1542, and on 25 July 1540 an Act of Parliament united the Fellowship of Surgeons and the Company of Barbers. The significance of this union is not clear, but it is known that among the books barber-surgeons were compelled to study to have the license of the Company, there had to be “either the *De methodo* or the *Therapeuticon*, with a slight knowledge of Hippocrates” and *Guydo’s Questions*, which is Guy de Chauliac’s text in Copland’s translation as it was reprinted in 1579¹⁰⁶.

There is another reason that makes me think that this 1542 print was based on that of 1537: both of them have title pages that retain *Les lunectes* as part of the compilation, while it appears to have been dropped and substituted by Galen’s treatise. Wyer’s copy present a poor print quality: it is in grainy Gothic letters with outdated woodcuts at the beginning of each treatise or section, pages are unnumbered and full of printing error. After the opening title and the list of the works present in the compilation, the *Questyonary* proceeds with the preface, which bears the traces of many contemporary phenomena I have noticed before.

Robert Copland the translatour herof to the Reders.

Gentyll reders in consyderalcion that euery scyence, arte, and faculte that are speculate & practysed by Phylosophers, nat onelly ought to be shewed and taught vnto suche as be present with them in theyr dayes, but also for a perpetuall benefyte to be set forth by wrytynge vulgarly in euery tongue, for the more eredines and erudycyon of all yonge and pregaunt practycyens, as fayne wolde attayne to the perfytenes of euery suche scyence, arte, and faculte. And nat withstandynge that there be ryght many and sondry sortes, aswell of very good and scyentyke bokes, as of ryght expert men within this Realme in the scyentycall arte of Cyrurgery. Neuertheles this lytell questyonary & formulary with the other bokes added therto haue ben often requyred and soughte for, to be had in englysshe (aswell of me as of other) by dyuers and many persones of the sayde scyence. In consyderacyon aforesayd, and that it is commodious, vtile, behouefull, and benefycyall to the common welth of the sayde scyence and arte. A certayne yonge gentyll man enured in the sayd scyence haue a boke of the same in frenche moued the ryght honest persone Henry Dabbe bybliopolyst & stacyoner to haue it translated in to englysshe. At whose instigacyon meanyng the help of God (though moste rudely) with the symplenes of a good wylling

¹⁰⁶ Erler, “The First English Printing of Galen: The Formation of the Company of Barber-Surgeons”, p. 163.

herte I haue enterprysed to do it in folowyng directly my copy. For I knowlege myne enempte in pronouncyng the englysshe of the names and termes naturally expressed in the sayde boke, aswel in greke, laltyn, & other, whiche myne authour hath nat reduced in to frenche, which names and termes I commyt to the dyscrecyon, emendacyon, and grauyte of them that haue the perfytenesse of the sayde scyence and facultie. For as Phylyatros sayeth, many termes and names that are symply spoken in one language and scyence is harde to be spoken in an other, except they be expressed, and what they signifye. wherfore curteys and gentyll reders take this in worth, and desyst myne ygnoraunce in the same with your scyentycall beneuolence, aud clere fronsate intellygence. And Iesus preserue you. Amen¹⁰⁷.

Robert Copland (1505-1547) was an English translator and printer. Before he began his work as a printer, he translated French treatises that he found at Wynkyn de Worde's shop, the printing shop where he worked for many years. The list of his translations demonstrates his importance in introducing French popular literature in England. He was also very sensible of the accuracy in the transmission of the texts and in many of his works he warns the printers against changes. Even here, in fact, he highlights a problem in translating in English from other languages: he lacks anatomical and physiological terms so he often cannot translate Greek, Latin or French terms in English being forced to use periphrasis.

The problem of which language had to be used to convey culture and science was a long-standing problem. It was taken into consideration, for instance, by John Trevisa in his English translation of *Polychronicon*. Trevisa's translation was completed in April 1387 and integrated with a preface whose subject was translation itself. In a Dialogue between a Lord, a wise person, probably *mecenas*, and a *clericus*, somebody who knew Latin and who pretended to embody Trevisa himself, it was asked whether it was a good thing to make everybody available to read books or not, and so whether translating for people who didn't know Latin was appropriate. It appears that the clerical attitude towards translation was to consider it as something dangerous because it opened up privileged texts to the unlearned. Whereas, the Lord's opinion was that translation could be very useful when written down and not only said. On this matter he made some examples: the Bible translated from Hebrew into Greek by "ten interpreters, and Aquila, Symachus [Symmachus], Theodocion [Theodosius], and Origines"¹⁰⁸; "Aristotle's books and other books also of logic and of philosophy were translated out of Greek into

¹⁰⁷ De Chauliac, *The Questyonary of Cyrurgyens*, Robert Copland the translatour herof to the Reders.

¹⁰⁸ Weissbort, Daniel - Eysteinnsson, Astradur, eds, *Translator-Theory and Practice. A Historical Reader*, Oxford: Oxford University Press, 2006, pp. 49.

Latin”¹⁰⁹; Deny’s books translated from Greek into Latin by John Scott, and then from Latin into French. Therefore, what would be the problem of translating in English?¹¹⁰. Although they used common rhetorical *topoi*, like deference, modesty, anxiety, nothing could prevent medieval and early modern writers from exploring English in its capacities, and especially in the service of medical writing. The prologue to the Middle English version of the *Cyirurgie*, a surgical compendium by Guy de Chauliac, which I will analyse at chapter V.1, is another example of this peculiar phenomenon. There the author reflects on his own role and on various problems of textual transmission and tradition “with considerable self-consciousness and sophistication”¹¹¹. Another example is provided by Thomas Norton in the *Prohemium* of his *Ordinal of Alchemy*: while declaring that his life would “honour alle Englishe grounde”, and that for this reason his work is written in English, he debates problems in textual transmission and the aptness of the vernacular. He writes that no word of his work can be changed without destroying the essential value of the entire treatise. Very interesting is also the *Translator’s prologue* of *The knowing of Woman’s kind in childin*, a gynaecological text translated from a French version of the Latin *Trotula major*¹¹². The anonymous translator explicitly states that he has intentionally “drawyn and wrytyn [his work] in Englysch” because his “ententyffe bysynes” was to “drau oute of Latyn into Englysch dyverse causis of here maladyes [...] afture the tretys of dyverse mastrys that have translatyde hem oute of Grek into Latin”. In fact, he is perfectly aware that his English female audience do not know Latin, but “bettyre rede and undyrstande thys langage than eny other”¹¹³. All these examples can be seen as a long-standing “collective attempt to render the literary achievements of the past into a new vernacular idiom”¹¹⁴.

As Stefania Fortuna writes “a large part of the literary production of humanist physicians consists of Latin translations of Greek medical texts”¹¹⁵. However, from the fifteenth century, Europe, and England in particular, experienced an incredible growth in scientific works in vernacular, and this increase was particularly remarkable in the medical field. The majority of medical treatises published in England in this period

¹⁰⁹ Weissbort - Eysteinnsson, *Translator-Theory and Practice. A Historical Reader*, pp. 49.

¹¹⁰ Wogan-Browne, Jocelyn - Watson, Nicholas - Taylor, Andrew - Evans, Ruth, eds, *The Idea of the Vernacular. An Anthology of Middle English Literary Theory 1280-1520*, Exeter: University of Exeter Press, 1999, pp. XIII-XVI.

¹¹¹ Wogan-Browne - Watson - Taylor - Evans, *The Idea of the Vernacular*, pp. 61-64.

¹¹² Furst, L. R., *Women Healers and Physicians: Climbing a Long Hill*, Lexington: University Press of Kentucky, 1997, pp. 138-139; Wogan-Browne - Watson - Taylor - Evans, *The Idea of the Vernacular*, pp. 157-159.

¹¹³ Quoted in Wogan-Browne - Watson - Taylor - Evans, *The Idea of the Vernacular*, p. 158.

¹¹⁴ Wogan-Browne - Watson - Taylor - Evans, *The Idea of the Vernacular*, p. 320.

¹¹⁵ Fortuna, “The Prefaces to the First Humanist Medical Translations”, pp. 324-325.

were translations of ancient medical works available in Latin. The translator's preface was a regular feature in printed versions: it could appear as a dedicatory letter or a letter to the reader¹¹⁶. The one in the *Questyonary* is clearly a letter to the reader: it begins by explaining the circumstances in which the work was undertaken and the reasons of this particular effort. The first reason was to provide practitioners with a textbook that could help them passing their oral examination for surgeons. In 1491, in fact, surgeons and barbers drafted an agreement to provide the licences to practice surgery together: this was probably the first step for the union of the two associations of barbers and surgeons of 1540. At the very beginning of his preface, in fact, Copland wrote that the work was intended "for a perpetuall benefyte to be set forth by wrytynges vulgarly in euey tongue, for the more eredines and erudycyon of all yonge and pregraunt practycyens". Then he proceeded stating that the formulary and the other parts of the *Questyonary* had been required for long time to be in English, but only in that moment "a certayne yonge gentyll man enured in the sayd scyence", that is a young surgeon, owned the French version of the text and "moued the ryght honest persone Henry Dabbe bybliopolyst & stacyoner to haue it translated in to englysshe". This "yonge gentyll man" was probably an aspiring membre of the Barber-Surgeons' Company¹¹⁷.

Copland then proceeds speaking about his customers and his sources. At first he reaffirmed, but never realised until that moment, which means that this work was renowned and widespread¹¹⁸. The *Questyonary* was probably intended for those apprentices who were at the beginning of their studies (at least 150 per year at the Barbers' Hall, which means 1000 apprentices for the seven years of the indenture), but it may also be used as a handbook for young or skilled surgeons, and this would made it valuable for Robert Wyer, the publisher. It is worth saying that Wyer had already worked with at least one of the two entrepreneurs mentioned at the end of the compilation: Richard Bankes. He had in fact commissioned Wyer to print *The practyse of cyrurgyons of Mountpyller and of other that neuer came there*, another surgical compilation intended for surgical students¹¹⁹. The last part of the letter presents the translator's anxiety for his work. He complains about the scarce resources of English, as he knows his "enernyte in pronouncyng the englysshe of the names and termes naturally

¹¹⁶ Fortuna, "The Prefaces to the First Humanist Medical Translations", pp. 325-335.

¹¹⁷ Erler, "The First English Printing of Galen: The Formation of the Company of Barber-Surgeons", p. 165.

¹¹⁸ Rhodes, Neil - Kendal, Gordon - Wilson, Louise, *English Renaissance Translation Theory*, London: Modern Humanities Research Association, 2013, pp. 4-5.

¹¹⁹ Erler, "The First English Printing of Galen: The Formation of the Company of Barber-Surgeons", p. 165.

expressed in the sayde boke, aswel in greke, laltyne, & other [...] For as Phylyatros sayeth, many termes and names that are symply spoken in one language and scyence is harde to be spoken in an other, except they be expressed, and what they signyfye”¹²⁰. Nevertheless, he ends arguing for the benefits of his work and praying the reader to “take this in worth, and desyst myne ygnoraunce in the same with your scyentycall beneuolence, aud clere fronsate intellygence”¹²¹. The above-mentioned Philiatros is none else than Jean Canappe, the French translator of *De methodo medendi* who wrote his own letter to the reader and placed it before his translation, as I will underline in the next chapter.

Even though all European countries tried to improve their own vernacular to a point where it could compete with Latin, during the fifteenth and sixteenth centuries the difference in language had been used to divide such works into those addressed to learned physicians, and those for unlicensed and unlearned practitioners and surgeons: obviously the former were in Latin, the latter in vernacular. In her pioneer study, Rossell Robbins wrote that “in the late fourteenth and fifteenth centuries, the distinction between medical manuscripts in Latin and medical manuscripts in English was socially very significant. This means that it was primarily the difference in language that separated the relatively few university-trained physicians, like Chaucer’s ‘doctor of physic’, from the illiterate others, specifically, the on-the-job-trained surgeons, barber-surgeon, apothecary, apprentice, cunning man, wise woman, lay sister in a convent, and midwife”¹²². However, in my opinion the situation was more complex than this and less clear-cut. First of all many graduate physicians used medical texts in English, while their unlicensed counterparts read treatises rich in Latin quotations because sometimes “the successful surgeons, even without the university hallmark, were able to live comfortably, sometimes lavishly, so munificent were their rewards”¹²³ and for this reason, they would have been able to afford expensive books. Moreover, practical textbooks on surgery or recipe collections were translated and reissued in English from French and from classical languages, both for practitioners and for eminent customers. Furthermore, the already-mentioned binary division between “elite Latin” and “lowly vernacular”, established by scholars, became more and more difficult to support when

¹²⁰ De Chauliac, *The Questyonyary of Cyrurgyens, To the Reader*. “Enernyte”: *apax* probably due to a printer’s mistake, it can be assumed as a synonym of weakness.

¹²¹ De Chauliac, *The Questyonyary of Cyrurgyens, To the Reader*.

¹²² Robbins, Rossell Hope, “Medical Manuscripts in Middle English”, *Speculum*, 45, 1970, pp. 393-415.

¹²³ Getz, “Gilbertus Anglicus Anglicized”, pp. 436-442; Talbot, Charles H. - Hammond, Eugene, *The Medical Practitioners in Medieval England: a Biographical Register*, London: Wellcome Historical Medical Library, 1965, Introduction, p. IX.

the disruptive force of Greek was introduced in the early sixteenth century¹²⁴. Even a renowned physician like Thomas Phaer (1510-1560) defended his decision to translate from French and to use English by saying that “the use of many ought not to be secret for lucre of a few” and that his aim was “to communicate the fruit of my labours to them that will gently and thankfully receive them”¹²⁵. In fact, the necessity of translation was felt with particular strength in England where the already-mentioned Royal College of Physicians was constantly opposing the Company of Barber-Surgeons and the Society of Apothecaries, and where “each of the three medical bodies was constantly evolving plans to infringe the liberties of its professional neighbours”¹²⁶. The main battlefield in which this conflict was fought was language: surgeons, in fact, wrote books in vernacular and promoted most of the English translations of Continental medical works that appeared in the sixteenth century, while most treatises by physicians continued to be in Latin to preserve their privileged position¹²⁷.

This quarrel is perfectly witnessed in another preface present in the *Questyonyary*: that translated in English from Jean Canappe’s prologue to his French translation of Galen and entitled “Philiatros the translatour in to Frenche to the Reader gretynge”¹²⁸. Copland follows Canappe’s translation very faithfully as it emerges from the presence of some Gallicisms, like “Chapitre”, and of some variants of the same term, like “Physicyens”, “Physycions”, “Physytions”, probably due to the translator’s uncertainty in rendering the French words, and also from the syntax, which strictly follows the source. Therefore, like Canappe before him, even Copland disparages the opposition in sharing medical knowledge and the inner division of medicine in practice and theory as even “Quintilian in his fyrst boke of the Oratory instytution recyteth howe Phylosophy and eloquence are conioyned by nature, and vnyed togyther by offyce and actyon”. In the same way even the three parts of medicine “dyetityke, pharmaceutyke and cyrurgery” are joined, and they could not be divided without “the damage and great detryment of all the medicynall professyon. For the one is holpen, made perfyte, and consumed by the other”. Copland writes that, opposite to the Galenic teaching, medical practitioners were divided into three groups: physicians, apothecaries and surgeons, with the first showing contempt for the others because of their “vyle and

¹²⁴ Quoted in Rhodes - Kendal - Wilson, *English Renaissance Translation Theory*, pp. 34-36; Slack, Paul, “Mirrors of Health and Treasures of Poor Men”, pp. 239-243.

¹²⁵ Rhodes - Kendal - Wilson, *English Renaissance Translation Theory*, pp. 238-239.

¹²⁶ Webster, *The Great Instauration*, p. 254.

¹²⁷ David, *Medicine and Shakespeare in the Renaissance*, pp. 19-22.

¹²⁸ De Chauliac, *The Questyonyary of Cyrurgyens, Philiatros the Translatour in to Frenche to the Reader Gretynge*.

unworthy [...] professyon". For this reason physicians knew nothing about surgery and "ye sayd manuell occupation the which Hipocrates and Galyen haue not shamed to treate of and to exercyse, but also the Methode to cure the vlceres and tumoures against nature, hath ben lefte by them in suche maner y^t the Barbours and Cyrurgyens in these dayes are more studyous than many physytions". It was for "the great and ardaunt desyre that I [the translator] haue knowen amonge the sayd Cyrurgiens to haue knowlege of some thynges" that he "haue traducte out of latyn in to frenche this fourth boke of the methode of Galien [...] Wherin I wolde desyre gladly the grekysshe tongue or the latyn, bycause of the great payne takynge in the translation". As Copland remarks, he tried to follow very strictly his French model, which, in turns, had followed the Latin, but with many difficulties in rendering the Greek scientific lexicon because "many termes and names that are symply spoken in one language and scyence is harde to be spoken in an other"¹²⁹. Nevertheless if we compare the Greek text with Linacre's and Copland's version, we can notice how similar are the terms and medical words employed by them: both the Latin translation, which would be used by literate physicians and scholars, and the English, which was intended to be read by barbers and surgeons, presented great accuracy and many etymological remarks, which I would analyse in the last chapter of this thesis¹³⁰.

The fact that Copland's "great payne takynge in the translation" involved for the first time a Galenic treatise is not trivial as physicians were considered the only legitimate heirs of Galen. University faculties and the Royal College of Physicians were cautious and harsh in supervising the diffusion of knowledge to those practitioners who had a lesser education and knew no Greek or Latin, and viewed with reluctance the publication of translated ancient medical texts, trying to preserve the secrets of their art. In 1498, for example, Guillaume Cop was asked to suspend his lectures on *Chirurgia magna* because he used the French version of the treatise to make it understandable even for the surgeons, and this was beyond his duty. Nevertheless, with the sixteenth century the College had to begin to face the problem that provincial audiences of apprentices, and even some physicians working out of the city of London were increasingly more than those in the city, but they knew very little Latin. Thus, vernacular versions of classical texts were permitted, but their sketchy quality and rarity made them untrustworthy, and many times a subject in Latin was explained in a very

¹²⁹ All quotations are taken from De Chauliac, *The Questyonary of Cyrurgyens, Philiatros the Translatour in to Frenche to the Reader Greeting*.

¹³⁰ Erler, "The First English Printing of Galen: The Formation of the Company of Barber-Surgeons", p. 161.

different way when in vernacular: an example is given by John Caius' work on the English sweat that was published in English in 1552 and then in Latin in 1555, but with considerable variations of style and even of content¹³¹. Even in Paris or Montpellier it was considered necessary to carry the medical discourse in an appropriate language (Latin) to maintain the high level of the faculties, which attracted the highest European talents. However, when the medical graduate left those cities and came back to his province, there he found practitioners who knew no Greek and Latin. This did not mean that surgeons were not clever, but that they lacked of a good education, which would have made them doctors, not surgeons. Canappe and Copland's prayer was for greater learning for the surgeons, as they needed philosophical training together with practical expertise because their role was gradually broadening.

Furthermore, in the second part of the sixteenth century the learned φυσικοί (physicians) of all European universities were developing new anatomical and physiological theories. "But how were the surgeons and even barbers to gain everything necessary to reach perfection in their art? How were they to rise above the crowd of erratiques et coureurs with their placards promising instant and universal cures, above the empirics, circulateurs, basteleurs, theriacopoles, vulgairement triacleurs, ou imposteurs et abuseurs, without doctrine or method [...]? The answer was simple; by adopting Galenic method"¹³². Only practitioners, particularly the English ones, seemed to be really interested in the ancient Hippocratic and Galenic *materia medica*. In this context, the vulgarization of ancient medical literature was not only intended to create a library of simplified collections, of textbooks for a wide and blurred mass of illiterate, and ignorant apothecaries, barbers and surgeons who had no education. These new translations wanted to expound the "sacred art" in a clearer language, and sought to offer barbers and surgeons the rudiments of the τέχνη ἰατρική, the art of medicine, supplied with examples from the past. In a period when the medical *auctoritates* were changing, they showed a real and profound interest towards ancient medicine, its techniques, remedies, and language. Moreover, many English scholars believed English nearer to Greek than to Latin, and this attitude led surgeons to a great interest in ancient Greek medicine and medical treatises. For example, Peter Lowe, a Scottish surgeon graduated in France, published a treatise entitled *Discourse of the Whole Art of Chyrurgerie* and then he translated in English the Hippocratic *Prognostics*. It is worth saying that he always translated the Greek εἰατρός with the English surgeon, thus

¹³¹ Nutton, "Humanist Surgery", pp. 82-83.

¹³² Nutton, "Humanist Surgery", p. 99.

showing that sixteenth-century-surgeons affirmed that their art came from classical principles. Many Greek medical works were translated in English and, although their antigraphies were in Latin, they often claim a more conservative attitude towards Greek words and etymologies; they present hypercorrections of Latin and the rephrasing of some sentences according to the Hellenic mood.

Whether or not it was right to translate into English was a long lasting problem. In 1574, for example, George Baker newly translated the third book of *De methodo medendi*, which appeared in his work *The composition or making of the most excellent pretious oil, called oleum magistrale* and after that, in 1566, the surgeon London (c. 1507-1567) published his English version of books three and four with the title of *Certaine workes of Galen, called De methodo medendi*. As the other English translators did, he chose these two books because they deal with practical techniques, leaving out all the theoretical parts of the work¹³³. However the need to legitimise a vernacular translation was still alive. In fact, in his dedicatory epistle *To the Right Honourable Sir Henry Neville, Knight*¹³⁴ Gale began presenting himself as a master in *chirurgerie* and then he proceeded justifying his choice of English, defending it from all possible critics by saying that through that language his work would be “better understood and sooner learned”¹³⁵.

If they shall say it is not good because it is in English tongue, then I must allege unto them, the famous men which were the chief setters forth of the same art, as Hippocrates and Galen amongst the Grecians¹³⁶.

According to Gale, in fact, as Hippocrates and Galen wrote in their own language, even if they knew many foreign languages and although Galen lived for a long time in Rome; as also the Arabians and the Latinists, like Plinius and Cornelius Celsus, who collected and translated many noble works of medicine out of the Greek tongue, did use their own natural tongue, for the same reasons he used his own mother tongue for the instruction and further knowledge of those students which were desirous to learn the same, and to use the same to the profit of the common wealth in the time of necessity¹³⁷. He was fully convinced that those who were considered by academic physicians as mere

¹³³ Boss, “The *Methodus Medendi* as an Index of Change in the Philosophy of Medical Science in the Sixteenth and Seventeenth Century”, pp. 13-42.

¹³⁴ Sir Henry Neville was “a godson of Henry VIII and a groom of the privy chamber”: Rhodes - Kendal - Wilson, *English Renaissance Translation Theory*, n. 1, p. 312.

¹³⁵ Gale, Thomas, *Certaine Workes of Galens, Called Methodus Medendi, with a Briefe Declaration of the Worthie Art of Medicine, the Office of a Chirurgion, and an Epitome of the Third Book of Galen, of Naturall Faculties*, London: Thomas East, 1586, *The Epistle dedicatorie*.

¹³⁶ Gale, *Certaine Workes of Galens, The Epistle dedicatorie*.

¹³⁷ Gale, *Certaine Workes of Galens, The Epistle dedicatorie*.

helpers, ignorant and even dangerous healers, were probably “more studyous than many physytions” and for this reason he devoted his treatise in English to “further those that be willing to learn”, i.e. especially surgeons¹³⁸. Therefore, according to Gale the art of medicine has to consist only “in reason and experience, neither can there be any third thing added thereunto, as Galen affirmeth in his third book named *Therapeutikon*¹³⁹. It seemeth to me, therefore, that he which understandeth any tongue, whether it be Greek, Latin or English, it serveth him no more but for the further understanding of that thing which he doth read”¹⁴⁰. He believed, in fact, that being able to read or speak many languages did not mean to be able to understand and practice the art of medicine, and for this reason language and translation come to be the most important means to acquire a solid medical knowledge. In Galen’s *Therapeutikon*, i.e. *De methodo medendi*, Gale also found the definition of the medical practitioner, whose skills do not derive from the number of languages he knows, but from knowledge joined with experience.

The same position is shared by Copland in his prologue, but it is also found in the epilogue of the work where there is a final letter to the reader, which was written by surgeons of St. Bartholomew Hospital founded at Farringdon in the City of London in 1123¹⁴¹. They appeal to the reader as a brother defining *Questyonary* a “needfull and necessaire worke concernin the Anatomie of mand bodie”. Therefore, it is clear that this compilation was intended for surgeons only, and not for example for barbers who had been members of the same company for two years. They also underline that the work was first of all in the hand of Thomas Vicary, surgeon and member of the Barbers’ Company of London first, then of the Company of Barber-Surgeons. After the title of master and that of surgeon, thanks to the licence given to him by the bishop of London, he became a governor of St. Bartholomew Hospital, and he probably brought there his own books, like *Questyonary*¹⁴². The description these surgeons gave of the treatise concerns its small size that make it useful and manageable, and the author’s aim in publishing it. Although “many good and learned men in these our daies, do cease to publish abroad in the English tongue their workes [...] and it is for that if any one fault

¹³⁸ The quotations are taken from Gale, *Certaine Workes of Galens, The Epistle dedicatorie*.

¹³⁹ This is not a mistake, as Rhodes suggests in *English Renaissance Translation Theory*, n. 6, p. 315, because the Galenic treatise books was entitled *Θεραπευτικῆς μεθόδου βιβλία ιδ'* in Greek, and then *Therapeutica* in the first Greek-Latin versions.

¹⁴⁰ Gale, *Certaine Workes of Galens, The Epistle dedicatorie*, quoted in Rhodes - Kendal - Wilson, *English Renaissance Translation Theory*, pp. 315-316.

¹⁴¹ De Chauliac, *The Questyonary of Cyrurgyens*, epilogue *To the reader*. The copy in the British Library lacks the final sheet, so the *epilogus* ends with the words “English tongue”: for this reason the transcription I provide here comes mostly from the copy at the Wellcome Institute.

¹⁴² Bagwell “Respectful Image: Revenge of the Barber Surgeon”, pp. 872-878.

or blemish by fortune be committed”, the author of *Questyonary* decided to published it in England for “(no doubt) your [of the reader] commodities onely, and the profite of the Common-wealth without praise and vaine gloire of himselfe”. The author they mention is probably the printer and bookseller Robert Wyer. We know nothing about his life apart from his great production of books: at least 145 are attributed to his printing press, among which many are about medicine. “In an age when physicians were few and costly, and the plague a frequent and dreaded visitor to all our great cities, books treating of the simplest and readiest cures were certain of a large sale”¹⁴³. He printed the *Questyonary* in a quarto volume at the cost of Robert Copland, the translator, and Henry Dabbe, bibliopole (a Graecism for bookseller) and stationer who promoted the translation. As in Copland’s preface it emerges that all those who took part in this publication had the same purpose: they wished that “men more skilfull and better learned would have borne” to preserve the ancient Galenic definition of medicine as an art based both on theory and practice¹⁴⁴.

Thus, Renaissance translators of medical texts, and Copland with them, aimed at satisfying all those who wanted to learn a true method of medical practice, and for this reason they promoted a profound and correct comprehension of ancient texts, especially the Greek ones to whom they felt particularly linked; this accurate comprehension was possible only if the healer could read medical texts and treatises written in his own mother tongue, as Galen did¹⁴⁵.

¹⁴³ Polmer, Henry R., *Robert Wyer, Printer and Bookseller A Paper read before the Bibliographical Society, January 21st, 1895*, London: Leopold Classic Library, 1897, p. 11.

¹⁴⁴ All quotations are taken from De Chauliac, *The Questyonary of Cyrurgyens*, epilogue *To the reader*.

¹⁴⁵ Rhodes - Kendal - Wilson, *English Renaissance Translation Theory*, p. 316.

V

“THE FOURTH BOKE OF THE TERAPEUTYKE OR METHODE CURATYFE OF CLAUDE GALYEN”

V.1. THE FOUR PARTS OF THE *QUESTYONARY*

In this final chapter I will take into consideration the whole *Questyonyary of Cyrurgyens* and I will describe every part of which it is composed. The four works are independent one from the other, and they begin with various titles. The first treatise is the only real questionnaire for surgeons, while the other works do not present a question and answer formula. The *Questyonyary* is the abridgment of the *chapitre singulier*, the introduction, of Guy de Chauliac's *Chirurgia magna*. The author deals with the history of surgery and the qualities that a good surgeon and his assistants must have; then he introduces the didactic subject of his work and the seven parts in which *Chirurgia* is subdivided. Then a short anonymous work about leprosy comes, immediately followed by a formulary, or book of medical recipes, wrongly attributed to de Chauliac. The compilation ends with the translation of the fourth book of Galen, and with the epilogue that I have already analysed.

All these works are clearly devoted to treatments that surgeons were used to provide, and even though they were different in subjects, length and author, from each treatise a specific attitude towards the ancient surgical authorities emerges. This attitude arises from the very first author, who was universally known as a surgeon, but who spoke of himself as “cyrurgicus et magister in medicine”, and who was called phisicus in many documents published by Nicaise¹. As it will clearly appear in the following paragraphs, this convergence was not due to the surgeons' will of assuming the role of the physicians, leaving surgery to the empirics (as many scholars stated²), but, I think, to their ambition of being taken into consideration and estimated as physicians were; and this was possible only getting closer to medical literature, especially that from the classical antiquity.

¹ Nicaise, Edward, *La grande chirurgie de Guy de Chauliac*, Paris: Alcan, 1890, pp. CLXXI-CLXXII.

² McVaugh, “Cataracts and Hernias: Aspects of Surgical Practice in the Fourteenth Century”, p. 340.

V.2. GUY DE CHAULIAC AND HIS *INVENTARIUM SIVE COLLECTORIUM IN PARTE CYRURGICALI MEDICINE*

Chaulhac is a small country in France, in the Lozère district: Guy or Guido was born there at the end of the thirteenth century. He came from a poor family but he had the protection of the Mercoeurs, a noble family that paid his medical studies as a reward for having saved the Lord's nephew, who was seriously ill. For this reason Guy could go to Toulouse studying with the surgeon Nicolas Antonio, called 'Catalanus', then to the University of Montpellier where he got the degree of *doctor physicus* in 1325. He also travelled around Europe: he was in Bologna studying with Alberto Bolognese, Peregrino and Mercadante (about whom we know nothing except their names). He also went to Lyon and Avignon where of Clement VI made him canon of Rheims³.

Tradition ascribes him many works, some of which are apocryphal. The first is *Chirurgia Magna*, then *Libellus de astrologia*, a short work dedicated to Arnaldus of Villanova; lost *De subtilianti diaeta*, about the cataract, written for the king John of Bohemia who was in Montpellier in 1340 for such a disease, and a work about hernia also lost. There are also two other works that are wrongly attributed to de Chauliac: *Chirurgia parva* and a treatise about the Great Plague of Avignon in 1348. His most renowned work is *Inventarium seu Collectorium in Parte Cyrurgicali Medicine*, a handbook of surgery, written in Latin and published in 1363, also known with the title of *Chirurgia Magna*. Even though Guy was familiar with Latin because he had received a classical education at the papal court, his Latin was not pure: it was mixed with French, Occitan and Arabic⁴. *Chirurgia Magna* was one of the most important reference books on surgery for at least three centuries. From the beginning, de Chauliac declares that his aim is to resume the *sapientium dicta praecipua* in a clear and comprehensible way so that medical gentlemen of Montpellier could understand them.

Ratio huius modi commentationis seu collectionis non fuit librorum defectus sed potius unitas et profectus... In constructionibus semper occurrunt melioramenta. Scientie enim per additamenta fiunt... Est ergo in constructionibus et assumptionibus unitas et profectus (Bibliothèque Nationale de France, MS 7132, f. 1r)⁵.

³ Tabanelli, Mario, *Un secolo d'oro della Chirurgia francese (1300). Volume 2°. Guy de Chauliac*, Forlì: Tipografia Valbonesi, 1970, pp. 1-23.

⁴ Nutton, "Medicine in Medieval Western Europe 1000-1500", pp. 139-205; Tabanelli, *Un secolo d'oro della Chirurgia francese (1300)*, pp. 1-23.

⁵ "The reason for this commentary or collection has not been a lack of books but rather (to achieve) unity (of knowledge) and advancement... Improvements always come about in syntheses. For science is made through additions... Consequently unity and advancement are (achieved through syntheses and

Quoting from Galen's *Hippocratis aphorismi et Galeni in eos commentarius*, the author explains how nobody could own all necessary books, and if so, it would be very boring to read them in their entirety and impossible to keep them in mind: this is why de Chauillac entitled his book *Inventarium seu Collectorium*, which allows readers, like *pueri in collo gigantis*, to see everything those giants of the past had already discovered and viewed, and even something more. Thus, throughout *Chirurgia magna* the author presents the opinions of his predecessors and contemporaries by quoting them directly or paraphrasing their treatises. Most of these quotations come from Galenic or pseudo-Galenic works, as he declares:

Et ego...vidi... multa scripta predictorum precipue Galeni quia quot reperiebantur libri in utraque translatione habui et eos cum diligentia qua potui studui (Bibliothèque Nationale de France, MS 7132, f. 2v)⁶.

De Chauillac's statement about two types of translations refers to Latin translations from Greek or from Arabic versions of the same works. As Wallner stated, "Guy was apparently the first author of an encyclopedic medical treatise to be aware that the Latin versions of Galen's works varied in the clarity and accuracy with which they transmitted Galen's meaning"⁷ and he usually preferred the Latin translations that he considered trustworthy. He stated for example that he preferred *Terapeutica* to Gerard of Cremona's *De ingenio sanitatis*, which is said to be an *arabica translatio*. De Chauillac noticed that the Latin versions of Galen's works varied in clarity and accuracy depending on their sources: if they had been translated from Greek they were reliable, if from Arabic they were not. Thus, the only three times he cites *De ingenio sanitatis* it was for contrasting it with Galen's *Terapeutica*.

Chirurgia Magna can be defined a manual of surgical techniques but it deals also with anatomy, physiology and pathology. It is divided in seven books and dedicated to Chauillac's teachers in Montpellier, Bologna, Paris and Avignon, and to the Papal Court. It can be considered "a kind of medieval medical chrestomathy, a distillation of the literature of the field"⁸ because de Chauillac often praises Galen and Arabic physicians

accumulations (of knowledge)", quoted in Ogden, Margaret S., "The Galenic Works Cited in Guy de Chauillac's *Chirurgia magna*", *Journal of the History of Medicine and Allied Sciences*, 28, 1973, p. 24.

⁶ "And I...have seen...many writings of those authors previously mentioned, especially of Galen, inasmuch as I have had as many books of either translation as were to be found and I have studied the mas diligently as I could", quoted in Ogden, "The Galenic Works Cited in Guy de Chauillac's *Chirurgia magna*", pp. 24-33. On this matter see also Nutton counts at least 38 works by Galen cited by de Chauillac: Nutton, "Medicine in Medieval Western Europe 1000-1500", pp. 139-205.

⁷ Wallner, Bjorn, ed., *The Middle English Translation of Guy de Chauillac's Anatomy*, Lund: Gleerup, 1964, p. 12.

⁸ McVaugh, *Guidonis de Caulhiaco*, p. XIII.

like Heben Musue (48/49-15 BC), with long quotations taken from their works. De Chauliac's great admiration for the physicians of antiquity was counterbalanced by the disregard for his contemporaries and medieval predecessors like Roger of Salerno, Theodoric, William of Saliceto, Lanfranc, and Henri de Mondeville, who are never mentioned in his works⁹.

V.2.1. MANUSCRIPTS AND PRINTED EDITIONS OF *CHIRURGIA MAGNA*

Many are the manuscripts and printed editions of *Chirurgia Magna*, so that it may be considered the best-known and widespread work of surgery of the Middle Ages¹⁰. Although de Chauliac's Latin original manuscript has been lost, there are proofs that it was stored for a long time in the library of the University of Montpellier. Despite its importance, the Latin *Chirurgia Magna* was difficult to consult because of its fragmentary tradition, so that the few scholars who studied it were forced to use the Renaissance French version by Joubert, reissued for the first time in Lyon in 1585 and reprinted by Nicaise with the title *La Grande Chirurgie de Guy de Chauliac* in Paris in 1890¹¹. This printing considerably modifies Guy's text, modernising it and removing most Arabic terms: a comparison between this printing and the extant Old French text displays so many differences and alterations that it is impossible to employ it as a modern edition (as Wallner did when he reissued the work in 1964¹²). Furthermore, one of the earliest Latin manuscripts, now Bristol, Public Library, MS 10, a fifteenth-

⁹ McVaugh, *Guidonis de Caulhiaco*, p. XIII.

¹⁰ The great majority of the extant manuscripts are dated to the end of the fourteenth century or to the fifteenth century. Only few of them preserve the treatise in its entirety. They are: Amiens, Municipal Library, Latin MS 421; s. XIV; Bethesda, National Library of Medicine, MS 509; s. XV; Bristol, Public Library, MS 10; s. XV; Carpentras, Inguimbertain Library, MS 322; s. XIV; Erlangen, University Library, MS 352; s. XV; Leningrad, Academy of Science, F. N., MS 121; s. XV; Oxford, Magdalen College, MS 208; s. XIV; Paris, Bibliothèque Nationale de France, Latin MS 1247; s. XV; Paris, Bibliothèque Nationale de France, Latin MS 14733; s. XIV; Paris, Bibliothèque Nationale de France, Latin MS 1488; s. XV; Paris, Bibliothèque Nationale de France, Latin MS 1489; s. XV; Paris, Bibliothèque Nationale de France, Latin MS 17846; s. XV; Paris, Bibliothèque Nationale de France, Latin MS 6919A; s. XV; Paris, Bibliothèque Nationale de France, Latin MS 6966; s. XV; Paris, Bibliothèque Nationale de France, Latin MS 7132; s. XIV; Paris, Bibliothèque Nationale de France, Latin MS 7133; s. XV; Paris, Bibliothèque Nationale de France, Latin MS 7133A; s. XV; Reims, Municipal Library, Latin MS 704; s. XV; Rome, Vatican Library, Latin MS 1316; s. XV; Rome, Vatican Library, Latin MS 1347; s. XIV; S. Gallo, Vadianisch Bibliothek, MS 430; s. XV. Nicaise, Edouard, ed., *La grande chirurgie de Guy de Chauliac*, Paris: Félix Alcan Éditeur, 1890, pp. CVIII-CLIII.

¹¹ Joubert, Laurent, *Chirurgia magna Guidonis de Cauliaco*, Lione: Tinghi, Philippe - Beraud, Symphorien - Michel, Etienne, 1585.

¹² Wallner, *The Middle English Translation of Guy de Chauliac's Anatomy*, p. 209: Nicaise's edition "appears to go back to the fourteenth century".

century manuscript on paper, was not used by Nicaise¹³. Most of this manuscript consists of the complete and intact text of *Chirurgia Magna* with contemporary marginal glosses, but the copyist's rendering is often incorrect and his hand doubtful. The first and unique modern edition of the Latin version of the *Inventarium* was offered by McVaugh who used Vatican City, Biblioteca Apostolica Vaticana, Latin MS 1317 (signed V), completed in Montpellier in 1373, as *codex optimus* explaining that it was "only ten years and eighty kilometres distant from the original that Guy drew up in Avignon, and only five years after Guy's death"¹⁴. McVaugh collated against V the text furnished by Oxford, Magdalen College MS 208 (signed O), a fifteenth-century manuscript written in England containing many variants corresponding to errors of the English translators¹⁵.

Chauliac's *Chirurgia Magna* was immediately translated into French and in a few years also into Occitan, Italian, English, German, Hebrew and Irish. I will consider here the English translation of the work that is testified by at least four distinct Middle English translations, two of which date back to the fourteenth century, probably copied soon after de Chauliac's death in 1368. In the fourteenth century English surgery was not renowned as the French, but the wars of that period led some English military readers such as John of Gaunt, Duke of Bedford, to recommend to his company the "rich, aphoristic, orderly and precise" de Chauliac's *Chirurgia Magna* with its suggestions in case of skull fractures and breast wounds, and its exposition of the different types of sutures¹⁶. This is probably why one of the earliest Latin manuscripts of *Chirurgia* is in Bristol and was made for John of Gaunt who was regent of France at that time (1420 ca.), and why there are two English manuscripts extant that precede every surviving Latin manuscript by three decades¹⁷.

In fact, England seems to have had a long surgical tradition and before *Chirurgia* there was another renowned medical treatise: the *Rosa Medicinæ*. This text was written between 1305 and 1307 by John of Gaddesten, a doctor of physic of Oxford, and its title probably derives from Bernard de Gordon's *Lilium Medicinæ*

¹³ Nixon, J. A., "A New Guy de Chauliac MS", in *XVIIth International Congress of Medicine*, edited by Comrie J. D., London: Oxford University Press, 1914, pp. 419-424; in 1614 Tobias Mathew gave this manuscript, among with other rare texts and incunabula, to Robert Redwood, who had already created the first public library of Bristol, writing that it was intended to "the free use of the merchants and shopkeepers of the city"

¹⁴ McVaugh, *Guidonis de Caulhiaco*, p. XIII

¹⁵ Wallner, *The Middle English Translation of Guy de Chauliac's Anatomy*, p. 427.

¹⁶ Allbutt, Clifford T., *The Historical Relations of Medicine and Surgery to the end of the Sixteenth Century: an Address Delivered at the St. Louis Congress*, London: Macmillan, 1905, p. 46.

¹⁷ Nixon, "A New Guy de Chauliac MSpp. 419-424; Streeter, Edward Clark, "A Fourteenth Century English Manuscript of Guy de Chauliac", *Proceedings of Charaka Club*, 4, 1916, 107-111.

(1303), even if the author informs that his intention is to refer to the five sepals of roses, which are as perfect as his book would be. John of Gaddesten employed many quotations from Galen, Pedanius Dioscorides, Rufus of Ephesus, Hali Abbas, Serapion, Al Rhazis, Avicenna, Averroes, John of Damascus, Isaac, Masawaiyh, Gilbertus Anglicus, and from the *Regimen sanitatis Salernitanum*, placing side by side scientific and superstitious prescriptions.

Nevertheless when de Chauliac's *Chirurgia* started circulating, it seemed that this "flower of instruction to surgeons would put the poor English rose of Gaddesten to shame": this "flower" is nowadays represented by various manuscripts¹⁸. I provide here a list of the English manuscripts of *Chirurgia*:

- Cambridge, Gonville and Caius College, MS 336/725; ff. 17-42v, s. XV: it contains Book I only;
- Cambridge, Jesus College, MS Q.G.23; s. XV;
- Cambridge, University Library, MS Dd.3.52; ff. 11-249v, s. XV;
- Cambridge, University Library, MS 139 Od. III-32; s. XV¹⁹;
- Glasgow, Hunterian Library, MS 95; ff. 36a-47b; s. XV: it contains Book I only;
- London, British Library, Harley MS 5919; s. XV;
- London, British Library, Sloane MS 1; ff. 13-312, s. XV;
- London, British Library, Sloane MS 965; ff. 24-106v, s. XV;
- London, British Library, Sloane MS 2463; ff. 2-51v, s. XV;
- London, British Library, Sloane MS 3486; s. XV: it contains only the *Anatomy*;
- London, British Library, Sloane MS 3666; ff. 7-157, s. XV;
- Manchester, Chetham, MS 27902; s. XV;
- New York, Academy of Medicine, MS 12; ff. 8-181, s. XV;
- New York, Academy of Medicine, "Roger Marshall" MS 13; ff. 16a-20a, s. XV;
- Oxford, Bodleian Library, Ashmole MS 1468; pp. 7-54, s. XV;
- Paris, Bibliothèque Nationale de France, English MS 25; ff. 9va-18ra; s. XIV-XV²⁰.

The earliest manuscript must be New York, Academy of Medicine 12, dated around 1425 and formerly owned by Edward C. Streeter who described it²¹. It consists of 181

¹⁸ Streeter, "A Fourteenth Century English Manuscript of Guy de Chauliac", pp. 107-111.

¹⁹ Streeter, "A Fourteenth Century English Manuscript of Guy de Chauliac", p. 107.

²⁰ It is an ancient volume written either when Guy was still alive, or few years after his death. Cfr.: Paris, Paulin A., *Les manuscrits français de la Bibliothèque du roi I-III*, Paris: Techener, 1842, p. 346; Taavitsainen - Pahta - Mäkinen, "Towards a Corpus-Based History of Specialized Languages: Middle English Medical Texts, Early Modern English Medical Texts", p. 83.

vellum pages written in double columns, some of which present decorated borders of flowers, floriated initials heightened with gold leaf and drawings of surgical instruments. It is complete except for a loss of about six words and it begins with two pages of indecipherable notes by the antiquaries Ch. J. Harford and R. Coffin of Portledge. It may be the antigraph of London, British Library, Sloane MS 3666 of the third quarter of the fifteenth century.

²¹ Streeter, "A Fourteenth Century English Manuscript of Guy de Chauliac", 107-111.

Figure 11



Figure 12



The translation in Academy of Medicine 12 is defined *Chauliac I* by the Middle English Dictionary, to distinguish it from *Chauliac II*, a different version present in manuscript Bibliothèque Nationale de France, English 25. It is a folio manuscript of 193 illuminated pages. Latin terms are here rendered in common English words or phrases. It “must have been executed either during the lifetime of the author or very shortly after his death”²². *Chauliac I* is a literal translation (common in the medieval translations from Greek to Latin), made by someone who wanted to translate into English being as nearly as possible to Latin language and syntax; while *Chauliac II* presents a more precise and accurate Middle English. *Chauliac I* is also testified by an interesting codex: Oxford, Magdalen College, MS 208, written in England in the fifteenth century. The text contains numerous English variants. The same English version is also present in two other fifteenth-century manuscripts: Manchester, Chetham, 27902, which originally contained the whole text, but now presents some losses, and Cambridge, Gonville and Caius College, 336, which sometimes offers better readings than other manuscripts, but contains only Book I of the *Chirurgia*²³.

There are two other incomplete translations of the same work that are classified as part of the *Chauliac I* by the Middle English Dictionary: the first is preserved in manuscripts Hunterian 95 and in manuscript Sloane 3486, a fifteenth-century version of a third of the first Chauliac book, interpolated with portions of Henri de Mondeville’s *Anatomy*. The other is a separate translation of the introduction present both in Gonville and Caius College, 336 and in Cambridge Dd. 3.52. This translation is fragmentary, limited to the introduction and table of rubrics. It is entitled *Inventorye of Guy de Chauliac*; it is very difficult to interpret because it retraces very closely the Latin syntax and vocabulary. Some scholars hypothesise that Hunterian manuscript 95 (probably contemporary to Academy of Medicine 12) together with manuscripts Sloane 3486, Ashmole 1468 and Roger Marshall manuscript at the New York Academy of Medicine would belong to a third partial translation of the *Chirurgia*, while the Gonville and Caius College manuscript to a fourth, a so-called *Chauliac IV*²⁴.

De Chauliac’s *Chirurgia Magna* had many reprints: in his work Nicaise enumerates 85 printings, nine of which are now lost. The first to be printed was Nicolas Panis’ printing in 1478, now lost. According to Nicaise, Panis would print the text from

²² Paris, *Les Manuscrits français de la Bibliothèque du Roi*, p. 346.

²³ Ogden, Margareth S., ed., *The Cyrurgie of Guy de Chauliac*, Oxford: Oxford University Press, 1971, pp. I-XV.

²⁴ Kuhn, Sherman M., “The Middle English Translation of Guy de Chauliac’s *Anatomy*, with Guy’s Essay on the History of Medicine”, *Speculum* 43, 1968, pp. 552-556.

a French manuscript emended through a Latin codex. Before the new century, other printings were published: most (at least 7 reprints) in Venice both in Latin and Italian, and one in Lyon thanks to the court physician “D. Symphoriano Champerio phisico” in 1498 and now lost²⁵. However, in spite of the numerous medieval English manuscripts of the work, the early printed version appeared in London only in 1542 as an extract in the *Questyonary of Cyrurgyens* and then it was reprinted in 1579 with the title *Guydos questions newly corrected*.

V.2.2. THE *CHIRURGIA MAGNA* IN THE *QUESTYONARY*

The sixteenth century saw the composition of a great number of new scientific and medical works, and this corresponded to a significant growth in printed editions of this kind of treatises. Many works were of semi-popular nature, intended for the layman, but there was also a market of medical manuals for professional use: this was the case of de Chauillac’s learned anatomical and surgical text *Chirurgia Magna*²⁶. De Chauillac in fact was one of the authors most often translated from Latin into English in the fifteenth and sixteenth century together with Lanfranc of Milan, Henri de Mondeville, William of Saliceto and John of Ardenne²⁷. In this period the first medical and especially surgical schools were established in England, and they were created by groups of scholars who pursued the same purposes and who gathered together to be more relevant in medical society. Physicians and learned surgeons sought to share medical concepts through the Scholastic method of teaching, which implied a deep analysis of texts (*lectio*), followed by a discussion (*dissertio*) between the teacher and his students: this was the most important part of the learning process as it led to synthesize divergent opinions²⁸. In regards to this de Chauillac’s *Chirurgia Magna* was very useful as it can be defined a “collection of thematic commentaries” where the author’s role is that of a commentator who gives many times his final judgement²⁹. More useful, especially for surgeons, had to be the *Questyonary of Cyrurgyens*: the first part of the compilation to which it gave the name.

²⁵ Nicaise, *La grande chirurgie de Guy de Chauillac*, pp. CVIII-CLIII.

²⁶ Bennet, Henry S., *English Books and Readers 1475 to 1557. Being a Study in the History of the Book Trade from Caxton to the Incorporation of the Stationers’ Company*, Cambridge: Cambridge University Press, 1970, pp. 97-112.

²⁷ Murray Jones, Peter, “Surgical Narrative in Middle English”, *A Quarterly Journal of Short Articles, Notes, Reviews* 18, 2005, pp. 3-7.

²⁸ Le Goff, Jacques, *Intelletuali nel medioevo*, Mondadori: Milano, 1984, pp. 93-97.

²⁹ Taavitsainen - Pahta, *Medical and Scientific Writing in Late Medieval English*, pp. 38-39.

De Chauillac's *Questyonary* is nothing but an abridged translation from French of the introduction and of the first chapter on anatomy of Guy de Chauillac's *Chirurgia Magna*, developed with a question and answer formula. Like its source, the *Questyonary* is a work specifically addressed to medical students that begins with the definition of surgery, the qualities of a good surgeon, the different parts of the body and their functions. The series of questions and answers do not always follow the original text by de Chauillac, but sometimes they adapt and transform it³⁰. I will consider here the first question in the *Questyonary* comparing it with the English translation in Academy of Medicine 12, f. 1vb:

*The Questyonary of Cyrurgyens*³¹

The Demaunde or questyon. What is Cyrurgery?

New York, Academy of Medicine MS 12

Perfor be it first yseide what is Cirurgie. And þof al many men haue diffinyd it manyfoldly, neþerleȝ þay al toke þair grounde of oure fader G[alien], whileȝ he seyth in *Introductorio medicine*³² : Cirurgie is a party of Cerapeutici .i. of curing, healing men by incisions & adustions & articulacions of bones. To þe which diffinicioun he addeþ in þe *Coment primo regimenti auctorum*³³: and by oþer aperacioun of handes. And þus it is completely descryued after þat it is considered streytly, as it is þe þrid instrument of medicine. Fforsop as it is consydered more largely; for þat it is a science of curyng sikenes in þe which falleþ or is intended manuale operacioun, with-oute excluding of þe toþer tuo instrumenteȝ of medicyne, videlicet of pocioun & of diete, sych a descripcioun is

³⁰ Taavitsainen - Pahta, *Medical and Scientific Writing in Late Medieval English*, pp. 65-68.

³¹ De Chauillac, *The Questyonary of Cyrurgyens*, *The Questyonary*.

³² Italics mine.

³³ Italics mine.

The response or answer. Cyrurgery is science that teacheth the maner and qualyte to worke principally in knyttyng in cuttyng and exercysyng other workes of y^e hande. In healyng of man, as moche as it is possyble. And here science is put for kynde. And albeit that Cyrurgery is of it selfe proprely by arte and no science yet for the bonde and affynyte that arte and science haue eche with other somtyme vnproprely that which is arte is called science and that which is science is called arte. It is otherwyse sayde (and better) that Cyrurgery is in two maners. One is that sheweth onely so y^t by it we can do nothyng as touchyng the operacion and that proprely is called science as we say in physycke that there be .vi. maners of symple appostumes that is to wyt .iiii. humeralles one aignous & the other ventous. The other maner of cyrurgery is usaunce that is to saye that it teacheth to use that he y^t knoweth it maye helpe hym selfe therwith as many tymes and as often as he wyll as touchyng Cyrurgycall operacions so that by it he is gouerned and ruled whan he wyll vse it as by the Cyrurgery that he hath in his vnderstandyng that teacheth hym that in all hote appostumes he oughte to put and laye to it repercutyues saufe vnto them that ben in the sumuytones and to such as

assigned of þe seiying3 of al men:

Cirurgie is a science, teaching maner & qualitee of wirching. principaly in consolding, in kuttyng, & in oþer manuale operacions hantying, heling men after þat it is possible. Science is put þer in stede of kynde .i. generalite. No yt availeth noȝt þat is made obieccioun þat yn many places it is named crafte. for here þe name of science is named or taken largely & noȝt most properly. þe habite3 of þe soule forsop haue so mych colligance þat one is often-tyme3 named for an-oþer. Neþerles, sobfastne3 hap þer is double Cirurgie, .s. teching, which is apropred by þe name of science, which som man may haue þof al he wirke neuer.

And using, which is appropriated by þe name of crafte. And þis may no man konne bot if he see it, þe which Aristotle nombred among mechanyc .i. handewerke craftes, and þat is þat G[alien] seith in *Primo de alimentis*³⁴: Of þe boke forsouth may nouþer be made any man a gouernor ne a crafty man of oþer crafte. Crafty men wirken forsop by doctrine alone which is had in exercizing.

³⁴ Italics mine.

be venymous. This Cyrurgery or arte that thou haste in thyne understandynge teacheth the to worke & use manually in medecynes and is proprely called arte and nat scyence. And in the ende of thy dyffynicion besyde the particulers that are put for differences that are set unto that whiche is possyble for it is nat possyble to all Cyrurgyens to heale all theym that are dyseased and sore.

Al oþer bene put for difference. Bot for þat it is logica; be it ouer-lefte. Neþerles, in þe ende is putte heling men after þat it is possible. ffor as saide my maister Raymond in Mountpelers: Al þinges may noȝt be yn al men, but certayn þingeȝ in certayne men. It is noȝt in a leche þat þe sike man be evermore relyued.

The medieval text is clearly recast into a new format for didactic purposes: the question and answer formula, in fact, was always praised for its usefulness. The question literature often started with an *exemplum* or short anecdote followed by a series of questions and answers. Those who chose this formula believed that this question method was the most useful to those who were being introduced to medicine, since it fashioned the mind and it also fitted in with the Galenic principle of reasoning by listing definitions, resolutions, and confirmations of the theories through experiments and experience³⁵. Thus, the usefulness of the *Questyonary* was double. First of all it was a compilation excerpting from important works gathered together, so that the readers could have easy access to them without being forced to go through the rare and difficult originals; second, it was a question and answer text, so that it used a didactic, easy way to convey authoritative opinions. Compilations, commentaries and question and answer tests were originally used at the university as textual forms of learned Latin works. However, when those works were translated into the vernacular their audience became wider, and compilations and the other didactic textual forms, which were so useful at the high level, became essential even in the education of literate medical practitioners³⁶.

Reading the excerpts given above, it emerges how the compiler worked on de Chauliac's text: he omitted the whole first introductory part, in which de Chauliac's recorded Galen's definitions of surgery; other references to classical medical authorities like Aristotle, and the final quotation of Guy's master. The compiler, in fact, seemed to

³⁵ Bullough, *Universities, Medicine and Science in the Medieval West*, pp. 1-14.

³⁶ Taavitsainen - Pahta, *Medical and Scientific Writing in Late Medieval English*, pp. 38-39.

be interested in providing a simple definition of surgery without adding superfluous cross-references to ancient authorities, as every surgeon knew that Guy de Chauliac was used to citing them consistently. Nevertheless, the compiler pays attention to the definition of surgery, which seems to be the focus of the whole compilation. The “affynytie that arte and scyence haue eche with other”³⁷ and the intrinsic duality of surgery made it difficult to define surgery a science or a craft. Thus, the compilation delves into the definition the “two maners of cyrurgery”³⁸ adding information that is not present in the original text.

A few lines later, the “condycyons ought a Cyrurgyen to haue”³⁹ are newly described. It is said that first of all a surgeon has to be more like a physician than a mere practitioner, as he

ought to be lerned and a clarke & nat onely in the pryncyples & begynnyng of Cyrurgery but lykewyse in Phisyke, and asmoche in theoryke as practyke. For in theoryke he oughte to knowe the naturall thynges and vnnaturalles and agaynst nature, Fyrste he ought to knowe the vnnaturall thyng and chye fly the nathomy for without it nothinge can be done surely in Cyrurgery as it appereth afterwarde more playnely⁴⁰.

However, this is not sufficient: the surgeon has also “to knowe the complexyon of his pacient for after the dyuersyte of the nature of the bodyes ought the medycyns be diuersified as Galyen declareth all alonge in his *Terapentyke* agaynst Thesilus”⁴¹. In de Chauliac’s words, in fact, and in those by the compiler of the *Questyonary*, the perfect surgeon appears to be a holistic healer. Obviously he had “to be experte and ought to haue sen other maisters worke”, but this was only the second condition, the first and probably the most important was that he had to

knowe howe to mynistr medycyns [cur]atyues whiche are one of the instrumentes of [phy]syke as of Cyrurgery without the which the [sci]ence of Cyrurgery can nat be complete. And this ought to knowe as touchyng y^e practice. Thus appereth the veryfycacyon of the fyrste con[dyc]yon that a Cyrurgyen ought to haue for he [ou]ght to be lettred & learned. And this condycyon [...]areth Galyen in the fyrste boke of the Tera[peut]yke agaynst Thesyllon, where he sayth at this [...]ynte⁴².

Reading this statement I had the feeling that the compiler confuses the description of a surgeon with that of a physician especially when he underlines that such a humble

³⁷ De Chauliac, *The Questyonary of Cyrurgyens*, *The Questyonary*.

³⁸ De Chauliac, *The Questyonary of Cyrurgyens*, *The Questyonary*.

³⁹ De Chauliac, *The Questyonary of Cyrurgyens*, *The Questyonary*.

⁴⁰ De Chauliac, *The Questyonary of Cyrurgyens*, *The Questyonary*.

⁴¹ De Chauliac, *The Questyonary of Cyrurgyens*, *The Questyonary*.

⁴² De Chauliac, *The Questyonary of Cyrurgyens*, *The Questyonary*.

healer had “to be lettred & learned”⁴³. However, there are two other conditions are highlighted:

he oughte to be a man of good memory of good iudgement of good dylygence of a clere syght hole of mynde and of his membres, with sclender fyngers & a stedfast hande without shakynge. The fourth condycyon is that a Cyrurgyen shulde haue is that he ought to be well manered bolde and sure in thynges that be nat to feare. And doubtfull, & fearefull in peryllous thynges. And ought to eschew all desperate cures and ought to be gentyll to his pacientes, wel wylling to his company wyly in pronostykyng chaste sobre meke and mercyfull nat anaricious nor extorcyoner for money. but after the capacityte of the pacyent and the faculte receyued competent and moderate rewarde⁴⁴.

Thus, to be a good surgeon meant to be smart, clever and skilful. One could almost say that a surgeon had to be the perfect healer Galen described in his *De methodo medendi*: nothing but a perfect physician-philosopher. De Chauliac’s *Chirurgia Magna* and his didactic, abridged form were certainly useful for the purpose, as is testified in a *Memorandum* of 22 July 1556 preserved in the minute book of the Barber-Surgeons’ Court of Assistants, which records the intellectual, financial and formal requirements to be admitted in the company. The fourth article lists the five examination questions that had to be made to prove the surgeon’s skills. Three of them (“what ys Surgery and also what an Anatomye ys and howe manye partes it ys”) find clear answers at the beginning of the *Questyonary*: “What is Cyrurgery? Cyrurgery is scyence that teacheth the maner and qualyte to worke [...] What is Anathomye, and wherof is it deryuate? Answered. Anathomy is the ryght determynacyon and dyuysyon of euery partyculer membre of y^e body of mankynde. [...] In howe many & whiche maners ought the scyence of Anathomy be taught? Answered. In two maners. That is to wyte by way of doctryne as by bokes wryten therof”⁴⁵. This strict correspondence is probably a sign that already in 1556 there were established basics that surgeons had to know, and there was also a codified literature and practice to achieve them.

Chirurgia Magna was reissued in this question-answer formula in a corrected reprint by George Baker, published in 1579 together with Baker’s translation of the epitome of Galen’s *De methodo medendi*, book III, and Clowes’ revision of the accompanying antidotary. This new printing was entitled *Guidos questions newly corrected whereunto is added the thirde and fourth booke of Galien, with a treatise for the helps of all the outward parts of mans body. And also an excellent Antidotary*

⁴³ De Chauliac, *The Questyonary of Cyrurgyens, The Questyonary*.

⁴⁴ De Chauliac, *The Questyonary of Cyrurgyens, The Questyonary*.

⁴⁵ De Chauliac, *The Questyonary of Cyrurgyens, The Questyonary*.

*containing diuers receipts, as well of auncient as latter wryters: faythfully corrected by men skilfull in the sayd Arte. A worke both learned and profitable, for Chirurgions, the lyke whereoff before this tyme hath not bene Printed*⁴⁶.

V.3. THE SECOND AND THE THIRD TREATISE OF THE *QUESTYONARY*

In this paragraph I will present the second and the third treatise of the *Questyonary of Cyrurgyens*, which immediately follow de Chauliac's questionnaire. The first is an anonymous work about leprosy, which begins:

The maner to examyne lazares & to approue lepry meselry after the myndes of Doctours. As Galyen wytnesseth it is greate iniury be it done to man or woman to departe & put away theym that be nat infecte w^t lepry, nor touched with meselry, & nat beyng lazares. And also it is greate daunger to supporte, haunte, or be with suche as are stryken or dyseased therwith for it is a contagious and daungerous malady. And therfore they that ought to iudge and approue them shulde ryght dyligently beholde theym & conside the vnyuoke sygnes and equyuokes also. And nat for one onely token gyue theyr sentences but by many conuenaunces and specyally vnyuokes⁴⁷.

From the very beginning the author refers to Galen's authoritative opinion when he prescribes the isolation of the patients affected from leprosy "for it is a contagious and daungerous malady". Leprosy was the term identifying a malignant cutaneous affection from ancient times, but under the works of the Greek and Roman physicians it became a synonym of Elephantiasis: a corrugated or discoloured state of the skin. The author of the treatise recommends a careful search for evidence of hereditary pre-disposition to this disease. Then the surgeon has to ascertain whether the patient has the Quartan fevers or not and how long; then diet, temperament and several other signs have to be tested. In explaining how to identify leprosy to avoid isolation of people not infected, the author mentions ancient medical authorities such as Avicenna's *Canon*, Hippocrates and Galen. Moreover, in two cases he also quotes the Greek masters using Latin: "for as Galyen sayeth in the fyrste partycle of the *Efforysmes of Ypocras* vpon this canon 'Et qui crescunt'", and "Fyrste than in procedynge as it is sayde to the knowlege of the vnyuocal sygnes, in folowing the doctryne of Ypocras in the *Fyrste boke of y^e*

⁴⁶ De Chauliac, Guy, *Guidos Questions Newly Corrected. VWherevnto is Added the Thirde and Fourth Booke of Galen, with a Treatise for the Helps of all the Outward Parts of Mansbody. And also an Excellent Antidotary Containing Diuers Receipta, as well of Auncient as Latter Wryters Faythfully Corrected by Men Skilfull in the Sayd Arte*, London: Thomas East, 1579.

⁴⁷ De Chauliac, *The Questyonary of Cyrurgyens, The Maner to Examyne Lazares*.

pronostikes sayeng ‘Primo enim egri faciem pernotabis’”⁴⁸. This text is clearly connected with the medical school of Montpellier, as Bernard Gordon’s method of healing is cited.

What follows is a book of medical recipes that is divided in two parts. The first devoted to wounds begins:

Here begynneth the Formularye of the aydes of apostemes and pustules ordeyned at Parys by mayster Guydon of Cayllyac Cyrurgyen and doctour in medycynes at Mountpyllier. Bycause that after the doctryne of Galyen in tertio *De ingenio sanitatis* lykewyse as of y^t workeman is the takynge of the essence of the dysease. Also the scyence of thynges wherof it is gyuen it behoueth that it procede of the same I than Antydotary ordynary in the scyence of apostemes wherby the locall remedies of the same apostemes shall be accomplysshed but we must fyrste knowe the matter of the same⁴⁹.

The second deals with abscesses starts with the title and the aim of the work:

Here foloweth the Formularie of the helpes of woundes and sores, ordeyned in Auygnon by mayster Guydon of Cayllyac cyrurgyen & mayster in Physycke. For doubte to forgete, & for the necessitye of myne owne propre brother I wyll shew the remedies proprely localles wherby is healed the sores and dyrupeyons, & solucyons of contynuyng, after the doctryne of Galyen, Auycen, Rasis, & Abucrasis and some maysters that I haue seen worke, I intende to fourme summaryly, and abredge with the formulary of the apostemes and pustules that I ordeyned of late at Parys, And bycause that, G[alen], prynce of Moges, in tertio *Terapeu[tica]*, sayth that the cure of vlceres hath two generall intencyons, That is to wyte one taken in the essence of the dysease and the other for certayne to the nature of the membre. And therefore this present treaty shall haue two partyes, In the fyrste shal be the propre fourmes of the helpes in al symple wounde or sore in asmoche as a wounde is symple, In the seconde partye of woundes composed⁵⁰.

Although this formulary is ascribed to de Chauliac, it is probably wrongly attributed and for this reason it is renowned as “la petite chirurgie” or “petit Guydon” (“lytell Guydo”), to distinguish it from the *Chirurgia Magna*.

I chose to quote these two headings because in both of them Galen’s *De methodo medendi* is cited, either with Gerard of Cremona’s title *De ingenio sanitatis* or with the Greek title *Therapeutica*⁵¹. The redactor, in fact, can “shew the remedies

⁴⁸ De Chauliac, *The Questyonary of Cyrurgyens, The Maner to Examyne Lazares*. On this matter see also Cookson, W. D., “Some Account of the Disease Called Leprosy in the Middle Ages of Europe”, in *A Selection of Papers Relative to the Country of Lincoln, Read before the Lincolnshire Topographical Society*, edited by E. J. Willson, Lincoln: Lincolnshire Topographical Society, 1842-1842, pp. 49-66.

⁴⁹ De Chauliac, *The Questyonary of Cyrurgyens, The Formularye of the Aydes of Apostemes and Pustules*.

⁵⁰ De Chauliac, *The Questyonary of Cyrurgyens, The Formularie of the Helpes of Woundes and Sores*.

⁵¹ Here in the correct form, while in *The Fourth Boke of the Terapentyke* the printer always confuses u with n writing Terapentyke instead of Terapeutyke.

propres localles wherby is healed the sores and dyrupcyons, & solucyons of contynuyng” because he “haue seen worke” of Galen and other ancient medical authorities, works that he “intende to fourme summaryly” to be useful to his own brother and to every reader⁵².

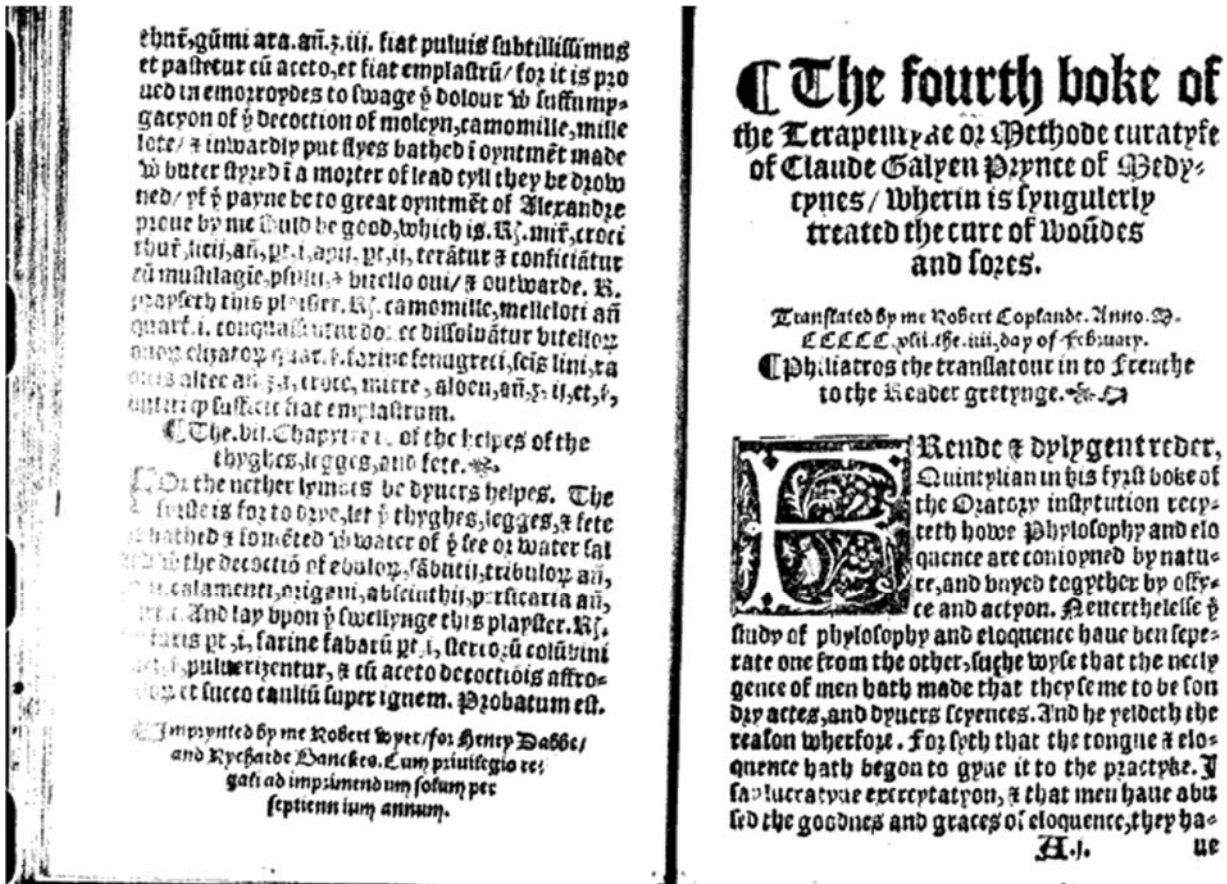
The second section of the formulary presents a separate part, which begins: “Here foloweth the formacion of the propre and commyn remedies of y^e dyseases from the heade vnto the fete after the dyuersyte of the membres & fyrste of the helpes for the heade”⁵³. It is divided in chapters and it ends with Robert Wyer’s statement “Imprynted by me Robert Wyer for Henry Dabbe and Rycharde Banckes. Cum priuilegio regali ad imprimendum solum per septiennium annum”⁵⁴. This statement makes me think that in a first stage the compilation had to finish here, and then in a second time the last part was added. The initial problem with the discrepancy in the date of composition does not help to understand the reason of this separation. Since the French compilation presents the same feature as the English, I think that the detachment of the first three treatises from the Galenic work was due to the fact that it replaced *Le Myrouel des Apothicaries item les lunectes des chirurgiens et barbiers* in the French reprint of 1537, while the first group (*The Questyonary*, *The maner to examyne lazares* and the *Formularye*) is always unchanged, as a single piece.

⁵² All the quotations are taken from De Chauliac, *The Questyonary of Cyrurgyens, The Formularie of the Helpes of Woundes and Sores*.

⁵³ De Chauliac, *The Questyonary of Cyrurgyens, The Formularie of the Helpes of Woundes and Sores*.

⁵⁴ De Chauliac, *The Questyonary of Cyrurgyens, The Formularie of the Helpes of Woundes and Sores*.

Figure 13



London, British Library, 12468, p. 89

V.4. THE FOURTH BOOK OF *DE METHODO MEDENDI* IN THE *QUESTYONARY OF CYRURGYENS*

The fourth book of Galen's *De methodo medendi* is part of a section in which the diseases due to disorder of continuity are treated: simple wounds, ulcers, tissue loss, ichors and so on. This section goes from book III to book VI and, as written before, it was the object of a separate publication under the title *Chirurgia* or *Chirurgia Galeni*. Book IV is divided in seven chapters: it begins with the prosecution of the previous discussion on dissolution of continuity because of simple and compound conditions. Galen considers the causes of wounds and ulcers and the basic requirements for curing them. Then he proceeds describing how to treat abnormalities in the underlying flesh because its good state was very important for the treatment of the overlying wounds or ulcers. He also discusses the treatment of swelling associated with dissolution of continuity and how to prevent the flow of bad humours into the affected part. In the third chapter Galen distinguishes between therapy and prophylaxis, and he states that the external causes of a disease contribute to diagnosis, but they are not the primary indication, as the Empirics think, for treatment. Two quotations from Thessalus' method of treating chronic ulcers follow. Galen criticises him in detail, asserting that Thessalus is deeply ignorant as he takes chronicity as an indication for treatment, but it is the condition of the patient that is the primary indication. In the fifth chapter the author describes chronic ulcers and he quotes Hippocrates' prescriptions. Galen then proceeds in describing various aspects of the treatment and he criticises Thessalus once more. The sixth chapter begins with other Hippocratic teachings on the treatments of wounds and ulcers and with the importance of identifying the therapeutic indications of the disease. Then Galen describes the therapeutic role of phlebotomy and purging, and, in relation to the latter, he distinguishes the upper and lower parts of the body. He refers to Hippocrates' point of view on phlebotomy and on the way of preventing inflammation. In the last chapter Galen goes back to the indications of treatment: the importance of the position and conformation of the disease; the differences in treatments; the variety of medications and applications according to the nature of the disease⁵⁵.

The last work in *The Questyinary of Chyrurgiens* is the translation of part of the fourth book of Galen's *De methodo medendi*. Unlike manuscript Sloane 6, it is a summary of the whole book four, as the title states: "The fourth boke of the *Terapentyke*

⁵⁵ Johnston - Horsley, *Galen: Method of Medicine Books 1-4*, pp. CLIV-CLVII.

or *Methode curatyfe* of Claude Galyen Prynce of Medycynes wherein is syngulerly treated the cure of woundes and sores. Translated by me Robert Coplande anno MCCCCC vlīi the iiii, day of February”⁵⁶. The title has a mistake as Galen’s treatise is called *Terapentyke* instead of *Terapeutyke*: it is due to a turned letter already present in the French reprint of 1537. The *Questyonyary of Cyrurgyens*, considering the portion related to Galen, is part of an exceptional circulation of the Galenic works translated in French, English, German between 1526 and 1560. This period was marked by the greatest circulation of the Galenic treatises in Europe, precisely when the work destined to replace them was realized and published, i.e. Andreas Vesalius’s *De humani corporis fabrica* (1543). The great majority of them was printed in Venice by Lucantonio Giunta, five in Lione⁵⁷. In less then a hundred years this work was reissued many times in Latin, either in whole or in part. However, when the sixteenth century ended, even the pre-eminence of *De methodo medendi* ended, and we have to wait until the beginning of the nineteenth century to find the *editio princeps*, which was printed in Lipsia by *officina libraria* Cnoblochii in 1828. This modern edition by Karl Gottlob Kühn, presents a Latin text produced three hundred years before, which is not a translation of the Greek: in fact, it draws on other manuscripts and reflects different readings than those used by

⁵⁶ De Chauliac, *The Questyonyary of Cyrurgyens, The fourth boke of the Terapentyke*.

⁵⁷ These are the titles of the printed editions of the Latin translation of *De methodo medendi*, listed by date of publication: Lutetiae, apud Desiderium Maheu, sumptu Godefridi Hittorpii, 1519; cur. Guillaume Budé. In folio; Parisiis, apud Claudium Chevallonium, 1526. In ottavo; Venetiis, per Caesarem Arrivabenem, in aedibus Ioannis Baptistae Pedrezani, 1526. In quarto; Venetiis, expensis Lucae Antonii de Giunta, 1528. In folio; 4 voll. Content: Galenus, *Opera*; Parisiis, apud Simonem Colinaeum, 1530. In ottavo; Venetiis, in aedibus Hieronymi Pentii, 1530. In sedicesimo; Venetiis, per Aloysium de Tortis, 1532. In sedicesimo; Parisiis, in aedibus viduae Claudii Chevallonii, 1538. In ottavo; Venetiis, apud haeredes Lucae Antonii de Giunta, 1541-1542. In folio; 7 voll. Content: Galenus, *Opera*; Venetiis, apud Ioannem Farreum et fratres de Rivoltella, 1541-1545; cur. Antonio Ricci, Vittore Trincavelli. In ottavo; 10 voll. Content: Galenus, *Opera*; Basileae, per Hieronymum Frobenium et Nicolaum Episcopium, 1542. In folio; 10 voll. Content: Galenus, *Opera*. Lugduni, apud Guilelmum Rovillium, 1546. In sedicesimo; Lugduni, apud Guilelmum Rovillium, excudebat Stephanus Rufinus et Joannes Ausultus, 1546. In sedicesimo; Lugduni, apud Guilelmum Rovillium, excudebant Stephanus Rufinus et Ioannes Ausultus, 1549. In sedicesimo; Basileae, per Hieronymum Frobenium et Nicolaum Episcopium, 1549-1551. In folio; 10 voll. Content: Galenus, *Opera*; Lugduni, apud Ioannem Frellonium, 1549-155r. In quarto; 4 voll. Content: Galenus, *Opera*; Venetiis, apud haeredes Lucae Antonii Iunta, 1550. In folio; 11 voll. Content: Galenus, *Opera*; Lugduni, apud Guilelmum Rovillium, 1553. In sedicesimo; Venetiis, apud haeredes Lucae Antonii Iunta, 1556. In folio; lat.; 10 voll.; ill. Content: Galenus, *Opera*; Basileae, per Hieronymum Frobenium et Nicolaum Episcopium, 1561-1562. In folio; lat.; 12 voli. Content: Galenus, *Opera*; Venetiis, apud Vincentium Valgrisiu, 1562. In folio; lat.; 10 voll.; ill. Content: Galenus, *Opera*; Venetiis, apud haeredes Lucae Antonii Iunta, 1565. In folio; lat.; 12 voll.; ill. Content: Galenus, *Opera*; Venetiis, apud haeredes Lucae Antonii Iunta, 1576-1577. In folio; lat.; 13 voll.; ill. Content: Galenus, *Opera*; Venetiis, apud Iuntas, 1586. In folio; lat.; 13 voll.; ill. Content: Galenus, *Opera*; Venetiis, apud Iuntas, 1596-1597. In folio; lat.; 13 voll.; ill. Content: Galenus, *Opera*; Vicentiae, typis Georgii Graeci, 1597. In folio; lat. Content: Fabio Pace, *Commentarius in sex priores Galeni libros methodi medendi*. Books I-VI. See also Durling, “A Chronological Census of Renaissance Editions and Translations of Galen”, p. 252.

Kühn for his Greek text⁵⁸.

Not only the Latin, but also the vernacular translations of *De methodo medendi* were very important and widespread in that period, and they provide the idea of the continuity in the transmission of Greek medicine: from antiquity, to the Middle and the Early Modern Age. The first translation was limited to the fourth book, it was in French and it was printed twice in 1537: first in Lyons by Juste, then in Paris by Sergent as part of *Le Questionnaire des Chirurgiens et Barbiers*. In 1538 Jean Canappe's translation of *Le treziesme* and *Le quatorzieme livre de la methode therapeutique* were published in Lyons, and the following year he also completed the translation of *Le cinquiesme* and *Le sixiesme livre*. Still in 1539 *Le quatorzieme livre* was reissued in Paris, and a collection gathering books III-VI and book XIII appeared in Lyon printed by de Guelques. In 1542 *The fourth booke of the Therapeutyke* was translated for the first time into English by Robert Wyer and appeared in *The Questyonyary of Chyrurgyens*; it was reissued in 1579 in the new reprint of the collection entitled *Guido's Questions*. Meanwhile, in 1547 *Les six principaux livres de la therapeutique de C. Galien* appeared in Paris with the translation by Jean Canappe. In 1554 Claude Martin published again the same work joining books III-VI and XIII-XIV of *De methodo medendi* in Canappe's translation, with book II of *Ad Glauconem* and *De tumoribus contra naturam*. This compilation was reprinted in 1558 in Lyons by Payen and in 1570 in Paris by Ruelle, the younger. Books III-VI appeared translated in English in a work entitled *Certaine workes of Galens called Methodus medendi with [...] an epitome of the third booke of G., of naturall faculties* attributed to Thomas Gale and dated to 1566. *Certaine workes* was reissued in 1586 together with the abridgment of *De naturalibus facultatibus* and *De tumoribus praeter naturam*, translated by Gale. Fourteen years before appeared the first translation in Spanish of *De methodo medendi* published in Zaragoza with the title *Therapeutica methodo de Galeno en lo que toca a cirurgia. Recopilada de varios libros suyos [...] nuevamente traduzida en Romance por Hieronymo Murillo cirurgiano de Caragoca*⁵⁹.

In this context the importance of the *Questyonyary of Cyrurgyens* is therefore underlined by the translation of *De methodo medendi* contained within, which anticipates the first independent English translation (realised by Thomas Gale) by twenty years. The section devoted to Galen begins with the already-mentioned translation of Philiatros' (Jean Canappe) letter to the reader, which explains the use of

⁵⁸ Johnston - Horsley, *Galen: Method of Medicine Books 1-4*, pp. CLIV-CLVII.

⁵⁹ Durling, "A Chronological Census of Renaissance Editions and Translations of Galen", p. 252.

surgery. Although it was esteemed by physicians to be “vyle and vnworthy” because it was mainly manual, “Hipocrates and Galyen haue not shamed to treate of and to exercyse” surgery, so that their works on “the Methode to cure the vlceres and tumoures” were taken in such a consideration by “Barbours and Cyrurgyens” that they became “more studyous than many physytions”⁶⁰. This preface perfectly matches the Galenic work with de Chauliac’s *Questyonary*, as even there the redactor stated that a surgeon had to be an expert “nat onely in the pryncyple & begynnyng of Cyrurgery but lykewyse in Phisyke, and asmoche in theoryke as practyke”⁶¹: a knowledge that only ancient medical *auctoritates* could provide.

The difficulty in translating “out of latyn in to frenche” and then into English was huge because “euery tongue hath his properte in such wyse that many thynges can not be sowned in the frenche speche, so well as they be written in the Greke or Latyn”⁶². Even though this statement was geared towards the French translation, the same problem is felt by Robert Copland. The original division of book 4 in seven chapters is not observed, as it was, for example in manuscript Sloane 6. However, the differences between the two English translations are many more. As an example, I will compare the first statement of book IV as it has been translated in manuscript Sloane 6 and in the *Questyonary of Cyrurgyens*⁶³.

Sloane MS 6

The Questyonary of Cyrurgyens

Here begynneþ þe ferþe boke contenyng VII chapitres. In þe furþe he setteþ bfore some comoun þings of accidens and sekenes comyng to woundes.

Here begynneth the .iiii. boke of the Terapentyke, of claude Galyen prynce of Phisyke.

Of al it be knowen þat separacione of iuncture which is called dissolucion or lousyng of uneuenhed be a sekenes coming to every membre, neþerles it is noȝt noted with one worde.

Vve haue sayd that there is a kynde of dysease, that is called solution of contynuyte, whiche commeth in to all parties of the body of mankynde. Howbeit it hath not one name in them al.

For why if it be in þe flesch it is seid a

For solutyon of contynuyte in the fleschy

⁶⁰ All the quotations are taken from Gale, *Certaine Workes of Galens, The Epistle dedicatorie*.

⁶¹ De Chauliac, *The Questyonary of Cyrurgyens, The fourth boke of the Terapentyke*.

⁶² All the quotations are taken from De Chauliac, *The Questyonary of Cyrurgyens, The fourth boke of the Terapentyke*.

⁶³ De Chauliac, *The Questyonary of Cyrurgyens, The fourth boke of the Terapentyke*. In the transcription I used bold to highlight specific words or features.

wound, if it be in þe bones it is said **brekyng**, in þe synews **brussyng** and somtyme it is in þe ligaments et named with [approved] worde also it bifallyng in þe veynes or on þe lacertes it schal oþerwise be named. Neþerles in þe veynes it is made of brusyng or fallyng or ane much manyng in þe lacertes forsothe it is made of a strong stroke. On þat þe blode goyng out of þe veynes and beyng with in þe skynne it is said of tymes to come of brusyng of þe veynes. Bot somtyme þe mouþe of litel veynes opned blode is sent out of þam, as it war swetyng whai for it serueþ noȝt þat þis sekenes be dissolucion of uneuenhede. Also som membre is neue separate bicause of schaving or grawyng of þe same neþerles þe sekenes is componed. For why þe separacion of þe iuncture considered it someþ to be called ane accidens of þe sekenes.

Every sekenes forsoþe which is seid separacion of iuncture or roynyng, if it falle in a membre losyng anyþing it is made on tuo maniers ouþer for yren or for grawyng or fretyng which for soþeys made of yren is in opne schewyng þat forsop þat falleþ of fretyng or of inwarde cause, necessarily schal be bicause of wiked humour or worste þat if it fal for utter cause ouþer it schal be for brynnyng medicine or brynnyng of fire.

parte is called **vlcere**, in the bone, **fracture**. The grekes call it **catagma**. In y^e synewe, conuulsion, the grekes cal it, **spasma**. There be other kyndes of solutions of continuite, that the grekes cal **Apospasma**, **rhegma**, and **thlasma**. That is to wyte **thlasma** in the ligament, **Apospasma**, and **rhegma** in the vessels and muscles, bycause of any vyolent stroke or greuouse fall, or any other great mocyon. The solution of contynuyte called ecchymosis in greke commeth most often with concussyon and ruption. Somtime solution of contynuyte commeth by operatyon of the oryfices of the vesselles, in greke named **Anostomosis**. Also commeth bycause that the grekes call it **dyapedesis**.

Other solutions of conuynuyte happeneth of eroysion in greke called **Anabrosis**. But it is a dysposytyon alredy medled and composed with an other kynde of dysease that consysteth in the quantite of the partyes, as before hath ben shewed, we haue spoken of holowe vlceres whiche [...]jede of two causes, that is to wete of excysyon and of eroysion. It is notorious in what maner incysion commeth. yf eroysion habounde inwardely [...]s caused of catochimie. yf outwardly it is done outhur by stronge medycyne or by fyre.

Wher for it bihouep þe to serch inquire It behoueth then as before is sayd to take
sekenes þat þou knowe which bene hede dylygently and dyscerne the symple
componed and which symple. dyseases fro the compounde.

For whi symple medicyne acordeþ or For to a symple dysease a symple
symple sekenes and componed to healyng is due, And so a composed
componed et noted above þe waye and þe dysease a healyng vnsymple.
witte of þe crafte of componed sekenes.

Reading the passage above, it clearly appears that Canappe's and Copland's translations do not come from the same source used for manuscript Sloane 6. I would also say that they might not be translations of Gerard of Cremona's *De ingenio sanitatis* as the syntax of the phrases and the language used are broadly different. I have highlighted in bold some terms that are the transliteration of the Greek names of the diseases treated: these technical forms together with their Middle English translation are employed to identify more clearly the various typologies in which the dissolution of continuity (the technical formula Galen used for wounds) is divided. They are totally absent in every Latin translation of *De methodo medendi* I could read, and even in manuscript Sloane 6: there, in fact, Latin and English words replaced all Greek terms, and no reference to the original classification is found. Even though the vernacularisation of medical texts in medieval England was aimed to make medical knowledge available to a wider public than those who read and wrote Latin, these readers were not necessarily monolingual. Although Latin was often the point of departure, "multilingualism has an important role in scientific and medical writings produced in medieval England. The tendency to combine materials in different languages appears to be more prominent in medicine than in other disciplines"⁶⁴. In medical writing technical terms and their precise definition are an essential part of medical knowledge and probably the most important thing to learn for a practitioner. Many times medieval and early modern English writers had to face the problem of creating a terminology never used before in the vernacular. Thus, they sometimes turned to other languages for help, borrowing foreign elements or adapting them to the phonological and morphological structure of English⁶⁵.

However, in the last part of *The Questyonary of Cyrurgyens* Greek terms are not used to fill the gaps in English as they are always accompanied by vernacular synonyms: in my opinion the aim of the translator is to specify special technical forms

⁶⁴ Taavitsainen - Pahta, *Medical and Scientific Writing in Late Medieval English*, p. 81.

⁶⁵ Taavitsainen - Pahta, *Medical and Scientific Writing in Late Medieval English*, pp. 82-83.

of the scientific discourse, and in this way to be more instructive for his readers. Learning these words, in fact, may give the practitioner an air of technicality and learnedness that English could not. Therefore, the translation in *Questyonary* is more precise than that in manuscript Sloane 6, both because it lingers over every particular definition, while manuscript Sloane 6 omits them often simplifying with the words “it schal oþerwise be named”, and because the terms used for translating the same technical forms are widely different: I would say Latinisms and refined terms. This evidently appears already at the beginning of the compilation where the dissolution of continuity, respectively in flesh, in bones and in sinews is named *wound*, *breaking*, *bruising* in manuscript Sloane 6, *ulcer*, *fracture*, *convulsion* in *Questyonary*, which also provides the Greek counterparts (*catagma*, *spasma*) of these words. This consideration is supported by the numerous Greek terms disseminated in the whole book, always in the form “the Grekes cal it”, and by a peculiar statement at chapter four. In one of his rants against the Methodics, Galen disparages their use of technical terms like δυσπαθείας or μετασυγκρίσεις, writing that they do not know their specific meaning. This is an outstanding passage⁶⁶, but the English translation highlights the adherence to the model and the author’s will to provide a literate version of the text borrowing a whole statement, followed by an explanation in English:

That is to wyt, from whens this that is sayd **Syncrinestai ta somata kai diacrinestai**. As ye wolde sayd medle & dyuyde the body⁶⁷.

Neither Gerard of Cremona, nor manuscript Sloane 6 provide such a quotation or present Greek borrowings. *The Questyonary of Cyrurgyens* and its French source cannot be translations from Gerard’s text. Jean Canappe, in fact, was accustomed to translating directly from the Greek, and his translation of *De methodo medendi* was the first realised in French. However, in English a vernacular translation of the fourth book was already present and specifically intended for surgeons: that in manuscript Sloane 6. Thus, choosing to retranslate it from a French text taken from Greek was a really remarkable choice. It may be supposed that Robert Wyer and Hanry Dabbe do not know the surgical compilation of manuscript Sloane 6, but I think it is more likely that, whether they were aware of it or not, they wanted to provide surgeons with a specific compilation, which recovered the ancient Greek knowledge and the Galenic texts

⁶⁶ For a detailed discussion see Vallance, J. T., *The Lost Theory of Asclepiades of Bithynia*, Oxford: Clarendon Press, 1990, pp. 131-143.

⁶⁷ All the quotations are taken from De Chauliac, *The Questyonary of Cyrurgyens, The fourth boke of the Therapentyke*. Bold mine.

quoting them closely to make simple surgeons not only literate healers, but also Greek scholars.

In the great translation and publication phenomenon of the sixteenth century, emerged the great labour by English translators who worked on the Galenic treatises and on *De methodo medendi* in particular. These new translations wanted to offer medical practitioners not only the rudiments of the τέχνη ἰατρική, but also authoritative texts. The most famous Latin translation of *De methodo medendi* made in this period was that by Thomas Linacre who translated the whole treatise directly from Greek into Latin. Linacre's work had at least fifteen reprints between 1519 and 1609 and it was sold together with his previous translation of *De sanitate tuenda* (1517) on the request of a customer clearly resolved to compare them⁶⁸. Even by John Caius faced the translation of *De methodo medendi*, but it was limited to books 1-2 and it was not renown⁶⁹.

Apart from the English translation of the fourth book of *De methodo medendi* in manuscript Sloane 6 and in Robert Copland's *Questyonary of Cyrurgyens*, there are three other important translations of the texts, which are all part of the early phases of a transition period of the medical field: "the scientific paradigm was experiencing a major epistemological shift, with medieval scholastic, logocentric science heavily dependent on ancient texts giving away to a new scientific thought-style relying more on empirical methods and explanatory principles based on observation and cognition"⁷⁰. What follows is the already-mentioned English translation by Thomas Gale. Limited, as usual to books III-IV of *De methodo medendi*, it was published by Thomas East with the title of *Certaine vvorkes of Galens, called Methodvs medendi* in 1566. Gale's source text was probably Linacre's Latin text because Gale makes a direct reference to him in his preface to another collection entitled *Certaine vvorkes of Galens*. As all the other English translators did, even Gale chose to translate books III-IV of *De methodo medendi* only, as his aim was to highlight the practical aspects of the treatise, leaving

⁶⁸ Durling, "A Chronological Census of Renaissance Editions and Translations of Galen", p. 293; Rhodes - Kendal - Wilson, *English Renaissance Translation Theory*, p. 313; Lathrop, Henry B., *Translations from the Classics into English from Caxton to Chapman*, Madison: University of Wisconsin Press, 1933, pp. 50-53.

⁶⁹ Ioannis Caii Britanni, *De medendi methodo libri duo, ex Cl. Galeni Pergameni, & Io. Baptistae Montani Veronensis, principum medicorum, sententia*, Basel: Froben, 1544.

⁷⁰ Taavitsainen, - Pahta, *Medical Writing in Early Modern English*, p. 3. See also Pahta, Päivi - Hiltunen, Turo - Marttila, Ville - Ratia, Maura - Suhr, Carla - Tyrkkö, Jukka, "Communicating Galen's *Methodus medendi* in Middle and Early Modern English", in *Communicating Early English Manuscripts*, edited by Päivi Pahta - Andreas H. Jucker, Cambridge: Cambridge University Press, 2011, pp. 178-196.

out all the theorectical parts⁷¹. Gale's version has been classified as the first Renaissance translation of *De methodo medendi* for example by Pahta⁷², but, as I have proved, the *Questyonyary* pre-empted Gale's work of about twenty years. In his preface Gale advocates the vernacularisation of medicine and defines his target audience as "Prentises and young men, which haue not beene trained up in schooles, neither yet can understand the Greeke or Latine tongue"⁷³. His aim of instructing the young students of the art of surgery seems to justify the use of the English tongue. Although Gale's public was not made up by "those which be great learned men, and understandeth the tongue", but by the non-Latined practitioners, his aim was to promote the dissemination of knowledge only among students of surgery, and not widely. Gale wanted to remedy the poor availability of medical treatises in English, because he thought it was necessary to pay attention to the subject, not to the language:

It semeth to me therefore, that he which understandeth any tongue, whether it be Greke, Latin, or English, it serveth him no more but for the further understanding of that thing which he doth reade: for it doth not follow, that every one which can speake Greke, Latin, or Ebru, by and by to be a good divine, or perfectlie to understand the Arte of Medicine, for the common people amongst the Gretians, spake the Greke tongue, and so in other countries, which speaketh their language, and yet neither Diuines, neither Phisitions, therefore it doth manifestly appeare by Galen, that the tongues maketh not an Artist, but reasonable knowledge being joyned with experience⁷⁴.

Another printing of Gale's work was published in 1586, but twelve years earlier, in 1574, George Baker realised a translation in English of the third book that was published in his work *The composition or making of the most excellent pretious oil, called oleum magistrale*.

In the following century a medical student whose name was Peter English, completed the last early-modern vernacular printing of Galen from an unknown source text: it was an abridged translation into English of almost the whole work with a commentary of the earlier parts provided by the translator. It was printed in Edinburgh in 1656 with the title *Galen's Method of Physick: or his Great Master-Peece, being the very Marrow and Quintessence of all this writings*, but the omission of many important parts of the original treatise, and the addition of new comments and the deep difference from all the other English versions of the *Method of healing* make it a free paraphrase

⁷¹ Rhodes - Kendal - Wilson, *English Renaissance Translation Theory*, pp. 312-313.

⁷² Pahta - Hiltunen - Marttila - Ratia - Suhr - Tyrkkö, "Communicating Galen's *Methodus medendi* in Middle and Early Modern English", pp. 178-196.

⁷³ Gale, Thomas, *Certaine Workes of Galens, The Epistle dedicatorie*.

⁷⁴ Gale, *Certaine Workes of Galens, The Epistle dedicatorie*.

than a translation. English's aim was "to take the essence of Galenic knowledge and transmit it [...] to readers in lower rungs of the profession"⁷⁵. Thus, he omits significant parts of the Galenic treatise like references to ancient schools of thought and theoretical principles, adding his own comments and argumentations, and treating Galen reverently and critically in turn.

If we compare the vernacular text of *De methodo medendi* in manuscript Sloane 6 with Gale's and English's translations the shift in the position of Galen as a medical authority emerges. The anonymous translation in manuscript Sloane 6 and *Certaine Workes of Galens, called Methodvs medendi* aimed to rescue the ancient medical knowledge and to transmit it to a vernacular audience, while the seventeenth-century-version by English is a selection from Galen, which radically modifies the original text. Moreover, even medical terminology changes in these works: some terms become more and more usual, while others are replaced by new anglicised forms. Manuscript Sloane 6 is certainly a striking example of the keen interest of Middle English authors for providing a wide public with the best medical authors through the vernacular, while Renaissance translations testify that "editorial intervention in transmitting Galen's knowledge became more possible over the time"⁷⁶. Therefore, early modern English translations of Galen were not new, as Middle English works like that in manuscript Sloane 6 were already available. However, because of the manuscript form, they appear to be only accessible to a few readers who could attend libraries or own such expensive copies.

All these considerations do not take into account *The Questyonary of Cyrurgyens* as it seems to escape any possible classification. Its pivotal position is due to its peculiarity: it is in print form and almost contemporary to Gale's translation, but unlike this, it shows neither the will of updating or modernising the Galenic text, nor a sense of liberty with regard to the original treatise. Although it was published in the mid sixteenth century, the *Questyonary* faithfully follows its source text, as the manuscript tradition was used to do, but in the meanwhile it also recovers the ancient text, preferring the Galenic Greek terms to Anglicisms and Latin-based neologisms. Moreover, the purpose in publishing such a compilation was not merely of widening an unqualified knowledge of Galen to a vernacular audience of illiterate healers, believing in the substantial indifference of the languages; it was of providing a specialised group

⁷⁵ Pahta - Hiltunen - Marttila - Ratia - Suhr - Tyrkkö, "Communicating Galen's *Methodus medendi* in Middle and Early Modern English", p. 183.

⁷⁶ Pahta - Hiltunen - Marttila - Ratia - Suhr - Tyrkkö, "Communicating Galen's *Methodus medendi* in Middle and Early Modern English", p. 183.

of healers, that was learned surgeons, the best and most relevant translation of *De methodo medendi*, skipping the Latin tradition of the text and going back to the original Greek.

CONCLUSIONS

When the Fellowship of Surgeons and the Company of Barbers united on 25 July 1540, as “maistres or governours of the mistery and com[m]ynaltie of Barbours and Surgeons of London”¹, a small number of educated specialists, the surgeons, and an undetermined number of barbers and illiterate practitioners were grouped under a single company². The reason of this union has been interpreted in various ways: in my opinion it gave literate surgeons many advantages as they distinguished from physicians and at the same time incorporated a wide number of practitioners. As Roberts has explained, this union definitely separated medicine and surgery, and clearly established the physicians’ and surgeons’ authority, but it also provided the small body of surgeons the strength of a wide company³. Symphorien Champier had already shown in the introduction to the history of surgery placed at the beginning of his *Le Myrouel*⁴ that surgery was “la plus ancienne” among the healing practices, but it was also suffering decline because of the rivalries inside the medical pyramid. Since physicians were interested in speculative learning only, and barbers and apothecaries dealt with medicine and surgery, since they were ignorant, literate surgeons, though few in number, remained the only healers who could both practise surgery and give medical advice having read ancient texts. Thus, the association between surgeons and barbers might grant the former a leading and controlling role over the other practitioners.

Already in 1491, the Fellowship of Surgeons and the Barbers’ Company had obtained the agreement to examine students and to supervise the issue of the licences to practice surgery, as it is proved by some extant licenses like that given to Robert Anson on 8 August 1497 or by the report of some examinations. On 28 March 1514, for instance, four “experte persons in the faculte of Surgery after the tenor of the saide arte” were requested by the bishop of London to help the physician John Smyth in examining

¹ Quoted in Erler, “The First English Printing of Galen: The Formation of the Company of Barber Surgeons”, p. 159; Young, Sidney, *The Annals of the Barber-Surgeons of London*, London: Blades, 1980, pp. 586-590, p. 586.

² Beck, Theodore R., *The Cutting Edge: Early History of the Surgeons of London*, London: Lund Humphrie, 1974; Young, Sidney, *The Annals of the Barber-Surgeons*, London: East & Blades 1890.

³ Roberts, R. S., “The Personnel and Practice of Medicine in Tudor and Stuart England. Parts II London”, *Medical History* 8, 1964, pp. 217-234.

⁴ Champier, Symphorien, *Le Myrouel des Appothiquaires et Pharmacopoles, par Lequel il Est Démonstré Comment Appothiquaires Communément Errent en Plusieurs Simples Médicines Contre l’Intention des Grectz, de Hypocras, Galien, Oribase, Paule Egynette et Aultres Grectz. Item les Lunectes des Cyrurgiens et Barbiers Auquelles Sont Démonstrées les Reigles et Ordonnances et la Voye par Lesquelles se Doybvent Reigler les Bons Cyrurgiens Lesqueulx Veullent Vivre Selon Dieu et la Religion Crestiene*, Lyon: Mareschal, 1525.

William Ashewell to licence him a surgeon of London⁵. In this situation, the leading role of surgeons clearly emerges, both in the new company, and in medical field. On one side the presumptuous physicians conceived surgery as a “vyle and unworthy [...] professyon”⁶, on the other, rough practitioners were not able to practise but simple operations. Thus, nobody knew nothing about surgery and “y^e sayd manuall occupation the which Hipocrates and Galyen haue not shamed to treate of and to exercyse, but also the Methode to cure the vlceres and tumoures against nature”⁷ had been neglected by all healers, apart from a small group of noble and learned surgeons. Therefore, although the agreement to examine students was formally given to the whole company, actually only surgeons had the complete control over the licences to practise surgery, and physicians onto theoretical medicine.

The fact that in a few years several surgical compilations were translated from French, leaving aside the simple commentaries and textbooks already available in English and choosing new handbooks with classical references, Latin and sometimes Greek quotations, and more and more technical terms, means that these group of surgeons, often educated abroad, especially in Italy, wanted to promote the improving of surgical education. We do not exactly know what material candidates who wanted to enter the company had to study or on what books they were examined to gain the licence, but some printed copies of the period give us a hint. In the same year in which the company was created (1540), Rycharde Banckes commissioned Robert Wyer the printing of the brief *Practyse of Cyrurgyons of Mountpyller and of Other that Neuer came there*⁸, in which real surgeons are distinguished from quacks who “make the people to beleue that they haue done a great cure”⁹ because of the ignorance of their patients. The anonymous author hoped that, reading his work, “euery Cyrurgyon wolde leye a parte all those workes and seke for some noble medycyns that wyll put away the causes of the humours”¹⁰. Two years later, in 1542, Banckes together with Hanry Dabbe commissioned Wyer to print another work: *The Questyonary of Cyruryons*. Both *Practyse* and *Questyonary* were translated from French, something that testifies

⁵ Quoted in Erler, “The First English Printing of Galen: The Formation of the Company of Barber-Surgeons”, p. 163. For this type of documents see also Talbot, Charles H. - Hammond, Eugene, *The Medical Practitioners in Medieval England: a Biographical Register*, London: Wellcome Historical Medical Library, 1965.

⁶ De Chauliac, *The Questyonary of Cyrurgyens, The fourth boke of the Terapentyke*.

⁷ De Chauliac, *The Questyonary of Cyrurgyens, The fourth boke of the Terapentyke*.

⁸ *The Practyse of Cyrurgyons of Mountpyller and of Other that Neuer came there*, London: Rycharde Banckes, 1540.

⁹ *The Practyse of Cyrurgyons of Mountpyller*, unnumbered page.

¹⁰ *The Practyse of Cyrurgyons of Mountpyller*, unnumbered page.

the publishers' effort "to appeal to English surgical students by marketing books, which had succeeded with a similar audience abroad"¹¹, but also the English surgeons' will to match their eminent French counterparts. Furthermore, in 1545 the association of Barber-Surgeons formally requested Wyer to print another work: the *Prognosticacion drawen out of Ipocras*¹², a treatise of 34 pages with woodcuts of Hippocrates and Avicenna and without preface and postface.

These surgical treatises, though few in number, were meant for a specific target audience: surgeons who were learning the art or who needed an aid in their daily practise. Although their content tended to be more comprehensive than that of specific treatises, they appear to be learned textbooks intended for literate practitioners, who felt a sense of continuity with ancient and medieval medical practices, rather than handbooks for an unlearned audience. Far from being mere ignorant healers, in fact, at least a section of the surgeons' guild wanted to recover the ancient surgical knowledge of Hippocrates and Galen. It sought to own the texts of the ancient medical authorities in order to figure out their secrets, to learn some Latin and even some Greek words, and possibly to face literate physicians: desires that clearly emerge in reading the translation of Galen's fourth book of *De methodo medendi* preserved in London, British Library, Sloane MS 6, ff. 180^v-203^v and in *The Questyonyary of Cyrurgyens*.

Even though physicians were supposed to have studied all ancient medical theories and especially those by Galen, and to know them perfectly, they were not supposed to put their knowledge in practice: this was the field of barbers, surgeons and apothecaries. The differences between the translation of Galen's fourth book present in *The Questyonyary of Cyrurgyens* and that in manuscript Sloane 6 bears the traces of English surgeons' outstanding evolving position from the end of the fifteenth century to the first half of the sixteenth century: they increasingly meant to acquire Galen's own medical vocabulary, and encouraged the copying, translation and printing of the ancient medical treatises in a learned vernacular language, as they wanted to have an easier access to them than that given by rare and unaffordable manuscripts. Their aim was to read at least some parts of the ancient surgical treatises, and to improve their medical approach especially through Galen's method of healing. Knowing or even quoting the most renowned physician-surgeon of the antiquity, in fact, was the perfect

¹¹ Erler, "The First English Printing of Galen: The Formation of the Company of Barber-Surgeons", p. 165.

¹² Hippocrates, *Prognosticacion Drawen Out of the Bookes of Ipocras, Auicen, and Other Notable Auctours of Physycke, Shewynge the Daunger of Dyuers Syckenesses, that is to Saye, Whether in Peryl of Death be in Them Or Not, the Pleasure of Almyghty God Reseruyd*, London: Robert Wyer, 1545.

viaticum to every medical leading role as it made them “more studyous than many physytions”¹³.

¹³ Gale, *Certaines Workes of Galens, The Epistle dedicatorie*, unnumbered page.

APPENDIX

What follows is the transcription of the whole *Questyonary of Cyrurgyens* as it can be read in the copy preserved at the British Library. The text comes from De Chauliac, Guy, *The questyonary of cyrurgyens with the formulary of lytell Guydo in cyrurgie, with the spectacles of cyrurgyens newly added, with the fourth boke of the Terapentyke [sic], or methode curatyfe of Claude Galyen prynce of physyciens, with a synguler treaty of the cure of vlceres*, London: Robert Wyer, 1542¹, as it is provided in *Early English Books Online*, Web 2018, with additions and corrections from the copy preserved at the Wellcome Library, 3029/B.

¹ De Chauliac, Guy, *The Questyonary of Cyrurgyens with the Formulary of Lytell Guydo in Cyrurgie, with the Spectacles of Cyrurgyens Newly Added, with the Fourth Boke of the Terapentyke [sic], or Methode Curatyfe of Claude Galyen Prynce of Physyciens, with a Synguler Treaty of the Cure of Vlceres*, London: Robert Wyer, 1542.

The questyonyary of Cyrurgyens, with the formulary of lytell Guydo in Cyrurgie, with the spectacles of Cyrurgyens newly added, with the fourth Boke of the Terapentyke, or Methode curatyfe of Claude Galyen prynce of Physyciens, with a Synguler treaty of the cure of vlceres, newly Enprynted at London, by me Robert wyer, And be for to sell in Poules Churcheyarde, at the sygne of Iudyth. Cum priuilegio ad imprimendum solum.

Robert Copland the translatour herof to the Reders.

Gentyll reders in consyderacion that euery scyence, arte, and faculte that are speculate & practysed by Phylosophers, nat onely ought to be shewed and taught vnto suche as be present with them in theyr dayes, but also for a perpetuall benefyte to be set forth by wrytynge vulgarly in euery tongue, for the more eredines and erudycyon of all yonge and pregnaunt practycyens, as fayne wolde attayne to the perfytenes of euery suche scyence, arte, and faculte. And nat withstandynge that there be ryght many and sondry sortes, aswell of very good and scyentyke bokes, as of ryght expert men within this Realme in the scyentycall arte of Cyrurgery. Neuertheles this lytell questyonyary & formulary with the other bokes added therto haue ben often requyred and soughte for, to be had in englysshe (aswell of me as of other) by dyuers and many persones of the sayde scyence. In consyderacyon aforesayd, and that it is commodious, vtile, behouefull, and benefycyall to the common welth of the sayde scyence and arte. A certayne yonge gentyll man enured in the sayd scyence haue a boke of the same in frenche moued the ryght honest persone Henry Dabbe bybliopolyst & stacyoner to haue it translated in to englysshe. At whose instigacyon meanyng the help of God (though moste rudely) with the symplenes of a good wylling herte I haue enterprysed to do it in folowynge dyrectly my copy. For I knowlege myne enernyte in pronouncynge the englysshe of the names and termes naturally expressed in the sayde boke, aswel in greke, latyne, & other, whiche myne aucthour hath nat reduced in to frenche, which names and termes I commyt to the dyscrecyon, emendacyon, and grauyte of t[h]em that haue the perfytenesse of the sayde scyence and facultie. For as Phyllyatros sayeth, many termes and names that are symply spoken in one language and scyence is harde to be spoken in an other, except they be expressed, and what they signifyfe. wherfore curteys and gentyll reders take this in worth, and desyst myne ygnoraunce in the same with your scyentycall beneuolence, aud clere fronsate intellygence. And Iesus preserue you. Amen.

Hereafter foloweth the questyonyary of Cyrurgyens.

The Demande or questyon. What is Cyrurgery? The responce or answer. Cyrurgery is scyence that teacheth the maner and qualyte to worke principally in knyttyng in cuttyng and exercysynge other workes of y^e hande. In healyng of man, as moche as it is possyble. And here scyence is put for kynde. And albeith that Cyrurgery is of it selfe proprely by arte and no scyence yet for the bonde and affynytie that arte and scyence haue eche with other somtyme vnproprely that which is arte is called scyence and that which is scyence is called arte. It is otherwyse sayde (and better) that Cyrurgery is in two maners. One is that sheweth onely so y^t by it we can do nothyng as touchynge the operacion and that proprely is called scyence as we say in physycke that there be .vi. maners of symple appostumes that is to wyt .iiij. humeralles one aignous & the other ventous. The other maner of cyrurgery is vsaunce that is to sayethat it teacheth to vse that he y^t knoweth it maye helpe hym selfe therwith as many tymes and as often as he wyll as touchynge Cyrurgycall operacions so that by it he is gouerned and ruled whan he wyll vse it as by the

Cyrurgery that he hath in his vnderstandynge that teacheth hym that in all hote appostumes he oughte to put and laye to it repercutyues saufe vnto them that ben in the sumuytones and to such as be venymous. This Cyrurgery or arte that thou haste in thyne vnderstandynge teacheth the to worke & vse manually in medecynes and is proprely called arte and nat scyence. And in the ende of thy dyffynicion besyde the particulers that are put for differences that are set vnto that whiche is possyble for it is nat possyble to all Cyrurgyens to heale all theym that are dyseased and sore. Demaunde. In what case oughte a Cyrurgyen to vse very cure? And in what cases is he permytted to vse onely palliatue cures. Answered. In all cases ought he to vse very cure excepte in thre cases where as alonely he is permitted the cure palliatyue. The fyrste is whan the disease of them selves are vncurable as lazary. The seconde for y^e inobedyence of y^e pacient to suffre the paynes that he ought bycause his myght can nat suffre it as is the Canker in a pertyculer membre. The thyrde yf by the cure of such a disease there foloweth a greater inconuenient as in to euyll inueterate sores or in to olde emeroides yf there be nat alway lefte an yssue there as any daunger is for drede to fall in to ydropsy or manyake as Ipocras sayth in his Aphorismes. Demaunde. Wherof is named Cyrurgery? Answered. It is so named of chyr that is a hande and of Gow that is operacion for it is a scyence that teacheth to worke by hande y^t is manually. Demaunde. What is the subiect of cyrurgery? Answered. The subiecte of Cyrurgery is the body of man that is diseased & sore able to be healed, for it is therabout that the Cyrurgyen worketh. Demaunde. what is theeffecte of Cyrurgery? Answered. Theeffect therof is to take away the dysease of mannes body and to kepe it in healthe as moche as it is possyble. Demaunde. In howe many kyndes or partyes is Cyrurgery deuysed? Answered. Iohannyce sayeth that generally it is deuysed in two, that is to wyt to worke in soft membres as in the flesshe. And to worke in the harde membres as the bones. And partyculerly Cyrurgery is deuysed in .v. That is to wit to worke in woundes in appostumes in sores and in restoracyons and in other thynges belongynge to handy operacyon. Demaunde. What dyuers operacions exerciseth the Cyrurgyen? Answered. In thre dyuers operacions. That is to wyt dysolue the thyng continued knyt the thyng seperated and put out the superflue thyng. To dysolue the thyng continued is by incysynge cuttyng or scaturysynge. To reioyne the separte as in consolydynge the woundes and redusyng the lypes. And to put out the superflue thynges, as in curyng appostumes to clense them and put away the coores. Demaunde. Howe many and what yrens ought a Cyrurgyen to bere in his case with hym? Answered. He oughte to haue .v. as Cysers Nyppers Launcettes Rasoures and Nedelles. Demaunde. Howe many and what oyntementis commonly oughte the Cyrurgyen bere with hym? Answered .v. That is to wyt an oyntement Basylycon for to rype Apostolorum to clense Aureum to encrease flesshe. And the whyte oyntement for to drye and bynde. And de Althea for to sowple. Demaunde. Of howe many thyngis and what thynges the Cyrurgyen taketh his entencions for to heale sore folkes? Answered. That after Galyen in his terapentyc they ben taken of thre thynges. That is of thynges agaynst nature of naturall thynges and of vnnaturall thynges and also of theyr annexes. And fyrste he taketh this indycacyon of thynges agaynst nature that is to wyt to the knowledge of the malady in his nature after Galyen in the seconde of his terapentic. And than come vnto the naturalles and after to the vnnaturalles and theyr annexes. And so after his indycacyons taken he ought to procede to the healyng of the pacyent in all that may lye in hym possyble. And let the Cyrurgyen note that it is sayde in all that may lye possyble in hym bycause it is nat alway possyble. And with what thynges, and howe. For as galyen sayth towarde y^e ende of his thyrde boke and in the seauenth of his sayd terapentyc [i]f the intencyons curatyues ben fewe and accordynge the cure is easye to the Cyrurgyen as in

a symple wounde. But where there is many consy[d]eracyons whiche in it selfe are contrary as in a holowe wounde and apostumate and nyghe to a noble membre, the Cyrurgyen ought to consydre .iiij. thynges. The fyrste is, yf there be two contrary diseases, wherof y^e cure of the one letteth the other (whiche is moste doubtfull and daungerous yf it remayne) in suche case he ought to begyn his cure at the moste daungerous & where there is moste peryll in the remaynyng of it and oftentymes more sooner in the accyidentes that happeneth in a sore then in the sore selfe. As whan a great flux of blode ouercommeth in any wounde or any sore fretynge that hath corroded any vayne in suche case often he must leaue the healyng of the sore for to entende to the flux of blode that is so great. Lykewyse yf in a sore were any synew that was pricked wherof foloweth crampe there must he begyn at the pryckynge of the synew for daunger of the spasna, which is moste peryllous. The seconde thyng that the Cyrurgyen oughte to consydre is yf one of the sayde dyseases be nat the cause of the other, and nourysssheth nat the other. In suche case he ought to begyn at the cure of it that is the syller and nourysssher of the other. For tyll that y^t which is the causer of the other be totally extyrped the healyng can nat be. Demaunde. Howe many consideracions ought the Cyrurgyen to haue touchynge his fourme and generall maner to worke manually? Answer. After Arnolde de villa noua, he ought to haue .iiij. The fyrst is he ought to consydre what operacyon it is that he ought to do to mannes body. And it is knowen by the dyuysyon of the operacyons of Cyrurgery aforesayde that is to knyt the thyng deuyded. The seconde consyderacyon is that he ought to consydre wherfore he worketh. And this is knowen by y^e general intencyon of Cyrurgery, that commaundeth to do the operacions vnto the body of man profitably with confydence or surenes. The thyrd consyderacyon is that he oughte to consydre yf suche operacyon be necessary & conuenable to be done to mannes body. And this he knoweth whan it can nat be healed otherwyse. And the fourth consyderacyon is that the Cyrurgyen ought to knowe howe to bestowe his remedies to the body of man. In these consyderacyons the Cyrurgyen oughte to take hede in doynge all thynges that he ought to do as touchynge this operacyon aswel before the workynge as after. The whiche .iiij. consyderacyons thou mayest haue and perceyue by suche an example. Yf thou wylt draw water fro the belies of ydropikes by manuall operacyon. Fyrste thou ought to consydre that the operacion which thou wylt do is to drawe out the said water. Secondely thou ought to consydre wherfore thou doest it for it is for to [h]eale or at y^e least way to gyue ease. Thyrdly why ther such operacyon be necessary nedeful or possy[ed]e. And thou ought to wyt that it is necessary at [...]ast wayes yf thou wylt heale an ydropyke of the [i]dropesy confermed and thou knowest that it is [...]defull and possyble yf the myght of the pacyent [b]e strong for yf it be weke be wel ware for to do it. And fourthly thou ought to consydre the maner to do it, which is such. Fyrst lye thy pacient vpryght, and than with a rasour cut the skynne of his bely vnder the nauel vnto the voyde places that are betwene the cyphac and the myrac. And also thou ought to make incision on y^e left syde yf the disease come of the ryght syde. Contrarywyse make y^e incysion on the ryght syde yf it come fro the left, and than put a lytell quyll or rede in to the hole, wherwith thou shalt drawe out of that water after the strength of y^e pacient. And whan thou wylt drawe no more take away the quyll and let the skynne of the belye go that wyll close the hole that no more water come out. And whan thou wylt drawe any more do as thou dyd before. Demaunde. Howe many and what condycions ought a Cyrurgyen to haue? Answer. .iiij. The fyrste is that he ought to be lerned and a clarke & nat onely in the pryncyple & begynnynge of Cyrurgery but lykewyse in Phisyke, and asmoche in theoryke as pra[k]tyke. For in theoryke he oughte to knowe the naturall thynges and vnnaturalles and agaynst nature, Fyrste he ought to knowe the vnnatural

thyngis and chye-fly the nathomy for without it nothinge can be done surely in Cyrurgery as it appereth afterwarde more playnely. Also he ought to knowe the complexyon of his pacient for after the dyuersyte of the nature of the bodyes ought the medycyns be diuersified as Galyen declareth all alonge in his terapentyke agaynst Thesilus. And by lyke reason oughte he for to knowe the strength. Secondly he ought to knowe the vnnaturall thyngis, that is y^e meate the drynke. &c. for they are cause of all helth when they be vsed as they ought to be. And also they be causes of all maladies when they are euyl vsed. Thyrdly he ought to knowe the thingis agaynst nature, which are .iij. The disease, the causes, and the accydenes of the disease. Fyrst he ought to knowe y^e dysease. Secondly the cause therof for yf he healed otherwyse (it shuld nat be of a sayntes dysease as good olde women saye) it shuld be but case of aduenture. Thyrdly he ought to knowe the accydenes that chaunce to come in dyseases for often tymes it preueryeth the same selfe cure of the dyseases as Galyen declareth in the begynnyng of the boke that he sent to Glauton his dysciple. As I sayd before he ought for to [kn]owe the vnnaturall thynges and to mynystre theym as they ought that are meate drynke. &c. Also by this ye shall vnderstande that the Cyrurgyen ought to knowe howe to mynystre medycyns [cur]atyues whiche are one of the instrumentes of [phy]syke as of Cyrurgery without the which the [sci]ence of Cyrurgery can nat be complete. And this ought to knowe as touchyng y^e practice. Thus appereth the veryfycacyon of the fyrste con[dyc]yon that a Cyrurgyen ought to haue for he [ou]ght to be lettred & learned. And this condycyon [...]areth Galyen in the fyrste boke of the Tera[peut]yke agaynst Thesyllom, where he sayth at this [un]ynte. Yf Physycyens had nothyng to do with Astronome Geometrye Logyke Granmer nor with other good doctrynes the Cobblers Corryers of lether Carpenters Smythes, and suche maner of people wold leue theyr craftes & renne to Physyke, & become Physycyens. The seconde comdycyon y^t a Cyrurgyen shuld haue is to be experte and ought to haue sen other maisters worke. And this wytnesseth Auenzoar when he sayde thus. It behoueth that euery Physycyen fyrste knowe and than to haue vse and experience. The thyrd condycyon that a Cyrurgyen ought to haue is that he oughte nat to be a foole vnwyty nor of rude vnderstandyng. But as Haly sayth in the thyrd boke de regni he oughte to be a man of good memory of good iudgement of good dylygence of a clere syght hole of mynde and of his membres, with sclender fyngers & a stedfast hande without shakyng. The fourth condycyon is that a Cyrurgyen shulde haue is that he ought to be well manered bolde and sure in thynges that be nat to feare. And doubtfull, & fearefull in peryllous thynges. And ought to eschew all desperate cures and ought to be gentyll to his pacientes, wel wylling to his company wyll in pronostykyng chaste sobre meke and mercyfull nat anaricious nor extorcyoner for money. but after the capacitye of the pacyent and the faculte receyued competent and moderate rewarde. Demaunde. Howe many & what condycyons ought the pacyent to haue that wyl be healed by the arte of Cyrurgery? Answere. That he ought to haue .iij. condycyons. The fyrst that he oughte to be obedyent to his Cyrurgyen as the seruaunt towarde his mayster as Galyen declareth in the fyrst of his Terapentyke. The seconde condycyon of the pacyent is that he ought to haue trust in his cyrurgyen for he heleth moste in whom he trusteth moste as Galyen sayeth in the fyrste boke of Pronostykes. And the thyde condycyon is that he take pacyence in hym selfe for pacyence is it y^t ouercommeth. Demaunde. Howe many and what condycions ought the assystentes and seruauntes or mynysters of the pacyent haue? Answere. As Galyen sayth in the ende of the fyrste comment of the afforysmes. The condycions of the company mynysters and seruauntes of them that are diseased ought to be suche as pleaseth the pacyent so y^t they ought to haue agreable seruauntes put to them, beyng trewe, louyng, peasyble, gentyll, and dyscrete.

Here begynne the seconde treaty wherin is moued and assoyled certayne questyons and dyfficulties touchyng the Nathomy.

Demaunde. Whyther the scyence of the Nathomye be necessarye and nedefull to the Cyrurgyen or nat & by howe many & what maners? Answer. Yee. The scyence of the Nathomy is nedefull and necessarye to the Cyrurgyen as it appereth by two reasons. The fyrste Galyen putteth in the .vj. boke of his Terapentyke, and is suche, for the Cyrurgyens that be ygnoraunt in the Nathomy may erre in many maners in theyr incysyon of synewes and theyr knyttynges, the whiche yf they knewe the nature of euery membre, their settinge and colligacion that they haue in all the body, and with euery onely membre partyculer yf it dyd happen y^t they were hurt they shuld knowe yf the synewes were cut or nat. And by this same reason they shuld nat erre in theyr incisions. And this reason is conformed by an example y^t Henry de Maundeuille putteth sayeng that the same maner that a blynde man worketh in hewynge of a log, so doth a cyrurgyen that knoweth nat the nathomy. For lyke as a blynde man that heweth on a log knoweth nat howe moch he shuld hew therof, nor howe, & therfore commonly he arreth hewynge more or lesse than he ought to do. Lykewyse so doth the Cyrurgyen that worketh in mannes body without the Nathomy. Also the sayde Henry approueth that the Cyrurgyen ought of necessitye to knowe y^e Nathomy, for euery workeman is bounde to knowe the subiect of his worke in whiche he worketh, or els he shulde erre in workynge. Tha[t] lykewyse yf it so be that the subiecte of the Cyrurgyen be the body of menkynde, it must be of necessitye that the Cyrurgyen do knowe y^e body of mankynde in it selfe and in the parties therof, so tha[t] it is necessary for a Cyrurgyen to knowe the Nathomy. And this is for the fyrste parte of the questyon. The seconde parte where is demaunded to howe many and what thynges the scyence of Nathomy is necessary to the Cyrurgyen. That is to wyte howe many proffytes and vtylities be of the scyence of Nathomy? The answer. The scyence of the Nathomy is necessarye and nedefull to the Cyrurgyen for .iiij. vtylities. The fyrste and the greatest is for y^e meruayle of the great power of God the creator of men, that so hath made theym to his lykenes & forme. The seconde is for to haue the knowlege of the membres y^t may be dyseased. The thyrde for bycause to haue knowledge to tell the disposicions to come of y^e membres. The fourth is for to heale the dyseases y^t come to the membres. Demaunde. What is Anathomye, and wherof is it deryuate? Answer. Anathomy is the ryght determynacyon and dyuysyon of euery partyculer membre of y^e body of mankynde. And is deryuate of Ana, that is to saye (nyght) that is to say (dyuysyon.) Thus Anathomy is called nyght dyuysyon of membres done for certayne knowleges. Demaunde. In howe many & whiche maners ought [t]he scyence of Anathomy be taught? Answer. In [t]wo maners. That is to wyte by way of doctryne as by bokes wryten therof. In seyng and redynge that which hath ben wryten by auncyent doctours and by experyence in deuysynge and Anathomysynge the deade corpses. As dyd Mundy and Bo[...]oyne, and as lykewyse dyd maister Bertruce, that whan he had a deade body by beheadyng or other wyse he layde hym on a benche in makynge .iiij. partycyons. In the fyrste he deuyled the nutratyf membres, for they be dysposed to putrefaccyon. And in the seconde the spyrytuall membres. And in the thyrde the anymall membres. And in the fourth the extremities. And vpon euery membre ought to be sought .ix. thynges. That is to wyt the posycyon the complexyon, the substaunce, the quantyte, the nombre, the fygure, the operacyon, the vtilite, and what dyseases may come therunto. Demaunde. What is the body humayne? Answer. It is one hole togyther decorate with reason composed of many and dyuers membres. Demaunde. what is membre? Answer. Dyuers auctours haue

gyuen dyuers diffinicions. G. in the fyrste boke of the vtylyte of the partycles sayeth it is a body that is nat holly seperate, nor holly conioynt to another. And also in the fyrst boke of his canon he defyneth it in plurell, and sayth thus, that menbres ben bodyes that are engendred of the fyrste commyxion of humours. Demaunde. Howe many maners of menbres are founde? Answer. Two. That is to wyt, symple menbres called consenblables, and menbres compost. The simple menbres ben they that may nat be deuided into another kynde, but what partie thou takest of them it bereth alway y^e name and the dyffynycyon of his hole. As the bone for what parte thou takest of the bone be it more or lesse euer it beareth y^e name and diffinicion of the bone, for euery parte of a bone in bone and euery parte of a synew in synew. The compost menbres contraryly be they that maye be deuyled in other kyndes, for no parte of them seperated bereth nat away the name of all. As the hande, the legge, the heade. Demaunde. Howe many symple menbres ben there? Answer. There be .xi. That is to wyte the bones, grystles, or cartilages, the synewes, the vaynes, the anteres, the pannicules, the s[o]rynges. The cordes, the skynne, the flesshe, the grece or fat, the heare, and the nayles. The whiche althoughe that verytably they be nat menbres neuertheles in asmoche as they haue vtylyte in y^e body of man kynde, & haue regeneracyon as the menbres, they be called menbres, thoughe it be vnpropely. Demaunde. Yf all the menbres may regenerate after theyr perdicion, & knytte agayne after theyr dislocacio[ns] Answer. For to declare that behoueth two thynges to be noted. Fyrste y^t the symple menbres be of two maners. Some be sanguyne menbres of whom the generacion is of sanguyne mater, as the flesshe and the grece. And the other menbres be spermatyke menbres so named bycause they haue theyr breeding and begynnynge of sparmatyke mater. Secondly it is to be noted y^t there be two maners of regeneracyon. One is very regeneracion, whiche is very reformation of the menbre in the same selfe substaunce, forme, qualyte, and quantite, and other such accidentes propely as it was afore the corrupcion and alteracion. And the other is regeneracyon nat very but lyke therto as nyghe as may be. And lykewyse there is .ij. maners of consolydacyon one is trewe, that is when both the partes of the thyng that is dyssolued by seperatyng and reassembled and knyt without any maner of apperynge of the dyssolucyon afore and without any meanes. And y^e other is vntrue consolydacyon and lyke to the other as nyghe as can be done, by meanes of the poore that the Physycyons call Porus sarcoides. These thynges [un]derstande & noted I saye fyrste that all sanguyne menbres may regenerate and knyt by very regeneracion and consolidacion, for contynually there engendreth blode ynoughe within the body for to regenerate the substaunce of the sanguyne membre lost, & for to reconsolidate and knyt it agayne. I say secondly that no menbres sparmatyf after the losse of theyr substaunce maye nat regenerate bicause that their mater is attribuate to them at the very begynnynge of theyr creacyon, and after that neuer engendre agayne. And also for theyr so lidite, & bicause they are weke of here & moysture. And for these causes and reasons they do nat reconsolydate with trewe reconsolydacyon after the desolucion of their seperatyng, but nature strengthynge alwayes possyble thyngis the best that she may wyl nat leue them thus dyssolute, reioyneth and knytteth them the best that she may and engendreth a flesshe (for to holde y^e dissolued parties) that is called porus sarcoides. Demaunde. Be all the menbres consenblables of one complexyon. Answer? No for some be hote & moyste and the other colde & moyst and other colde & dry. And of the hote & drye there is none for amonge all menbres consenblables, ther is none more hote & dry than the skynne that is temperate. And it is nat onely temperate amonge the menbres of mankynde but also amonge all the substaunces of thyngis that may engendre and corrupte as Galyen sayeth in his fyrste boke of

complexyons & the last Chapytte. The membres hote & moyste be the menbres that are sanguyne as the flesshe the spyrytes and the naturall humydities as wylleth Auerroys in the [...] of collyges. The membres colde and moyste are the flewme, fat or the grece, and the maroughes. The membres colde and drye are all the other menbres after theyr degrees as the bones the cartylages the strynges or cordes the lygumentes, the [se]newes the vaynes arteres & pannycules. And here is the mayne see where as it behoueth ney[t]her Physycyen nor Cyrurgyen to sayle, for a phy[syc]yen and Cyrurgyen ought for to knowe y^e com[ple]xion of the menbres as natural Phylosophers. Demaunde. Which are the menbres compostes and wherfore are they called organykes & instrumentalles? Answer. The membres compostes be menores that are composed of the symple and consemblable menbres. And therfore they be called therogenes that is to say of dyuers natures and may be deuyded in dyuers kyndes that is to wyte in to menbres consemblables and theyr partyes bereth nat away the dyffynicion and reason of the hole. As to the seconde questyon that asketh why they be called organykes & ins[t]rumentalles? The answer is, bycause they are ins[t]rumentes of the soule as by the handes the fete the lyuer y^e face, and the semblables. Demaunde. Howe be the organyke menbres ordeyned and composed. Answer. Some of these menbres be pryncypalles and the other nat pryncypalles. Demaunde. Howe many vnpryncypal menbres be there? and howe many vnpryncypal. Answer. There be .ii. pryncypalles that is to wyte the herte the lyuer the brayne & the genytalles all the other be called vnpryncypalles. Demaunde. Of what complexyon is the herte? Answer. The herte is hote bycause it is lyke the very brennyng hote ouen of all the body fro whens commeth the heat to all the body. And albeit that Philosopher haue wyllid to say that it is tenperate bycause it is pryncyple and that it gyueth begynnyng of lyfe. Neuerthelesse the herte is drye in his complexyon bycause of his composycyon for it is composed of strynges & pannycles and of harde and styf flesshe. Demaunde. Of what complexyon is the lyuer? Answer. It is hote and moyste. For the mos[t]e parte of the thynges that it is composed is fleshshely blody & therwith ben transmised dyuers pypes or arteres. Demaunde. Of what complexyon is the brayne? Answer. It is colde and moyste, bycause it hath a marowy substaunce. Neuerthelesse it differeth fro the maroughe bycause the brayne is a sparmatyke membre & the marough is a sanguyne membre. And therby it is colde in comparyson of other menbres and that nat symply for all menbres be naturally hote. Demaunde. Of what complexyon are the kydneyes and the mylt? Answer. The kydneyes be hote & moyste howbeit the kydneyes be nat so hote as y^e mylt, bicause of the grosse blode that is in the mylt, lyke as the mylt is nat so hote as the lyuer. Demaunde. Of what complexyon is the longes? Answer. Hote and moyste. It is hote bycause that heat is sent to it from the herte as Galyen sayeth in y^e fourth boke of y^e vtylite of the particles & is moyste but nat so moyste as the greas for it melteth nat at the fyre as the greas doth. Demaundes vpon the Anathomy of the skynne or the lether. Demaunde. What is the skynne. Answer. It is a couerynge of the body of mankynde [...]at is composed & context and wonen with thre[a]s and vaynes with synewes and arteres for to [woun]nde the body & gyue it felynge. Demaunde. [...] many maners of skynnes or lether are there? [An]swere. Two, one is extrynsyke or outforth, and [th]at is proprely called lether. The other is intryn [...]ke and that is proprely called pannycle rym or skynne as be those of the heade y^t couer the brayne and the skull & they y^t couer y^e bowelles of y^e body. Questyons vpon the Anathomy of the greas. Demaunde. What is the grease? Answer. It is a thyng in the humayne body that is as oyle that chauffeth and humecteth the body. Demaunde. Howe many maners of greas be there? Answer. Two. The one is without forth nere to the skynne & that proprely is called adeps or fatnes. And y^e other is inwarde &

nyghe to the bely & proprely is called auxunge or fat grease. Questyons vpon the Anathomy of the flesshe. Demaunde. Howe many maners of flesshe are founde? Answer. Thre. One is very flesshe and propre and it is founde but in a lytell quantite, & one in two places of the body of mankynde. That is on the heed of the yerde and betwene the tethe. The other is glandulouster, odenose, or cruddy and kyrnele, as is the flesshe of the ballockes of the dugges and the flesshe of the emuntors. The other is flesshe musculous or lacertous y^t is harde as bawme styffe or knotty. And this is founde in great quantyte, and ouer all the body where as is any manyfest moeuynge. Demaunde vpon the muscles and lacertes. Demaunde. Be the muscles symple membres. Answer. yea, as touchynge the sensyble iugement Howbeit of very trouth they are menbres composed of synewes of lyens strynges thredes[...] and flesshe that fulfylleth them & of the pannicule that couereth them. Demaunde. Wherin agreeth and differ the muscles and lacertes? Answer. It is all one thyng which after dyuers consyderacyons hath ben called muscle and lacerte for it is called muscle for his resemblaunce of a mouse that in latyn hyght mus. And it is called lacerte [b]ycause it hath thy forme of a Lizard for lyke as those two beestes are byg in the middle and sclender towarde the tayle so is the muscle or lacerte. Demaunde. What is the maner & howe do the muscles and lacertes procede in the body of mankynde. Answer. After that the muscles is composed as is aforesaid from it descendeth rounde strynges and cordes that commeth nygh to the ioynthes the which when they be nygh the ioynthes they do [...]de abrode and enlarge and reyse the ioynt all [...]out with the pannicle that couereth the bones. [An]d whan they are passed the ioynt they do waxe [wo]unde agayne and retourne into cordes & with [t]he flesshe make another muscle. And of this mus[...] procedeth and ryseth another rounde corde and [...]ges that byndeth the ioynt all about & moe[...]. And so ceaseth nat to procede tyll they come [t]he extreme and ferthest partycles of the body. thus alway y^e muscle procedeth the ioynture. [An]d as the synewes that procede of the noddle ta[...]th forme of muscle at the necke and at the brest, and than commeth to the ioynt of the shulder. And [b]ecommeth rounde strynges and spredynge flat in comprysynge all the ioynt and do plante them in the bone of the ioynthe and moeueth it. And whan they come fro the ioynt of y^e sholdre a two or thre fynge brede they waxe rounde in cordewyse. And with the flesshe and strynge that commeth from the heade to the bone of the sholdre is made muscle vpon the myddes of the bone of the ioynture fro whiche commeth a corde that thre fynge brede fro the elbow enlargeth and compriseth all the elbow and moeueth the lytell arme. And thre fyngers be ponde it waxeth rounde & retourneth in to a corde. The whiche with the strynge that commeth fro the necke and with the flesshe make a muscle vpon the sayde lytell arme of the whiche muscle is made a corde and thre fyngers fro the ioynthe of the lytell hande it spredeth and compriseth all the ioynture of the sayde hande than it twisteth rounde agayne and entreth the muscle of the myddes of y^e hande of the which commeth cordes that moue y^e fyngers, by the which thynges it appereth that the woundes that are made about thre fyngers of the ioynthes be peryllous, for the synewy cordes be made bare of the flesshe and apperentes. Of the whiche all onely pryckynge is cause of spasme or crampe and of deth as Galyen sayth in the thyrde boke de regny, and in the seconde of his terapentye which is to be noted of the Cyrurgyen. Questyons vpon the Anathomy of the synewes. Demaunde. What is synew. Answer. It is a symple membre created to gyue felynge and mouyng to the membres deputed to nature. Demaunde. For howe many distributary intencyons were they created? Answer. After Galyen in the fourth boke of the vtylyte of the partycules in the last Chapytre, they were created for thre intencions. One is to gyue felyng to the organykes sensytyfes. The seconde to gyue moeuynge to the motyfe or styrynge membres. And thyrddly to gyue

knowlege to all the other membres of the thinges that hurte them. And it is notably sayd to the sensytyfe or felyng membres. For in the cartilages or grystles, nor in bones, nor glaudylous or cruddy [f]lesshe the synewes be nat penetrate but in y^e teth as Galyen sayth in y^e boke aforesayd. Demaun[nde] Fro whens bredeth the synewes? Answer. All the synewes of the body brede and come out of the [...]ayne by it selfe or of the noddle that is his vy[...], betwene the which some brede of y^e foreparte the brayne and they be softer and more propre [...]g[...]ue felyng than mouyng. And the other come and brede of the hyndre parte of the noddle descende fro the brayne and these be har[...] more propre to gyue mouyng than felynge. [De]maunde. Yf the felynge & moeuynge by one [...]ynew alone or by many? Answer. After Ga[lie]n in the fyrste boke of the interyours somtyme they are borne by one synewe alone, and somtyme by many. Demaunde. Howe many parell or lyke synewes be there that without meane spryng and brede of y^e brayne. And howe many pareyle or lyke synewes commeth fro it by meane of the noddle? Answer. Fro the brayne immediatly springeth .vij. pereylles. And .xxx. pareylles come fro it by meane of the nuke that brede behynde by the ende of the lossarn as Haly Abas sayeth in his boke de Regaly dispositione, in y^e seconde sermon of the fore party. Questyons vpon the Anathomy of the strynges [o]r lyens. Demaunde. Of what nature ben the lyens or strynges and wherof brede they? Answer. They be of the nature of synewes howbeit they brede of the bones. Demaunde. Howe many maners of lyens or stryngis be there? Answer. Two. Some bindeth the bones inwarde. And the other byndeth the ioyntes outwarde as Galyen sayeth in the .xii. boke of the vtilite of the partycles in the fyrste Chapytte, of cowplynge of bones that they are comprysed about w^t stronge braunched stryngis. Questyons vpon the Anathomy of the cordes. Demaunde. Of what nature are the corbes? Answer. The strynges ben almoste as all of one nature for both be of the nature of synewes but yet the cordes more than the stryngis. For lyke as the strynges be meane amonge the cordes and the bones so be the cordes meane among y^e strynges & the synewes. Demaunde. Wherof brede the cordes and whens take they felynge and mouynge. Answer. They brede of the muscles and take felynge and mouynge of the synewes wherby the membres are moued. Demaunde. Wherfore is it that whan the cordes withoutforth are cut the membre leseth bowynge and whan they withinforth are cut the membre leseth y^e stretching. Answer. Albeit the cordes be rounde whan they yssue of the muscle, yet do they sprede whan they [s]ome to the ioynt and they are lyens or strynges that are set rounde aboute the sayde ioynt as the cordes about the membre so that they withinforth [...]awe the membre & they withoutforth do stretche it. And whan the one draweth y^e other loseth. And whan they are cutte outwarde the bowynge is . And whan they are cutte inwarde the stret[...]ynge is loste. Questyons vpon the Anathomy vpon the vaynes and arteres. Demaunde. What is a vayne? Answer. It is the place of the blode of nourysshing. De[...]. What is artere? Answer. It is the pla[ce] the spyrytuall blode. Demaunde. Wherin [...]ag[...]e and differ the vaynes fro the arteres. An[swere]. They do agre in that they be of consembla[...] dystroyoucyon throughe all the body that is in [...]rynge of blode. And they dyffer in two thynges. The fyrste appereth by theyr dyffynicyons aforesayd that is y^t the vaynes bereth the nourysshing blode and the arteres the spyrytuall blode. The seconde dyfference betwene theym is taken of the place of their breeding. For the veynes brede of the lyuer, and the arteres of the hert as Galyen sayth in the .xvii. boke of the partycles. Demaunde: Do they separe in any wyse one from the other in the body of mankynde so that the veynes may be without the arteres, and the arteres without the veynes. Answer. In some places the veynes do separe from the arteres. And the arteres be founde w^out veynes. As it is manyfest both in y^e armes and in rethe mirable, howbeit no vayne is founde without artere. Demaunde.

What is the maner of procedyng of the veynes & arteres through the body? Answered. When they go forth of the place of theyr breeding, they renne forkewyse in two partyes the one vpwarde and the other downwarde and yet of them euery partye braunchet[h] and procedeth vnto the last and extreme partyes of y^e body for to nourysshe and gyue lyfe to all th[e] membres thereof. Questyons vpon the Anathomy of the bones. Demaunde. Wherefore are the bones made? Answered. Bycause they shulde be the foundacyon of all the body & susteynyng therof. And therefore they are made harde and strong the better to here the burthen of all the other. Howebeit some of y^e bones are made for the defence of the inwarde membres as the bones of the heed, the brest bone, and the backe bone. Demaunde. Howe many in nombre are all the bones in a body of mankynde. Answered. Auycen sayeth that there is .CC.xlviii. saufe the bone that is called (os laude) wherto the tongue is founded. The whiche bones thou mayst consyder and se by the fygure here before wryten and of whiche partyculer mencyon shal be made, and declared in this present treaty. Demaunde Howe ben the dyuersytyes amonge the bones of the body of mankynde? Answered. They be deuersyfyed in dyuers maners for some bycause of y^e ioynthes are full of maroughes & the other nat. Some are streyght & other coked. Some are lytell and [s]ome byg. And all bones are bygger at the endes [t]han in the myddes by reason of the ioynthes. And [s]ome are enbossed for to entre, and other haue va[y]nytees that receyueth. And some haue both the one and y^e other. And other haue neyther one nor the other. And of them that haue enbossyngis and [...a][...]uytees, some haue them clauelares lyke keyes y^e teth And other ben sacratyles or sawe wyse, as the skull of the heade. And other knotty in eche [...d]e as v[e]na in the thyghe. Other be foueable or [s]olow as the faucylles or forke bones. Other ha[u]e both sortes as the fyngers. And they that haue [n]eyther one nor other ben ioyned solidatiuely, and they that haue the enbossynges and vacuacyons be they that make the ioynthes of whom commeth dyfloracyon and other separacyons. Questyons vpon the Anathomy of the cartylages or grystles. Demaunde. What is cartylage? Answered. It is a substaunce as it were of the kynde of bones, but it is softer or sowpler than the bone is. Demaunde. Wherefore were the cartylages made? Answered. For two reasons. One to fulfill the lacke of the bone as in the palpebres or eye lyddes the nosethyrles, and eares. The seconde to make the better coniunction of the bones with the parties next them, as in thorax and parties of the loynes bycause that the softe substaunce, (as the flesshe and other partyes) be nat hurte by the mouynge of the bones whiche are harde. Questyons vpon the Anathomy of the nayles. Demaunde. Wherefore are the nayles made of the vtter partes of the body? Answered. The better to take holde. Questyons vpon the Anathomy of the heares. Demaunde. Wherefore were the heares made. Answered. For two reasons that is to wyte to encrease beaute and to purge. Here endeth the fyrste partycle of the seconde treaty. And begynneth the seconde ptycle where as is moued & ass[a]ysed certayne questions and difficultees vpon the Anathomy of the membres composed. Demaunde. What is the skull or scawpe of the heade? Answered. It is that parte of the heade that is full of heare wherin the anymal membres are conteyned. Demaunde. Upon the seuen thynges y^t a good Anathomypost ought to consydre on euery menbre which are in the skull or scawpe of the heed. Answered. Fyrst his helpyng appereth by diffinicion abouesayd. The posycyon therof is on the hyghest place of the body. The col[l]ygaunce is notorious for it hath collygaunce w^t the face and the necke, and of it commeth all the partyes of the face & the muscles mouyng the heade be planted in the necke whiche are of .ij. maners. Some be proprely lacertes that brede nyghe the [...r]es tyll they come to the furcules or forkes of brest. The other be commyn in the necke & heed which shall be sayde whan we speke of the necke. The quantyte is more in man than in any other beaste as the brayne is more in man than in any

[o]ther beast. The forme therof is rounde compry[m]ate lyghtly fro one parte to another. And it be[l]oueth that the parte before & behynde be bony [i]s Galyen sayeth in the seconde de regni. And the [o]ther cause of this forme sayth Galien in the .viij. [...]oke of the vtillite of the partycles bycause that it maye be the lesse passyble. The substaunce is bony and full of maroughe as appereth by experyence. The complexyon is colde by meanes of y^e partyes that it is composed of be colde. Demaunde. Of howe many and what partyes is y^e scawpe of the heade composed. Answer. After Auycen in the .ii[i]. boke of his canon and .j. Chapytre it is composed of .x. partyes. That is to wyte .v. conteynyng and v. sondry. The contenauntes that be without, fyrst ben the heares than the lether or skynne & than the flesshe musculous than the great pannycle, and than the brayne panne skulle or crane. And the sondry ensuyng withinforth ben the dura mater and the pio mater and than rethe myrable and than the substaunce of the brayne, & than the bone that is the foundacyon of the brayne & than the rotes of the synewes y^t brede of the brayne whiche shall be spoken of by ordre. Demaunde. Of what substaunce is the great pannacle that is called Per[r]eranium and wherof bredeth it and with what partyes hath it collygaunce? Answer. Fyrste it is a neruous or synewy substaunce. Secondly it is bred of the dura mater. And thyrdly it hath collygaunce with the sayd dura mater and is bounde with it by strynges synewes & veynes that go in and out by y^e commysures or seames of the brayne panne or skull. Demaunde. Is the brayne panne of one bone or of many and for what reason? Answer. It is of many, for it is of .vij. that ioyned togyder and is so ordeyned bycause that yf anoyaunce come to one that it shulde nat come to another and is conioyned with the commysures called sarratylles seames endented as tethe of a sawe to thyntent that the fumositytes or vapours maye haue yssue fro the brayne. Demaunde. Which are the .vij. that the heade is composed of? Answer. The fyrst bone of the fore parte is called Coronall that dureth and compryseth fro the myddes of the orbytauntes vnto the commysure that trauerseth the Crane or skull. And in it is the holes of the eyes & the collatores of the nosethyrilles. The which col[l]atores be departed by the addyng of bones in ma[n]er of a crest of a henne within the whiche is fast[n]ed the cartylages or grystles that deuydeth the [...]osethyrilles. Howbeit it is to wyte that somtyme [t]he coronall is deuyded by a commysure in the myddes of the browe whiche moste often is founde in women, The seconde bone of the heade in the hyn[...]e parte is called Occipitall and is enclosed by a [c]ommysure thwartly in maner of a greke lettre cal[le] Lampda and is harde and ful of perced holes by the whiche descendeth the nuke of the [...]ayne throughe the myddes of the spondylles or [...]dge bones tyll vnto the ende of the backe, The [th]yrde & fourth bone of the heade ben in the myd[l]e of the sydes therof & therefore they hyghe pery[...]sles and be deuyded by a commysure after the [l]ength of the noddle of the heade and by two commysures be led vnto the bones of the eares and are square, The, v, and the, vj. be y^e bones that are called Petrous for they are harde as a [s]tone, Also they be called Scamous or scale for they be conioyned in maner of the scales of a fysshe with the sayd parietalles which are the holes of the eares, and the instrumentis mamylares of y^e emunctures. And be braunched as lyke the bones called peryetalles with y^e commysure (called Lampda) vnto the bones of the temples. The .vij. bone is the bone bafylare that is lyke a wedge that closeth & susteyneth all the sayd bones ouer the rofe & this bone is perced and hath great spongeosyte to purge the grosse superfluytees and is of a grosse substaunce. And these .vij. bones abouesayd are pryncypalles. Howbeit besyde these sayde bones there are yet other small bones lesse pryncypalles that are made for certayne helpes, as is the bone of the crete that deuyde the nosethyrilles within the coronall and the equall bones that are in the face. And the clauall bones y^e are the bones of the eares wherunto are fastened y^e muscles and cordes that couer the lawes.

Demaunde. Howe ought the partyes inwarde of the heade be well seen and knowen at the eye? Answer. Ye ought to deuyde the skull w^t a sawe after the roundenesse. Demaunde. What is the dura mater and pie mater? Answer. They be two pannycles ful of vaynes and arteris wherof one is of the partye of the heade and the other of the party of the brayne that wrappeth and couereth all the substaunce of the brayne. Demaunde. From whens commeth the nourysshynge in to the brayne? Answer. It commeth fro the soft moder by vaynes and arteres that commeth by y^e holes of the inwarde bones and outwarde by the commysures of the superyour bones. Demaunde. Where is the substaunce of the brayne sytuate and of what shape, and of what substaunce and colour is it of? Answer. Fyrste it is situate vnder the fote of hard moder and is rounde in shape & whyte of colour. Demaunde. By what reason are the membres organykes sensytyues and dyuers other double. Answer. Bycause that yf one of them suffred the other shuld nat suffre. Demaunde. Howe many [...]lies hath the brayne after his length and howe [m]any partes in eche ventrycle & howe many and what vertues taketh theyr origyne in eche party? Answer. Fyrste y^e brayne in length hath thre ven that is to wyte the ventrycle afore that & that in the myddes and the anteriour a[n]d meane eche is deuyded in .ii. parties. In eche one vertue taketh his origyne. In the fyrs[t]e of the ventricle before is put y^e common blode. seconde y^e vertue of ymagynacyon. In the ventry[...]le is put the cogitatyfe and racyo[une]. And in the hynder ventrycle is put the vertue or memoratyfe. Demaunde. Whi[...] of these thre ventrycles are the byggest? An[s]were. The formoste is the byggest? The myddle [m]ost the least, & the hyndermost is meane. Demaunde. Hath the blode of y^e other ventrycle any wayes? Answer. Yes, wherthorow all the spirites passe. Demaunde. In whiche of the ventrycles is the wyt of smellynge founded? Answer. In the formost ventrycle where the addyng mamyllares are it is founded. Demaunde. Howe many cowples of sensityfe synewes come fro the brayne and fro whiche parte? Answer. From the anteryour parte commeth .vij. payre of synewes sensityfes whiche go to the eyes to the eares to the stomacke and other menbres. Demaunde. In whiche ventrycle of the brayne ben the places called lacune vernus fornis & ancafernis & the gaudynous flesshe that fulfylleth them? Responce. They be in the meane ventrycle. Demaunde. Where is rethe mirable set, & wherof is it composed? Answer. It is set vnder the pannycles and is onely composed of arteres y^t commeth fro the hert. Demaunde. Where is the vital spirite made anymall & how? Answer. It is made of the sayd arteres that rethe myrable is composed by the labour of y^e complexyon of the brayne? Demaunde. Is y^e nuche any party of y^e brayne? Answer. It semeth to be a party therof, and therefore the sygnes and accidentes are as they of the brayne as Galyen sayeth in the .xi. boke of the vtylyte of the partycles. Demaunde. Wherof bredeth the maroughe of the nuche, and howe? Answer. It bredeth of the hynder parte of the brayne wrapped with two pannycles as the brayne. Demaunde. Howe procedeth the maroughe of the nuche & what synewes brede of it? Answer. It descendeth by the spondyles vnto the ende of the backe & of it bredeth motyfe synewes. Demaunde. What dyseases maye come to the scalpe of the heade? Answer. There maye come woundes appostumes & yll complexyons. Demaunde. What woundes of the scalpe of the heed be moste peryllous? Answer. To penetrate all the skulle but more the touchynge the rymmes but moste of all y^t toucheth the substaunce medulare. Demaunde. Wherefore is it that the operacyons Cyrurgycalles that are done about y^e commysures be suspecte? Answer. For feare lest the dura mater fall nat on the pie mater & that it compryme the brayne. Demaunde. Howe ought the incy[si]ons of the heed be made? Answer. They ought [...]e made accordynge as the heares do procede so procedeth the muscles. Questyons vpon the Anathomy of the face and partyes therof. Demaunde. Whiche are the partyes of the face wherof it is

composed? Answer. The [...]owes the iyes the nosethyrilles the eares the [...]mples the chekes the lawe bone with y^e teth. Demaunde. Wherof is the forheade comsed? Answer. One of the skynne & musculous flesshe [n]or the bone vnderneath is of the coronall. Demaunde. Howe is the forme of the browes made? Answer. Of the bone that is vnder the browe, for [t]he spongeosite of the seconde table of y^e sayd bone is reysed alonge as yf it were double and that maketh the forme of the browes. Demaunde, wherfore are y^e browes made, Answer. They are made for the more beaute and to saue the eyes & therefore the eyes are armed with them, Demaunde, Howe ought incysyons be made in those partyes? Answer. They ought to be made after the length of the body for so procedeth the nuche, and nat after the rugnesse. Demaunde. Wherfore are the eyes made & where are they set? Answer. They are made to be instrumentes of the syght and are set within the bone arbyttall that is a party of the coronall & the bones of the temples. Demaunde. Wherfore are the synewes obtykes perced? Answer. For to be the waye of the spyryte vvsyble. Demaunde. What is the maner that procedeth the obtyke synewes from theyr bredynge vnto the eyes? Answer. It is thus for fyrste they procede from both the sydes one here and another there. And whan they are wⁱn the skull they come and ioyn together and than deuyde them eche from the partye that it is brede & procede nat thwart eche ouer other crosse wyse from the ryght syde to the left syde nor fro the left syde to the ryght syde, as some haue wened. Demaunde. Of howe many vestures or tuncles ben y^e eyes composed? Answer. Of .vij. The fyrste without is called coniunctiua that is thicke and whyte. And it compasseth all the eye except that y^t appereth of that y^t is called cornea and it is bred of the pannycle that couereth the skull that compasseth all the eye suppose that in it self is but thre yet for the dyuersyte of colours that taketh aboute the myddes of the eye that is called yris, it is sayd that there is .vj. wher of the other thre ben of the partye of the brayne the other thre be of the partye withoutforth. The fyrste bredeth of dura mater and in the inwarde party it is called slirotiqua and in the outwarde cornea. The seconde bredeth of pia mater and of the inwarde party it is called Secundina and of the outward party it hyght vnca. The thyrde bredeth of the synew abtyke and of the inwarde party is called rethina and of the outwarde parte on the humour Crystallyn it hyght Aranea. Demaunde. Of howe many humours is the eye composed? Answer Of .iiij. The fyrste that is set in the myddes of the eye is called humour crystallyn by cause it is of colour of Crystall in forme of a hayle done wherin pryneypally is founded the syghte. After this humour so nyghe the brayne is y^e giasy [h]umour that susteyneth & compryseth all the hyn party of y^e humour crystallyne. And both these [hu]mours ben wrapped with pannycle oblyke. The [t]hyrde humour that is on the fore party is called the humour Albugineus. And this humour is be[t]wene the sayde weithe or tuncle called Rethina [t]hat which bredeth of pia mater. The fourth hu[m]our putteth Galyen in the boke of y^e vt[t]lytes of y^e [...]rtycles & laste chapitre y^e is called the humours [...]era lu[...]ida in the region of the blacke of the eye and it is all spyrytuall. Demaunde. Wherof is the eye composed besyde the partyes aforesayd? Answer. Ouer and besyde these foresayd thynges the eye is composed of mouynge synewes descendyng fro the seconde equalyte of synewes commyng downe fro the brayne and the syxe muscles that moue them and fro the vaynes and arteres and the spongeous flesshe that fulfyl the places about the lachrymall & the palpebres neyghbours cartylagynouses with heares determynd closynge the superyour partyes with a muscle & openynge with two transuersall muscles. Demaunde. Of howe many substaunces is the nose, and howe many & what partycles hath euery substaunce? Answer. It is of thre substaunces that is to wyt of substaunce flesshely bony and cartilagynous, The flesshely substaunce hath the skynne and two muscles aboute the hynder parte. The bony substaunce hath two trianguler bones

wherwith the brydge is reysed vp and the foundacyons do ioine on the one parte by the myddes of the length of the nose, and on the other after the dayes. The subcartylagynous is dowble one outwarde that maketh the typ of the nose and the other inwarde deuydeth the nosethyrilles. The nosethyrilles ben two gutters ascendyng vnto the bone of the collatory where as are applicate the addicions mamylares of the brayne where as smell is & descendyng vnto the palays nygh lanulle by the whiche chanel is drawn the fumous vaporacyon to the said places. And the ayre is brethed & respyred to the longes and the brayne is purged of superfluytees. Demaunde. Of what substaunce forme and what place and for what cause were the eares made? Answer. Fyrste they are made of cartylagynous substaunce. Secondly they are holowe of forme. Thyrdly they are set on the petrous bones. And fourthly they be ordeyned to the herynge. Demaunde. Fro whens commeth the herynge to the eares? Answer. It commeth by the streyt holes of the bones petrous by meane of a synewe that commeth to the eares that bredeth of the .v. equalyte of synewes of y^e brayne. Demaunde. Wherof serueth the glabelous flesshe that is vnder the [w]ares? Answer. That they may be clensers of the brayne. Demaunde. Wherof ferueth certayne vaynes that parnygh by that place? Answer. Af[t]er Lanfrankes in tencyon bycause they cary the [l]ater sparmatyke to the ballockes. And therefore yf [t]hey be cut a man is neuer apte to generacyon. Neuerthelesse Galyen holdeth the contrary as [...].ycen recyteth in the treatye of the lygnage. Demaunde. Wherof serue the temples the che[...]. and the lawes? Answer. They be parties of sydes of the face. Demaunde. Wherof are [t]he chekes the temples and the lawes compo[sed]. Answer. Of the musculous flesshe w^t veynes [...].teres and bones. Demaunde. Howe muscles [a]re there in the sayd parties and fro whens come [t]hey? Answer. Fyrste there is .vij. muscles that moue the lyppes & the chekes whiche after Auycen commeth from the forcule of the lower partyes. After Haly there is also .xij. that moue the nether lawes of the whiche some openeth it that come fro the place of the party of y^e eares. And the other close it that descende from aboue in passynge vnder the bayle of the bones of the temples & those are called tymporalles and are ryght noble and very sensyble & therefore theyr hurt is very peryllous by the reason wherof nature hath wrought wysely for to saue then & hath ordeyned y^e bought of the temples bones and the other muscles are made for to grynde and chawe and those procede of the balle of the chekes. And to all these muscles commeth sinewes fro the thyrd pareyle of synewes of the brayne. Demaunde. Commeth there any veynes or arteres with y^e sayd muscles? Answer. Yea, chyefly about the temples, and the corners o[f] the eyes and the lyppes. Demaunde. Howe many bones is there in the partyes abouesayde? Answer. There is many. For fyrst there is .ix. bones of the chekes as Galyen sayth thoughte there appere but two that are ioined vnder the nose. And than is there two parell that are called the bones of the temples the whiche in makynge a party of the orbyttall or emynent pomall that is rounde bryght apples of the chekes compassyng y^e chekes producyng an addycyon rounde aboute the addycyon of the bone petrous, and maketh the bought vnder the whiche be conserued and kepe the muscles of the temples. Than is there y^e nether lawe bones wherof Auycen sayth that y^e nether lawe is composed of two bones whiche be narowe vnder the chynne & there are knit by an onely ioynt, and in the top of euery of the other extremytees in cuttyng is a bowed sarrature which is composed with an addycion very subtylly made and bred there. The bones that come there are fastened w^t strynges. Demaunde. Of howe many partyes is the mouth composed? Answer. Of .v. partycles. The lyppes the tethe the tongue the rooffe and [...].ncl[...]. Demaunde. Fro whens commeth it that the [...]the haue felyng seyng that bones fele nat? An[...].e. Albeit that the tethe be of bony substaunce, [neue]rthelesse a[f]ter Galyen in the .xvj. boke of the of par[...]ey fele by reason of

certayne [sene]wes desce[...] [...]ro the thyrd pareyle of the [sen]jewes of y^e bra[...]at haue there they
 rotes. Demaunde. Howe many tethe ought euery persone to haue? Answer. Some haue mo and some . In
 some is sounde .xxxij.xvj. in euery Iawe. [A]nd in other is founde but .xviij. That is to wyt donales two
 quadruples .viiij. molares and cassalles. And theyr rootes are fyxed within [t]he Iawes of the which some
 hath but one and other two and some thre and other foure. Demaunde. What is the tongue? Answer. It a
 partycle fleshshely softe and spongyous com[p]osed of many synewes strynges veynes and ar[...]es for the
 taste pryncypally ordeyned to speke and vtyle to gouerne y^e meat in the mouth. Demaunde. Whens
 commeth the moeuynge to the tongue and the vertue of taste? Answer. It commeth fro the veynes
 tastynge and moeuynge that commeth fro the .iiij. and .v. pareyle of the synewesof the brayne.
 Demaunde. Howe many muscles commeth to the tongue and fro whens come they? Answer. There
 commeth .ix. that brede of the addycyon called sagittal of the bone named Lapheoides. Demaunde.
 Wherof serueth the glaudynous flessches that are vnder y^e tongue? Answer. They be ordeyned for y^e
 mortyfyng of y^e tongue, for in the sayd flessches is two oryfices wherby the spatele yssueth. And vpon y^e
 sayd flessches y^e tongue is sytuate as vpon a molle hyll. Demaunde. Wherof serueth the encla & the
 amygdales and faulses and where are they sette? Answer. Fyrste they serue to prepare the breth & are set
 behynde the tongue towarde the palays. Demaunde. What is the palays Answer. It is the hyghest place or
 rofe of the mouth. Demaunde. Wher with is the palays of the mouth couered with his partyes? Answer.
 With a pannycle that bredeth out of the insyde of the stomacke. Questyons vpon the Anathomy of the
 necke & partyes of the backe. Demaunde. Wherefore is the necke made? Answer. It is chyefly made for
 the loue of the Trachea arteryall and other party[c]ulles mountynge and descendynge by it. Demaunde.
 Howe many partyes is there that constytueth and composeth the necke? Answer. Fyue, The skynne the
 flesshe the muscles the strynges and the bones. Demaunde. What partyes are conteyned in the necke
 Answer. Foure, Trachea Arterea Ysophagus called Meri. The wesaunt the gulle and the throte. And also
 there is the synewes the veynes the arteres and porcyon of the maroughe of the backe. Demaunde. Howe
 may the necke be wel [d]euyded to se the Anathomy parfytely? Answer. It ought to be deuided after the
 length and at the [...]e parte. And there shall appere Trachea arte[...] that is the waye of the breth in
 procedynge by [...]sion to the longes goyng fro it to the throte gulle or en[...]la. Demaunde. Wherof is
 [...]hea arter[y]a composed? Answer. Of dyuers cartylag[y]nous that are nat parfytely of [...]rty of Meri
 wherin they are conioyned or[...]tly with a p[...]y strong & lyght. Demaunde. [Th]at is the M[e]ri is it
 s[...]? Answer. Meri otherw[y]s[e] [...]hagus is y^e way mete & this [...]of the throte thyrieth the m[...]
 vnto y^e [...]omacke. [De]maunde. Wherof is the Me[ri] composed? . It is composed of two webbes
 wonen [...]h[...]des. Demaunde. With what membre the me[r]i collygaunce[s]. Answer. Fyrste it hath
 [...]gaunce with the skynne o[f] the mouth bycause his webbe withinforth is conteyned with the [...]yd
 pellicule. Secondly it hath collygaunce with [t]he bely by his outwarde pellycle that is fleshshely whiche is
 conteyned with the pellycles of the bely. Demaunde. Where is the wesaunt set? Answer. Upon the two
 wayes of the partyes of y^e mouthe. Demaunde, What is the wesaunt? Answer. It is a cartylagynous
 grystled partycle created and fourmed for to be iustrument of y^e voyce and the keye of Trachea arteria in
 the tyme of transgluttyng by meane of an addycion called lingue forme that is one of his partyes,
 Demaunde, Wherof is the wesaunt composed? Answer. Of the grystles, About the sayde wesaunt is
 planted, ix, muscles mouynge all the holle of eche party in mountynge and descendyng, & makynge the
 other moeuementes as Galyen clerely sheweth in his boke of the voyce & of clere moeuementes.

Demaunde, What veynes and arteres be they that passeth by the partyes of the necke that are to be noted at the Anathomy of the necke? Answer, They be the greate veynes & arteres that are led by the furculles in styenge vpwarde y^e sydes of the necke to the superyour partyes whiche be called Guy degi and popleticis depe & suberall, Thyneysyon of the whiche be very peryllous, The Cyrurgyen ought to be ryght well ware, Demaunde, What is rydge? Answer, Spondyle is a bone (that constytueth the backe) bored in the myddes wherby the nuche passeth and hath in the rybbes that the synewes do yssue many addycyons mountynge and descendynge outwardly makynge the chyne of the backe, Demaunde, What is the backe? Answer, The backe is lyke y^e kele of a shyp conteynyng fro the hyndre parte of the heed vnto the necke composed of dyuers spondyles successyuely to defende the nawpe, Demaunde, Howe many spondyles are there in al y^e backe. Answer. There is in all and by all .xxx. The which to declare it is to be noted that as Galyen sayth in the .xij. & .xiiij. boke o[f] the ty[...]lyte of the partycles y^e in the backe is fo[...]e great parties that is the necke the shol[...]s the r[a]lynes and the bone that some call (the holy bone) & some the brode bone or sholdre blade. And in the necke be .vij. spondyles. And in the shol[...]s or backe there is .xij.. In the raynes .iiij. then and by all there be .xxij. very spondyles. And [...]s[...]de these there be .iiij. in the holy bone and .iiij. [t]he rumpe which be nat very spondyles, but sy[...]tudynarres, & as vycares. For the thre fyrste longe and byg and haue none addycyons nor [...]es in the rybbes but before they be moch gry[...]ied specyally the last and brede sklenderwyse as . Thus the some in all and by all as well of as nat very there be .xxx. spondyles. De[maun]de. Howe many payres of synewes yssue of [...]oddle and in sunme of all y^e brayne? Answer. [...]h[...]e bre[t]eth of y^e noddle .xxx. payres of synewes there bredeth a payre of sinewes on euery spon . And besyde all them there bredeth a synewe [...]out felow by the ende of lostary. And thus on party of the noddle there bredeth .xxx. payres synewes and one alone. And on the fore partye [...]redeth .vij. payre of synewes and thus in some in all and by al bredeth of the brayne .xxxvij. payres of synewes. Demaunde. What be the loynes and wherof were they? Answer. The loynes are musculous flessches lyeng in the sydes of the spondyles of the backe that serue as hacoytes of the synewes. Demaunde. Wherof serueth a thycke pannycle as that which is vpon the skul and on the other bones that are on the spondyles? Answer. They be to bynde the spondyles togyther. Demaunde. Howe many maners of flesshe are founde in y^e body of mankynde? Answer. Thre, the flesshe of y^e loynes proprely called cerniees, lyenge next to the spondyles as it is sayde. And the musculous flessches of which is made the tenautes moeuyng the heade and the necke whiche are .xx. in nombre as Galyen sayth and in the flesshe that fulfyll the empty places. Demaunde. Howe many stryngis be there that holdeth the heed with the necke and the sholders? Answer. There be dyuers, Fyrst the fore parte where as be two byg ones that descendeth fro vnder the eares vnto the furcule, And in the hynder perte there is yet other greater y^t bindeth it to the spondiles of the backe & the sydes. There be other that descende to the sholdres in such dysposycyon that the tenaunt muscles and the strynges ben aboute the necke that maketh the heade bowe and y^e necke, & to lyft vp and tourne aboute, for without them it is nat possyble to make artyculacyon or mouyng, Demaunde. What dyseases may the necke suffre? Answer. Dyuers, as wel in it selfe as in conteyned places, as woundes, dislocacyons out of ioynt and appostumes which in it be all peryllous, Demaunde. Howe ought incysyons be made in the necke? Answer. All alonge for so goeth his partyes. Questyons vpon the Anathomy of the sholdres & the great handes. It is fyrste to be noted that a sholdre homoplate & the humere is all one, Demaunde. Wherfore be y^e handes made? Answer. To take and defende the organes and for that cause man is garnyssed with handes in steade of weapons, Demaunde.

Wherof ben composed the sholdres and y^e handes? Answered. They are made of skynne flesshe of veynes of arteres of synewes, of mus[c]les of cordes of strynges of pannicles of gristles, and bones, Demande. Whens commeth the mus[sc]les and cordes that moue the armes and howe are they sytuat? Answered. They descende fro the and passe by the brest and compryse and be [...]peth all the ioynt of the bone called vlna or of addycyon & are planted therin, Demande. whens commeth the synewes that moue the [...]oldres and the armes? Answered. Fro the noddle passe thorough the necke, Demande. From [...]e[...]s commeth theyr veynes & arteres? Answered. [T]hey are sent fro the arme, Demande. Howe [m]any bones are in y^e sholdre? Answered. Two, the [...]one sholdre blade and the bone furculare, The bone spatulare yssueth fro the party of the backe and is lyke a pal for it is large and thynne fro the backe parte with an apparence holden by y^e myddes. A[n]d at the party of the ioynte it is somewhat longe and rounde in maner of a helue with thre addycyons in the ende, The fyrste in the myddes that receyueth the ende of vlna in a socket, The seconde in the heyght is croked, and sharpe in maner of a rauens byll, And the thyrde is on the lefte syde outward more croked lyke an anker. The bone furculare commeth from the partye of the brest and is rounde and styfe in the holownes of the superyour party of the brest bone & hath two braunches one goeth to one sholdre & another to another sholdre and byndeth & closeth these two addycyons called Rostralles bycause the said myddle socket holde y^e ende of vlna more styfly in y^e ioynte, Demande. Be the addicions abouesayd other bones than the bone of y^e sholdre? Answered. No, after Lanfranke and Henry but are substancyall party of it as it appereth by experyence. And also Galyen in the .xiiij. boke of the vtilite of partycles the seconde and twelwe chapytte where he sayeth that the homoplate towcheth the extremittees of the sholdres, and ioyneth and couereth togyder in maner of a coueryng which is garde of all theyr artyculacyon as touchynge the sholdre & ought to defende the vpper ende of the arme that it go nat out of his place. Demande. What collygaunce hath the bone furculare? Answered. It hath thre great collygaunces that goeth from the ende of the sholdre vnto vlna & rounde about is bounde and strayned with great tenautes that brede of the great muscels that commeth from the brest, & of the sholdre plante in y^e bone that styreth it of the whiche some do stretche vpwarde and the other downward, and y^e other two conuerse all about it. Demande. In what partye of the sholdre is it where as is assygned the memory of the hert? Answered. It is assygned in the partye that is vnder the ioynt that is vnder the arme pytte that is fylled with glaudynous flesshe Demande. In how many parties is the arme deuysed that is called y^e great hande? Answered. After Galyen in the seconde boke of the vtylyte of partycles & seconde chapytte it is deuysed in thre great partyes. One is called vlna the other lytel arme, and the thyrde the surall hande. Demande. In howe many and what particles is the great hande composed? Answered. Of suche partycles as the other that is of skynne, of flesshe, of arteres, and veynes. Demande. Howe many and what veynes is founde apperyng in the arme? Answered. Dyuers the which after the braunches that they make and the [...]tending by y^e arme are diuersified, for although [t]hat they in makynge of braunches they come vn[de]r the arme pyttes yet agaynwarde they ramy[...] in to two partyes. One parte goeth on the out of the arme and the other on y^e insyde. That the outsyde yet brauncheth more and maketh braunche ouer the sholdre in to the heade. And [t]he other descendeth and maketh two braunches of the whiche one is deuysed on the outsyde of the arme in dyuers partes and is called the corde of the arme b[ut] the other parte descendeth to y^e parte of the arme & appereth in the folde of the elbow and there is called Cephalycia and fro that place descendeth in to the hande and appereth betwene the thombe and the fore fynger and there it is called cephalica ocularis. And that party

that was deuyded vnder the arme pyttis that goeth in to the inwarde party in descending appereth within the bought of the elbowe and is called Basylyc. And fro that place descendeth in to the hande and appereth betwene the myddle fynger and his neyghbour and hygh Saluatell. And of these two sayd veynes that are in the bought of y^e elbow is made a braunche that appereth in the myddes of those ij. & is called Mediana. And dyuers other veynes are founde in the arme that for theyr smalnes the Cyrurgyen hath lytell a do w^t them. Demaunde. Howe many notable synewes come in to y^e arme and wherby, and wherof brede they? Answer. By the spondyles of y^e necke descendeth in to eche arme foure notable synewes that brede of the noddle one aboue, and another beneth, one behynde, and another before. Questyons vpon the Anathomy of the great hande. Demaunde, Howe many bones are in y^e fyrste parte of the great hande that is named vlna or adiutor & howe it is figured? Answer. There is but one alone full of maroughe and is rounde of fygure at both endes, for at the vpper ende it is rounde as one onely entrynge in to the socket or pyt of y^e sholdre & at the nether ende the roundnes is double in the myddes in forme of a pouilly. And in the inwarde parte is a lytell apparence and in the outwarde parte backwarde is a concauyte wherin is receyued the ende of the addicyon lyke a beke of a rauin, in to y^e byggest socket, what tyme that the arme is reysed in suche maner that the sayde roundelles entre in to the holownesse of the sockettis, And whan the arme is stretched & bowed it commeth and maketh the ioynt of the elbowe. Demaunde. Howe many bones is in the lytell and howe be they figured? Answer. There [t]e two and hyght focylls that is to wyt the byg[ge]st that is in the arme and is greater and lon[g]er than the other for the addicyon that it hath that resembleth a beke and it goeth toward the fynger, In makynge outwarde an enbossed [te]peraunce in maner of a wedge, The lesser goth [re]warde and goeth fro the bought of the elbowe the hande toward the thombe lyke as it [...]oyne to it, And in both the endes of y^e same [...]yttes receyuyng the roundnesses, Towarde [...]owe ben receyued y^e roundnesses graduales adiutory with the addicyon that is lyke a of the sayde elbowe, And toward the hande roundnesses of the bones of the hande & they both bygger toward the endes bycause of the [...]oynture and sklender toward the myddes and longer y^e synewes and the muscles, Demaunde. Howe many coniunction of bone be in the hande and howe many bones in euery coniunction and howe they are figured & formed? Answer. There be thre coniunctions of bone in the hande. In the fyrste coniunction be thre and in the seconde coniunction foure. And of this nombre Auycen gyueth his reason bycause y^t the fyrste coniunction toucheth the focyll bones as holdynge all to one bone and therefore there maye nat so many holde. In the seconde coniunction there be foure, bycause there myghte be no mo for the space of thre in the fyrste coniunction toward the focyll bones. And the bones of these two coniunctions be short, and these two coniunctions of bones be called the recepte of the hande. In the thyrde coniunction be foure bones longer than the other. And that coniunction is called the brest of the hande or pecten. Howbeit Auycen putteth to these thre coniunction of bones one bone mo which is added to the two fyrste coniunctions of the recept and was create for to defende the synew of the brest of the hande. And this dyuysion of bones may be seen in the fygure that was figured afore. Demaunde. Howe many fyngers is there in the hande, and howe many bones in euery fynger? Answer. There be .v. fyngers & in euery fynger thre bones. And thus in all the fyngers is but .xv. bones. By the whiche thynges aforesayde it may be knowen that in all the great is but .xxix. bones. That is .xv. in y^e fyngers .xj. in the lytell hande .ij. in the arme and one in the adiutor. Demaunde. Which bones out of ioynt of the abouesayd menbres ben most easyest to set in agayne & whiche be most dyffycyle? Answer. The moste diffycyle is the ioynt of y^e elbow and the easyest is the sholdre ioynste & the meane is that of

the hande. Questyons vpon the Anathomy of the brest. Demaunde. What is the brest? Answered, It is the arke of the spyrytual membres. Demaunde. Of howe many partes is the Thorax and brest composed? Answered. Of two, for some be conteyned and the other conteynyng. Demaunde. Howe many partes of conteynynges, and of conteyned ben there in the brest & what be they? Answered. Fyrste there be foure conteynyngis the skyn, the flesshe musculous, the pappes, and the bones. And in the partyes conteyned there be .viij. That are the hert, the longes, the pannycles, the stryngis, the veynes, the arteres, the Mery of Ysophagus. Demaunde. Wherof be the pappes composed and with what membres haue they collygaunce? Answered. They be composed of whyte glaudenous [...]esshe, and with veynes, arteres, & synewes. Ther[...]re haue they collygaunce w^t the herte, the lyuer, [a]nd the brayne, and with the genytall membres. Questyons vpon the Anathomy of the muscles of the brest. Demaunde. Howe many muscles be there in the brest? Answered, After Auycen there be. lxxxx. of which some are commune at y^e necke other at the sholdres other at the mydryfe other at the rybbes other at the backe & proprely other ar at the brest. Demaunde, In howe many and what maners ben the bones of the brest deuyded? Answered. In thre maners some be in the fore parte other in the hyndre parte, & the other at the sydes. Demaunde. Howe many bones be in the fore parte of the brest? Answered. Seuē, after as there be .vij. rybbes that ioine to them of whiche that vpwarde is nyghe the throte, that is receyued in the fote of the bone of the furcule aforesaid & that belowe in the furcule is an addycyon cartylagynous called Ency forme. Demaunde, Howe many bones are in the partye behynde the brest. Answered .xj. that are spondyles wherby the nuche passeth wherof bredeth .xij. payres of synewes, bryngyng felynge and moeuyng to the muscles aforesayd. Demaunde. Howe many bones be on eche syde of the brest? Answered. There be .xij. that haue .xij. rybbes coniunct to y^e .xij. spondyles aboue sayde. Of the whiche .xij. rybbes there be .vij. very, and .v. false or lyengly, for they be nat complete as the other be aforesayde. Questyons vpon the partyes conteyned within the brest. Demaunde. Howe is the herte situate within the brest? Answered. Bycause that the hert is the begynnyng of lyfe and is within the body as kyng and lorde of all the other membres of whom all the other membres do take influence. And for that cause it is set in the myddes of the brest nat declynyng to one parte more than to another, as Galyen sayth in his .vj. boke of the vtylyte of partycles. And this is certainly vnderstande, for from the nether parte it is enclyned a lytell toward the left syde to gyue place to the lyuer that is on the ryght syde aboue the herte. And as to the vpper parte it declyneth somewhat toward y^e ryght syde for to gyue rowme to the arteres. Demaunde. Of what shape is the herte? Answered. It is of the lykenes of a pyne apple for the narowe parte is towardes the nether partyes of the body. And the larger parte where as the rootes are holdeth to the vpwarde partes. Demaunde. Of what substaunce is the hert? Answered. It is of a harde substaunce and lacertous. Demaunde. Howe many celles is there in the hert? Answered. Thre, that is the ryght and the left betwene the sayd bentrycles is a pyt wherin the nourysshyng blode commyng fro the lyuer is dygered and made spyrytuall that is sent by the arteres to all the body and chyefly to all the pryncypall membres as to the brayne where by dygestyon is take another [n]ature, & is made anymall. And in the lyuer wher in it is made naturall. And to the ballocke where it is made genytall and to all the other membres cause lyfe. And by the ryght ventrycle the braunche of the veyne mountyng that bereth the blode fro the lyuer vpwarde and yssueth of it selfe, of the whiche veyne the one parte called veyne arteryall goth to nourysshe the lunges. And y^e rest in mountyng maketh sondry braunches vnto the hynder partyes as is abouesayd. And fro the left ventrycle of the herte yssueth y^e veyne called pulsatile fro the which one parte goth to the lunges that there is called

Arteria venalis that bereth y^e capenous vapours fro the lunges and introduceth the ayre for to coole the herte. And the other parte maketh branches vpwarde and downwarde as is abouesayd of the other veynes. And ouer the thre oryfyces of the sayde thre ventrycles there be thre pellycles that open and close the entrynge of the blode and of y^e spyryte in conuenable tyme. Demaunde. Howe many eares hath the hert, and howe are they set and wherfore serue they? Answer. The hert hath two eares, on eche syde one set vpon the sayde laterall ventrycles y^t serue for to let the ayre in and out that is appareylled for it fro y^e lunges. Demaunde. Wherof serueth a cartilaginous bone that is in y^e herte? Answer. It is to stay and strength it. Demaunde. Wherof is the substaunce of the coueryng of the herte? Answer. It is called precordi[um]m, & is of a skynny substaunce wherto descendeth synewes as vnto other inwarde intraylles. Demaunde. With what membre hath the hert collygaunce? Answer. With all menbres and specyally w^t the lunges, wherwith it is bounde. And with the mediastinum wherwith it is steyed and strengthened. Demaunde. May the herte sustayne dysease longe? Answer. No, for his great dygnyte. Questyons vpon the Anathomy of the lunges. Demaunde. Of what substaunce is y^e lunges. Answer. Of a softe substaunce, clere, spongeous, and whyte. Demaunde. Howe many maner of vesselles be conioyned by the substaunce of the lunges? Answer. Thre, that is the braunche of the vayne arteryall that bredeth (as it is sayde) of the ryght ventrycle of the hert. And the braunche of the vayne pulsatyle that commeth fro the left syde. And the branches of Trachea arteria that bereth the ayre to the herte. Demaunde. Howe ben these thre maners of vesselles set within the lunges? Answer. They be deuyded ouer all y^e substaunce by small ones and lesse, vnto a very small quantite. Demaunde. Howe many lobbes hath the lunges? Answer. .v. Thre in the ryght party and two in the lefte. Demaunde. Howe many pan[a]tycles be there in y^e brest? Answer. Thre. The fyrste couereth inwarde all the ribbes, and that is called pleura. The seconde hyght Mediastuum [a]nd that deuydeth all the brest in the ryght party and left. And the thyrd is called the mydryfe that [...nydeth all the spyritual menbres from the nutry [...yfes and is composed of pleura, & of the cyphac, and of the pannycle that hyght Cordorus that is of synewes sent to it from the spondyles, and the flesshely partyes chyefly next the rybbes, that proprely is a muscle, the operacyon wherof serueth to put out superfluytees, as Galyen sayth. Questyons vpon the Anathomy of the bely and partyes therof. It is to be noted vpon these thynges that folowe, that the bely may be taken for two thynges. Fyrste for the stomacke. Secondly for the region of all nutrytyfe menbres and so it is taken here. Demaunde. What is the holle posycyon of the bely? Answer. It is vndre the region of the spyrytuall menbres so that the superyour parte that is at y^e entryng called precordyal & towarde y^e forcule, & the partye that is called stomacle, a thre fyngers nygh the nauyl downwarde and the party vmbelycall synual is fro y^e nauyll downwarde and the ypocondres be in the syde vnder y^e rybbes. And the parties called yliac are ouer the haunches. Demaunde, To se the Anathomy very well in the partyes of the bely, as well the conteynnynges as the contynued howe ought the Cyrurgyen to open it? Answer. He ought to open it alonge and ouerthwart this way and that that he may the lyghtlyer se the partyes afore (that be the Myrac and Cyphac) as behynde where as are the .v. spondyles of the kydneyes, and the flesshe ouer them. Demaunde. Of howe many and what & howe many partes is the myrac composed. Answer. It is composed of .iiij. partes. Of the skynne, of the grease, of the flesshy pannycle, and of the muscles, of whom yssueth the cordes. Demaunde. What is Cyphac? Answer. It is a pannycle onely that is added to the Myrac. Demaunde. Howe many and what be the partyes conteyned in the bely? Answer. .vij. Fyrste the ars gut, secondly the guttes, thyrdly the stomacke, than y^e lyuer, than the mylt, and the kydneyes. Demaunde.

Wherefore are the muscles of the bely fourmed? Answered. For two reasons. The fyrste is to strength it. The seconde to expell the superfluytees of the membres. Demaunde. Howe many muscles be in the bely? Answered. After Galyen in the .iiij. boke of the vtylyte of partycles and in the .vij. of his Terapentycke [t]here be, viij, That are two all alonge commyng fro the boucler of the stomacke vnto the share bone and two ouerthwart the backe, and entrelace by the myddes of the belye, And, iiij, from the angles transuersalles of the which two brede in the rybbes of the ryght syde, and go to the left syde, and of the hakle bones, and of the share & the other two of the lefte syde, & go to the ryght syde of the sayd [b]ones in crossynge by the myddle of the bely. Demaunde. What is [t]he perytoneon and wher[o]f is it dryuate? of what substaunce is it & wher[fo]re serueth it? Answered. It is sytuate vnder the [s]ayde muscles, and it so named of Pery that is to [an]y rounde aboute, and of Tonnes that is to say [a]ntestynon for it goeth rounde aboute the nutry[t]yfe partyes & is a lytell pannycle, synewy, subtyll, and harde and serueth to kepe that the muscles compryse nat the naturall membres and it maye be enlarged, and comprymate in maner of other membres and that it be nat lyghtly broken and that the thynges conteyned in it yssue nat as it happeneth to them y^t are greued therwith and it is proprely called Cyphac. Demaunde. What woundes of [t]he bely are moste peryllous and moste dyfficile to heale, eyther they of the myddes of the bely or they in the sydes? Answered. They in the myddes of the bely bycause the partyes there ben more treatable & the bowelles there come sooner out, than by other places, Demaunde. What is Epypleon and wherof is it composed? Answered. It is a pannycle that couereth and wrappeth the stomacke aboute and is named of epi that is to say ouer all or aboute, or pleon, that is to appere, for it pereth ouer all the stomacke and is composed of two tunycles, the one thycke, and the other thynne, layde one on another, & of dyuers arteres, veynes, and synewes, and great quantyte of fat and is called ars gut. Demaunde. Wherof bredeth the pypelon & wherefore serueth it? Answered, It bredeth of the partyes that be vnder y^e backe and of the Cyphac, & it is ordeyned for to rechaufe the partyes nexte therto, as Galyen sayeth in the fourth boke of the vtylyte of partycles & .xiiij. chapytre. Demaunde. May the pypelon holde longe whan it is hurte without great alteracyon and howe ought it to be dressed? Answered, No, but it is lyghtly altered & chaunged for the fatnesse, and ought to be bounde and nat cut for feare of flux of blode, Demaunde. Of howe many skynnes or tunycles are the bowels composed and wherefore serue they? Answered They be composed of two tunycles and serue fyrste to make dygestyon and to brynge the Chilus to the lyuer by meanes of the veynes mescreykes & to put out the fylthy superfluytees. Demaunde. How many guttis be there. Answered. Syxe althoughe that they be ioyned togyther yet haue they dyuers offyces & dyuers shapes wherby they are deuyded. Of the whiche syxe guttes thre be sklendre & thre byg. The fyrste of the thre sklendre is named Portanarium or Duodenum. The seconde is called Ieiunium. And the thyrde is called Subtile. Of the thre byg the fyrste hyght Esac the seconde Colon & the thyrde is the ars gut called Longaon, or y^e streyght gut. Demaunde. Be the sayd guttes garnysshed with muscles? Answered. Yes for the gouernynge of the superfluytees that they receyue & put out. Demaunde, What is the maner to make incysion for to knowe, dyscerne, and se well euery gutte by the Anathomy? Answered. Fyrste it behoueth to begyn [a]t the ars gut that is called longaum or rectum and bycause that y^e fylthy mater shall nat let the [...]ynde it at the vpper ende, and let it be two endes, and be cut in the myddes of the lygature and let the nether parte be left & procede in dyscaruynge almoste vnto yleone where as the gut begynneth that hyght Collon, which is byg with lytel celles wherin the fecall mater taketh forme and is two fadom longe, or there aboute & declyneth moche towarde the left kydney & in mountyng towarde the mylt & reuolueth of

y^e party commyng towarde the ryght syde of the stomacke, vnder the pannycle of the lyuer, where receyueth a porcyon of the humour coloryke which moueth it to put out the superfluytees, and in the ranclyng it descendeth to the ryght kydney at the hyndre ende of the haunche there as begynneth the gutte called one eye, or the bag for it semeth y^t it hath but one eye although it haue two after y^e very trouthe. One wherat the fylthy mater and another that it goeth out but bycause that they be very nere it semeth y^t it hath but one and this gut is very shorte for it is but of a handfull longe. And bycause of the nyghnesse of the haunches and bycause it is nat well bounde it descendeth sooner in to y^e ballocke coddess, whan a man is greued or broken than any other gutte and of this gut is bred y^e sklendre gut that hyght Ylion the which Ylion is well .vij. or .viij. fadoms longe & it hath many reuolucyons in all y^e backe. After this is the gut that hyght Ieiuniun, bycause it is alwayes emptye for the greate multytude of messerayke veynes that be aboute it contynually suckynge it & for the colour that is sene betwene it and Portanarium that incyteth it contynually to expell that that is in it. And to this gut is conteyned the gut called Duodeum whiche is so called bycause it is .xij. fyngers of lengthe after the whiche foloweth y^e gut called Portanarium, so called by his offyce, for it is the nether gate of the stomacke, as Mery is the vpper gate. Demaunde. Wherefore is it y^t the woundes made in the small guttes neuer heale, & yet those of the great guttes heale somtyme? Answere, Bycause that the small guttes be full of pannycles & the great guttes are ful of flesshe. Demaunde. Howe may the Mezentereon be knowen by Anathomy? Answere. To se the Mezentereon very well thou ought to bynde the guttes towarde the gut Portanarium and cut in maner as the longaon is and than put all the guttes out. Demaunde, Wherof is Mezentereon composed, and howe is it set? Answere. Fyrste it is composed of veynes messeraykes innumerable branched fro the veyne of the lyuer called Portanaria and is couered & garnysht before with pannycles and strynges y^t conioyne the bowelles with the backe and with glandynous grease and is commonly called seame which whan it is out ye may clerely se the Anathomy of the stomacke. Demaunde. What is the stomacke. Answere. It is the organ of the fyrste digestion engendreth the chyl[...]. Demaunde. What is the place of the stomacke within the body? Answere. After Galyen in the .iiij. boke of the vtylyte of partycles and fyrste chapytre. The place of the stomacke is in the myddes of the body bycause it is the common almoner almes dealer and preparer to all the membres of the body natwithstandynge that the superyour party therof somewhat enclyneth vnto the left syde towarde the .xij. spondyles where as the dyafragma endeth and the lower parte declyneth to the ryght. Demaunde. What menbres haue be made for to serue the stomacke? Answere. The fyrste is the mouthe for in lykewyse as the veynes Mezeryalles be preparatyues of the seconde dygestyon that is done in the lyuer lykewyse is the mouthe of the stomacke. For as Auycen sayth y^e chawynge acquyreth some digestion. Afterwarde serueth the Mery and ysophagus of the vpwarde partyes in bryngynge the meate in to the stomacke. And of the nether partyes serueth y^e guttes, & the veynes Mezeraycalles to put forth the noyfull thynges and dystribute the profytable thynges dygested and chylozed in it. Demaunde. Wherof serueth the stomacke? Answere. Proprely it serueth to dygest by his heate of his owne carnosyte in the botome therof, as Auycen sayeth, and by the heates gotten of the next partyes for it hath the lyuer on the ryght syde that warmeth and the mylt on the left syde that trauerseth it w^t his grease & wayes wherby it sendeth the humour melencolyke to the stomacke for to prouoke it appetyte. And aboue i[f] is the hert with the arteres that causeth lyfe and the brayne that sendeth it a braunche of synewes from the vpwarde partyes gyuyng to it felynge. Also from the partye of the backe and the veynes called kyllis, and adorthy, and dyuers other strynges descendynge fro it wherby it is

bounde with the spondyles of the reynes. Demaunde. With howe many skynnes is the stomacke couered? Answered. With two, one is fleshy that is outwarde, and the other is synewy that is inwarde. Demaunde. Of what viles is the stomacke composed. Answered, Of longytudynalles to drawe in & transuersalles to reteyne & latitudinalles to put forth. Demaunde. Of what shape is the stomacke? Answered. It is rounde endlong in maner of concorde suche wyse curbed that his entrynges be hygher than his body bycause y^e yssue of the thynges that it conteyneth be made inducly. Demaunde. Of what quantyte is the stomacke? Answered. It is manyfest for commonly it holdeth .ij. or .iij. pyntes. Demaunde. What is the lyuer? Answered. It is the organe of the seconde dygestion engendrynge blode. Demaunde. Howe or where is the lyuer set in the body of mankynde? and of what fygure is it? Answered. Fyrste it is set vndre the bought of the rybbes & is of fygure as of the moone curbed towarde the rybbes and is holowe towarde the stomacke with .v. lappes or pannulles in maner of handes comprysynge the stomacke. Demaunde. whens commeth the felynge to the lyuer? Answered. It commeth by a pannycle that couereth it to which commeth a synewe for his felynge. Demaunde. With what membres hath the lyuer collygaunce? Answered, Fyrste w^t the dyafragma by his pannycle y^t couereth it which byndeth it to y^e diafragma w^t strong strynges. And also it hath colligaunce w^t the backe, w^t the stomacke, with y^e guttes, w^t the hert, and all the other menbres. Demaunde. Of what substaunce is y^e lyuer. Answered. It is the substaunce of flesshe and red as quayl[...]ed blode, entrelaced all about with veynes and arteres. Demaunde. Wherof serueth a great veyne that commeth out of the holownes of the lyuer called Portanaria? Answered. It is bycause that all the succosyte that chyllus draweth by his branches it transmytteth and dystributeth by all the lyuer for that veyne is deuyded Mezeraycalles innumerable that are planted in the stomacke and in the bowelles for to drawe & bere away the said succosite fro the lyuer. Demaunde. Of what party of the lyuer yssueth a great veyne and holow called killis and wherof serueth it? Answered, It yssueth out of the bosse of the lyuer and serueth to dystribute all the blode that is engendred within the lyuer ouer all the body for that veyne yssueth out of the lyuer, and maketh braunches vpwarde & downwarde through all the body wherby it dealeth the sayde blode to euery membre to fede it. Demaunde. What are the medycynes y^t oughte to be applyed on y^e lyuer? Answered. That for the substaunce seldom dyssoluable lyghtly it oughte to haue medycyne somewhat styptyke. Demaunde. What is y^e galle? Answered. It is a bag or bladder pannyculous set in the holownes of the lyuer aboute the meane pannulle for to receyue the coleryke superfluyte. Demaunde. Howe is testis fellis composed? Answered. It hath two entrynges or neckes betwene whiche is a dystaunce, wherof one is on the ryght syde that adresseseth towarde the myddes of the lyuer to receyue the colere. The other is at the botome of the stomacke & in the bowelles to sende them colere for the vtylytees aforesayde. Demaunde. Of what quantyte is the galle? Answered. It conteyneth peradventure a glasse full or the mountenaunce of a fyoyle. Demaunde. What dyseases suffreth it commonly? and howe be they knowen? Answered. It suffreth opylacyons aswell in the necke propre, as in the necke commune. And the dysease knowen whan the stoppynge is in the necke commune bycause that the colere may nat yssue out of y^e lyuer nor the blode may nat clense but abyde with the blode and maketh the vryne yelow, & all the body. And it is knowen whan it is in the necke propre bycause that the helpynges do fayle, that it was wonte to haue & euen accydent foloweth as Ga[ly]en sayth in the .vij. boke of the dysease & the accydent, and in the .v. of the interiours. Demaunde. What is the mylte? Answered. It is the receyuer of melancolyke superfluite engendred in y^e lyuer. Demaunde. What is the situacion of the mylt in the body of mankynde? Answered. It is of the left syde embracyng trauersly the stomacke. Demaunde.

Of what substaunce is the mylt? Answer. It is of soft substaunce & spongyous, blacker then the lyuer. Demaunde. Of what shape is y^e mylt? Answer. Of a longe fygure in maner of foure corners. Demaunde. With what membres hath the mylt collygaunce? Answer. It is bounde by his pannycle with the rybbes and of his bosse and concauyte it hath collygacyon with the stomacke, and with the ars gut. Demaunde. Wherin serueth the mylt in the body of mankynde? Answer. It serueth by these two wayes for by one way it draweth the superfluyte melancolyke of the lyuer. And by the other waye it sendeth it to the oryfyce of the stomacke, for the causes abouesayde. Demaunde. What maner dysease doth y^e mylt suffre? Answer. It doth suffre opylacyons bycause that his ma[n]er is grosse wherby the sayde opylacyons folowe other inconuenyentes for whan it fayleth to clense the lyuer of the sayd superfluytees the body is faynt and yll coloured. And whan it fayleth to transuyt the stomacke nat sendynge y^t it ought to do the appetite wasteth or is taken away. Demaunde. What solucyons of contynuyte be moste peryllous in them of y^e lyuer, or them of the mylt and whiche of both suffreth strongest medycynes? Answer. The solucyons of contynuyte be more daungerous in the lyuer than in the mylt? and the mylt suffreth stronger medycyns then the lyuer & purgeth chyefly by the bely. Demaunde. What thynges are the kydnees & howe many are in the body of man and of what substaunce are they? Answer. They are partycles ordeyned to clense the blode of haynous superfluytees and there be two of them on euery syde one, and are of the substaunne of harde flesshe. Demaunde. Of what shape are they? Answer. They are long of shape as an egge comprymate and haue in them concauytees wheri[...]they receyue that whiche is drawn by them and eche of them haue .ij. holes wherby they drawe the aquosyte of the veyne called kyllis and by the other sende the sayd aquosite called pysse to the bladder. Demaunde. What membres commeth to the kydnees and with what membres haue they collygaunce? Answer. There commeth to them veynes, arteres, & synewes, wherof theyr pannycle is made and theyr fat is lyke talowe & haue collygaunce with the backe. Demaunde. Wheron are the kydnees sytuate? Answer. They are situate vpon the tumbes, wheron they be as on a coytte. Demaunde. What veynes passe betwene the kydnees ouer the spondyles. Answer. There passe the veyne adorty descendynge to the nether membres from the whiche very [...]ere it yssueth the membres sparmatykes. Demaunde. What dyseases may the kydnees suffre? Answer. They do suffre many dyseases and specyally they suffre opylacyons and stones that are harde to heale. Questyons vpon the Anathomy of the haunches bones. Demaunde. How many bones ar in y^e huckles? Answer. After the veryte there is but one howbeit after dyuers partyes of it there are thre. The fyrste is called the halowed sacred or y^t there be thre or four spondyles on the party of y^e backe and on that syde it is very byg and towarde the lower ende y^t is to say th[e] foundement it commeth in lessenyng and there is i[...]artilaginous & this bone hath a hole before wherby passeth y^e synewes and nat by the syde as do other spondyles of the backe. The two other be two great bones one on eche syde that be coniuincte w^t this great spondyle of the holowe bone behynde and before in makynge the pectynall bone, & these two bones are large on the yliake partyes & on the party of the share they be narowe in maner of braunche and ioyneth to y^e share before and therefore are they called the share bones. And in the myddes of these bones of the backe partye there be two concauytees called exides or boxes wherin are receyued the endes o[f] the bones of the thyghes, called vertebres, & there are called the thygh bones. And all the sayd bones therby nyghe the parties of y^e foundement echone hath a great hole wherby descendeth synewes, m[u]scles, veynes, and arteres, that be broughte from aboue downwarde. Demaunde. What is the bladder of what substaunce and of what shape of what quantyte & howe it is sytuate? Answer. It is a receyuer of

aygnous superfluytees of the kydneyes and it is pannyculous and stronge for it is composed of pannycles and is rounde of shape the bygnes for to holde a pynte, & is sytuate vnder the share. Demaunde. Wherby receyueth the bladder the superfluite vrynall of the kydneyes, and wherby is it put out? Answer. Fyrste it receyueth the superfluyte vrynall by two longe wayes that descende fro the kydneyes that entre by the sydes of the bladder dyagnomnelly by two angles y^t whiche wayes are called the pores vritides, and by a carnous necke with muscles closynge and openynge in bowyng and ouerpassynge to the yerde in men. And in women without reflyxyon vnto two fyngers within the necke of the matryce wherby she putteth forth that vrynall aquosite. Demaunde. To what diseases is y^e bladder disposed? Answer. It is dysposed to opylacyons aswell by stones as by graueylous vryne y^t it receyueth of y^e kydneyes. Demaunde. Howe are medycynes applyed to the bladder? Answer. By cyrurgery. Demaunde. Where oughte incysyon to be made for the stone in the bladder? Answer. At the necke without the [...]eame perignous. Demaunde. What are y^e sparmatyke vesselles? Answer. They are certayne veynes that brede nere the kydneyes and nygh the veyne kyllis and adorthi berynge the blode to the genytral menbres, aswel in man as woman wherin by the last generacion it is made sparne or sede of mankynde nature. Demaunde. Howe many maners of sparmatyke vesselles be there? Answer. Two for some bryngeth the mater sparmatyke [...]n and some putteth it out. They that brynge it [b]e braunches of veynes and arteres that brede of [t]he veyne kyllis and adorthi. And they that put it out be they y^t mounte nere to the necke of the bladder and putteth the sparne out of the hole of the yerde, and with them is the synew suspensory and sensyfe that descendeth to the genytalles. Demaunde. Howe be the vessels sparmatyke situate? Answer. They are set thus for towarde y^e grynde aboute the Myrac and Cyphac is a hole wherby descendeth from aboute the thre bodyes aforesayd, that is the veyne and artere that bryngeth & the synewe sensytyfe that is harde to the necke of the bladder at the rote of the yerde, and the hole of the yerde wherby mounteth the mater sparmatyke for to go out. And thus may be seen that yf y^e hole towarde grynde be out of measure large the bodyes superyours as the zyrbus, or guttes may descende in the loceon, and swell the purs of the ballockes as yf one were broken, and often maketh brustenesse where as maye descende moyste mater that wyll make a hermen. Questyons vpon the Anathomy of the pyntyll. Demaunde. What is the yerde and wherof is it composed? Answer. It is the yerde vryyll that is the cultyner and labourer of the felde of mankynde and is the way of the vryne and is composed of skynne, of muscles, of stryngis, of veynes, and arteres, of synewes, and of ryght great bandes. Demaunde. Where is the dysposicion of the yerde. Answer. It is planted vpon y^e backe of the share. Demaunde. Fro whens are sent the skynne, the stryngis, the veynes, arteres, flesshe, and the synewes? Answer. Fyrste the stringes are sent fro the bone satron and the parties nexte it. The veynes, the arteres, the flesshe, the synewes, & the skynne are sent to it from the superyour parties. Demaunde. Howe many pryncypal wayes hath the yerde? and what dyuersyte of names taketh it in sondry parties therof? Answer. It hath two wayes that is of the sperme, & of the vryne and the ende of the yerde hyght balanum. The bowell hyght mitra and the heade hyght prepuce. Demaunde. Of what quantite ought y^e yerde of man to be? Answer. Commonly of .viij. or .ix. ynches howbeit to be plyfyke with any woman it ought to be proporecyoned at the necke of her matryce. Questyons vpon the Anathomy of the losseum. Demaunde. Wherof bredeth the losseum and wherof taketh it name. Answer. It bredeth Syphac & Myrac theyr parties passynge and hangyng outwarde of it vpon y^e backe of y^e share at the begynnyng of it. It is called the Dymdyme and there it doubleth and fro the lower partye it is called Loceum and is the coddess of the geny[t]alles. Demaunde. What are the

ballokes? Answered. They are the pryncypall organs of the generacyon of mankynde for in them the mater spermatyke is made parfyt & sure. Demaunde. Fro whens commeth the sperme to the ballokes? Answered. From all the body and specyally fro the pryncypall membres for the bredyng of theyr vesse[l]les, as of the herte, the lyuer, and the kydneyes. And for the cause of delectacyon the brayne hath commutacyon therin, for the synewes that descende fro the brayne to the ballokes. Thus of all the body it taketh nature nat by quantyte but by vygour. Demaunde. What is the matryce and in what place is it set? Answered. The matryce is the felde of generacyon of mankynde, & organ susceptyfe of gendryng mater and is set betwene the bladder and the longaon. Demaunde. Of what substaunce is the matryce? Answered. Of a pannyculous substaunce. Demaunde. Of howe many skynnes or tunicles is the matryce composed? Answered. It is composed of two skynnes of whiche the inwarde is ful of sharpe veynes with y^e endes of which veynes be conteyned with the pannycles Lembrion and are deuyded in two parties pryncypalles after y^e nombre of the dugges & thoughe there appere but these two chaumbres in the matryce yet after Mundyne there are .vij. smal chaumbres in the matryce, thre in eche of the two chaumbres and one in the myddes and the outwarde tunycle neruous. Nat as Auycen sayeth that it is create of synewes commynge fro the brayne but as in substaunce is consenblable neruous, for it is whyte, and pryuate of menstruall blode, & is stretchyng as the synewes for it streyneth and loseth as nedes requyeth. It commeth but very lytell of synewes wherby it feleth & this outwarde tunycle is all playne, and is nat deuyded. Demaunde. Of what shape is the matryce? Answered. It is the shape of the instrument of generacyon of men for it is proporcionly made to the yerde and coddess of mannes genytours, excepte that it is reuersed, and is holowe within for to receyue mannes yerde in the tyme of copylacyon for the necke of the matryce is lyke a mannes yerde and the matryce with in is lyke coddess or purce of y^e genytalles of men. And as men haue two ballokes or stones y^t passe and appere outwarde so haue women inwarde except that they be bygger in the man than in the woman. And in men they are longwyse & rounde and in women they be rounde and flat, and are set on both the sydes of y^e matryce eche on a syde. And euen so as the vesselles spermatykes ben in y^e myddes of the ballokes outwarde so be they inwarde in women. Demaunde. With what membres hath the matryce collygaunce? Answered. Theyr collygaunce pryncypally is with brestes by the veynes of mylke, & menstrualles, for the which thynges nouryces haue nat well theyr menstruous floures. Demaunde. Of what quantite is the matryce and the necke of it? Answered. The matryce commeth almoste fro the nauyll vnto y^e vtter parte of the cont, in comprysynge the necke and all the body of the matryce. Howbeit the necke of the matryce ought for to be naturally of .x. or .xj. fyngers brede & after as the woman hath to meddle with man fleshely lytell or moche it waxeth longe or shorteneth. And also it waxeth longe or short after as the man that medleth with her hath his yerde shorte or longe. Questyons vpon the Anathomy of the ars gut whiche was lefte afore the better to se the Anathomy of the other nutratyfe membres. Demaunde, What is the Longaon of what length is it and where is it set? Answered. It is the ars gut that is a palme or handefull longe almoste to the kydneyes and is set ryght ouer the foundement on the backe and tayle. Demaunde. Howe many muscles be in the ars gut and wher to serue they it? Answered. There be two that open and close it whan it nedeth. Demaunde. Howe many veynes commeth to the gut nygh to the foundement? Answered. Fyue braunches of veynes named Emorroides or Emorroidalles. Demaunde. With what membres hath the ars gut collygaunce? Answered. With the bladder, and therfore whan one of them suffreth so doth y^e other. Demaunde. What is the pigneum? Answered. Pigneum in Arabyke is to saye the ars hole. And it is the place betwene the ars & the yerde whiche is a

seame that foloweth the coddess and the stocke of the yerde. Demaunde. What are the gryndes? Answer. They are the clensynge places of the lyuer & are of Gladyous flesshe ordeyned to the bought of the thyghes. Demaunde. What are the buttockes? Answer. They are grosse musculous flesshe ordeyned ouer y^e bones of the thyghes, and hukcles wherfro descendeth muscles, cordes, and strynges, mouyng the thyghes, and the great legge with the hukcles. Questyons vpon the Anathomy of the great fote. Demaunde. Where begynneth the great fote and howe f[e]rre it lasteth and in howe many partes the great fote is deuyded? Answer. The great fote lasteth fro the ioynt of the hukcle called, vnto the ferdest parte of the toes and is deuyded as the great hande in thre parties. The fyrste is called the thyghe the other the legge and the last the lytell fote. Demaunde. Wherof is the great fote composed? Answer. At y^e great hande, with [...]ynne, flesshe, veynes, arteres, muscles, stryn[y]es, gry[s]les, and bones. Questyons vpon the veynes of the great fote. Demaunde. Fro whens commeth the veynes to the great fote & howe do they dyuyde them the great fote? Answer. After that the veynes makynge braunches, at theyr begynnynge ben [de]scended to the last spondyle & there are dyuyded two parties one on the ryght another on the [...]ft eche of them lykewyse ar diuided in two braun[...h[...s] fro thens one goeth to the outwarde parte and the other to the inwarde in makynge braunches descendynge by the legges to the ankles and fete. Demaunde. Howe many and what veynes ben let blode commonly in the great fote? Answer. There be .iiij. the sopheynes that are vpon the ancle inwarde toward the hele and the scyatyke vnder the ancle outwarde and the popletyke that is vnder the kne and the arenal that is betwene the lytell too and his nexte felowe. Demaunde. Wherof bredeth the synewes that commeth to the great leg and where passe they? Answer. They brede of the laste spondyles of the kydneyes of the holy bone, and the moste parte of them pas by the hole of the thyghe bone and make muscles in the bought of the [o]ne so that they descendynge from the hukcles & cleue to the bone of the thyghe with the cordes mouynge the ioynte maketh the great brawne that are on the thygh that styreth the kne and the leg, and the calfe ouer the leg mouyng the fote and ancle & the muscles of the fete mouynge the toes after the fourme and maner as is before sayd of the hande. Demaunde, Howe goeth the longe and byg strynges where ende they, & wher[e] appere they moste? Answer. They descende by all the leg and appere greatly in the greyndes & vnder the knees, and vnder the hele, and on the ioyntes of the toes, and the sole of the fote is all full and there they ende. Questyons vpon the Anathomy of the great fote. Demaunde. Howe many bones are in y^e thygh and of what shape be they? Answer. There is but one bone and that is ful of maroughe, and is rounde in one party and the roundnesse therof vpwarde hyght Uertebrum y^t declyneth inwarde, and is receyued in the pyt of the hukcle bone and is somewhat bossed outwarde but in y^e inward party toward the kne are two roundnesses whiche ben receyued & wrapped in two concauytees that are in the focylle of the leg. And ouer it one rounde bone aboue that is called the knop of the kne. Demaunde. Howe many bones are in the kne and howe be they named? Answer. There be two that be called y^e morteys bones wherof y^e greatest is on the insyde parte wherof is made the sharpenynge and conioynynge of the leg and goeth fro the kne vnto the fote makynge the ancle inwarde. The lesser pyt bone is in the vtter parte descendynge vnder the kne a lytell and is smoth vnto the fote ioynyng there with the other pyt bone ma[n]yng the outwarde ancle. Demaunde. Of what shape are y^t two focyl bones? Answer. The grea[t]est hath two pyttes toward the kne whiche re[u]eyue the rounde endes of the thyghe bone for the [...]sser commeth nat vnto the ioynt but is smothe as is sayd and lyeth nygh vnder the kne and ther[f]ore it is called arcus. And toward the fote in the [...]nyng with the bygger bone both they make holowe pyt or morteys wherin the fyrste bone of the

fote is receyued. Demaunde. Howe many coniunctions or assemblyng of bones are in the lytell fote and howe many bones are in euery coniunction? Answered. There be thre. In the fyrste coniunction be thre bones assembled in one roundnesse. The fyrste hyght Caab in Arabyc, in Greke Astra gallus, & is in maner as y^t nut of a crosbow rounde on eche syde. In the vpper roundnes therof is affirmed the holownesse of the pyt or morteyes bones, and there the fote is moued, and the nether roundnes is affirmed to the concauete of the manyculare bone and after that forwith toward the bone called Nanyculer that is a synew concaued on eche syde. In the fyrste concaue is receyued the roundnes of Cohas aforesayd. In the seconde concaue is receyued y^e seconde coniunction of the bones of the fete and vnder them is the bone of the hele, of the whiche all the fote is stedyed and yssueth toward the hyndre parte for y^e strynges that are fyxed in it. Demaunde. Howe many bones is there in the seconde coniunction & howe are they figured? Answered. There be foure that be short ynough one of them is called grandmos[y]n that is on the vtter parte toward the lytell too. And these bones be rounde toward the nanyculare & holowe toward the thyrde coniunction. Demaunde. Howe many bones are in the thyrde coniunction of the lytell fote? Answered. Fyue longe ynough that coresponde & receyue the toes. Demaunde. Howe many toes is there in eche fote, and how many bones is in euery too? Answered. There be fyue toes in euery too thre bones excepte the great too that hath but twayne. Thus in nombre there be .xxvi. bones in the fote. And in all y^e great fote or great leg there be .xxx. Demaunde. Whiche of the said ioyntes is moste easy to set agayne, and whiche is moste dyffycyll? Answered. That of the lytell fote is moste dyffycyll & that of the kne is more and the scyatyke is meane. Here endeth the seconde treaty of this present questyonary. Here begynneth the thyrde treaty of this present questyonary where as are moued and soylled dyuers questyons and dyfficultees in the maner of byndyng wyndyng or rollyng to sewe to make boylsters lynte and tentes. Questyons vpon the maner of rollyng or byndyng. Demaunde. Howe many maners of lygaturres or rollynges ben there and howe ought they to be made and wherto eche of them bryngeth togyder? Answered, There ben thre maners. One is incarnatyue and it competeth to newe woundes, and fractures, and is done thus. The wounde is bounde at both endes vnto the myddes in begynnyng fro the party opposite to the hurt place in ledyng one ende toward the vpper parte of the membre & the other toward the nether in takyng the parties or aboute them tyll it be seen what is best to be done, in streynyng more vpon y^e hurt place than on y^e parties aboute it. Neuerthelesse howbeit hede must be taken to strayne to harde or to loose but the tyme to bynde is whan the pacyent may well suffre it. And y^e fore ende of the sayde rolle ought to be sewed. And yf nede be there ought to take dyuers rolles wounde by one selfe maner of wyndyng. The lypes of the wounde are ioyned one to the other and so the appost[y]macion is deffended and some put to double clothes and strayne them and sewe them on the place. Other maner of byndyng is called expulsinc and it proprely agreeth to depe woundes, for to expell and put out the mater from the botome and to deffende that other matters come nat in the place, & this is done with a rolle folded at the heed begynnyng at the nether parte of the membre in streynyng moste there. And fro thens in vnwrappyng toward the vpper parte. The thyrde lygature is called the lygature holdyng the medycyns and it competeth as vnto the membres where as straynyng can nat be made nor other ligature, as at the necke, the bely, and in al apos[y]umes, and dolorous dystribucyons. And this is done with rolles of one chyef or dyuers chyefs, or armes, begynnyng vpon the hurt place in byndyng to the contrary of the sayde place. Demaunde. What ought y^e maner of byndyng to be? Answered. They ought to be softly and without payne. And yf the bondes or rolles cleue fast let theym be moysted onely with wyne tyll they be

losed. Demaunde. Wherof ought the rolles to be made? Answer. After Galyen they ought for to be made of boleyne cloth, olde, soft, smoth, and clene. Demaunde. Of what quantite of length and brede ought the bondes to be? Answer. They ought to be longe and large commonly they that bynde y^e sholdres ought to be of syxe fyngers brede those for the thyghes fy[...]e those for the leg foure they for y^e arme thre and those for the fyngers one and the length to b[e] after the necessyte of wyndyng. And this sayth Galyen in y^e fourth boke of his Terapentyke, that th[e] partycule vlcerate may nat well be bounde w^t[o]ut to haue lerned the indycacyon of the formyng of the membre. Questyons vpon the Anathomy of seamyng or stytychyng. Demaunde, Howe many and what maners are there of seames? Answer. Thre that is [...]eame incarnatyfe and it agreeth to all woun[d]es whose lypes be ferre a sonder, yf they may be [a]pproched and made egall and whiche lygature [...]ely suffyseth nat and haue no straunge thyngis [b]etwene the lypes & that be new or renewed by caryfyacyon in takyng the skynne awaye. The other seame sowyng hyght restrayntyfe of blode and is done with the nedle in entryng & foldyng as skynnes be sewed. And this is done whan for the great effusyon of blode the other seames cannat be made. The thyrd is called the seame conseruatyfe and it is done as the other be but it is nat so narowe for it is nat made but for to mayntayne the lypes tyll the wounde be closed. Demaunde. In howe many maners is y^e incarnatyfe seame made? Answer. In .v. maners. The fyrste is makyng the fyrste stytyche in the myddle of the wounde and the other in meane space of eche syde[s] and goyng also betwene let two stytyches be lefte the space of a fynger brede ouerthwart and also ye ought to haue a quyll w^t a hole in the syde wherwith the other syde of the lyppe shal be steyed bycause it shall nat swerue and bycause that whan the nedle is passed thorowe it may be sen at y^e hole in the quyl. And whan the nedle is passed to drawe it & the threde in steyng the lyppe that it folowe nat the threde. And fyrste knyt it with two reuolucions. Secondly with one, & than cut the threde fer fro the kno[w]. Secondly the seame incarnatyfe is made with nedles or w^t steale of fethers ledde in with the nedle in to woundes that be great & depe that haue lypes wyde separete in puttyng threded nedles in to theym as nede is in wrappyng them with threde as ye wolde fasten a nedle with threde on your bosome or pouche lid, and to abyde there vnto the consolidacyon of y^e wounde. Thyrdly a seame incarnatyfe is made with egal the mylles made of towe well wrythen & sklenderly, as strawes the length of a fynger or of the steale of a fether whiche appertayne to the places whan we wyll that the seame remayne longe tyme. And it is done whan threded nedles are put in to it by both the lypes. Than is the nedle retourned by the same hole tyll that there remayne a pyt wher i[t] is put one of the endes of the wedge and than the tayles of the thredes are streyned and bounde on the other ende of the wedge and there cut of the endes of y^e thredes and let the wedge lye vnto the parfyte consolidacion. Fourthly a seame incarnatyfe is made with hokes and they ought to be small mete for the membre, curbed on eche syde, in fastnyng it in to one lyppe and than brought to the other. And in the same let the hokes be fastned lyke as the shere men do in hokyng theyr clothes. fythly an incarnatyfe seame is made with cloth, and is made in places wherin we wolde that no [ci]catryce shulde appere, as in y^e face & it is made o[f] two peaces thre tryangled and of the bygnesse of the quantite of the membre. And anoynte them with oyntementes myscatyues and conglutyna[ti]ues, made of y^e powdre of dragons blode, of en[...]nse, mastyke, sarcacole, and steynge meale of the [...]yll, incorporate with whyte of an egge, and that [ev]ery peace be layde in euery syde of the wounde [...]ter an ynche of dystaunce and whan they be drye [...]ewe them subtylly and the lypes wyl reioyne to [...]ydre. Demaunde. What nedles ought they to be for to make these incarnatyfe semes? Answer. They ought to be euen and smoth, and thre

edged at the poynte and at the eye they ought to be holowbecause y^e threde shal nat let it to passe easily. Dema[u]nde. In what woundes accordeth the seames conseruatyues? Answer. They conioyne in wyde woundes (where as the flesshe is lost) for to approche y^e lypes, wherein it behoueth to draw some thyng out bycause they may the sooner be consolydate. Demaunde. Whan is it tyme to take away the seames and how ought they to be taken away? Answer. The tyme to do then away is whan they haue done theyr operacyon. And the maner to take theym of, is to put the tayle of the proue vnder the fyst & to cut the threde of the sayd tayle of the proue and in puttyng the flat of the proue aboute the lyppe wherby y^e threde is drawn out, for drede of dyuydyng the wounde. Questyons vpon the maner to make and to applycate the bolsters. Demaunde. What is the maner to make bolsters? Answer. Auncyently they were made of fethers sewed betwene two whyte clothes and therfore are they called plumeceaulx or pylowes of fethers in frenche. And bycause that they behoued to often to be renewed & remoued which was ouer anoyous it is founde to make them of towe or flax of hemp wel boucked and clenched and somtyme with wol or cotton and somtyme is put soft and thynne clowtes in two or thre foldes or mo as it nedeth. Demaunde. Wherefore serueth the bolsters? Answer. To stay and conpryme the places dissolued and confort the natural heate of the membre vnioynte and to deffende y^e greues of the lygatures. Demaunde. Howe ought the bolsters to be applicate? Answer. Somtyme they be layde to drye somtyme they ought to be moysted or bathed in gleyr of egges, in wyne, or in oyle, as the dysposycyon requyeth. And they be of thre sortes, some be thre square, which (Auycen sayth) serue to brede flesshe and ought to be layde on eche syde of the wounde and the other on the wounde in ioynynge them togyder and some are rounde that are layde drye on the other to kepe the naturall heate, and to rype the rotnennes & other be square, and they are layde to deffende the hurtyng of the lygatures. Questyons vpon the maner to applycate lyntes and tentes. Demaunde. In how many & what case ought to be vsed lyntes & tentes? Answer. In .viij. cases. Fyrste is yf so be that the woundes that we wyll enlarge, clense, or drawe out any thyng fro [t]he botome as in depe woundes that haue nede to be serched for the lycour that assembleth in the botome of the spaciosite. Secondly they be vsed in [s]olowe woundes wherein we oughte to engendre flesshe. Thyrde in woundes altered of ayre, which ought to be clenched. Fourthly in woundes brused. Fyftly in appostumes. Syxtly in woundes that must be wrought about the bones. Seuently in bytynges. And last in woundes vlceres. And all other woundes without tentes and moches ought to be vnderstande to be consolydate. Demaunde. Wherefore be tentes and lyntes made? Answer. Some be for to clense the woundes and they be made of softe tendre, as of seare olde linnen cloth other are made to kepe the lypes of woundes open and they ben made of very clene towe or of fyne clowtes, or cotton, or of quyll of bras or syluer holowe, as to the nosethyrles for to haue ayre, or in depe woundes that the rotnennes reclose nat but come out. Other are made to enlarge the oryfyces of the woundes & they be made of sponges harde wrythen or of Gencyan rotes. Thus endeth the thyrde treaty of this present questyonary. Here begynneth the fourth treaty of this present questyonary in conteynynge .iiij. partycles. In the fyrste partycle is moued & solued certayne questyons and dyfficultees vpon the maner of bledynge. Demaunde. What is bledynge or blode lettyng? Answer. Dyuers Auctours haue gyuen dyuers diffynicions of bledynge. Arnolde of the newe towne in his boke of partyculer operacyon that bledynge is incysyon of veynes by the whiche incysyon the blode euacueth and the humours that renne in the veynes with y^e blode. And Auycen in his fyrste fen, of the fyrste boke of his canon sayth that bledynge is an vnyuersall euacuacyon of emptyeng the multitude of humours. And in the thyrde boke of the sayde canon he hath dyffyned that it connue

euacuacyon of humours. And Galyen vpon the syxth artycle of the affoe of Ypocras vpon this canon. Quecunque flommia. &c. sayth that it is the comyn helpe of pluresy. Demaunde. What euacuacion is moste surest & least daungerous eyther the lettynge blode or the medycyne laxatyfe? Answer. After Galyen in his lytell boke that he made of blode lettynge that lettynge of blode is the least daungerous for it is restraynt whan we wyll, and nat the medycyne for after that it is ones taken it wyll do y^e operacyon. Demaunde. For howe many intencions be the bledynge made? Answer. For .vj. The fyrste is for [...]o purge and of this intencyon sayeth Galyen in the thyrd of his Terapentycke that euacuacyon for the object regardeth all onely y^e replexion. The [s]econde intencyon that bledynge is made is for to dyuerte, and this intencion putteth Galyen in the [s]econde boke of blode lettynge it is somtyme an[t]yspatyc that is to say dyuersyue and this declareth Galyen in y^e fyfth boke of his Terapentycke as the flux of blode at the nose of the ryght noethrylle, is restraynte by the bledynge of the ryght arme. And whan the lefte noethrylle bledeth the blode lettynge of the lefte arme restrayneth it for the diuersion of the blode that for the blode lettynge taketh another way and tourneth in to other places than at y^e nose. And this lykewyse sheweth vs Ypocras in y^e fyfth partycle of his affor where he sayth that yf the hynder parte of the heade dyd ake y^t the souerayne remedy is to make the ryght veyne of the foreheade be opened and nat onely for the euacuacyon that is made by the bledynge, but lykewyse for the antispase and diuersion. The thyrd intencyon wherfore bledynge is made is for to attray as Galyen declareth in the boke aboue-sayde of blode lettynge. Yf we wyll cause the menstrues of women to come we cause the sophynes of the fete to be opened nyghe to y^e tyme that they shulde come or els we apply to them ventoses w^t scaryfycacyons in the nether partyes. The fourth intencyon wherfore lettynge of blode is made is for to alter as sayth Galyen in the fourth boke of his Terapentycke and vpon the fyrste artycle of the affor that blode lettynge vnto Lipothomie that is to say vnto fayllynge of the hert, sodaynly coleth all the body and restrayneth the feuer as yf it hadde slayne it. The fyfthe intencyon is for to preserue and this intencyon declareth Galyen in the said boke of blode lettynge, and on the syxte of affor, vpon this affor that to who soeuer y^e blode lettynge is good & conuenable where as he sayeth that many dyspose to periplemonie and spyttynge of blode, to quynsees, to epylence, and appoplexy were preserued of the said inconuenyentes by lettynge of blode at the sprynge tyme. The syxte intencyon is for to lyghten nature as Galyen declareth in the eleuenth boke of his Terapentycke the xv. chapytre, towarde the myddes of the said chapytre sayeng that it is than better to cut y^e veyne, nat onely for the feuers synocalles but also in all the other that ar of rotten humours and to them that haue aege and suffysaunt strength therto. For nature dyspensed ouer all the body is lyghtned bycause y^t the thyng that greued it is taken away as a great burden lessened and made lyght. The rest it dygereth that y^e oughte to be dygered and dyuyde that y^t ought to be dyuyded and retourne to kyndly operacyons. Demaunde. What be they that may well bere the lettynge of blode? Answer. To this questyon Galyen in the boke aboue sayd of blode lettynge sayth that it is they that are robust and stronge and that haue byg and large veynes and that be nat to leane, to whyte, & ten[d]er. And contraryly the other may scantly suffre it for they haue but lytell blode and theyr flesshe is [l]argely enaporable. Demaunde. What folke [s]uffreth nat blode lettynge? Answer. It is they [t]hat are of contrary dysposycyons to the dysposycyons aforesayde as whytely coloured and leane folkes, or ouer fat and weyke, y^t haue streyt veynes and tendre folke & specyally lytell chyldren afore. xv. yeres and olde folke after .lxx. yeres yf it be nat by great nede and with great cautele and he that be nat wont to be letten blode, and they that haue weyke stomackes and haue flux of the bely dyatryc and people gullyng,

fraungyng, and dronkerdes, & women with chylde, chyefly in the fyrste and last monethes as vnto .iiij. monethes and after .vij. monethes vnto the ende and women hauynge theyr floures, and Rasis in his fourth boke of his Almansor putteth to them that haue fasted and suffred hunger. The fleumatykes, & them that and wont to diseases of colde maladyes. And those that dwelleth in very colde regyons, or vehement hote. Demaunde. Howe many and what veynes are to be let blode in the body of mankynde? Answer. As Haly sayeth in the nyynth sermon of the seconde parte of his boke de regali dispositione there be xxxiiij. Of the whiche there be .xij. amynd the armes that is to wyte two medyans, two cephalykes, two basilykes, two affelleres, two cubytalles, and two seynalles. And in the heade there be .xiiij. That is two behynde the eares, two in the angles of y^e eyes, two organykes, two on the sunne of the heade, one on the foreheade, one on the hyndre parte of the heade, one on the nose, and two vnder the tongue. And there be .viij. in the fete, two on the knees, two sopheynes, two scyatykes, and two at the ancles. Howebeit Albucrosus putteth in all but .xxv. That is to wyt .xv. in the heade .v. in the armes, and .v. in the legges. Demaunde. Is it lefull and conuenable to let blode on the arteres? Answer. Yea, howbeit it is very doubtfull and yet may ye let blode at the arteres of the temples and behynde the eares. Demaunde. Howe ought the arteres to be opened? Answer. It is better to cut them thorowe then otherwyse. Demaunde. In howe many maners ought y^e veynes to be opened? Answer. After thre maners, that is to wyt the common veynes be cut in length, the partycules ouerthwart and are cut thorowe and be canterysed. Demaunde. In what quantyte ought the blode to purge by the blode lettynge? Answer. It is nat possyble to measure the blode lettynge by certayne rule for all medycynall euacuacyons ven coniecturatyues as Galyen sayeth in his foresayd boke, and in his seconde boke of his Terapentyke. Howebeit Arnolde of de villa noua the newe towne after the doctryne of Ypocras measureth [i]t by coniecturacyon sayeng that in blode lettynge is nat to be consydered the quanty of the blode all onely but also must be consydered y^e tyme, the regyon, the aege, and the dysese. Demaunde. Which of the sayd consyderacions that ought to be had to measure the quantyte of the bledynge be moste necessarye and that ought syngulerly to be [co]nsydered? Answer. There be two amonge the other that is the strength of the malady, and the vertue for yf the malady be great and the necessitye and the vertue be stronge, a greate bledynge ought to be made for one tyme. And yf the vertue be weyke and the necessitye greate it ought nat to be done so moche at one tyme but ought for to b[e]withdrawen & taken away at two or thre tymes after as the vertue may suffre at once. And this to do oughte to be consydered the poulce and whan it is seen that it alyeneth to vnequalyte and that it minissheth the veyne ought to be stopped. Thus lykewyse ought to be consydered the colour for yf it chaunge to better disposicion & colour it ought to be stopped. As it appereth by Galyen in y^e fyfthe boke of sharpe dyseseas. And the great bledynge after Galyen and Auycen is of two pounce and the least of halfe a pounce & the meane of one pounce. Demaunde. At what houre and at what tyme ought the bledynge to be made? Answer. At all tymes necessarye and constraynte. The tyme constraynte is the tyme whan the bledynge ought to be made and can nat be in any wyse taryed with out more daunger wherunto ought nat totally to be regarded in thynges that shulde hyndre or let it yf the lettynge were nat so greate (as sayeth Bernard of Gordon) y^t there myght ensue greater inconuenyence. In suche case it may be correcte & tourned to some other euacuacyon as in a chylde that hath a feuer synocall in stede of lettynge blode to be boxed. Howebeit that Auynzar let his sone blede that was but thre yeres olde, & healed hym. Auerois recounteth in the seuenth boke of his collyget, in speakynge of this tyme, and this houre, at all tymes, and at all houres, as well by nyght as day, and ought to let blode without any delay. The tyme

chosen is the tyme conuenable to do it after the instaunce of the bodyes aboue and the dysposycyons
 belowe as to the dysposynge of the bodyes. That is to wyt that the mone haue good lyght as of .vii.ix. or
 .xi. dayes in encreasyng, or of xvii xix or .xxi. in wanyng and neyther be in coniunction nor opposycyon
 & that she be in a good place, and good sygne & fre of all yll sygnes. And mayster Arnolde de villa noua
 sayeth in his affor. That to let blode is best aboute the myddes of the thyrde quadre bycause that than be
 but lytell condensed, no renmatizanted. And the salernytans do chuse the bledynge at dyuers houres after
 that at dyuers houres the humours haue theyr cours. Neuertheles it is to be noted as touchynge these
 thynges that are sayde that there where as the two influences may nat both togyder ouercome. The
 Phisycyen or Cyrurgyen ought sonest to stey at that y^t is best knowen vnto hym that is to the influence
 here beneth whiche is effecte of the dysposycyon aboue. Demaunde. Howe many and what condycyons
 oughte the workeman to haue that wyll dyspose hym to let blode? Answer. He [o]ught to haue foure
 condycyons. Fyrste he ought to be yonge, vertuous and stronge so that he be [...]at caduke nor shakynge
 of his handes. The se[c]onde is that he ought to be of good sight, that he maye well dyscerne the veynes
 on y^e places where they be. The thyrde is that he ought to be accustomed for to do it. The fourthe that he
 ought to be furnysshed of bendes and cotton and red powdre bycause that he may ouerceas[...]e morogie
 yf it hap to come. Demaunde. What ought to be the maner to set blode? Answer. Fyrste he ought to rub
 the place well all about that he wyll let blode and than he ought to take a lyst or a gyrdel wherwith he
 must bynde the membre hygher than the place where he wyll make the openynge. And than he ought well
 to holde the place where the veynes is that he wyll open and seke it with the ende of his fynger and than
 open it softly and pearce it nat thorowe but ought to reyse somewhat the poynte of the launcet vpwarde
 for feare to hurt y^e artere or the synewe and his euacuacyon thus suffyciently done, to take awaye the
 gyrdell that it was bounde w^t and dilygently close the wounde with a lytell cotton and bende it.
 Demaunde. Howe ought he to be gouerned that wyll be letten blode before he do blede and after that he
 hath bled. Answer. To the fyrste demaunde I say or he be letten blode yf he double that the blode be
 grosse or in colde wether as in wynter he ought to walke a lytell and trauayle or be bayned the day afore
 specyally yf he shulde blede at any lytell veyne of the handes or fete. And yf y^e veynes as yet appere nat
 wel, a day before he must haue a plaster of leueyne And yf he doubte of his strengthe that he were to
 weyke or he blede gyue hym a [h]o[t]te with wyne & than procede and make hym blede [...]yttyng yf he
 be stronge. Yf he be weyke let hym [...]yt in his bedde somewhat reysed. To the seconde d[e]maunde howe
 he ought to be gouerned whan actually he is let blode. Fyrste yf he haue rynges or stones that haue
 specyall vertues for to staunche that he leaue them of. And than whan y^e opening is made gyue hym a
 staffe in his hande and that he remoue his fyngers and coughe and that he be a lytel stryken on the hande
 and sholdres. And yf the wether be colde or that ye doubt that the blode be to grosse, or that ye make
 fecomdacyon ye must make an openynge longe ynoughe. And in wether and opposyte dysposycyon ye
 must make it lesser and yf the vertue be weyke ye must haue colde water all redy for to rubbe hym. And
 make hym other thynges that are accustomed to be made for faylyng of the hert, yf his herte do faynte. As
 to the thyrde questyon, howe he ought to be gouerned after the bledynge I say that yf for the bledynge he
 chaufe, ye must gyue hym some of a pomgarnade to eate w^t a lytell colde water, by y^e counceyll of
 Galyen and yf he be nat chauffed gyue sauge leues wet in wyne. And then lye hym vpryght vpon a bedde
 decly[r]yng somewhat on the syde that he hath blede on and close the dore and the wyndowes so that by
 ouer moche light his eyen be nat troubled. And an houre after, (nat before) let hym [...]ate temperatly &

nat gredyly & let his meate be of good substaunce and qualyte and that it eugendre good blode and rectify the yl yf any be, and let his drynke be more than his meate but nat so moche as he is wonte. And yf he be accustomed to slepe .ij. or .iij. houres after let hym slepe a lytell. Howebeit Auycen forbyddeth holly the slepyng soone after lettyng of blode for the comfraction that than after ensue in the membres & that the pacyent take good hede that his veyne open nat agayne and he ought to kepe this rule thre dayes after. Demaunde. Is the Cyrurgyen bounde to haue the knowledge of the blode that is drawen? Answer. No, but the beholdyng of the said blode belongeth to Physycyens. Neuerthelesse for to comforte hym y^t hath bled & to reioyce hym he oughte to loke on it, and tell hym that his bledyng was good for y^e blode that is drawen was good and that is better that is remayned, and yf it be yll it was a good bleding for hym. Demaunde. If the Cyrurgyen wolde haue the knowledge of the blode y^t he hath drawen by the blode lettyng howe shall he dyscerne the good from the bad? Answer. For the good is it that is his substaunce is neyther to thycke nor to thynne, and that is frangyble and in his coloure is redde. In odoure pure, and in sauour swete and amyable and the yll blode is it that is deuoyde of the sayde condicions, as the coleryke y^t is to thynne and yelow and bytter and is sharp in smell. And the melancolyke blode is thycke and blacke, or yellowysshe drawyng to dymine & aygre in sauour. And the blode stewmatyke is thycke and gleymy and whyte in colour, and swete in [f]auour and the blode where as is moche water betokeneth that the pacyent was a good drynker or that his reynes be feble and weyke. And that that is graueyllous, and of coloure and substaunce of ashes betokeneth that he is a lazar & the blode blacke and asshe is yll, & betokeneth corrupcyon of humours and dysposycyon to feuers and appostumes and euyl pustule & blaynes. And y^t which is thycke and the skynne ouer stronge, so y^t scantly it wyll breke sygnyfyeth dysposycyon to opilacions. And y^e blode that hath the coloure of greas and blode, sygnyfyeth coldnesse, or ouer great heate and adustyon. Of the which thou shalt knowe the dyfference by the behauyng of the body. And the blode that can nat congele, signifyeth that he is waxen colde and [i]nnatural. And that that congeleth in competent tyme, as in halfe an houre, sygnyfyeth that he is naturall. And of all these maners and sygnyfycacions it is very good for the Cyrurgyen to cal the Dhysycyens bycause of parfyte knowledge. Here endeth the fyrste partycule of this treatyse. And here begynneth the seconde partycule wherin is moued and assoyled certayne questyons and dyfficultees vpon the maner of ventosynge or boxyng. Demaunde. What is ventosynge. Answer. It is the puttyng of boxes vpon any membre for to expuls the mater betwene the sky[n]ne and the flesshe. Demaunde, What are ventoses? Answer. Uentose is an instrument made in maner of a boxe with a streyt necke and a wyde bely. Demaunde. Wher of ought ventoses to be made? Answer. After Albucrasis they be made of thre thynges. Some of hornes, some of glasse, and some of brasse. Demaunde. Howe many fourmes is there for to vse ventoses and what is theyr effectes? Answer. Some be with garsynge and other without scaryfycacyon. Those that be done without scaryfycacyon draweth the mater out felyng, and y^e other contraryly. Demaunde. What dyfference is betwene euacuacions done by blode lettyng, by ventosynge, and by snayles blode sowkers? Answer. The moste dyfference is of blode lettyng for it draweth the blode deper than the boxyng or the snayles and the snayles deper than the ventoses whiche proprely draweth but betwene the skynne and the flesshe. And therfore Auycen sayeth y^t they purge more the thynne blode than the thycke and more the vpperst than the nether. Demaunde. For howe many and for what intencyons are ventoses appli[c]ate with gar[...]ng vpon a mans body? Answer. For .xij. intencyons. Some generall, and some pertyculer. The generall is made to clense sensyblly and haue the place of a blode lettyng whan blode lettyng dare nat be

done for dyners thynges that letteth blode lettyng, as in a chylde of .xiiij. yere olde, & in aged folke aboute .lxx. yeres. And for this cause Auycen calleth ventoses curates of y^e veynes. The .vij. intencyons wherby the sayde ventoses is applyed, is taken of the places y^t they be sette to. The fyrste is to purge the mater of the heade, and the parties therof and therefore they are applyed in the nawpe of the necke, and kepeth the place of the cephalike bledynge. And therefore they be good for the dyseases of the eyes, to the infections of the face, and stynkyng of the mouth. The seconde intencion is for to clense the spyrytual maters and therefore they must be applied betwene the shuldres & kepeth the meane for blode [...]ettyng of the medyan and therefore they be con[t]etent to the dyseases of asma, palsye, & spettyng of blode. The thyrd intencion is to empty the mater that is conteyned in the nutrytyfe membres and therefore shulde they be applyed to the raynes and to the loynes and there they take the place of [...]asilica & therefore they auayle to the opylacyons [...]ostumes, and dolour of the lyuer of the reynes, and scabbes of all the body. The fourth intencion is that it is applied in the myddes of the arme, for the ache & paynes of the parties therof. The fyfth intencion is for that it is applied in the myddes of the thyghes and the legges nygh to the ancles, and applyed there is in the stede of the blode lettyng of the sophynes and therefore they prouoke the floures to women and causeth them to pyse, and easeth the paynes of the matryce and the bladder, and comfereth to the gowte of the fete & euyl sores. Demande. For howe many and for what intencyons the ventoses applyed without scarificacyon? Answere. But for one generall intencion and for .xi. partyculers. The intencion general is for to drawe, and the partyculers do vary after the places that they be applyed to. The fyrste place is vpon the ypocondres to reduce & dyuert the blode of the nosethrylles after Galyen in the fyfth of his Terapentyke sayenge that whan the ryght nosethryll doth blede, for to staunche it y^e ventose must be applyed vpon the lyuer and whan one bledeth at the left nosethryll it must be applyed on y^e mylt. The seconde place where they be applyed is vnder the brestes for to staunche and dyuerte the floures of women, as Ypocras sayth in y^e fyfth of his affo, and as Galyen declareth in the begynnyng. The thyrd place where they ought to be applyed is on the interyour parte of the heade for to reyse the eucla & to staunche the rewme. For to drawe the depe mater outward as Galyen declareth in the xiiij. boke of his Terapentyke and for that cause they be often applyed vpon y^e appostumes that be in the clensyng places the which Auycen hyddeth to be drawn out as moche as maye be. Lykewyse they be applyed for y^e same cause vpon y^e thyghes for to prouoke floures in women. And also nyghe to the appostumes of the ioyntes to w^ddrawe & deffende that the sayde appostumes do nat brede and to put ferof the humours fro y^e sayde ioyntes. The fourth place to apply them is vpon the bredyng of synewes, in palsy, for to heat them as Auycen sayeth in the thyrd boke of his Canon in the Chaptour of palsy. And Galyen in the thyrd boke of y^e interyours, where as he proueth agaynst Archygenes that the brayne is prynciple and begynnyng of the vertue anymall. The fyfth place to apply ventoses is vpon the bely in colyke passyon, for to resolue and vnuapen the ventosire, and cease the payne. The .vj. place is vpon the matryce, and vpon the bowelles for to reduce and withdrawe them to theyr places, as Auycen sayth in his thyrd canon. The .vij. place is vpon the rybbes & lyke bones for to reduce and retourne them in to theyr places, whan they are broken or dysioynted. The .viij. place is vpon the wayes and poores wherby the vryne passeth from the reynes to the bladder as Auycen sayth in the thyrd boke of his Canon. The .ix. place is vpon the eares & gappes of depen woundes, for to drawe out the fylth or other noyaunce yf there were any. The .x. place is vpon the necke for to enlarge the wayes of the breth and of the meate. The .xj. place to apply ventoses is vpon venymous bytyngis and blaynes to drawe out the thycke venym.

Demaunde. Howe ought they to governed that must be ventosed before & after it? Answer. To the fyrste answereth Galyen in the thyrde boke of the cretyke dayes, and the same proueth Albumazer in his great introductory that the chosen dayes for to applye ventoses is whan the moone is ful & nat in the wane. For as the moone encreaseth in lyghte lykewyse encreaseth the humours within the body and as it waneth so descreaseth y^e humours & withdrawe them inwarde. And therwith it ought to be an australl day that is to say hote and moyste and the ventoses ought to be plyed fro two of the clocke vnto thre. And after y^e intencyons of doctours fyrste y^e place ought to be bathed and fomented (whiche shulde be ventosed) with warme water yf the blode be thicke but yf it be thynne it is nat nede at all, for it shuld be daunger of to moche resolucyon and that the strength shuld weyken. And it is to note that neuer scaryfieng ought to be made but fyrst ye must put to the ventose drye, bycause the blode must be drawen or it be voyded. As to the seconde question it is to be noted as is afore spoken that there be two maners of ventoses. Some be of horne and some of glas. They of horne are applied in suckynge. They of glas with towe put in to the ventose and fyre in the twoe and layde on the flesshe than the fyre quencheth where the ventose taketh. Or after Albucrasis take a lytell candell of waxe and gyue it a lytel stey belowe that it may holde ryght vpon the flesshe, and lyght it, than set on the ventose, and the candell wyll quenche and the ventose take holde. And the Cyrurgyen oughte with his handes to rubbe all aboute the place to moue the blode to it. As to the thyrde questyon after that ye haue applyed and set to the said ventose by two or thre tymes yf it be nede whan it is taken away ye ought to make certayne scaryfycacyons very depe with the rasour and than wype and drye the bloody place and than ones agayne set to the ventose as ye dyd before and kepe it on halfe an houre tyll it be halfe full of blode, and then take it away and [t]ype the place, and set it on agayne, and holde it there more or lesse tyll ye haue suffyciently halfe a [w]ounde of blode, or to a pounce, after the tenour [o]f the strength the quantyte of the replexyon. And after the fyrste apposycyon after the scaryfyca[ti]on yf it blede nat wel rub the place w^t the mouth [o]f the ventose, or gyue it small fyllyps with your and garse it a newe that it may blede well and whan it hath ben ventosed wype and drye the and than anoynte it with oyle of Roses or [o]ther oyntement to mytygate the smert and go[...rne the pacyent as is aforesayde of them to be [...ten blode. Demaunde. Shal they be set vpon [b]restes of women or other softe place? Answer. [...]ay, for daunger that it do nat entre to depe in quantyte, & may nat be had agayne. Demaunde, Yf the ventoses wyl nat hold whan they be set on, what ought y^e Cyrurgyen do to make them faste? Answer. He must bath and foment the place all about with warme water in such wyse & so longe that the eyre entre nat. Demaunde. Is it nedefull for to contynue & kepe them longe? Answer. No, specyally aboute the pryncipal membres that are the mynes of strength for behynde the necke they hurte the mynde and behynde the shuldres they anoy the herte & in the ryght ypocondre they noye the lyuer. Thus endeth the seconde partycule of this treatyse. Here begynneth the thyrde partycule of this treatyse where as be moued and assoyled some dyffycultees & questyons vpon the maner to apply blode souckers or horse leches. Demaunde. Wherefore are horse leaches applyed? Answer. For to vnderstande y^e solucyon of this questyon is to be noted what horse leches be. They ar wel knownen to be certayne lytell blacke wormes lyke to Myce tayles and haue small yelowre streykes on theyr backes somewhat brownysshe vnder the bely and to the question they are put and applyed to drawe or soucke as is beforesaid. Demaunde. Whiche are the blode suckers that ought to be chosen and which are holsome and whiche are daungerous and oughte nat to be applyed in any wyse? Answer. They that be good are founde in clere waters and they that be of a lothsome coloure with great heades, and that be rotten, and founde in noughty

waters be daungerous, euyl, and venymous. Demaunde. To what bodyes and to what membres ought they to be applyed? Answered. They ought onely to be applyed in bo[un]es voyde of replexyon for in cacechymyke bo[un]es and replete they ought neuer to be applicate as touchyng the places and membres that they [o]ughte to be put to they are applyed but onely to [...]uche places as ventoses can nat be set, as to sy[n]ewes, in the lypes, gunmes, & in places drye and [...]ar[...]e of flesshe, as the fyngers and ioyntes. And [...]hedery[...] wylleth that somtyme they be set vpon [...]ostumes of the clensynge places, whiche are of [di]ffycyle [c]uracyon and maturacyon & some wyll [h]aue them set on emoroydes for to open them. Demaunde. In howe many maladyes are blode [...]kers good? Answered. Auycen sayeth y^t they be [...]ood to scabbes, to emoroydes, and to apostumes of the clensynge places as it is sayd. Demaunde. Howe shulde blode suckers be applyed? Answered. They ought nat to be applied whan they are new taken but kept in fresshe clere water all a day tyll they haue purged of all that was in theyr belyes. And than rub the place that ye wyll put theym to tyll it do wexe r[e]ddy and wasshe it or anoynte it with a lytell blode, or garse it with a rasoure that some blode yssue & than put them to with a rede or your handes and put them in two or thre places as nede shall be. And whan they haue wel sucked and drawen tyll they be full, they wyll fall of by them selfe or els put a lytell vyneygre on theyr heades, or whyte salte, or aloes, or separte theym with a horse heare or a fyne threde. Demaunde. Howe shall the place be ordred after that they are fallen of? Answered. Rub and wasshe it with salt and vyneygre. Demaunde. Yf after the extraction and fall of the worme there folowe emororgie or to great flux of blode, what ought the Cyrurgyen to do? Answered. To staunche it with a playster of Bolarmynyke galles, balastye, & other that staunche blode. Demaunde. Howe ought he to be ruled that hath ben blode sucked after that they ar fallen of? Answered. He ought to be ordred as they that be let blode, as it is wrytten in y^e fyrste partycle of this treatyse and he ought to take tryacle for doubte of ventosytes that blode suckers do brede. Thus endeth the thyrd partycle of this present treatyse. Here foloweth the fourthe partycle where as be moued and soyled other dyfficultees touchyng the maner of canterisynge or searynge. Demaunde. What is canterysacyon? Answered. It is an operacyon made w^t fyre artyfycially in y^e body of man for certayne vtylytees. Demaunde. Howe many maners of Canteres be there? Answered. Two maners Some are actualles and they appere sodeynly in [e]ffecte, as they that are made w^t instrumentes of [...]etall, and brennyng or with the rote of Arysto[l]ogie, or of Affodylles that are sore herte, or with water, or with sethyng oyle layde to the place, com[m]yngly & nat at aduenture. Other are potencyall whose operations are nat so sensible nor so soday [...], but appereth afterward as they that be made [...]th brenning or ruptycke medecines. And there is maners of theym. Some are of stronge op[re]ssyon, and maketh scarres as lyme & sope and [...]ardus. Some other thyrleth more lyghtly make no scarres, but blysters as canterides, [...]mule, and pantalupina. Demaunde. Whiche [...]anteres are the surest, the actualles, or the poten[t]yalles? Answered. The actualles, bycause y^e action of fyre is moste simple. And also it hurteth lesse the nexte partyes, and pryncypall membres than the action of rapture for it is greatly suspecte to the pryncypall membres and therfore it ought nat to be applyed, but yf case be that the pacyente were faynte herted and durst nat abyde the fyre and in case that ye wolde apply canteres lastly and for to purge for in suche case the rapture for the payne that it maketh and for the byg scar that it leueth, and in weykyng of y^e place is cause of bygger flux of blode. Demaunde. Which is moste profytable to make actual canteres with golde or with yren? Answered. In pryncypall and tendre membres, as the eyes it is better to do it with golde than with yren. Howbeit in other menbres it is more behoue full to do it with yron as sayth Albu. For the fyre may be better esteemed

in y^e yren than in the golde or in syluer bicause of theyr colours, but yf it were a goldsmyth that is wonte therto. Demaunde. Yf actuall canteres be necessarye, and to whome, and wherwith? Answere, Fyrste they be necessary to conserue helth and to heale diseases, and kepeth the rowme of profytable purgynges, as blode let tynges, and clensynge by medycyns laxatyues, in suche that may nat suffre them. And the rest that remayneth after the purgynges it correcteth in great and stronge dyseases, where as it is wonte to be gyuen. Secondly they be necessary and conuenable to be gyuen in all dysposycyons of maladyes and specyall in materyal maladyes, saupe in suche as are hote and drye wherin they do many euylles and that it is true that they be profytable in the other fyrste dysposycyons, and colde dysposycyons and moyste, in as moche as it contraryeth them holly. Thyrdly in hote and moyste dysposycyons in which suppose that holly they do nat contrary, neuerthelesse they contrary accydently in as moche as it voydeth the cause of the maladye. Howebeit it is to be noted that suppose a cantere be a profitable remedy & very conuenable, yet it is nat nowe adayes so moche in vse as it was wont to be for the abusers of the arte and that exercysed it, the whiche indyfferently and in all dysposy[t]ions, that is to wyt in replecion or otherwyse apply them. And it is euyll done & many euylles foloweth therby. And therefore good Cyrurgyen beware ryght well, that in a persone ful of humours good or bad neuer to apply Cantere without precedent purgacion. Demaunde. For howe many and what vtylytees are canteres made and ordey[n]ed? Answere. For .vj. vtylytees. The fyrste to com[f]orte the membres, for they chanfe and drye the membres that were dilled with colde and humy[...].te. And therefore Galyen sayeth of the auctoryte Ypocras, that the drye thyng is nerest the hole [...]hyng and the moyste thyng ferdest of. The se[...]ude vtylite is to withstande & deffende the mem[o]re from corruption. And therefore Auycen in his fourth boke commaundeth them to be done rounde aboute the estionoenes sores spredyng or compassynge, and to corrupte bones. The thyrd vtylyte that Auycen putteth is to resolue the coarted maters in any membre and therefore byddeth Albucrasis and Haly abbas that they be applied to the paynes of the ioyntes, & great doloure of y^e heade. The fourthe vtylyte is to staunche the blode, as Auycen putteth, and Galyen in the fyfth of Terapenty bycause they make scarre. The fyfth vtylyte is purging olde fluxes as the eyes, & of all the body, & this vtilite putteth Arnolde of villenensis. And for that cause be the cetons & canteres done (behynde the necke) and in the fontenelles of the lacertes where as one is deuyded from the other) vnder the sayd lacertes a two or thre fyngers fro the ioyntes. The syxth vtylyte that Galyen putteth is to entrebreake, and intercyde the matter. And for that cause are the veynes of the temples canterysed bycause that the mater renne nat in to the eyen and in ruptures that the bowelles shall nat descende, and in the cyrcuyt and next places to wycked sores. And of this vtylyte Arnolde of vylle. maketh an afforisme where he sayeth y^t the rennyng can nat be diuerted nor yssue kyndly & that his abiden may be competently clensed by canteres. The .vij. vtylite is for to drawe out the superfluytees. This vtylite the common vsage approueth by operacyon of apostumes by canteres, and by cuttyng of kymelles, & extyrpacyon of flesshe quycke or deade. Demaunde. Which are the places and partycle of actual canteres? Answere. After men of this tyme there be .viij. The fyrste is applyed to the [h]oppe of the heade wherto the mayster fynger may reche begynnyng a spanne fro nyghe to the rote of y^e nose stretching vpwarde & the doctours wyll that there ought to be applied a rounde cantere with an oliuare for to resolue the brayne and dyuert the rewpose maters in the subiecte places by lowe and some depe them to the bone & other rase & make bare the fyrste table of the scul. Howebeit Alb. approueth it nat and the sayde canteres applyed to the sayd places auayleth to ydlenes, fallynge euyll, paynes of the heade, and to rennyng of the eyes, to ptysyke, and to

all rewmes. The seconde place to applye canteres oughte to be in the flesshe of the heade behynde in y^e noddle. And they ought lykewyse to be applyed rounde with an olyuare and auayleth for to heate and conforte the heade in palsy, in tremblyng of lymbes, crampe, and to pale lazery. The thyrde place to apply can[c]eres is on the eye lyddes to correcte them & reyse [t]hem and is done with a cantere mytilyn in stede [i]f pytche, for to close y^e holes or places of y^e drawen [...]eares, to let theym growe agayne and ought to actuall, that is in maner of a nedle. Lykewyse [th]ey be applyed to y^e lachrymalles to consume the [su]perflue flesshe and is done with a small actuall [...]ntelayre nygh to the nose, for the fystula, & with quyll. Lykewyse to y^e temples with a cantelayre to close the veynes, to staunche the rewme that falleth ouer the eyes. And it is applyed to the nose w^t an actuall throughe a quyl or rede for to consume the stynke. The fourth place is for to apply theym within the vnulle for to cut it with a sharpe cantere throughe a quyl. The fyfth place is the necke where as cetons are applied with tonges cetoned or with a needle cetonned behynde the necke in the pyt and they are applied to departe the humours that renne to the eyes as Lanfrancke sayeth. And other say that they haue sen by experience y^t r[o]unde canteres applied to the sayde places & lefte longe open heale the madnes, and the fransy, & furyous. And Galyen in the .xiiij. of his Terapentye sayeth, that a ventose made on the noddle is good helpe for rewmes that descende ouer the eyes and for the moste helpe so dyd Guydon. The syxth place is in the fore parte of the necke vnder the chynne (by the counceyll of some maysters) for to clense y^e mater of gout rose & other infections of the face and mouth and they wyl that there be applyed a cantere with cetons. The seauenth place is on the homoplate vnder the fontelles of the armes thre fyngers fro the ioyntes, where as manifestly is deuyded the lacert from the lacert with a cantere and rounde clauall with heade and plate perced. And in the sayde place is applyed inwardly the canteres for remedyes of the face, & fore parte of the necke. And applyed in the sayde place outwardly on the arme, is for dyseases of the heed, and hynder parte of the necke. The .viij. place to applye canteres is on the parties of the brest or thorax vnder the furcules with a rounde cantere or cetons for dysease called asma, or shortnesse of brethe, and dysease of the lungpype. And lykewyse they be applyed vnder the arme holes for the paynes of the sholdres and to clense and appale y^e leproy and lykewyse for the dysease of epimace, or apostumes of the rybbes is openynge made with a knyfe ansall to drawe out che rottennes howbeit it is daungerous of the fystule or of death for the weykenes of the herte by cause of the ayre that thyrilleth in at the openynge as Albucrasis sayeth. The .ix. place is on the fore parte of y^e bely on the stomacke with rounde canteres, or canteres with cetons, that kepeth it better open, for the dyseases of the stomacke, or on the lyuer, or on the mylte, for the dyseases of the sayde membres. And vnder the nauyll for the water of ydropesy. And Albucrasis and Haly do them with claualles, dowble or treble. The .x. place is in the flankes for the rupture, and in the coddess for swellynge of the coddess, and flankes, with ceton and on the share for the bladder. The .xj. place is behynde on the reynes and is made with a rounde or clauall cantere. The .xij. place is on the fonty[n]jelles vnder y^e knee .iij. fyngers brede, there as the [...]ert is dyuyded fro the lacert and is made with [w]ounde claualles with place for the purgacyon of [a]ll the body and the dyseases of the legges. De[m]aunde. Which are the general vtylytees of can[...]eres potencyalles? Answer. Potencyall canteres are profytable and serue to suche thynges as the actualles do, saupe that they conforte nat as the actualles, but they weyken the membres & therfore be they more appropried to empty and deriue the humours, open apostumes, and restrayne flux of blode than the actualles. Demaunde. Which are the partyculer, and profitable places of potencyal canteres? Answer. Fyrste as touchyng theyr partyculer vtylytees, they are

taken of the places where as they are applyed and the places where as they are applyed ben suche for the brennyng potencies ought to be applied in flesshy places, bycause of theyr de[...]e drawyng and deper than the actuall brennynges. Howebeit they be more greuous in noble membres. And the blysters potencies canteres be applyed vpon places betwene flesshe and fell, as vnder y^e chynne, behynde on the necke, in the face, on y^e ancles, and on the handes, for it holdeth but humours that are betwene the skynne and y^e flesshe, as it appereth by experyence. Demaunde. Whiche and howe many be there of actuall canteres, wherto they be vsed, and what shapes haue they? Answer. Dyuers auctours haue vsed and dyscryued the forme or shape of certayne. Wyllyam of Salicet descriueth .vj. or .viij. Lanfranc .x. Henry of Mundeuyll .viij. Howebeit of all common canteres Guydon dyscryueth but .vj. whose names & formes foloweth. The fyrste is called Cultelere (of C[o]ustean) that is a knyfe, and it is of two maners one is called Dorsall bycause it hath a backe & cutteth but on the one syde and the other is Ansall bycause it is made in maner of a swerde cuttyng on both sydes. And with this Cultelere be the superfluous flessches cut, and apostumes are opened, and the sores vlcres rectified. Of the which Culteres the shapes or fourmes are suche as be here fygured. The seconde cantere is named Oliuare bicause it resemblith a kyrnell of Olyue, as sayeth Haly abbas in his .ix. boke de ragali dispositione in the seconde party, and chapy[t]er of doctions of the heade, and nat lyke to Olyue leafe as wened Lanfrancke, Salicet, and Henry. Also his operacyon declareth it, the shape is thus. The thyrde Cantere is called Dacteler bycause it is in semblaunce of a Date stone and it is bygger than is the Olyuare and the fourme is suche. The fourth is named punctuall, which hath the poynte sclendre and rounde & it is of two maners. One is made with a rest or platte, bycause it shall nat [s]erce thorowe the skynne and with this there be [...]anteres to the dyseases called knottes in the fontenelles and in the armes and legges. The other is playne & longe in maner of a beme of the somne whiche is applyed with a quylle The fourmes of them are suche. The quyll. The fyfthe is called a cantere subtile wherwith the Cetons are applyed with small tonges brode and perced. And this is lyghter and more durable. The pl[...]. The fourme of the seconde is suche that the punctualles bycause the name of punctualles do fall often, & haue nede of byndyng more tydeous than these be the fourme is suche. The tonges. The .vj. is called Cyrculare whiche hath .v. adiutours to make .v. canteres ad nodulum with plate perced of .v. holes after this fourme folowyng. Demaunde. Howe and in what maner ought the canteres be applyed? Answer. They ought to be applyed in the fourme as foloweth. That is, fyrste the place must be sought where y^t they shall be applied, and wype it wel and drie it, than blysse it, after take your platyne or quyl and apply them all colde but ye must nat let them [...]ye long and than gyue the canteres to the worke man that shall applye them all hote and very flamynge, so y^t the pacyent se them nat. And let them be applyed vpon the sayde places in reuoluyng them contynually from one place to another that they cleue nat to the flesshe, tyl the rednes begone. And they muste be harder pressed vpon the bones [t]han on the synewes, and more lyghtly and let it done as oft as nede shall be. Demaunde. In what tyme, and in what hour ought the canteres [t]o be applyed? Answer. After Galyen in y^e thyrde [a]nd thyrtene boke of his terapentyke, at all tymes [a]nd at all houres as necessity requyeth so that [t]he body be clene and nat full of humours. Demaunde. Howe longe ought they to be kepte open after the canterysyng? Answer. After y^e doctryne of Rog. & of those maysters by y^e space of .xl. dayes or more, by the space of thre monethes for that is the laste terme of apostumes as Ypocras sayth in the .vj. partycle of his afforysmes and seconde of the pronostyces. And the cause is, for y^e vertue confortatyfe entreth by the canteres by the foresayde tyme is euaporate, and the place weyked and also

there abydeth replexyon of euyll humours by the sayde openynge. Demaunde. Howe ought the place to be kept open after the canterysynge? Answer. They must be kepte open w^t tentes or knottes of waxe, or with water in the whiche is stepped and dyssolued the vertue of Euforbie, or scamony, or colloquintida, or of elebora, after the kynde of the humour that shall be purged, or with a pease, or a nut made of the wood of yuy, or of Gentian and ouer it lay a cole leafe, or an yuy leafe & ouer that a linnen cloth thre dowble, and a platyne of brasse or laton, or of syluer bounde theron, and be remoued twyse or thryse a day. Demaunde. How must they be ordred that shal be canterysed? Answer. Thus. Fyrste or they be canterysed they must be confortd, and to them declare the vtylytees and goodnes that canteres wyll do to them and yf it be nede to make to holde hym fast, and to bynde hym well. And after that they be canterised ye must apply on the sayd places oyle of Roses (w^t whyte of an egge well beaten togyder and well in corporate) by the space of foure dayes. And than apply vpon it a maturatife made with butter wel washed and vnsalted and a lytell wheate floure, or with some other vnctuous thyng and swete without salte vnto the scar be fallen and than to be dressed & healed as vlceres be saufe onely that yf ye wyl kepe them open for to purge y^e humours and the vaporious fumes, or that y^e place had ben opened longe aforehande. For whiche thyng it shulde nat be sure to close it without that it were [e]uacuate by another place, for it shuld be daunger that the humours that were wonte to renne in the sayde membre shulde remayne within and that peradventure it wold deryuate to other membres and do more harme than was before. Demaunde. Is it of necessyte that after it is closed to open it agayne, yf it be lefull to open it in y^e same place? Answer. Yes, or in another membre nere to it, or to the next place, as Arnolde of newe towne sayth in his parabolles. Demaunde. Yf they that be canterised with potenciall canteres may be ordred as they be canterysed w^t actualles? Answer. Yes saufe that they shal nat be bounde. And also those that blyster make no scarre, whiche must be well applyed, correct, and reprimat of theyr malyces. And after that the blysters be reysed perce theym with cysours or a nedle, and lay a coleworte leafe theron and couer it with linnen, and ordre it as ye lyst. And bycause that they be nat blystred nor make no scar thus they fall within .vij. dayes. Thus endeth this present questyonary made in the honour of almyghty god & profyte of yonge studyntes in Cyrurgery wyllng to apply their study in y^e same arte.

The maner to examyne lazares & to approue lepry mesel[l]y after the myndes of Doctours.

As Galyen wytnesseth it is greate iniury be it done to man or woman to departe & put away theym that be nat infecte w^t lepry, nor touched with meselry, & nat beyng lazares. And also it is greate daunger to supporte, haunte, or be with suche as are stryken or dyseased therwith for it is a contagious and daungerous malady. And therfore they that ought to iudge and approue them shulde ryght dylygently beholde theym & conside the vnyuoke sygnes and equyuokes also. And nat for one onely token gyue theyr sentences but by many conuenaunces and specyally vnyuokes. Fyrste than whan that the approuers come or cal them dyseased to theyr presence for to examyne them, they ought to conforte them with holsome wordes, and tel them that the sayd dysease is penaunce salutary for the saluacion of theyr soules, and byd them to take it pacyently. And that they feare nat to saye the trouthe for yf they were founde lazares it shuld be theyr purgatory in this worlde. For albeit that they were refused of the worlde yet they were and be chosen of God. &c. And than cause them to swere to say the trouthe and enquire of them suche thynges as foloweth. Secondly the examyners ought to enquire of theym by the prymatye causes of lepry. And fyrste enquire of them yf there were any of his lygnage that he knewe to be lazares and

specyally theyr faders or moders for by any other of theyr kynred they ought nat to be lazares but yf it were by some constellacion that influed equally vpon a kynred and specyally on them that dwelt togyder, and haue one selfe maner of lyuynge as we se oftentimes by the tyme of pestylence, yf any of a kynred be stryken or enfect y^t also many other as bretherne, and cosyns, or other parentes soone after are stryken, & yet or they haue be borne. For as Auycen sayeth in his seconde treatyse the fyrste son of the fourth of his Canon in the fyrste chapyter of rottennes. The fyrste cause of rottennes is meates and the nourysshyng that is of euyl qualytees. And for that cause yf a chylde be nourysshed of a woman corrupte and infecte in her humours ought also to be infect. And nat all onely yf the mother be a leprese but let vs beholde also y^t for the sayd cause by experyence that they beyng conceyu[e]d in the tyme that y^e woman hath her floures [a]nd that she be nat clene that scantly the chylde [...]apeth lepry, or to be scalled, or tached with suche [ef]fecte dyseases or that he bere some tache vpon [h]ym. Also yf the father were fecte and in the mater wherof he is composed. For as Galyen sayeth in the fyrste partycle of the efforysmes of Ypocras vpon this canon Et qui crescunt. The thynges that are dyssolued of an other thyng necessarily extendeth of the nature of the thyng wherof they ar dissolued. Than ought ye to enquire yf he hath had y^e company of any leprese woman. And yf any lazare had medled with her afore hym and lately bycause of the infect mater and contagious fylth that she hadde receyued of hym. It is to be noted that a woman is nat so daungerous to be a leprese to habyte with a lazare, as it shulde be a man to habyte with a lazarus woman, or with one that hath habited newly w^t a lazare. For all infections remayne in the matryce of the woman, vnto the tyme that they be poured by theyr floures & clensed whiche a man can nat do, bycause he hath no receptacle where to holde the sayd immundycytees. Than ye oughte to enquire of hym yf he hath had the quartayne feuers and howe longe syth? For howbeit (sayth Auycen in his fyrste fen of the fyrste boke of his Canon) the feuer quartayne delyuereth a man of euyl melancolyke diseases and wyte yf he hath nat had the emorroydes, and syth whan? Lyke reason the emorroydes kepeth that he fall nat in to inconuenyence. Than enquire hym of his dreames & yf his dremes be nat terryble and that he seeth blacke thynges, and deuyls suche dreames betoken the melancolyke humour to haue domynyon wherby he is so enclyned. And wyt of hym how he is wont to lyue as yf he hath vsed meates with stronge spyce and in great quantyte, and strong wyues, or garlyke, lekes, onyons, and colewortes, olde chese, gotes flesshe, of beares, of foxes, of mesyl swyne, or salt meates, and of vnclene fysshe all at one table, & yf he haue continued therwith. And also of all maner herbes, and such meates as brenne the blode, and holly consumeth it. Than aske yf he hath had great solycytudes, & chargeable thoughtes that hath dried hym made hym melancolyke. Than ye oughte to beholde and consydre in your selfe of what complexyon he is, aswel naturall as accydentall, for suppose that lepry be a colde disease by incineraciom of humours, yet Auycen sayth, the moste auntyent cause of lepry is the euyl complexyon of the lyuer that is so hote and drye that it brenneth the blode & melancolyeth it. After y^t the pacient hath ben examyned vpon the fyrste causes that dyspose a persone to be a lazare he oughte to be examyned and approued by the sygnes of lepry aswel equyuocalles as vnyuocalles and are the sygnes that comueneth onely in this dysease and the equyuocal sygnes conueneth them in dyuers maladyes. Of the vnyuocal sygnes. Fyrste than in procedynge as it is sayde to the knowlege of the vnyuocal sygnes, in folowing the doctryne of Ypocras in the fyrste boke of y^e pro[n]ostikes sayeng. Primo enim egri facien pernotabis. Fyrste y^u shalt note y^e sygnes apperynge in the face for they are the truest for all the sygnes vnyuocalles are holden there bicause y^t in y^e face amonge al other membres of the persone is no greater nombre of spyrytes bicause of the .v.

organes of knowlege y^t is there. That are the hearyng, speakyng, seying, smellyng, & felyng & also it is the barest of flesshe & therfore it is soonest altered of all y^e other menbres & at this cause Gordon preserued a man at Mountpyllier .x. yeres to be cast out, agaynst the intencyon of all other doctours there, because y^e tokens appered nat in the face, & yet it dyd ouer all the other membres. Fyrste than begynne at the heyght of y^e heed, & beholde his here & his browes, & plucke at them, & loke yf with y^e rote they drawe any flesshe by the rottennes & corrupcyon of theyr flesshe. Such by defaute of nourysshyng is soone seen. Item fele w^t thy fynger yf his browes be nat grauellous, and ful of graynes, bycause that in al lepry the vertue assymulatyfe defayleth. And for that cause whan y^e nouryssshing commeth to the menbres they may nat assenble theym to the menbres at all & therfore they remayne grayny the whiche thyng mounteth alway nexte the membres bare of flesshe as is the face. Than beholde his eyen yf they be rounde specyally to the domestike partye. Also lykewyse yf his eares be rounde & thicke and rugged. Also yf his nosethyrilles be wyde outwarde narrow w^tin & gnawen. Also yf his lypes & gunmes are foule stynkyng and corroded. Also yf his voyce be horse, and as he speaketh in y^e nose. And also yf his brethe and sweate stynke, and all that commeth fro hym and yf there apere any straytnes of breth as yf wolde querken and for that cause haue the most haunte. Also yf his loke be steyed and horryble in maner of monster. These sygnes be vnyuocalles that alwaye betoken lepry whan they are all or the moste parte of theym with the equyuocalles as it shall appere and such sygnes come in lepry by these causes as Auycen sayeth. The fyrste generacyon of lepry is in the entayles, & for that cause the lunges and lyghtes be hurte & the pype of the voyce assysteth it, and causeth them to speke as it were in the nose. And for the rotten and corrupte fumes y^t mounte vpwarde by the conductes of the brayne, and the heares lessen and fall for defaute of good fedyng. And they appere in the face and in the brest. Of the equyuocalles tokens. The Doctoures put .vj. tokens equyuocalles. The fyrste is hardnes and tuberosyte of the ioyntes outwarde as the armes, legges, handes, and fete, for the drye mater, that is stopped by melancoly. The seconde is a morfewe colour & derke [n]or the blacke melancolyke humoure that corrup[m]eth the blode. The thyrde is fallynge of heare, spoken of in the vnyuokes. The fourth is wastynge of a brawne, and chye fly of a poulce, so that whan it [i]s pyched it abydeth vpryght by the consunption of the sayde muscle. The fyfth is the insensybylyte of the rotten humours of the outwarde partes ex[...]cemytees, spredde within them. The .vj. is blacke [h]operous skal and scabbe in the face, and sores on the body by rotten humours and corrupt, y^t stryue with y^e euyl fumositytees. The seuenth is graynes vnder y^e tongue, & behynde the eares the causes are in the vnyuokes. The .viii. is brennyng and felyng of pryckynges ouer all the body. The .ix. is ruggyshnes of the skynne in maner of a goos, for the greate drythe of the blode and humours. And therfore they oughte to be vnclad & water caste on them and loke yf it take and synke in the skynne by cause of theyr drythe where it semeth that they are anoynted they seme so moche to be fat. The .x. that they be of yl rule and are commonly begylers. The .xi. that they haue terryble dremes, as I said before. The .xii. y^t they haue weyke poulces. The .xiii. they haue whyte vryne, thynne, and asshy. The .xiiii. theyr blode is blacke and dusky[...]he, of leady colour, and sandye & to se this it must be wasshen and streyned. The maner to let them blode, and to wasshe and strayne it. Fyloyne sayth, that there must be a great openyng in the veyne whan they be letten blode bycause the thicke blode shuld nat remayne and the thynne onely come out. And whan it is drawen, consydre the substaunce and the colour yf it be so as is abouesayde, and than wasshe it, and passe it through a fayre whyte cloth and than loke on the flesshe that abydeth in the cloute and yf it be graueylous and troublous it is a great token. Otherwyse take salte and

medle it in the blode, and yf it melte soone. Another way, take his vryne and vynegre and loke yf they wyll myngle togyther. Yet do thus, put some of the blode in to a basyn full of water and yf it go downe to the botome lyke meale it is a token that he is a lazare. Then good Cyrurgyen do nat as a folysshe iuge that forthwith gyueth his sentence but fyrste or thou gyue it preferre God before thyne eyes and consydre dylygently the vnyuocal sygnes and the equyuocalles, and se yf they agree but yet neyther iudge a man to be lazarous by the equyuocalles nor for one or two of the vnyuocalles nor by the least of the pryncypalles but there as the vnyuocalles in all or in the moste parte, and of the pryncypalles accorde with y^e equyuocalles of the moste parte and of the pryncypalles. Finis. Thus endeth the maner for to examyne lazares and to approue their diseases after the intencyon of Doctours.

Here begynneth the Formularye of the aydes of apostemes and pustules ordeyned at Parys by mayster Guydon of Cayllyac Cyrurgyen and doctour in medycynes at Mount pyllier.

Bycause that after the doctryne of Galyen in tertio de ingenio sanitatis lykewyse as of y^t workeman is the takynge of the essence of the dysease. Also the scyence of thynges wherof it is gyuen it behoueth that it procede of the same I than Antydatory ordynary in the scyence of apostemes wherby the locall remedies of the same apostemes shall be accomplysshed but we must fyrste knowe the matter of the same. And that done may be founde and chosen the entencyon cutatyfe after the natures of them. And I say for certayne that it is ryght and artyfycyall waye to worke as it is proued in y^e treatyse before alleged. Than I wyll put in this present formularye the knowledge of apostemes & the aydes wherby may be gyuen locall remedies after the intencyon of Galyen, Rasis, and Auycen, suche as I can compryse in theyr doctryne. And merueyle you nat yf I haue nat willed to publysshe this worke, & haue kepte it secrete. For it hath nat ben for pryde but for certayne reasons which admonysshed me ther to bycause that the wepons that a man may beat downe his ennemyes with all ought nat to be put in to theyr handes. For whan one enforceth his ennemye wytyngly, it is no meruayle yf he fall in his owne tourne. Than take this lytell Antydocary in worth. And that howbeit it comteyneth but a lytell yf God lende me tyme and gyue me good fort[u]ne I shall perforce me to make it hole complete. In the whiche shall be gyuen doctryne and artificial maner for to ordre after Rasis, Galyen, Albucrasis, and Auycen. And this present treatyse shal haue foure chapytres. The fyrste shal be of the locall remedies of hote apostemes. The seconde of y^e local remedies of pustules. The thyrde shal be locall remedies of colde pustules. The .iiij. shal be of the exitures Rubrica, of y^t cures of hote apostemes. The cure of hote apostemes haue .[i]ij. intencyons. The fyrste is to egal the mater an[te]cedent. The seconde to gouerne the mater con[j]uncte. And the thyrde is to abate the accyidentes. As of the fyrste and thyrde I holde my peace but of the seconde wherby the mater conioynte is go[u]rned is fulfilled by repercussyon at the begynnyng excepte in .x. cases whiche I leaue as nowe bycause of bryefnes, & with reprecutis & resolutis, and maduratis, in the encreasyng, and with resolutis in y^e estate, and w^t dessicatis in y^e declynyng. The locall remedies that fulfill thentencyon of y^e begynnyng be of thre fourmes. The fyrste is Epitheme de Auicena. Receipe succi solatri, succi super vine, aque rosis, acete ana uncias .i. fiat epithema. The secounde fourme is a playster of Sandal. de auicena. Receipe farine ordeii. unciam. i. sandalis rubei psidie, acacie, sumac ana uncias .ss. Epithema predicta quod sufficit fiat emplastrum. The thyrde fourme is cerot de G. that Auycen aloweth and is. R. Olei Ros. uncias. iiij. cere. unciam. i. fiat vnguentum and be it wasshed in colde water two or thre tymes. The locall remedies that accomplysshe thentencion of thencreasyng ben of .iiij. fourmes. The fyrste is Epithina. Receipe vinum

dulce. quart troy.i.aqua Ros. aceti ana quar. ss. croci. 3 .ij. infundantur per horam, et coletim and make epitheme. The seconde fourme is de volubili of Auycen thus. R. maluarum. M.i.Ros. absinthij .ana uncias .s. farine ordeï. unciam.i.olei camomille, aque fabrorum, quod sufficit ad decoquendum, fiat emplastrum in sethyng it on the fyre. The thyrde fourme is Cerot of Camomyll. Receipe olei camomille, olei ross, ana uncias .ij. cere, unciam.i. fiat vnguentum. The locall remedyes that accomplysshe the state are of thre fourmes, The fyrste is de paritaria of mayster Dinus, R, paritaria, malue, ana, M, i, camomille aneti fenu greci, siminis lini ana, unciam s, olei vini albi, aque fabrorum, as moche as suffiseth to seth it & make a plaister. The seconde fourme is diaqui[...]lon common made thus. Receipe litargiri libras semis olei communis quar.ij. mustilaginis, altee, fenugreci ana quar.ij. fiat emplastrum cum custodia litargiri. The thyrde fourme is basilicon triafamarum de .G. made thus. R.cere, resine, picis, spice, licij, olei ante quod sussicit fiat vnguentum. And these two abouesayde haue suche vertues than whan they fynde mater redy to rypenesse they do maturate and to resolue, they resolue, And the remedyes that accomplysshe thentencyon of the declynacyon, be all thynges dissycatyues and consumynges of the mater and specyally dyapalma is moche praysed, and is of, G, in Cathegenis, and is made thus, R, auxungie porci veteris, lib, ij, olei antiqui, lib, iij, litargiri, lib, ij, Coperose quart, semis, fiat emplastrum cum spatula de palma viridi, vel [...]anne, vel iunipero, and apply it. The seconde chapytre of the local remedyes of hote pustules. The cure of hote pustules accomplyssheth thre entencyons but the fyrste two be left. The thyrde is whiche is egall, The mater antecedent hath two intencyons, and y^e other is after, before the vlceracyon fyrste ought to be mynstred medycyns that be colde, dyssycatyues, & infrigidatyues, with some reperucyon. And herto is the playster of solatra and farnia order are well alowed and it belongeth to colerykes. But for certaynte vnto sanguynes is appropriate emplastrum of Arnoglossa the fourme wherof is after, G, R, Arnoglossa, M, i, lentisi quar, i, panis furfuris, quart, s, ros, aut gallarun, as the faculte of y^e mater is, unciam, semis, and be put with smyth water (as maister pilgrym sayth, tyll it be thycke, And for the same is y^e playster of pomogranato of Auycen proued & experte in the one and other regyment, the fourme therof is thus, R, pomorum granatorum, ij, seth theym in veneygre or water acetum put therto. The gouernall accomplysshynge the entencyon after the vlceracyon is to drye the rottennesse that is thycke and flesshy, bloody, and vyrulent and after nede to deffende the ambulacyon in the one and the other. The rottennes dryeth with dyuers dissycatyues and are made dyuersly after the dyuersyte of the case to thacomplysshynge of the sayde entencyon in fyue formes, of the which. The fyrste is vnguentum apostolicorum of Auycen called venera, and of Hebemesue and is called the oyntement of Sarrazeos that rectifyeth the euill vlceres and woundes of yll consolydacyon and fystules, The fourme wherof is, R, cere, resine, armoniaci, ana 3, xxiiij, litargiri, 3, viij, thuris, mirre, galbani, bedellij, Aristologie ana, 3, v, florun eris, oppoponaci ana, 3, iij, olei communis, librasij, In wynter and sommer, lib, ij, and do make an oyntement, The seconde fourme is vnguentum Egiptiarun, and is put of Galyen and Albucrasis and is stronger, & well proued at Boleyn, where it is vsed, R, florun eris, 3, iiij, alumnis 3, ij, aceti, unciam, s, melles, uncias, ij, make an oyntement, and boyle it on the fyre tyll it be thycke & redde. The thyrde fourme is vnguentum viride for the same intencyon, but it is stronger, and therfore Auycen commaundeth it in the chapytre of hestiomeno bycause that in clensynge, it letteth nat the vlcere to growe large, and is made thus, R, florun eris, unciam, s, mellis, uncias, ij, make an oyntment and styrrer it on the fyre, The, iiij, fourme is trociscun aromatici that are put of Auycen and of Galyen, and in fallynge maketh crust, and openeth w^t cantere, R, vitrioli, calcanti alumis, ana, 3, s, corticis granatorum, 3, x, gallarum, 3, v,

aristologie, mirre, ana, 3, s, put all to powdre and with swete wyne be well trocysked. Also the trocyskes of Caldaron, that are called Affrodillorum of mayster Roger the fourme of them are, R, calcis vine partis, i, arcenici rubei et [...]rini alkali, ana, partis, s, let them be encorporate [...]e of affrodylles et fiani trocisci and whan the [...]st is very harde make it [...]al w^t butter, & Auycen counceleth to medle a lytell sulph[u]re w^t butter. The [u]yrulent dryeth and wasteth with one of these, iij, dyssycatyues, that folowen, Of the which the fyrst vnguentum litargiro, proued at all exitures, , litargiri puluerizati vt alcofol, uncias, ij, olei ros, lib, [...] aceti, unciam, i, ducendo in morterio fiat vnguentum. The seconde fourme is vnguentum de cerusa [...] is approued of Rasis, to all fleyenges. R, ceruse unciam, s, litargiri, 3, ij, olei.ros, 3.ij.cere. uncias s, de albu mibus [...]uorum, ij, numero canphore, 3, i, & make an oyntement, The thyrde fourme is vnguentum de calce, of, G, that is proued at the barynge of synewes R, calcis, vine [...]onies ablate et dissicate. unciam.i. olei ros.uncias.iiij.cere albo.unciam.s.fiat vnguentun. The prohybycyon or deffendynge of the vlcercacyon is and ambulacyon is made with redde oyntment, made this wyse. Receipe baliarminaci.uncias.ij.terre sigillate, unciam.i. aceti modicun, olei rosarum quod sufficit, fiat vnguentun. The thyrde chapitre wherin are accomplysshed the local remedies of colde apostemes. In the cure of colde apostemes be .iiij. intencyons. The fyrste is to egall the mater antecedent. The seconde is the conioynt mater. And y^e thyrde is to correct y^e accyidentes leaue we the fyrste. The seconde is to accomplysse with repercutyues in propres, & that is nat often and with stiptyke resolutyues for the moste parte, and for common workmanshpy. But for asmoche that the materes are dyuyded in to hardnes and softnes, and resolue them by ryght way of workynge, kepynge the mater softe that it fall nat in to rotnennes howbeit the soft mater hath an onely entencyon that is to wyte to resolue. Therfore shall I saye in the sunme of .xviij. Antydotes that nowe are belongynge to the softe mater, and shortly to all colde maters, of the which some resolue & some mollyfy, and some do both. Therfore the dylygent workman, workyng the mater of colde apostemes ought to wyt to whiche resolucyon is due and to which mollyfycacyon, and to whiche both. The fyrste Antydote, or the fyrste fourme is Epythime of lirinium of asshes and is of.G.Ras. and Auycen and competeth proprely in vdimia, & in apostemes mollyfyed, wherby it appeaseth and resolue the which the mater is thus. Receipelexinium cinerum, [...]la[...]llatorum cinerum. vij. cinerum salic, optimi ac[e]ti, ana quar.vnun olei violarum. unciam. i. and must be applied luke warme vpon the place w^t the sponge, and straitly bounde thereon. The seconde is a playster of Coole wortes proued in swellynge of legges. Receipe caulum rabiorum. M.ij. salic. unciam.i. lexinij cinerum, clauelatorum librami. aceti optimi quart.i. olei viol. unciam.i.fiat emplastrum in the sethyng on the fyre & than beat and styred in a mortar as it suffyseth. The thyrde fourme is of mirra, and is of Auycen and Rasis & Serapion proued in paynes ioyntes of colde maters. Receipemirre, aloes, acas [...]li[i]ij, ciperi, boliermenici, croci, ana unciam.s.fiat pul[...]s et cun aceto & aqua calumi confictendo, fiat em [...]astrum. The fourth fourme is a playster that [...]cyally auayleth agaynst y^e swelling of y^e paynes the ioyntes. Receipevrine vacce, absinthij, abrotani, [...]cenardi, calami aromatici, ana unciam.s.thur, mastic, [...]racis, calamente, ana 3.i.stercoris vaccini quar.i [c]onficiendo cum aqua et aceto fiat emplastrum and apply it. The fyfth fourme is diaquilon of Rasis propre for scrophules and kynnelles proued by Auycen. Receipediaquilon comme, librami.pulueris radicis yreos.z, i, et malexando cum oleo de lilio, fiat emplastrum. The syxth fourme is Dyaquilon magnum, expert to mollyfy and res[o]lue all hardnes. Receipelitargiri, triti, et cribellati ana, uncias, vj, olei yri ni, olei camomille, olei aueti, ana, uncias, iiij, mustilaginis, altee, fenugreci, semnis lini, et ficcun succi yreos, succi squille, ysopi

humide, glutinis alcanbi, and is lyme to take byrdes ana, ʒ, v, and, s, terebentine, unciam, i, et si resine, cere, citrine ana, unciam, i, let it be confyct and made as it shuld be. And who that wyl put therto serapinum armoniacum ana, ʒ, i, and that shall be dyaquilon gunmatun. The seauenth is vnguentun vfifur good and experte to molyfy scrophules, and competeth to all vlceres fraudulententes. Receipelitargiri, galbani ana, ʒ, v, armoniaci, ʒ, iiij, vfifur, ʒ, viij, olei lib, i, and make an oyntement. The, viij, fourme is a cowe torde, which is praysed to mollyfy & resolute scrophules and all knottes, and is of Auycen R, stercorum vaccorum, uncias, ij, radicis caulium, squille, ficuum, pingneum lupinorum aun, ʒ, ij, mellis, auxungie porcificis, olei antiqui ana, quart, s, and make your playster. The .ix. fourme is de stercore caprino for the same intencion. Receipe stercorum caprinorum uncias, ij, cucumeris, azimi, ficuum immaturatarum ana, unciam, i staphisagrie bdellij, farine fabar[u]m, amigdalorum amarum ana, unciam, semis, fecis olei antiqui quod sufficit, & fiat emplastrum. The .x. fourme is emplastrum de semine vrtice, whiche Auycen sayth resolute hardnes in a weke and lesse, that is in thre dayes. And. G. putteth in Cathagenorum. Receipeseminis vrtice, seminis sinapis, sulphuris viue, spume maris, aristologie, ros, bdellij ana, unciam, i, armoniaci dissoluti in ace to, et olei antiqui, et cere ana, uncias, ij, fiat emplastrum. The .x. fourme is antidotis de limaceis, expert and proued and hath propriate to heale kynrelles Receipe cicerum limacearum. ʒ .i. auxungie porci antiqui quar.s.iterendo misceantur, and make a playster. The .xij. fourme is de serpentibus and is appropried to scrophules. Receipe cicerum serpentis. unciam .i. mellis, aceti ana quar semis fiat linimentum. The .xij. fourme is linimentum of greaces, appropried vnto [...]rophules, & is mollyfyed of all hardnes, and [r]esolute. Receipe auxungie porci antheris, macis, et galline, medulla bonis ana unciam .i. cere quod sufficit, & fiat vnguentum. The .xiiij. fourme is a playster of gummes, generally to all hardnes. Receipe terebentine, unciam .i. bdellij, galbani, oppopanici, masticis ana unciam semis ar[...]aci, storacis ana ʒ .ij. vnguenti predicti quod suffi, fiat [i]m[p]lastrum, vel vnguentum, for the best [i]s ye seme for the quantyte. The .xv. fourme is playster of rotes for the same intencion. Receipe radi maluarum, radicis budie, radicis cucurbitule egres ficuum pignium ana unciam .i. farine fenugreci, seminis ana unciam semis auxungie quod sufficit, fiat vnguentum. The .xvj. fourme is de sordicis and is very pro[...] to the hardnes of the mylt. Receipe ysopi humide, [...]sordicie balnei unciam .i. mustilaginis, seminis lini, a[c]eti ante quod sufficit ad incorporandum, fiat emplastrum. The .xvij. fourme is of myneralles that is ryght propre to y^e hardnes of the synewes, after the suffumygyng of the stone Marcasite. Receipe litargiri quart, semis marcasite unciam semis mustilaginis, altee, fenugreci, seminis lini ana uncias .ij. olei antiqui q i.fiat emplastrum, ad modum dyaquylon. The cure of the exitures. The cure of y^e exitures hath foure intencions. The fyrste is to rype the mater. The seconde after the maduracyon to open it. The thyrde is to purge the place. The fourth is to drye it after the openyng and clensyng. The fyrste intencion accomplyssheth foure fourmes. The fyrste fourme is tetrafarmacum of. G. that maketh it with meale of wheate, saffron, water, and oyle. The seconde fourme is a playster of malowes y^t is made thus. Receiperadicis maluanisti quar .ij. farini fenugreci, se minis lini ana unciam .i. auxungie porci.uncias.iiij.fiat emplastrum. The thyrde fourme is a playster of Tebes, that is propre to our fourme. R, ceparum coctarum su[b] pr[u]nis, iiij, numero frumenti quar, i, farini fenugreci, unciam, i, auxungie porci, ij, fiat emplastrum, The fourth fourme is dyaquilon and basilicon, and to the same intencion is dyaquilon magnum abouesayde. The seconde intencion is accomplysshed by hote yron in vnsynewed places or by blode suckers to suche as be fearefull, and by corosynes, in meane places y^e fourme wherof is dowble, The fyrste fourme is a playster of Galbanum that openeth the exitures of

chylidren, R, galbani, unciam, i, fermenti, unciam, s, stercoris Columbi, uncias, ij, mellis, 3, i, make your playster and lay to it, The seconde fourme is rupture that is made with lyme and softe sope, cum salina aliquid pistata, The thyrde intencyon is accomplysshed by thre mundyfycacyons, The fyrste is of honny that is made thus, R, farine ordeï, unciam, i, incorpor[a]ndo cum melle rosato, fiat emplastrum, The seconde fourme is mundyfycatyfe with egges, and is of Auycen, R, vitellorum ouorum numero, iij, mellis, unciam, i, fenugreci quod sufficit, fiat emplastrum, The thyrde is mundyfycatyse of Apio and is propre to [...]ytures vnmadurate, bycause that in mundyfy[i]ng it madureth, and suffreth nat to fystule, R, [su]cci apij, uncias, iij, mellis optimi quar, i, farine frumenti unciam, i, incorporantur in patella ad ignem et tunc fiat emplastrum. The fourth intencyon accomplyssheth by the oyntement of calcadum and is dyapalma as Auycen sayth bathed with towe in vyney as Galyen sayeth & is the same that abydeth our dyscrecyon in the agregacyon of local remedies of apostemes, after as I maye compryse by myne vnderstandynge, the maner to make it I do [...]aue to the wyt of the workman, for I shulde be to longe and it is to presuppose that he knoweth it. Here foloweth the Formularie of the helpes of woundes and sores, ordeyned in Auygnon by mayster Guydon of Cayllyac cyrurgyen & mayster in Physycke. For doubte to forgete, & for the necessaryte of myne owne propre brother I wyll shew the remedies proprely localles wherby is healed the sores and dyrupcyons, & solucyons of contynuyng, after the doctryne of Galyen, Auycen, Rasis, & Albucrasis and some maysters that I haue seen worke, I intende to fourme sunmaryly, and abredge with the formulary of the apostemes and pustules that I ordeyned of late at Parys, And bycause that, G, prynce of Moges, in tertio terapen, sayth that the cure of vlceres hath two generall intencyons, That is to wyte one taken in the essence of the dysease and the other for certayne to the nature of the membre And therefore this present treaty shall haue two partyes, In the fyrste shal be the propre fourmes of the helpes in al symple wounde or sore in asmoche as a wounde is symple, In the seconde partye of woundes composed. The fyrste Chapytre of the cure of woundes symple. Al symple woundes after y^e entencyon of Galyen in the place alleged ben new woundes in the partyes of y^e flesshe, that onely requyrenh consolydacyons woundes after the agrement of al[l] workmen hath foure intencyons, The fyrste is to drawe fro the wounde y^t ought to be drawn, The seconde to staunche the flux of the blode, The thyrde to the fourme of the wounde, The fourth to drye it, The fyrste is to accomplysshe the wyt of the workman in working, The seconde accomplyssheth it by one of .viij, maners of blode staunchynge, after Galyen in the fourthe Canon, as by [...]ood stytyng, or by good byndyng, & by conuenable dryeng, The aydes to accomplysshe thyntencyon that is to drawe fro the wounde that is to be drawn (without the wordes of the Empe[r]ykes) be of thre maners, The fyrste is a common instrument, (as is conteyned in y^e great worke, and [w]ere be named, viij,) that is to wyte the tonges, The fyrst is good red wyne with towe wet therin [a]nd wronge layde on the wounde, The seconde is [...]mentum rubium common, that is such, R, tera [...]tyne lote quar, i, pulueris rubei dicti superius, misceantur, & ley it on with towe, and a play [...], for it dryeth, encarneth, and conforteth. The seconde Chapytre of wounde composed. The woundes composed after the intencion of Galyen aforesayde, be they y^t haue somtyme dysposycyons that requyre dyuers intencyons for theyr healyng. And although it be that the dysposycyons that make composycyons in woundes be sondry neuerthelesse bycause of breuyte I wyll put here but the comunes that is to saye the best knowen. The woundes are somtyme composed with vnnatural mater somtyme with losse of substaunce somtyme vyrlent & fraudelent venymous fylthynes somtyme with fystule and canker somtyme with concussyon & apostemes. And somtyme with pryckynge of synewes, and ache, and with

superf[ll]ue flesshe, and other lyke thyngis. The help of composed woundes with losse of flesshe requyreth two thynges. Fyrste the regeneracyon of the flesshe lost. Secondly the consolidacion of y^e flesshe and the skynne. The regeneratyfe medycyns any mundyfyement, & abstercyon be of .viiij. formes. The fyrste fourme and the seconde is v[n]guentum aureum that I make. Receipecere 3 .v. resini quarti. i. Terebentyne libram i. mellis quarti, i. thuris, masticis, sarcacole, mirre, aloes cicotriini, [...] fiat vnguentum. The thyrd fourthme is vnguentum aureum of Hebemesue that is, R, cere citrine, [...], vt, olei boni, lib, ij, terebentyne quar, ij, resine, colophonie, ana uncias .i.&.s. croci, 3, s, olibani, Masticis, ana uncias .i. et fiat vnguentum for it bredeth fles[s]he, conforteth, & maketh stronge. The fourth fourme is the great basilicon that is praysed ouer all and called tetrafarmacum and is of Galyen. It is regeneratyfe of flesshe, with rypynge & purgynge, and is one of myne owne makynge. Receipe cere, resine, picis niger, cepi vaccini, olei cominis ana, quarti, i, vel quantum vis fundantur ad ignem, et fiat vnguentum. The fyfth fourme is vnguentum fuscum, of Nycolas, of Roger, of Iamerius, and of all Apotycaryes and Barbers. Receipe olei lib, i, &, s, cere, uncias, iiij, Colophonie, 3, ii, picis nigre, cepi, arietam ana, 3, ij, fiat vnguentum. The syxth fourme is vnguentum de lino that Auycen and Hebemesue putteth, which is, R, [...]asure vetusce, pa[n]ni lini bunmundati, [...], oppopanici partis, ij, vini, mellis, olei to [...], ana partis duas, litargiri, aloes, sarcacole ana, partis vnus fiat vnguentum. The seauenth fourme is emplastrum croceum made by mayster Peter de Bonaco, R, fenugreci, partis, i, infundatur per .ix. dies in vino albo, donec tumescat, deinde tere fortiter, & cola addendo cepi hircini quart, iii, insimul terantur et coquantur, et postea pinguedo et mustilago congregantur quibus addatur cere quart, i, resine.uncias.ij. fundantur omnia, et colentur, & fiat emplastrum. The, viij, fourme is vnguentum [...]eruo, qualiter preciosum, taken in my comyne [...]tulary, to heale all woundes, R, arthemesie, sca[...]rose, aurum valens, absinthij, galbani, lanceolate, plantaginis, tanasceri, apij, verbene faciole, ancer be siluistris, senationis, saponarie, pimpinelle, lingue canis, celidonie, pillocelle ana M.i. conterantur omnia mundata a radicibus, et extra[h]itur succus, et cum libras ij. auxungie porci, et libram i. cepi hircim et libras ij. olei, et partis .i. mellis coquendo, incorporando in mortario, et fiat vnguentum. And mayster Peter of Bonaco wrought with it, but he put therto at the last the decoctiom of thure, mastice, aloen, as he thought best and wasshed it. The .ix. fourme is emplastrum gratia dei and is taken at the cartulary of mayster Peter whiche is comune vnto all woundes aswel in the heade as in any other party of the body for it draweth the blode and the venymous humours from the botom, & engendreth flesshe and consolydeth. Receipe cere albe, resine armeniacy ana libras semis terebentine quar .i. galbani, olibani, masticis, mirre clare ana unciam semis aristologie rotunde 3 .ij. The thynges to be grounden be grounden and molten in good whyte wyne that verueyn was soden in, consolida maioris et minoris, centaurea, pimpinelle, ipericon, herbe sarraconice, herbe g[...]a dei, baucre, sanabario ana M.i. & after be drawen and wet in womans mylke and oyle of roses, and be made a playster. The .x. fourme made y^e erle Antidotis. Receipe auxungie porci recentes, cere albe ana quart .i. olei camomille libras semis ambre, gresie 3 .ij. mastici.uncias.ij. fiat vnguentum, The .xj. fourme is vnguentum de yreos and is of mayster Dinus of Florence. Receipe cepi vacini libras semis olei ros. uncias .iiij. cere 3. ij, Radicis yr[...]os unciam .i. Thuris, sarcacole, Masticis, aloen, aristologia ana uncias .ij. terebentine quar.i. fiat vnguentum and this was vsed of the Barbers of Mountpyllier. The .xii. fourme is nutritura litargiri y^t, R, putteth, R, litargiri b[...] puluerisati lib, i, Olei ros, aceti optimi ana libraml.&, semis terendo in mortario paulatine addendo modo oleun, modo acetun per tenpus incorporetur, et serueturni olla. The .xiiij. fourme is the powdre of receipe {R.} olibani, aloe, sarcacole, sanguis draconis

ana pulurizentur et super ponatur, it is merueylous. Another powdre commaunded by Lanfranc. R. thuris, masticis, fenugreci, ana quantun vis, fiat puluis. The thynges that causeth generacyon of flesshe & skynne and to strength. The helpes conglutynatyues, consolydatyues, and sigillatyues be of .xvj. fourmes. The fyrste is wyne of the decoction of Rasis. The seconde is vnguentum album that is made thus. Receipe ceruse. unciam. i. Litargiri. unciam. semis Olei ros. libram. i. aque ros, quar. semis And let them be well styred in a mortar in puttyng somtyme oyle, & somtyme rose water, & make an oyntment & it is of Domo. The thyrde fourme is vnguentum album de Rasis, R, olei rosarum, lib, i, cere, uncias, ii, ceruse, unciam, i, canphere. , albus ouorum, iij, in numero and make an [...]ntment and yf a lytel litargiri were put therto wyll be the better for scabbydnes, The fourth [...]urme is a precyous whyte oyntment for scabbe [...]d serpygine, R, ceruse, uncias, ij, litargiri, unciam, i, thuris masticis, ana uncias .ij. & semis olei quod sufficit, addendo aque ros. a[u]t acetum siat vnguentum. The .v. fourme is vnguentum de calce and is of Auycen merueylous to consolydate and drye the conbustyons and woundes of synewes. Receipe vnflaked lyme wasshed. ix. tymes in colde water vntyll the sharpnes be all gone quar. i. et cum oleo ros. ducendo in morterio fiat vnguentum. And it may be made with waxe and with y^e whyte of an egge as ye seme to be best, for it is y^e better. The syxth fourme is a whyte playster of ceruse that Galyen putteth in libro cathagenorum and mayster Peter darle of Auynyon vsed it. Receipe cere uncias .iiij. olei ros. libras semis terebentine quar .i. ceruse 3 .ij. litargiri unciam .i. olibani, aluminis unciam semis post infusionem olei, cere et terebentine reliqua misceantur in morterio et fiat vnguentum. The .vij. fourme is a blacke playster of the boke Cathagenorum that is one of myne. Receipe litargiri partis .i. olei, et aceti ana partis .iiij. incorporando coquantur per diem integrun, continue agitando cun spatula, et vocatur emplastrum vnus diei. The eyght fourme is dyapalma in cathaginis, R, auxungie porcis veteris lib, ij, litargiri lib, ij, coperose quar. semis, coquantur ad modum emplastris nigri, cum spatula de palma viridi vel canna, et fiat emplastrum. The, ix, fourme is a playster of mayster Peter of Bonaco, R, plantaginis, consolida maioris, be thenice, berbene, pimpenelle, piloselle, mille foli, lingue canis, caude equine ana, M, i, comcassentur cu[m] lib, ij, cepi arietini coquantur et collentur postea addatur resine, cere, galbani ana, quar, iij, terebentine quar, i, & s, effundantur et fiat emplastrum. The, x, fourme is a playster of centaure & that vsed mayster Peter of Arle, R, centaurea minor, M, vj, temperetur per noctem in vino albo, deinde coquantur vsque ad consumationem medietatis, colentur, et iterum illa collatura boliatur vsque sit reducta ad spissitudinem mellis and let it be kepte And whan ye make a plaister take of y^e same wyne of centaure, uncias, iiij, lactis mulieris, uncias, ij, terebentine lib, s, cere none quar, i, masticis, gunmi armoniaci, ana, unciam, i, malaxando fiat enplastrum. The .xj. fourme is y^e playster of Dinus that is thus. Receipe bethonice, centaurea ana M. iij. conquassantur et cum vino albo buliantur et collentur et collature addatur terebentine libras semis resine quar. i. cere. unciam. i. Iterum buliatur et super acetum proiciatur et congregentur et tun lacte mollificentur et fiat emplastrum. The xij, fourme is the kynge of Englandes oyntment. R, cere albe, resine ana quar, i, aloe, uncias, ij, terebentine, lote, unciam, i, thuris, masticis, ana, unciam, s, fiat vnguentum. The, xiiij, fourme is a playster that y^e Erle Wylllyam had (of mayster Anferyn of Genes) and gaue it to the frenche kyng. R, pimpinelle, bethonice, maligrane verbene, vernucularis ana, M, i, bu[u]iant in vino albo vsque ad consumationem duatun partiun deinde coletur et iterum bultatur et addatur cun eo resine lib, s, cere alba lib, s, masticis, uncias, iij, [u]t coquantur & proiciatur super lacte mulierun et mollificetur et fiat emplastrum. The, xiiij, fourme is vnguentum gratie that mayster Iohnn neuwe to mayster Anseryn of Genes dyd make. R, olei vdegaris, lib, i, cere quar, i,

semen illarum ros, agrestun, unciam, s, fiat vnguentun. The, xv, fourme is a greneoyntment. R, cere et olei ana, uncias, vj, liquefiant et in fine addatur viride eris, unciam, i, ducendo cum spatula fiat vnguentun. The, xvj, fourme is vnguentum viridun herbarun commune of Nycolas of Roger of Iamerius & of all the Ceciliens. R, celidonie, panis cuteli, qui dicitur alleluya, centrungalli, leuistici, scabiose ana M, i, olei, lib, s, cere, masticis, aloes, viride eris ana, unciam, i, fiat vnguentun, The, xvij, fourme is of mayster Guillam of Saliceto whiche is praysed of Lanfranc & Henry, R, balanstis, aloes, cathume argenti, eris vsti ana, fiat puluis, Item, R, corticis pini, unciam, i, litargiri, ceruse ana, unciam, s, nucis cipressi, centaure minoris, aristologie vste ana, uncias, ij, fiat puluis for it is very profytable. The helpes for fraudulent woundes and sores. The helpes for woundes composed w^t corrupte sores are they that requyre excytacyon & be of, vij, fourmes, of which, The fyrste fourme is wasshyng with wyne and honny, The seconde fourme is purgyng with homny in secundo ad Glanconem that is such, R, mellis cocti, lib, i, thuris, unciam s, farine ordeï vel orobi, 3, i, misceantur and it may be made so with terebentyne & is good in synewy places, The thyrde fourme is mundyfyatyfe of smalache that is of Guyllyam and Lanfranc, of Henry, and of all the Physycyens for it purgeth and rypeth the corrupt sores, R, succi apij, 3, viij, mellis, farine frumenti vel aliorum quar, i, seth it on the fyre contynually styryng it tyll it be thycke, and be made an oyntment and put therto succi absinthij, It suffreth nat any fystules or canker to bre[...] in woundes and yf the wounde dyd chaufe put therto succum plantagi[...]s or crassela, it shulde be profytable, The fourth fourme is mundyfyatyfe of myrre and is of Bronne and of Thederye R, mellis lib, i, farine siliginis, farine lupinorun, fenugreci, ana, unciam, i, mirre, 3, i, succi absinthij, lib, s, terebentine quar, i, buliendo succun cun farinis in fine addantur alia, et fiat vnguentun, The, v, fourme is mundyfyatyfe of resina and is stronge and is appropried to synewy membres, R, mellis terebentine ana, lib, s, myrre, sarcocole, farine fenugreci, semnis lini, ana, 3, i, dissoluantur gunme cum mellis et terebentina & additis pulueribus, fiat vnguentum & it is greatly in vsage, The syxth fourme is mundyfyatyfe of yreos, and is of mayster Dinus, and it is such as putteth and draweth out the rot[t]ennes, R, mellis, lib, s, terebentine quar, i, raditis [...]reos, unciam, s, misceantur, et fiat vnguentun, The, .i., fourme is another mundyfyatyfe of Dinus ma[d]e of gunmes for thycke corrupcyon and is suche, R, galbani armeniacy resine terebentine picis vaccini cere olei antiqui ana, 3, i, dissolviendo [...]mas cum aceto et fiat vnguentum. The helpes of woundes and sores with venyms. Helpes of composed woundes apostemate with venym requyareth stronge desiccacyon & be of, vi, maners, The fyrste maner is y^e wasshyng with wyne and aluminous water with good and artefycyall lygature, The seconde is a playster of the byssshop of Lodene that was of how sholde with the erle of Armynac appropiate to all olde sores vlcers fystules and cankers. Receipe auxungie porci mundate a pelliculis temperate in aceto per x. dies renouando semper acetone de tertio in tertium diem. libras . aluins ruppe quar. semis pistando in morta rio per diem integrun, fiat vnguentun. The thyrde maner is vnguentum azurimon very profytable to pustules of the face in scabie s ipigine. Receipe auxungie porci preparate vt dictun est, libram i. argenti viui extincti quart, i. aluins quart. semis sulphuris viui. unciam. i. bugie. unciam. s inde de baldac 3 .ij. pistando in morterio fiat vnguentun. The fourth maner is litargirun nutritun and is of Rasis and Auycen and proued of all workmen. Receipe litargiri bene puluerizati quantum vis et cun sufficientia olei ros. et aceti tantun ducato in morterio donec inspicietur et tumescat et renouatur et seruatur et si adderetur cun vna parte iuxta pars facti de ere vsto, anthimonio plunbo vsto aluminis balaustiarun rube cururine galli sanguis draconis cathine argenti serico vernubus terrestribus siccatis ana partis fiat puluis et mis ceatur in morterio. It shulde be an oyntment profitable to

all sores that be venymous and of dyffycyle consolydacyon. And yf it be made in a mortel of leade it shulde be the better to all dysposycyons of canker as Galyen sayeth prima parte me amir. The helpes of woundes with fylthynes. Al the helpes of sores and woundes with fylthynesse & venymous corrupcyon requyreth stronge wasshynge with desiccation and be of .xij. fourmes. Of whiche. The fyrste fourme is decoction of petis potz de sauces or w^tout decoction. The seconde fourme is vnguentun apostolorum that is appropried to mundy[n]y y^e vlceres. Receipe cere albe, resine, armeniaci ana uncias .xiiij. oppoponici, viride eris ana uncias .iiij. aristologie ro. thuris ana ʒ .xvj. mirre[n] galbanun ana ʒ .iiij. b dellij ʒ .vi. litargiri uncias .ix. ole[...].onis libras ii. dissoluantur gunme in aceto, et misceantur cun litargiro cum oleo decocto, et addatur c[e]ra [r]esina liquefacta et coquantur quousque gutta in[...]piat coagulari et inde ponando ad ignem misceantur pulneres et in fine viride eris ponatur et [...]at vnguentum. The thyrd fourme is gratia est of Hebemesue called saraceos and emplastrum magnun which he vsed to clense the woundes of yll consolydacyon & mayster Anseryn vsed the same and mayster Peter of the argenterii the materylles wherof ar as vnguentun apostolorum saue that [t]hey put erugo de campane seth it tyl it be blacke. The fourth fourme is vnguentun egiptiacun and of Rasis & Auycen. And my mayster of Boleyn vsed therof and is one of myne for I haue founde good proffe alwayes in it for it corrodeth lyghtly & mundyfyeth very wel. Receipe mellis libram i. aceti, lib, semisflorun eris. unciam .i. aluins. semis sodden on the fyre tyll it be thycke and suffyciently red. And therfore it is called the dowble coloured oyntment. The fyfth fourme is the grene oyntment of Rasis & Auycen, howbeit I haue vsed it but lytell bycause y^e grene oyntmentes are dyffamed on the behalfe of the people. R, mellis, lib,, viride eris, lib, s, misceantur quod non approbo, for it is to stronge, The, vi, fourme is emplastrun rubiun grecum, and is also of two colours, the whiche Galyen putteth in tertio ad Glanconem, & it is allowed of mayster Dinus bycause it rectifyeth the euyl vlceres that are of dyffycult consolydacyons. R, olei, lib, ii, aceti. lib, i et, s, litargiri, lib, i, coquatur litargirun cun oleo et aceto donec ingrossetur et tunc ponatur viride eris et coquatur donec inspicitur et rubeun efficiatur. The seauenth fourme is vnguentun viridun of herbes and is commended of mayster Dinus bycause it mundyfye the olde sores and wasteth gentylly the superflue flesshe and healeth. Receipe celidonie, plantaginis, scabiose, vrtice, leuistici, centrungalli, galine, grasse, ana, M, i, concassantur, et cum lib, ii, olei per, vii, dies temperentur, deinde buliantur et exprimendo colentur cui colature addatur cere, uncias, iii, terebentine, uncias, vi, resine, uncias, ii, buliantur donec parum spissentur deinde tolletur ab igne et misceatur thuris, sarcocole, aloen, ana unciam, i, aristologie longe, floris eris. ana, uncias. vi, misceatur, et fiat vnguentun, for it is good and proued. Many other helpes are put in the incarnatyfe helpes that brede flesshe and mundyfye. The eyght fourme are trociskes. And fyrste y^e trociskes andromathi that Galyen and Auycen putteth to be called Aldaron, and ar made in powdre tempred w^t wyne or with vyneygre. R, corticis granatorun. unciam. semis gallarum. ʒ .viii. mirre, aristologie ro ana ʒ .iiij, draganti, aluins [...]ametr[...], ana, ʒ, ii, zetgi quod est vitriolum, ʒ, iiii, be put to powdre and with swete wyne incorporate, and be made to trociskes. Also trocisci caldicon. Receipe calcis vi[...]e partis .i. arcenici rubei & citrini, alcali, acassie, ana partis, s, puluerizentur et conficiantur cun capitello, et fiant trocisci. And are of Galyen Capitellum after Roger, and Albucrasis is made thus. Receipe calcis vi[u]i, salis armeniaci, ana, lib, i, teren[...]r et piscentur cum lexiuia cinerum truncorum fabarum et ponantur in olla infundo minutim perforata et ponatur in alia olla integra de subtus in quo reci [v]iatur capitellum, And it is good to gnawe all su[p]erflue flesshe and maketh openynge of cantere [a]nd lyghtly causeth the barke to fall. The, ix, [...]me are tricisci affrodillorum. Receipe succi affrodil[...]

.i.vj.calcis viue. uncias. iij. auripigmenti.unciam.i. con[...]antur et fiat trocisci and let them be dried in [t]he somne in August & they are of myne. The .x. [...]me are the trocyskes of arcenyc after the, iiij. [...]ysters. Receipe arcenici sublimati quart .i. pastetur [...]u[...]co solatri or of caules wortes or other her[...] and be dried in the somne or at the fyre and do [...]so thre or foure tymes folowyng and make tro[...]yskes. The .xi. fourme ben y^e brekynges of Albucrasis that make them of arcenyc and vnsleeked lyme & of soft sope, And some put therto to alter the coloure fute of the chymney and incorporate them w^t salina. The .xii. fourme is actuall cantere of Albucrasis confortyng the menbre rectyfy the vlceres of yll complexyon and appeaseth the brennyng in the two fyrste dayes with the whytes of egges, and oyle of roses bet togyther. And than procede to the brennyng with butter and a lytell meale. And make a defensyfe aboute it with bolearmenyake, & terre sigillata, camphere, and oyle of roses & vyneygre, or with oyntement populeon. The helpes of woundes and sores composed with fystules. These helpes or aydes are of foure fourmes. Of the which. The fyrste is drynke proued for fystules, Receipe agrimonie partis, i. decoquantur cun vino albo et fiat colatura wherof shall be gyuen euery mornynge a goblet full to the pacyent to drynke. The seconde fourme is a playster of agrymony. R, agrimonie et pistetur cum sale et succus exprimatur infra fistulam et folia supponantur. The thyrd fourme is lexiuium infusum in aqua forti or any of the trocyskes abouesayde be tempred in brennyng water in the capytello or wyne and aqua fortis, after y^e alkamystes stronge water is made thus. Receipe salis armoniaci, auripigmenti rubei, et citrini, cuprose, viride eris ana partis equalis puluenzantur et ponentur in alembico vitreo benelutato et distillentur cun lento igne et prima aqua qui exit abiciatur postea dupletur ignis et quando alembicum sit rubeum retineatur statim aqua in vase vitreo vnn cooperto custodiatur for it is of so greate strength that it melteth yron, and perceth it and therefore one onely drop mortyfyeth the fystula & destroyeth wartes and exeressence. The fourth fourme are ruptures actuall canteres of Albucrasis, as it is sayd of fraudulent vlceres and certayne oyntementes and playsters that is aforesayde. The aydes of woundes and sores composed with canker. Syxe fourmes there be of woundes and sores with cankers. The fyrste be pocions for cankers, and be heauy herbes and chye fly it is sayd that cerac auayleth whan it is dronke, Lykewyse sayth mayster Arnolde of Newtowne of cen[...]nodia called lingua passerina, swynes grasse, Al[s]o saphyrs and emeraudes be good. The secon[de] fourme is precyous wasshyngis vyneygre soden [...]ith salt, And tryacle & flesshe of vipers are good [...]raynly for they put all the venym in to the [...]ynne, The thyrd fourme is linimentum spe[...]lly [...]leiro, s, styred in a mortar of leade in the tyll it become blacke and be made oyntment, alowed of Galyen & Auycen, The fourth [...]rme is lytargy kepte in a mortar of leade tyll it be blacke, for it is a precyous thyng to all fleyngis of the skynne & to all cankered passyons of all the partyes of the body chye fly in the ars, And it is of Galyen in .x. terapentice. The fyfth fourme is vnguentum dyapanphiligos which thederic aloweth and all his suyt, bycause it cureth canker and herispila, & combustions which is. Receipe olei ros.cere albe .ana uncias .v. succi granorun rubiorum, solatri uncias .iiij.ceruse lote 3 .ij. panphiligos, it is thutia plunbi vsti et loti ana unciam .i. thuris unciam. semis fiat vnguentum cum oleo et cera et reliquam. The .vj. fourme ben the ruptures mundyfyatyfe oyntementes that are spoken of before. And the actuall canteres of Albucrasis of woundes & vlceres composed with concussions. The helpes of woundes or sores made with concussyons or strypes. Of sores & woundes made with concussyons be .xj. fourmes. The fyrste is restoracions with olei mirtillorum, et olei ros, with whyte of egges. The seconde is resolutyfe made w^t wyne and honuy and salt with flax. The seconde is a playster made with waxe and comyn. The .iiij. is with floribus camomille, melleloti, mirtillorun, absinthij,

aneti, & cimini. The .v. is emplastrum malnarum, absinthio, furfure, et aneton. The .vi. is a playster made of semine ordeï, fenugreci, seminis lini, camomille, et furfuris subtilis ana unciam .i. arcenici sublimati, puluerizati, 3, s, decoquantur cum vino decoctionis calamento addendo in fine, modicum de olei camomille & this is ryght good to resolueth the deade blode of the concussions and it is greatly approued of Auycen. The .vij. is imbrogation of Iametus that healeth & resolueth all concussyons. Receipe olei Ros uncias .ij. capitem caparun, et seminis cimini, ruthe, arthemisie, absinthie, persicarie. ana unciam semis fiat emplastrum. The .viij. is a playster of mayster Peter of Bonaco comune to all concussions. Receipe cere quar .i. armoniaci. quar. s piscis nauallis, quar, s, cimine, ruthe, absinthie, peritarie, ana, 3, s, succi peritarie, aceti optimi, ana, quar, i, confundantur armoniaci in succis per noctem, et mane ponatur super ignem, et liquefiat cum re [...]quis vsque ad consumptionem succorum, et pulue [...]es malexentur cum oleo laurino, et fiat emplastrum. The .ix. fourme is occicrocium commune at the Apotycaries & is good for the concusyon of bones, and is made thus. R, cerc, picis, colopho[b]ic, croci, ana, uncias, iiij, terebentine, galbani, armoniaci, m[...]re, thuris, masticis, ana, 3, i, dissoluantur gunme cum aceto, fiat emplastrum. The .x. fourme is a[p]os[t]olicum, comune at the appotycaries that resolueth and rectifyeth merueylously the hurtyng the bones and concussyons, and is made thus. Receipe litargiri, unciam, i, cere rube colonie, ana, unciam, i, pulegij, [...]sci quer[...]ini, ana, unciam, i, armoniaci lapidis calamite, , 3, v, thuris, masticis, ana, 3, i, terebentine, galba [...]dellij, mirre, eris vsti, lapidis calcis, aristolo[g]e, d[...]aprassij, oppoponice, sarcocole, ana, 3, ij, disso[lu]tis gunmis cum aceto, et mixtis cum litargiro cum oleo decocto, et in fine aliis positis, fiat emplastrum. The, xj, is apostolicum chirurgicum of Roger very good to all concussyons. R, colophonie, lib, i, picis nauallis, lib, s, galbani, serapini, oppoponice, thuris, masticis, terebentine, ana, unciam, s aceti, lib, cere, s, iiij, dissolutis gunmis cum aceto, & bu licis, er liquefactis reliqua addantur et mollifican do, fiat emplastrum. And yf red powdre be put with the sayd playster it wyll be good rupture. The aydes of woundes and vlceres with composycyon of apostemes. Woundes & vlceres composed with apostemes and ache haue foure fourmes of help. Of the whiche the fyrste is olei Ros with papaueris albi cum vitello oui. The seconde fourme is of mygrayne and is of Auycen. Receipe granati dulcis et de quoquantur cun vino pontico vsque ad dissolutionem, et fiat linimentum. The thyrde fourme is a playster of soden breade and somtyme is a lytell homny put therto and medled playsterwyse and is of .G. and oftentyme is put to it de succo ebulorum and somtyme de succo apij and is alowed of .iiij. maysters of Salerne. The fourth fourme is a playster of malowes and is alowed of Thederic and is of myne. Receipe foliorum malue M .iiij. coquantur fortiter, deinde terentur, et postea cum modica de coctione super ignem addendo modicum de furfure subtili, fiat emplastrum. The helps of woundes with pryckynge and ache of synewes. The helps of woundes with pryckynge of synewes, and ache be of .vij. fourmes. The fyrste is fomentacyon with oyle and terebentyne medled & warmed. The seconde is a playster of Euforbio, and is of Galyen, of Browne and Thederic, and is one of myne. Receipe resine, cere, picis ana quar. semis terebentine, olei cominis ana unciam semis euforbij 3 .ij. olei, masticis. unciam .i. fiat emplastrum. The thyrde is purgynge of synewes, alowed in the hurtynges of the noddle of the heed, by mayster Peter de Bonaco. Receipe mellis rosarum colati. quar. i. cere. resine, terebentine ana quar. semis farine ordeï. unciam. semis masticis, sarcocole, munmie ana unciam. semis olei, Masticis unciam .fiat emplastrum. The fourth fourme is emplastrum [l]umbricorum that bredeth flesshe and knytteth the synewy membres, which is of Lanfranc. Receipe vtriusque consolide, arnoglos. semis piloselle vtriusque plantagnis, ana M. i. vermiun terrestrium. libram semisterantur [...]ina et

ponantur in. libram i. et. semis olei cominis by .vj. dayes after that it is soden and streyned, & pressed, than put to it cepi mutonis. lib, i, picis naualis, lib, s, pi [...]is grece quar. i. armoniaci, galbani, oppoponaci, cerebentine ana uncias .i. thuris, masticis ana, unciam, s, dissolu gunmis in aceto, fiat emplastrum. The fyfth fourme is vnguentun dulce mollyfycatyfe, resolu[...]se, and mytygatyfe of the paynes of y^e synewes. butiri sine sale, lib, i, olei viola, lib, s, auxungie, galline, aut anceris, azimi, medule bonis retentis ana 3 .i. cere quod sufficit, fiat vnguentum. The .vj. fourme is vnguentun marciatum et agrippa, merueylously resolutyfe and confortyng the synewes and the ioyntes, & is made thus. Receipe cere albe. libras ij. olei, lib, viij, rorismariun, foliorum lauri, ruthe, thamaristi ana, lib, s, sauine, balaustie, balsami, thimi, epithuni, oximi, lilifagi, polij, calamenti, arthemesie, enule campane, bethonice, herba Sarazenice, herbe sancte marie, brance vrcine, spargule, herbe venti, pimpinelle, herbe paralizis, simarum sambuc[o] crassuli, millefolij, semper viue, camedrios, centinodie, mirte, centaure, foliorum fragule, quinque folij siccatis, radicis maluauistis ana, uncias, iiij, urticarum, violarum pauperarum, mente turelle, herbe muscate, alleluya, lingue cervine, crespule, camphorate, ana, quar. semis fenugreci, cimini ana .unciam, i, butiri, medule ceruine adipis, vrsi, galbani, armoniaci ana, unciam, i, thuris masticis, storatie ana, unciam, s, olei nardini, unciam, i, infundantur herbe in vino, postea coquantur et colentur, et colature alia addantur, et fiat vnguentun. Unguentum agrippa resolutyfe is made thus. Receipe brionie, uncias, ij, radicis sticados, lib, i, squille, lib, s, yreos, uncias, iiij, radicis filicis, radicis ebuli ana, uncias, ij, olei, lib, iiij, cere, uncias, v, buliant herbe cum oleo et tolentur et addatur cera, et fiat vnguentum. The, vij, fourme is vnguentum de ramis, and is of .G. in libro cathegenorum profytable to all hardnesses, as crampe, or stytyche, and carthecanos, and such lyke. R, olei radicis cucumeris agrestis, lib, ii, olei maiorane, alkangi, cere, terebentine, medule ossium cerui ana, lib, s, sanguis testidinun quar, i, ranarun numero, vi, balsami, unciam, s, coquentur ranis & sanguis testidinum cum oleo colentur, et colatura cera, et reliqua misceantur, et fiat vnguentun, which is very precyous. The helpes for woundes and vlceres composed with venym. The helpes of woundes and vlceres composed with venym are of .iiij. fourmes. The fyrst is vnguentun nigr[u]m, & is of Dinus. Receipe cepi arietam, picis, oppoponaci, terebentine ana, lib, s, fundendo misceantur proitiendo in aceto and is of Wylliam in de secretis and in Macer in libro cathagenorun. The seconde fourme is emplastrum de cepa, and is alowed of Wylliam of Saliceto. R, vnum cepe nuon, radicis lilij siluestris quar, s, [...]corte, unciam, i, salis, unciam, s, olei mellis, uncias, ii, coquendo radi ris in vino, & pistendo in mortario, fiat vnguentun. The helpes for woundes and sores with superflue flesshe. The woundes and vlceres of superflue flesshe are of .viij. fourmes. The fyrste fourme is [...]ax or towe chopped smalle and layde theron. The seconde is powdre of dactiles applyed ther[...], The thyrde is alume soden. The fourth is [...]perose layde vpon it. The fyfth is powdre of [...]ciskes affrodillornm. The syxth is lyme of [...]halke and honny myngled togyther & seth them or drye them & make a powdre, The, vij, ben the trociskes of arsenyke abouesayde, The, viij, ben ruptuR, incisions, & canteres cutelleria aforesaid. The helpes of fractures and dyssolucyons or dislocations of bones or ioyntes. The helpes of Algebra & of dislocatioms are of .vj. fourmes. The fyrst is glutynatyfe that serueth at the begynnyng. Receipe farine volatile pistetur part .i. pulueris rubei part. semis pistentur cum albumine ouorum et fiat emplastrun. Or the playster of browne that serueth at the seconde remouyng. Receipe aloes, mirre, boliarmenici, glutinis acatie, dragaganti, lapdani ana puluerizentur, et albumine ouorum incorporentur and lay it on with towe. The thyrde fourme is that serueth after the .xx. dayes is the decoction of roses, absinthij, mosse able arboris, quercus et salis and lay it to with flaxe. The fourth

fourme is a playster of Lanfranc appropried to confort the membre and therfore it accordeth to serue the last and is made thus. Receipe olei ros. uncias .iiij. resine uncias .iiij. cere uncias .ij. colophonie, masticis, thurn, ana uncias .ii. nici cipressi, cucumerum, ana 3 .i. fiant magdaliones aforesayd. The fyfth is apostolicun chirurgicun et oxcicrotiun. The syxth fourme is spannadrapi Receipe thurn, mastic, picis, farine volatilis, boliar menici ana 3 .ij. cere, cepi arietun, ana libras semis Melt the wax and the talowe togyther than put the powdres therto & styre them togyther and dyp a cloth therin and applye it to the place. But bycause that somtyme after the restoratiom there remayneth some hardnes therfore shall be put here the maner to soften it agayne in this wyse. Fyrste the membre shall be mollyfyed with the decoction of the heades and fete of shepe and the myddle barke of Elme and with corticis radicis maluausti ana M.i. florun camomille, meliloci, fenugreci, semine lini ana quar. semis & boyle them by the space of an houre and let the hardnesse be bathed therwith the space of a day or a halfe and than be wyped and anoynted with other, or with this oyntment. Receipe dial[...]ee, agrippe, olei laurini ana misceantur. And yf the membre be nat soupled, do it with this. Receipe maluausti, lib, ii, semini fenugreci, seminis lini ana, lib, i, squille, lib, s, olei, lib, iiij, cere, terebentine, gunmi edere, galbani ana, 3, ii, colosonie, resine ana, lib, s, coquantur herbe cum aqua et [...]clentur, et reliqua addantur, et fiat vnguentum. Or this that is propre. R, olei laurini, olei masticis, olei mustellini ana, quar, i, auxungij [...]zim vel viculi. lib, s, alipte muscate, gallie muscate, [...]dellii, [...]rcocolle, aspalti, storacis. calamnite ana, unciam, s, castor, uncias.ii, musti, 3, s, cere quar, i, fiat vnguentum. And when it is anoynted lay theron de lana succida, aur [...]jiaquilon magnum, vel gummatum, aut[...]radicis maluausti co[...]tas et pistatas cun farina, fenugreci [...]minis lini, et fecis olei coins. And yf it be an olde hardnesse it were behouefull to bath or stewe the membre with the infusyon of a pyece of yren, or of [...]myll stone well heate in the fyre and put in vy[nn]ygre, and set the membre theron. Also to wasshe [...] it with the water of mannes blode ones destylled is precyons or for to wasshe it with hote blode. Here foloweth the formacion of the propre and commyn remedies of y^e dyseases from the heade vnto the fete after the dyuersyte of the membres & fyrste of the helps for the heade. Here after we shal put the helps for the woundes of y^e heade. And fyrste the pocyons made by Thederic and his felowes. Receipe cinomomi, unciam, i, 3, unciam, s, galangi granorum paradisi, cardamomi, piperis longi et nigri, gariofili ana, 3, i, fiant puluis & they saye that yf he broke it, it is a good sygne and yf he vomyt it is an yll sygne. The seconde fourme is purgyng of the brayne & pannycles therof. Receipe olei mellis Ros. callati ana, uncias, ii, olei Ros, unciam, i, let them be medled and with fyne clothes layde theron. The thyrde fourme puluis capitale and is of mayster Dinus, alowed of Lanfranc and Henry. Receipe radicis yreos, aristologie, thuris, mirre, sanguis dra, farine orobi ana, fiat puluis. The fourth fourme is emplastrum bethonice, which is vsed at Paris that bredeth flesshe & conforteth, reyseth the bones, purgeth, and healeth. Receipe cere, resine ana, lib, i, succi bethonice, succi plantaginis, succi apii ana, lib, i, coquetur cera et resina cun succis vsque ad consupcionem succorum deinde ponatur terebentina et incorporentur et colentur et fiat emplastrum. The, v, fourme is emplastrum capitale of mayster Anserin of Genes y^t draweth & reyseth y^e bones, bredeth flesshe, & healeth. And, M. Peter sayde y^t he had proued it in a dogges heade that was wounded to y^e brayne & healed hym. Receipe terebentine pert, ij, cere pert, i, resine pert, s, molten on the fyre & streyned on vynygre & than molten agayne & cast vpon y^e iuce of these herbes, bethonice pert, ij, berbene pert, i, et cun aliis succis et lacte mulieris diu mollificentur & make a playster therof, it is stronger than the fyrste. The .vj. fourme is ordeyned to reyse bones yf they may be had none otherwyse & was of, M. Peter. R, olei antiqui pert, i, sordiciei aleorum,

cere a[...], pert, s, euforbi quar, pert, vnus, aristologie lomge pert, vnus, lactis mulierum modicum, fiat emplastrum. For y^e scabbe take this salve as, G. wylleth Receipe litargiri, sulphurum viui, calcis, viui atramenti, [v]itrioli, auripigmenti fulginis, viride eris, et elebori albi et nigri, alumnis, gallarum ana, unciam, s, argenti [u]iui, unciam, i, cere, picis, olei nutun ana, lib, s, succi lapatij, succi fumeterre, succi scabiose, succi, boraginis ana, quart, i, buleantur cera et oleum cun succis vsque ad consumptionem reliqua incorporentur, & fiat vnguentum, diligenter. Also for fallynge baldnes of [...]e heares & to cause the heare to brede in the car [...]iary of, M, Peter. R, succi calcidarum, unciam, i, puluis [...]nguissugis combustarum, lacerci viridis, adusli [sa]lu[b]ris talparum, apun combustarum solerium combu[...]un, cetatum porci abustarum, viride eris ana, unciam, i, mel[i]s quod sufficit ad incorporandum, fiat vnguentum [p]robatum est. The remedies for the face and parties therof. Fyrste the gutta rosa is allowed vnguentum citrinum of the communalte of y^e antydotary. R, auxungie porci preperate libram, i, argenti vini, unciam, i, viride eris, unciam, s, pistendo in mortario, fiat vnguentum, Secondly gommara is put to whyte the face which is of Rasis, R, cicerum fabarum, ordeï mundati, amigdalorum excortitatorum, dragaganti ana, part, i, septen raphani part, s, fiat puluis and tempre it with mylke and anoynte y^e face by nyght and in the mornynge wasshe it with water and branne, Thyrdly is put to it a water of fraunce, R, litargiri calcinati, lib, i, masticis, uncias, ij, pistentur cum albumine ouorum, et ponantur in alem bico et fiat aqua it is ryght precyous, Fourthly lac virgineum to purge & drye the vyrulent pymples, & spotty skynnes of the face is made thus, Receipe litargiri subtiliter puluerizati, uncias, iij, aceti albi optim lib, s, misceantur simul & admictantur residere et distillando cun pecia trianlanti filerim vel cun sacco sussiapiatur aqua deinde illa aqua misceatur cun aqua salis puluerizata, et libras s, aqua pluuiialis vel fomranee et misceantur ambe aque & coagulabuntur ad modum lecti, & rub the place w^t it that is infecte. Helpes for the dyseases of the eyes. Fyrste take the water of. M. Peter of spayne, that conforteth and clereth the syght Receipe feniculi, ruthe, celidonie, berbene, eufrasia, clarete Ros, & aque eius ana, concassentur et temperentur per diem naturalem in vino albo deinde ponantur in alembico, et fiat aqua colirium album. Secondly take Colirium album for the payne of the eyes, made by Galyen. Receipe ceruse lote unciam .i. sarcocole 3 .iij. agmidum, 3, ij, dragagant, 3, i, apij, 3, s, puluerizentur omnia valde et cum aqua pluuiali mollientur sub tegulam et fiant parui pillule and let them be staped with womans mylke or with rose water, and be admynystred. Colirium de thutia. Thyrdly is admynystred colirium de thutia made at Mountpyller in the ende of optalmia, for it resolueth and dryeth the moisture that commeth to the eyes. Receipethurij preperate, lapdani calaminarum ana, unciam, s, gariofil.x. numero faui cun melle, 3, i, puluerizanda puluerizentur subtilissime, et ponantur in, uncias, ij, vini albi et aque Ros, quar, s, camphere, unciam, i, colentur subtilissime, et fiat colirium. The powdre of mayster Arnolde. The fourth fourme is put by mayster Arnolde for to drye the teares and to rectify the rednesse. R, thutie preperate, 3, i, anthimonn, unciam, s, margari[n]arum, 3, ij, florum coralli, rubium, 3, i, & s, ceciri cru[...] prorie de flostulo vermie minutim incisi 3, s, fiat puluis subtilissimus et seruetur in pixide erea. Fyftly is put the powdre of welcome, of myne owne makynge for all spottes of the eyes. Receipe zuca[m] i tandi, unciam, i, thutie preperate, unciam, s, puluerizentur, et cum aqua Ros, pestentur et in prelium spergantur et in versetur peluis super fimium, lini, aloes, & exsiccentur et puluerizentur subtilissime, & fiat puluis et seruetur in pixide erea, & ponatur in oculis cum s[...]ilo argenteo. Syxtely is put colirium for the rednes and y^e teares and is made by Dinus. Receipe thutie preperate.unciam, i, aloe cicotriini, unciam, s, camphere, 3, i, aque Ros, s, lib, i, & s, vini granatorum, lib, s, puluerizanda puluerizantur subtilissime, et misceantur cum aliis et calafiant sub

carbones modica bullitione, coletur et seruetur. Helpes for bledynge at the nose. For bledynge of the nose. Whan the flux of blode commeth in the nosethyrilles it is staunched in puttyng in to them tentis anoynted with licio dissolued in water holdynge y^e nose thyrilles with your fyngers tyl it be staunched & holde a sponge at his foreheade bathed in stronge vyneygre. And also it helpeth to staunche y^e hyndre partes. Also for popilipo mayster Peter de Bonaco aloweth a tent de radice achori tempred in oyle of Iuniperio wherin scamony hath ben dyssolued. Helpes for the paynes of the eares. The paynes of the eares are appeased by puttyng in theym the mylke of a woman as is aforesayd. The vlcres of the eares be clensed with honny Ros, puttyng therto a oyntment made thus. Receiperubiginem ferri et teream fortiter et pone eam in sartaginem cun aceto fortissimo et far oam bulire donec siccetur. Item distenperetur cun aceto et siccetur ad ignem postea iterum subtilissime pulueriza, et cun aceto coque donec recipiat spissitudinem mellis. And put of it in to the eares, for it healeth the olde sores. Or elles after mayster Peter. Receipenitri cardomini decoquantur in succo r[...] the et coletur, and one drop be dystylled in to the eare for it bryngeth the rottennes outwarde and dystroyeth the superflue prowde flesshe & healeth. Helpes for the paynes of the teth. The dolour of the toth ache is appeased with holdyng vyneygre of y^e decoction of peletory, or herbam hertes tonge. The blackenesse is wasshed as was approued w^t this water. Receipe salis armoniaci, salis genme ana quar .i. aluins, quar, s ponantur in alembico et distillantur et fiat aque. The chauffynges and swellynge of the gunmes are appeased w^t the water of cheruel, playntayne, [...]luine, or w^t this wasshing made of Dinus. Receipe ro[...]un.unciam.i.lentium ana quar.i.baulaustium quar. semis comcas[c]entur et buliantur cun aqua & aceto fiat linimentum. The thyrd Chapytre is the remedies for dyseases of the necke. The necke hath dyuers dyseases of the which some be here specified and fyrst de bocium of necke. Bocium of the necke hath.ij. fourmes The fyrste is powdre of mayster Dinus. Receipe se[...]ulare uncias .ij. 33. unciam .i. brionie, piretri, scrapini, ma[...]l[...]e, oluiarum, salis genme, ossium, cepie, spongie [co]bustie ana 3 .ij. gariofilis piperis, cinamomi, unciam.i. fiat puluis in quo sit modicum de alumine. The seconde fourme is to emplayster the place with diaculum, or with a playster of gootes dyrt, or with a playster of the flewmatyke apostemes. The .iiij. Chapytre of the helpes for the shuldre and parties therof. For the payne of y^e shuldres there is an oyntment medled with martiacun & agrippa. For the gilbosite & bocement Auycen aloweth em plastrum de acoro. Receipeacori, enule canpane, saune ana quar.i, bdellij quar. semiscastorei 3 .i. coquantur in vino et oleo vsque ad consumptionem vini, et de oleo cun cera fiat vnquentum. Cyragra of y^e reynes is cured as the flewmatyke apostemes but specyally in it is plasters of mountpyller of red cawle wortis soden w^t lye of ashes bowked & knodden w^t a lytel vynygre. The .v. Chapytre is of the helpes of the brest and partes therof. The helpes of the brestes are of two fourmes The fryste is pocion resoluynge & wastynge all the mater and hyght fundatorum. Receipe caude equine terrestres. M. i. radices osimandi quar. radices draguntee quar. semis coquantur cum vino et melle and admynyster a goblerful whan he goth to bed, and he shal slepe. The seconde fourme is another potion or drynkes commyn to all inwarde sores, made by G. Receipe centauree cesti nepiti gariofilate, pimpinelle, pilosselle, sumitate canateneritatum caulium tanatesti rubee, penthaphillon, aurum valens ana coquantur in vino et melle, and be mynystred as is sayde before. It causeth the rottennes to come out at the sore and clenseth the venyme that is in it but yf it be vomytred there is no hope of cure as the people sayth. The .vj. Chapytre is of the help of the bely and parties therof. And fyrste for the thre dayes is allowed lana succida infusiomis decoctionis cimini. Secondly pro offensionibus is allowed y^e commyn potion of Receipe R. munmie, boliarmenice, terre sigillate ana uncias .i. fiat puluis. And be

admynstred 3 .i. cum unciam .i. aque plantaginis. Thyrdly the potions of the brest are allowed for to resolute the mater gathered within. Fourthly outwardly maye be made playsters that be fourmed in the concussyons. In ydropesie it is good to prouoke or styre y^e vryne. Therefore by the doctryne of. G.M. Henry grylletes blacke flesshe [...]lyes or cantarides & toke awaye theyr wynges & heades & brent them in floure and made a powdre wherwith he admynstred at euen a grayne with wyne, and caused so moche vryne that many were healed. In the paynes of the kydneyes and of the bladder, I haue sen admynstred lye of the ashes of bean steales which dyd merueyles in mouynge [i]f [u]ryne and clensynge the wayes therof, the ror[...]nes, and grauell, and styrynge the menstrues. Remedyes for the payne of the raynes and the [...]adder. Rabymoyses for the vlceres of y^e kyd[n]eys and of the bladder approued water dystylled [...]cane gotes mylke vnder this maner. Receipe peri[...]ini lactis picherios 3 .iij, iubebe, sebesten ana uncias .i. [...]armenici unciam. semis quatuor seminun frigidorum mun [...]torum 3. iij. seminis papaueris albi, citoniorun [...] 3 .ij, conquassantur, et distillando fiat aqua. And Auycen graunteth in diabete the water of the clere mylke of a shepe but I haue put to it herba caude equine, plantaginis, Ros. semen maluauis unciam i, alkangi & mection of mylke w^t the colyres aforesaid & plaisters & ruptures betwene nature is allowed. The, vij. Chapytte of the helpes of the loynes and theyr partes. Fyrste the payne of the yerde is appeased with crommes of breade knodden w^t yolkes of egges with oyle of poppy. The vlceres of the yerde ben wasshed with alume wat & emplaysterd w^t oyntment of populeon & anoynted w^t vnguentun albu or w^t oyle of roses w^t the whyte of an egge & powdre of brent lead, ceruse, & aloes. The swellynge of y^e coddess is swaged w^t a playster of malowes & beane flour & comyne soden in water. The rupture hath, iij, helpes. The fyrst is an electuary, R, conserue comsolida ma.lib, s, comserue ro, quar, s, pulueris dragaganti frigidi, unciam, i, radicis valeriane, se natiomis, bolearmenicise, nasturtij, lapdani, sanguinarun ana, uncias, ij, panis succari, lib, i, fiat electuariun cun aqua ferrata, The secounde is a playster of shepes heare of all y^e communaltees, R, picis naualis, colophonie ana, uncias, ij, litargiri, armoniaci, opponaci, gabani, bdellij, mastic, serapini, terebentine, sumar, comsolida ma, & mi, ana, unciam, i, visciueri, ematistez, thu[s], gipsi, mirre, aloen, munmie, boliarmenici, sanguis dra, aristo, vermiun trestriun, ana, unciam, s, sanguis humant uncias .ij. conficiantur cun pellis arietina cocta aqua plu[ui]alivsque ad dissolutionem et fiat emplastrum. The thyrd fourth is of B. & my self. Receipe nucis cipretun acassie, gallarun, baulastiarum ana 3. v. mirre, sarcocole, thurne, gummi, ara ana 3 .iij. fiat puluis subtilissimus et pastetur cun aceto, et fiat emplastrum for it is proued in emorroydes to swage y^e dolour w^t suffumygacyon of y^e decoction of moleyn, camomille, millelote & inwardly put flyes bathed in oyntment made w^t buter styred in a mortar of lead tyll they be drowned yf y^e payne be to great oyntment of Alexandre proued by me shuld be good, which is Receipe mirn, croci thurn, licij, ana, pert, ij, terantur & conficiantur cun mustilagine, psillij & vitello oui & outwardly. Receipe prayseth this plaister. Receipe camomille, melleloti ana quart .i. conquassantur do[n]ec dissoluantur vitellorum ouorum elizatorum quar. semis farine fenugreci, seminis lini, ra[...]s altee ana unciam, i, croce, mirre, aloen, ana, 3, ij, et, s, [...]ntiri quod sufficit fiat emplastrum. The .vi[i]. Chapytte of the helpes of the thyghes, legges, and fete. For the nether lym[m]es be dyuers helpes. The fyrste is for to drye, let y^e thyghes, legges, & fete [t]e bathed & fomented w^t water of y^e see or water salted w^t the decoction of ebulorum, sanbutij, tribulorum ana, ij. calamenti, origani, abscinthij, persicaria ana, [...]art [...]i. And lay vpon y^e swellynge this playster. Receipe furis pert, i, farine fabarun pert, i, stercorun columbini [...]t, [...], puluerizentur, & cun aceto decoctionis affro[...]orum et succo caulium super ignem. Probatum est. Imprinted by me Robert wyer for

Henry Dabbe and Rycharde Banckes. Cum priuilegio rega[l]i ad imprimendum solum per septienn ium annum.

The fourth boke of the Terapen[u]yke or Methode curatyfe of Claude Galyen Prynce of Medycynes wherin is syngulerly treated the cure of woundes and sores. Translated by me Robert Coplande. Anno. M. CCCCC.vlii. the .iiii. day of February.

Philiatros the translatour in to Frenche to the Reader gretynge. Frende & dylygent reder, Quintilian in his fyrst boke of the Oratory instytution recyteth howe Phylosophy and eloquence are conioyned by nature, and vnyed togyther by offyce and actyon. Neuerthelesse y^e study of phylosophy and eloquence haue ben seperate one from the other, suche wyse that the neclygence of men hath made that they seme to be sondry actes, and dyuers scyences. And he yeldeth the reason wherfore. For syth that the tongue & eloquence hath begon to gyue it to the practyke. I say lucratyue exercytatyon, & that men haue abused the goodnes and graces of eloquence, they haue forsaken and all holly lefte the cure of vertues. And good maners, whiche is the very phylosophy the whiche of very propre n[...e] ought to be comiuncte with eloquence, in folowyng the sentence of Quintilian. I say lykewyse that the parties of the art of Medycyne (y^t is to wyt dyetityke, pharmaceutyke, and cyrurgery) ben such wyse cowpled connexed togyther that in nowyse they can not be seperated one fro the other without the dommage and great detryment of all the medicynall professyon. For the one is holpen, made perfyte, and consumed by the other. In such wyse that the one [...]lteth, and stombleth without the other. How be now a dayes I wote not yf it be by neclygence, or bycause of the lucratyfe practyse, wherto the most parte of Physicyens do study more than to the Theoryke, whiche is none other thyng but y^e parfyte and entyer knowlege of dyseases and tem[...]ere[...]s of mankynde bodyes, with the facultees & [...]tues of the medycynes, wherof the indycatyon [...]atyfe is taken) the sayde partyes of physyke is [se]parated. Of the whiche the fyrst is abyden with [...]e[...] that y^e vulgare people call Physyci[o]ns. The [wou]nde with the apotycaries, wherof they haue y^e[...]me of pharmacopoles. And the .iiii. to the Cy[ru]rgyens. So that the physycien (nowe) trusteth [...]all or almoost to the apotycaries in the knowlege of symple medycyns the whiche are so necessary that they can not well compose, nor well vse the medycamentes somtyme composed without y^e same. And as touchyng the Cyrurgery (whiche is but a manuall occupatyon) the physytions esteme it a thyng to vyle and vnworthy of theyr professyon. And not onely y^e sayd manuall occupation the which Hipocrates and Galyen haue not shamed to treat of and to exercyse, but also the Methode to cure the vlceres and tumoures against nature, hath ben lefte by them in suche maner y^t the Barbours and Cyrurgyens in these dayes are more [s]tudyous than many physytions. Whiche is the cause wherfore I haue traducte out of latyn in to frenche this fourth boke of the methode of Galien moued of the great and ardaunt desyre that I haue knowen amonge the sayd Cyrurgiens to haue knowlege of some thynges. Wherin I wolde desyre gladly the grekysshe tongue or the latyn, bycause of the great payne takynge in the translation, and also bycause that euery tongue hath his properte in such wyse that many thynges can not be sowned in the frenche speche, so well as they be written in the Greke or Latyn, prayeng the good reader take this my present wrytynge in worth. Here begynneth the .iiii. boke of the Terapentyke, of claude Galyen prynce of Physycke. Vve haue sayd that there is a kynde of dysease, that is called solution of comtynuyte, whiche commeth in to all parties of the body of mankynde. Howbeit it hath not one name in them al. For solutyon of comtynuyte in the flesshy parte is called vlcere, in the bone, fracture. The grekes call it catagma. In y^e synewe, conuulsion, the grekes cal it, spasma. There be other kyndes of

solutions of continuite, that the grekes cal Apospasma, rhegma, and thlasma. That is to wyte thlasma in the ligament, Apospasma, and rhegma in the vessels and muscles, bycause of any vyolent stroke or greuous fall, or any other great mocyon. The solution of contynuyte called ecchymosis in greke commeth most often with concussyon and ruction. Somtime solution of comtynuyte commeth by opera[t]yon of the oryfices o[f] the vesselles, in greke named Anostomosis. Also commeth bycause that the grekes call it dyapede[...].s. Other solutions of con[t]ynuyte happeneth of e[r]oyision in greke called Anabrosis. But it is a dysposytyon alredy medled and composed with an other kynde of dysease that consysteth in the quan[ti]te of the partyes, as before hath ben shewed, we haue spoken of holowe vlceres whiche [...]ede of two causes, that is to wete of excysyon [an]d of eroysion. It is notorious in what man[ne]r [de]cysion commeth. yf eroysion habounde inwardely [...]s caused of catochimie. yf outwardly it is done [...]her by stromge medycyne or by fyre. It behoueth [t]hen as before is sayd to take hede dylygently and dysc[e]rne the symple dyseases fro the compoude. For to a symple dysease a symple healyng is due, And [...]o a composed dysease a healyng vnsymple. Also we haue sayd before what Methode must be kept for to heale the composed dyseases. Howbeit it is not ynoughe to knowe the generalyte of the sayde Methode but behoueth to be exercyced in all the partyes therof, seyng that in the same is nede (by maner of spekyng) of sondry partyculer Methodes, bycause y^t euery kynde of dysease hath his owne Methode. Than that whiche resteth of of the curatyon of vlceres must be perfourmed in this boke, takynge the begynnyng here. Euery vlcere is ey[t]her symple and alone without other dysposytyon or affectyon begynnyng with it, or precedent, or suvsegement, or it is with some other dysposycyon, or dyuers wherof some haue nat all onely excyted the sayde vlcere, but haue augmented it. The other are without the which the sayd vlcere may nat be cured & of them haue we treated here before. We shall treate in this present boke the dysposycyons which augmenteth the vlcere in the whiche lyeth double counsell of curacyon that is to wyte, eyther to take the sayde dysposycyons all holly out of the body or to surmount the incommodite that aboundeth. The whiche thyng maye be easely done yf the dysposycyon be lytell. But yf it be great the vlcere maye nat come to cycatryce vntyll that remedy be put to the sayd dysposycyon, wherby we must dylygently consyder what the sayde affeccyons and dysposycyons be and howe many in nombre, in takynge our begynnyng as is aforesaid. Euery vlcere is be it alone or with holownesse requyreh and demaundeth that the flesshe subiect be natural and that there be nothyng betwene the lyppes and extremytees that ought to be conglutynate which oftentymes happeneth, so that heare, a spyder threde, matter, oyle, or suche lyke thyng letteth the knyttyng. And those thynges are as symptomes and accyidentes of the sayde vlceres which yf they be present may hynder and let the curacion, yf they be nat, they let nat but the dysposycyon of the flesshe subiecte is cause of that whiche foloweth. For with the same flesshe and by the same the lyppes that were asonder are closed and the holownesse fylled. It beho[w]eth than that the sayd flesshe be kyndely, bycause that these two thynges maye well & commodiously made parfyte. Than shal it be kyndly yf it kepe it selfe temperatly the which thyng is common to all other partyes. Wherby it behoueth that the flesshe subiecte be holly temperate aswell to close [t]he viceres as to fyll theym with [f]lesshe but is it [...]oughe of that? Must nat the blode that gathe[...]h to it be good also? and moderate in quantyte? semeth thi[...] to be trewe for it lacketh asmoche [...]t the corrupte blode be as holsome for the clo[...]sge, and as to fulfyll the flesshe as somtyme it [...]keth erosion and exulcere the body. And yf it be habundaunt in quantyte it engendreth exe[...]ment in the sores and as is aforesayd letteth and hyndreth the curacyon. And also there be thre maners of vlceres

dyffycyle for to be healed. The fyrste maner haboundeth by the vntemperaunce of the flesshe subiecte. The seconde by the vyce and yll qualyte of the blode gatherynge to it. The thyrde for the ouer great measure and quantyte of the sayd blode. Ought nat the dyuysyon to be made thus? or otherwyse that is to wyte the cause wherfore some vlceres are stubburne and defycyle to be healed is for the mystemperaunce of y^e flesshe vlcerate, or for the gatheryng of humours Yet agayne, the mystempered flesshe ought to be deuysed in two dyfferences. The fyrste is whan the subiect flesshe is out of nature in an onely qualyte. The seconde is whan with the euyl qualyte it hath tumour agaynst nature. The flowyng of humours is dyuyded in two dyfferences, that is to wyte in the qualyte of gatherynge y^e humours, & in the quantyte. Somtyme dyuers of the sayde dysposytyons are medled togyther, and somtyme all. But the Methode for to cure then all togyther ought not to be gyuen but eche one by it selfe. As yf the intemperaunce of the flesshe be drye & fylthy moderate it with bathynge, and wetyng in temperate water. But at all and as many tymes that this remedy shalbe vsed, the ende of the bathynge and wetyng shalbe forth with that the partycle becometh ruddy and ryse in a lumpe. Than sease y^t bathynge & moystynge. For yf ye bath it any more ye shall close the humour agayne that was losed out, And so ye shall profyte nothyng. Lyke wyse the moystynge faculte of medycyns ought to be greater then it is commaunded in hole party yf the flesshe be more moyste, than naturall habytude. Ye must haue regarde to the contrary, for the faculte of medycyns ought to be desyceatye, and in no wyse to vse any water. But yf ye must wasshe the sore take wyne or posca, that is to saye oxycraton, or the decoction of some sharpe herbe. Lykewyse ye shall coole the pryde of the flesshe that is to hote, and heate that whiche is to colde. Ye shall knowe suche vntemperaunces partly by the colour, and partly by touchynge, and partly by felynge the dyseased. For somtyme they feale great heate in the party, somtyme manyfest coldenes, & delyte them in hote or colde medycyns. And sometyme appereth rednes, and somtyme whytenesse. But it is an impertynent thyng to this worke to dystynke these thynges. In the whiche worke we shewe not the Methode to knowe the affectyons, [...]ut for to heale them. In suche wyse that by one consequence of wordes, we be come vnto the sayd Methode to knowe the affectyons. Retourne we [t]han to our purpose. Yf any parties are vlcera[te] with swellynge agaynste kynde, fyrste the swell[...]ynge must be cured, What ought to be the cura[t]yon of all swellynge we shall say hereafter[...] Pre[...]ntly we shall treate of whiche is comuycte and commune to the curatyons of vnkynde humoures or swellynges with the vlceres. yf the lypyes of the vlceres are dyscoloured onely, or somewhat hardened, they muste be cut vnto hole fleshe. But whan suche dysposycyon or affection hath to procede further there must be had delyberacyon, to knowe yf all the party dyscoloured and hardened vnkyndly ought to be cut, or yf it ought to be cured by longe space of tyme. And without any dowbte in suche case it is necessarye to knowe the pacyentes wyll. For some had leuer to be longe in healyng than to suffre incysyon. And other are redy to endure all thyngis so that they may be soone healed. Lykewyse here shall be spoken of the curacyon of euyll humours that gathereth in the partes of y^e sore places, in as moche, and bycause that it is an humour gnawynge aboute succorosyfe. But in as moche as it is a wycked humour or ouer encreasyng in quantyte the curyng therof shal be spoken of in his owne place. Than whan the humours that gathereth in the vlcerate parties is nat very fer of, nor in quantyte, nor qualyte, it behoueth to dyuert & dryue away, that is in restreynyng and to coole the heate of the parties that are before the sore place. Lyke maner ye must begyn the lygature at the vlcerate party, in ledynge it towarde the hole partye as Hyppocrates wylleth in the fractour of bones. Also that the salues that are layde to the sayde vlceres must be more vndryeng than they that are layd to a

syngle sore. And yf the flux or rennyng wyll nat stop with salues, seke the cause of the sayde fluxyon, and take it fyrste away. Yf the fluxyon come by weykenes and feblenes of the party that receyueth it, y^e sayd weykenes must be cured. And such curacyon also shall be propre for y^e vlcerate party. But yf cause of the sayd fluxyon habounde eyther by ouer moch blode, or fylthynesse of all the body, or of any of the superyour partyes, ye must fyrst delay the sayd causes. The weykenes of the partye for the which gathereth to moche humour haboundeth holly of the intemperancy. And nat all togyther of intemperancy wherof foloweth that the vlcerate flesshe is onely intemperate & nat weyke and feble. And somtyme chaunceth both the one and other, that is, both vntemperate and weyke. For y^e great vntemperaunce is cause of the weykenes of payned party. The which vntemperaunce shal be cured (as it is beforesayd) in coolynge the heate, moystynge the dryth, warmyng the colde, & dryeng the moyst. And yf the place be to colde and moyste togyther in warmyng and dryenge also togyther. And so of the other vntemperaunces in doynge away euer the qualyte that surmounteth by his contrary qualyte. The reason is euery thyng that behaueth it wel, & is accordyng to nature nat onely in quycke [t]hynges, or plantes, but also in all other thynges, moderate (whiche the Grekes cal symmetron) and without excesse of all vycyous humours. For [t]he thyng wherfro nothyng can be taken, nor put [o]o it, neyther any partye, nor any qualyte, it is all parfytely moderate. Contraryly, the thyng that must be taken fro, or somewhat put to it, is nat in a natural estate, wherto is nat possyble to retourne, but in doynge awaye the excesse, and puttyng to it that it lacketh. In an other place we shall speke of the ouer moche or lacke of y^e partyes but whan any qualyte is ouer excessyue, it is nedefull that the other qualite contrary be ouercome. And that the corrupcyon vntemperaunce be delayed, in restorynge the sayde qualyte that was ouercome. For in colyng that which was to hote, thou shalt restore that whiche lacketh and dymynysshe that whiche was to moche haboundant. Thus it is necessarye that the enracyon of the thynges that are put fer fro theyr naturall beynges, by some in temperacy be made by thyngis of contrary vertne. And thus the flesshe or any party therof wherin is fluxyon bycause of weykenes, ought to be cured in this maner. And whan the intemperaunce is cured, heale the vlcere. Curyng the temperaunce as yf it had come without vlcere. By the which thyng it is manyfest that all such curacyon is nat propre to vlcere, but to intemperacy. Lykewyse yf any corrupte fluxyon happen in the vlcerate partyes as well by y^e occasyon of any partye as of all the body wherto the blode or any yll humours do gather. Fyrste remedy must be had, eyther to the party that is cause of y^e fluxyon, or also to al the body. Thus than we shall heale fyrste the varyces that are often ouer the sore place bycause that anone after we maye heale the soore. Lykewyse in them that haue dysease in the mylte, or of any other notable party. Fyrst it behoueth to cure the sayd partye and than after we shall come to the curacyon of the sore or vlcere howbeit none of y^e curacyons therof is nat propre vnto an vlcere, but to some other affection and dysposycyon, eyther that engendreth vlcere, or that nouryssheth & conserueth it. Nowe it is tyme to make an ende that no straunge cause (or as it is nowe sayde) the fyrste iudiciall is iudycatryce of curacyon, but the curatyfe iudiciall affection & dysease. But the thynges y^t ought to be done particularly are founde, eyther that the fyrste iudicial sheweth eyther of the nature of the sore party, or of the temperaunce of the ayre and of other lyke thynges. For to speke bryefly no indycacyon maye be taken of thynges that be nat yet permanent. But in as moche as for to knowe a dysease that is nat euydent by reason nor by wyt, we ar often constrayned to enquire of the externe and prymityfe cause. For this occasion the vulgar meneth that the sayde prymityfe cause is indycatyfe of curacyon, the which is all other. As it appereth clerely that may well & parfytly be knowen. For yf

ecchymosis, or vlcere, or erisipclas, or putryfaction, or phlegmone be in any parte, it a superflue thyng to enquire the efficyent cause of suche [d]yseases, but yf it be yet present and remaynyng. [F]or in this matter we wyll heale that whiche is done all redy and shulde prohybyte the efficyent cause to procede any farther. And yf the sayd efficyent cause which hath produced the effect therof hath no lenger beyng, we shall do away the sayd effecte. For to do away the cause that is no more it shulde nat be possyble for vs, whan we wolde do it away, bycause that the curacyon apperteyneth to the thyng present, as prouydence to the thyng to come but that which we feare nat that it may hurt neyther for the present nor for the commynge is out of both the offyces of y^e arte, that is to wyt, of curacyon and of prouydence. Wherefore in such a thyng ought to be no serchyng of any iudicial, neyther to cure nor to puruey, but (as sayd is) the knowlege of the prymytyfe and externe cause onely vtyle in the dyseases to vs vnknownen. Neuerthelesse the Empirykes take somtyme the prymytyfe cause as partye of all the cours of the dysease (that is called in Greke syndrome) wherein they haue obserued and experymented the curacyon as in them that haue ben hurte with a mad dog, or venymous beastes. Thus doth also some Dogmatystes which do affyrme to heale such dyseases by experyence onely without racyonall indicion for they enquire the cause prymytyfe as partye of all the syndrome, and vnyuersall cours. But the prymytyfe cause serueth nothyng to the indicion of curyng, althoughe it be vtyle to the knowlege of the dysease, to them that haue knowen the nature of venymous beastes by vse and experyence, and therof taketh curatyfe indicion. For put the case that I knowe that the venyme of a Scorpyon be of a colde nature. And for that cause as of a colde thyng that I take indicacion of the remedy, howbeit the case is such that I haue no sygne wherby I do vnderstande that the body is hurte of a scorpyon. It is manyfest yf that I knowe that y^e sayd body is hurt with a scorpyon that I wold enforce me to warme all the body and also the party stynged without abydyng for any other experyence in takyng myne indicion of the nature of the thyng. For lyke as we haue shewed in the boke of medycamentes wherein it behoueth to be exercyted who soeuer wyll take any fruite of these present commentaries. No such faculte can be founde with out experyence. Sothely it shuld be a gyfte of fely [...]yte so that any hauyng the syght of Litargiri, of Castoreum, or Cantiride forthwith to vnderstande theyr vertues. But lykewyse as in all thynges is commytted errour, as well by excesse, as by lacke, so is it presently. For yf they that afferme that the vertues of medicamentes is nat yet knowen & that after so greate experyence. And the other y^t esteme the sayde vertues to be knowen by one experyence [a]lone, do gaynsay eche other. For the fyrste speake [...]er lyghtly and to imprudently, yf it be imprudence to afferme a thyng impossyble, and the other are all togyther stupydes, sturdy, & lytygious. But for this present tyme we wyll say no more, bycause I haue spoken more playnly in y^e thyrde boke of temperamentes aud also in the boke of medycamentes. Neuerthelesse for knowlege of y^e diseases some prymytyfe causes are proffyttable but after y^t the present dysease is all togyther knowen than the cause prymytyfe is totally vnutyle. Nowe haue we abouesayd that it behoueth nat to medle and confounde both the doctrynes togyther but the emperyke ought to treate by it selfe & the rationall also by it selfe. We muste nowe call to mynde (bycause we haue preposed in these present commentaries) to treate all onely the doctryne rationall. Albeit that to some thyngis that we say we do nat adde that them all and absolutely be nat true, but onely after the sentence of the Methodyke secte howbeit euery one of hymselfe ought to reason it, and for to adde it. And at this present tyme we haue added that any cause externe and prymytyfe is profyttable to the indicacion curatyfe albeit that it serueth well to the knowlege of the dysease. And we confesse that the cause prymytyfe is a party of the syndrome, and of all the

emperykes cours is that they cure all dyseases, by reason or by experyence. But in all that we wyll say hereafter it shall nat be necessary to adde suche wordes. Than let vs retourne to oure fyrste purpose in takynge the pryncple certayne and vndowbtfull wherof also we haue vsed heretofore there as we haue sayde that the dysease that requyreth to be cured iugeth the ende wherunto the Cyrurgien ought to entende and of the same all other indications ben taken wherby ye maye vnderstande pryncypally of the vlceres, wherof we haue begon to speake, that the sayd indication hath no maner of societe with the cause prymytyfe. For put we the case that any vlcere be come of a fluxyon in any party than it is manyfest that y^e sayd vlcere procedeth of corrupt humours for nature is wont for to do so in dyseases whan she purgeth the body she sendeth all the corrupcyon to the skynne in suche a maner that the sayd skynne is vlcerate & all the body purged. What is than the curacyon of suche vlceres? Certaynly as of other vlceres wherin no corrupte affec[t]ion or dysposition (that the Grekes call Cacoctes) is adioyned. And yf it be so, it is euydent y^t none indication is taken of the cause that hath excited and made the vlcere. But yf the vycyous humour remayned some indication myght be taken of the sayd cause or otherwyse it shulde be a deafe thyng that y^t thyng whiche is no more beyng shulde requyre curacyon[e] Or yf any thyng iudged and shewed curacyon where there no maner of [...]de. Wherefore it is a straunge thyng & all ho[...]e agaynst reason to say that the indication cura[t]i]fe ought to be taken of the cause externe & prymy[t]yfe. And for bycause that the sayde indication nat taken of the same cause it is euydent that ought to be taken of the cause that is present. But what is such indication fynal[...]y? Certaynly who that shulde well and pr[o]prely speake it is [t]hat thyng that belongeth to prouidence, who so wolde be abused with the vocable. The grekes cal it Prophylactice. For y^e curation of vlceres eyther beyng onely syngle vlceres, or beyng with holownesse (yf ye esteeme and consydre dylygently) is parfyte in eschewynge and foreseeing the thyngis that may anoy nature. And the sunme in effect when all is done, it is the worke of nature, as is closynge of a sore vlcere and regeneracyon of flesshe. In the which thynges belongeth all the cure to that parte of the arte medycynall that is called Prophylactyce in Greke y^t is to say prouidence although that vulgarily it hyght, healyng. And therfore this party that is named prouidence is deuyded in to two kyndes. The fyrste is it that doth a way the dysease that is present. And the other w^t standeth the dysease that is nat yet in estate. Thus the yonge leaches vnderstande nat that theyr contencion and dysputynges is of names. Howebeit that yf they were studyous of thynges they shuld inuent and knowe that there be two fyrste dyfferences of the functions and actions of medycyne. That is to wyte, eyther to cure & heale the dyseases all redy greuous or to let and withstande them that are nat yet present. Than is there no man but he wyll saye that to cure and to heale is none other thyng but to do away the diseases all redy present and greuous be it but that is done in doynge awaye the thynges that do let the worke of nature, or by medycamentes. But prouidence is none other thyng but to let that the sayde dyseases come nat. And certaynly they that by reason & Methode admynyster the arte of medycyne do cure y^e vlceres that come afore of corrupt humours in purgynge the sayde humours and also in doynge awaye the thynges that letteth the worke of nature. And proprely to say these two maners of curyng ar called Prophylactykes in Greke. For they let (as is aforesaid) that the fylthynes engendreth nat at the sore or ouer moche moyste corruption. It behoueth nat than thus miserably to stryue of the names. But rather it is more conuenient to gyue some good Methode to cure the vlceres, suche as I haue gyuen (after my iugement) as well in the boke precedent as in this. But I merueyle me moche of the [h]ole hardynes of Thessalus wrytynge so of the curacyon of vlceres, that is named Cacocethe that is to say wycked. The communy[t]ies of vlceres that

last longe tyme that are vncurable or that retourne after the cycatryce induct ben very necessarye, in lykewyse as in vlceres that maye nat growe togyther and be closed. It must be estemed what is the cause that letteth and pro[...]yteth the sayd cleuyng, or growyng togyther whiche cause ought to be done awaye. But in [t]hem that renewe y^e cycatryce induct it behoueth [...]o kepe y^e sayd cycatryce, that is to wyt in strength confortyng the suffryng membre or all the [b]ody in commune and in ordryng it that it endure [...]at lyghtly, by the remedies appropryate therto. And after that Thessalus hath proposed suche wordes in the begynnyng of his boke of Cyrur[g]ery, he wryteth afterwarde more playnly of this matter, in this wyse. The vlceres that endure longe, & that may nat be healed, or that renewe and come agayne after the cycatryce, gyue suche indications. That is to wyt in them come nat to cycatryce, it behoueth the lettynge of the vnyon and coalescence and renewe the vlcerate place. And after that ye haue made it lyke vnto a fresshe wounde it must be healed agayne as a bledynge vlcere. And yf the sayd cure profyte in nothyng, ye ought to mytygate thynflamation and make all other dyligence. But the vlceres that come to closyng and open agayne in y^e actes and outwarde sores ye ought to heale them, lyke vnto then wher there is fresshe brennyng. And afterwarde ye ought to lay vpon the sayd vlceres a playster made of mytygant thynges, vntyll that the yre and fyersnesse be abated. After this done ye ought to helpe to dresse the cycatryce. And than that ye make the parties about it waxe reade in wrappyng it aboute with a malagme (that is to wyt a salue malactyke) the whiche is made of Mustarde or with some other medycament that may chaunge the sayd parties, and make them to be the lesse subiecte to dysease. And yf they ceas nat in this maner ye ought to haue cure of all the body in strengthnyng it with dyuers exercytacyons, iestynges, and vociferacions, in commyttyng them that kepe hym to such thynges. Also by maner of lyuyng, dymynuyng, or augmentyng by degrees in begynnyng at vomytyng made by Rayfortz. Ye shall also vse whyte Elebore, and all other thynges, wherof we vse in dysseases and dyffycyle to do away that are subiect to reason and maner of lyuyng beholde here the saying of Thessalus. Nowe we must esteme the stupydyte or audacyte of the man. I say the stupidite yf he thynke to say well and the boldnes yf he fole hym selfe culpable to saye nothyng. And by this meanes hopeth to abuse and deceyue the readers. But tell me Thessalus what is the indicacyon curatyfe taken of olde sores? In good soth I neuer founde curation that was indicate and shewed of the olde vlceres, nor of new, nor also of the tyme in what dysease that it be but of the affection & dysposycion that I haue purposed to heale. For totally yf we regarde tyme as yf the indycacyon cura[ty]fe were taken of it, the seconde day we shuld gyue all other indication than the thyrde. And lykewyse to gyue the .iiij. day another, than the .v. and so of the .vj. and all other dayes folowyng. And by [t]he meane we shall no more consydre the dyseases that we cure. And the indication shall no more be [...]ken of them wherby we coulede neuer thynke a [...]aunger reason. Howe than are the communittees vlceres necessary that endure a great whyle, se[...]g that y^e tyme of it selfe can indicate in nothyn[...] For whan one vlcere is with erosyon, that com[m]eth of euyl humours we shall nat take for that [t]he monethes after another indication, but that which we haue taken at the very begynnyng, and for a trouth I wyl nat parmit that such an vlcere shuld abyde longe tyme but at the fyrste I wolde take the cause therof away. For it is leful y^e moste often to knowlege the dysease at the begynnyng, and it is necessary that the indication be taken of the sayd dysease. But I can nat coniect what may shewe and ensygne the tyme more than the nombre of dayes, but that Thessalus wyll saye that to haue knowledge of such vlceres we must tary the tyme but in such a maner he shuld be an ydyot all togyther. That is to wyt, yf he comfesse openly that of other thyng the indication curatyfe is taken and of

other the knowledge of the dysease. For although that the tyme serueth somewhat to y^t dysease neuerthelesse the indication curatyfe is nat taken of the tyme. But wherof serueth it yf any vlcere be inueterate, to do away that whiche letteth the coition and coalescence, and to renew the place that is payned? For a man inepte yf by a fylthy fluxyon (that the Grekes cal cacoethe) the lyppes are disposed in such or such maner what shalt thou proffyte yf thou cut it before thou hast prouyded to stop y^e fluxyon? That is to wyte thou shalt make the vlcere wyder than it is as some do that cure vlcres in the same maner bycause that as longe as the cause lasteth that before made the vlcres harde and flynty. Other thynges shall nat come of the excysyon of the sayd vlcres but amplyfycacion. For them that thou cuttest shall be agayne as hard and stony as they were before, albeit that the prudent and wyse Thessalus (God knoweth) hath nat added this word, that is to wyt, that the partye of the vlcere that is stony and harde & vncoloured ought to be cut, but commaundeth by absolute sentence and diffynityfe, that we ought to cut that which letteth the closynge of the vlcere, and renew it, yf he counceled to do away y^e causes that let and hyndre the agglutynacyon. And that this reason and maner were antyke I wold nat excuse hym. For it is a precept and commaundement almoste of all the auntyent maysters whiche haue wryten by any reason and Methode of the cure of vlcres that it behoueth to do away the effycient causes of the said vlcres, lyke as of al other sores, [n]or to say that in vlcres the cause effycient muste fyrst done away, & nat in other diseases, it were of no purpose. But totally in all dyseases wherin the effycient cause remayneth styll, it behoueth to begyn the curacyon at the same cause. And yf the [s]ayd Thessalus hath left to tel all the causes that let the coition and conglutination, & that he hath [o]nely spoken of the labyes (as he hath shewed af[ter]warde) it appereth that he ignoreth, more than knoweth nat what belongeth to the curacyon vlcres. For it is possyble that the same cause alone, wherfore the vlcere may nat be cured, as sayd the intemperancy that is in the vlcerate [...]tyes, w^out any tumour agaynst nature maye the cause. It is also possyble that the sayde intemperancy be coniunct with tumour, the which natwithstandyng requyreth nat al togyther that the labyes shulde be cut. It may so be that varix that is to say a swollen vayne that is aboue it may be the cause, or that the mylte is augmented, or some dysease of the lyuer, or the weykenes of the party greued, the which is none other thyng but a clere and notable vntemperatnes, or euyll and vycyous humour in all the body that the Grekes call Cacoehyne. The which is the greatest cause of all them that maye vnproffyte and anoye in the vlcres. As moche also may greue the vlcres the superhaboundaunce of humours egal to the same that the Grekes cal Phethora. Yf Thessalus commaunde to do awaye euery of these causes aboue sayde, I alowe hym, as he that consenteth and is conformed to the auntyentis. But also yf he be nat of the opynyon that onely the labyes shuld be done away, I say that of many thyngis he hath knowen one alone, which is so euident that the shepeherdes are nat ygnoraunt therof. For yf a shepeherde sawe the labies of a sore, harde, flynty, wan, and blacke, or of any other notable vyce of colour, he wold haue no dowbte for to cut it. Than for to cut is a redy and easy thyng but for to heale by medycamentes is a greater thyng & that requyreth workemanshyp. Neuertheles Thessalus neuer knewe what the labyes are that may be softened by medicamentis. For all confesse that he hath swerued from this party of the arte. And thus (as hym selfe sheweth) it semeth that he had neuer experyence nor rational scyence of any medicamentis, whiche is a manyfest thyng of the boke that he hath made of medycamentes. But to the processe of this worke we shall treate of the passages whic[h] he hath nat wryten well. And now we wyll dyspose vs with delyberacyon to speake of the curacyon of inueterate vlcres, the which he hath treated in saying aforesayde. Certaynly it had ben better to haue

called them Cacoethe, that is to say wycked, and nat inneterate, and than declare theyr nature, and expos[e] the cause of theyr generacyon, and curacyon of eche of them. That is to wyt, fyrste the commune cu[r]acion of al vlceres, in asmoche as they be vlceres, [th]e which I haue wryten in the thyrd boke next [a]fter the partyculer and propre curacyon of eche of them, after the kynde of the effycient cause, as I haue taught in this present boke. And howbeit [...]at Thessalus hath done nothyng of all these [...]nges, yet he estemeth y^t the vlcerate place must [...]ewed. Than whan y^t it is made as a fresshe [...]nde, to heale it as a bloody & rawe vlcere, what yf he be exercysed in the workes of the arte vnderstandeth nat euidently that suche do[...] hath ben wryten by hym that neuer healed Is it possyble that any maye heale a inue[...]e vlcere as it that is cruent and full of blode, y^e he hath made it lyke a fresshe wounde? shal in drawyng the labyes of the vlcere togyther by rolles, or ioynynge them by styches, or sooner neyther by the one nor the other but by medycament apt and conuenable in vlceres cruent & bloody with lygature? What is he that knoweth nat that an vlcere Cacoethes is caued, seying that it is made by erosyon? Is it possyble than (O foole and imprudent Thessalus) that an vlcere caued may growe togyther and be agglutynate before that the cauyte be replete with flesshe? Is nat that to cure an vlcere as a grene wounde? Than hast thou wryten in vayne that y^e indicacyon to cure caued vlceres is nat closyng, but fyllynge. And howbeit that euery vlcere Cacoethes and wycked were nat caued of it selfe and of the owne nature neuertheles whan it is made as cruent in cuttyng the labyes (as thou commaundest) necessarily it is made caued and acquyreh ryght great dystaunce of labyes in such maner that I can nat se howe thou mayst conglutue it and make close as that whiche is cruent. For yf thou assay to approche them by force and vyolence, the labyes that are fer asonder, is of necessity that there come a phlegmon and also the sayde labyes may nat mete and close togyther, which as me semeth is onely to be vnder stande of Thessalus. Than afterwarde he addeth these wordes yf the vlceres be nat bounde y^t thou mytygate the phlegmon. For it is necessary that they be nat vynculate but bycause that the same also be gyuen to Thessalus, and that we passe ouer without so curyous examynacyon. It is euident to euery one that he foloweth nat the communyte that hym self hath gyuen. For yf we take y^e which let[te]th we shall take no more any thyng of the communyte of inueterate vlceres, in asmoche as they be suche. Natwithstandynge this, put we the case that it be so, and let vs se what foloweth. Thessalus wryteth in this maner. The vlceres that come to cycatryce, and open agayne shall be healed in the acceys and vlceracyon in suche maner as they that lately haue be vexed & greued by phlegmon. Than after he sayth ye must cause readnes to come to y^e partyes that are aboute it by a playster, that is to saye reuollytyfe, whiche is made of mustarde sede. What sayst thou made fole? yf the fluxyon be bytter and hote, must the party be made reade with mustarde sede? In suche wyse y^t that which the said party ought to haue of the fluxion [i]t shall obtayne forthwith by thy salue? That is, [t]hat it be all vlcerate and reade. For the auneyen[...] made the weykenesses of y^e partyes that was [...]me of colde, or habundaunce of humour without [m]anyfest heate in makynge reade them. But thou rubryfycacyon in all sores. Fyrste w^out ma[...] any dyfference, yf the vlcere be nat cured ey[...] by the weykenes of the partye, or by the ma[...] of the fluxyon, & than thou tournest the ordre. after that thou hast brent y^e party by mustar[...], and hast proffyt in nothyng, than thou to the curacyon of all the body. Howebeit [...]t after my iudgement, all the countrys be ordeyned and stablysshed in such thynges, as wel by reason as by experyence. That is to wyte that all the body be fyrste emptyed of supfluytees, or that any dare admynyster any bytter or hote medytament to the partye. For all those medycamentes drawe vnto them from all the body lyke vnto the cucurbitule, that is to say ventose or boxyng. And thus yf thou do nat

empty fyrste all the body thou shalt leaue mater of fluxyon to the bytter medycament which thyng the emperyke confesse and so do the dogmatistes, & the most auntyent doctours haue esteemed it so. For in as moche as Thessalus hath made mencyon of them, it shal be no straunge thyng to cyte and alledge them as wytnesses. That is nat leafull to heale the eye well before all the rest of the heade, nor the heade before all the body. Such was y^e sentence of Arystotyll & Plato in the curacyon of dyseases. Lykewyse of Hypocrates, Dyocles, Praxagoras, and Plistonicus but Thessalus alone gaynsayth this opynyon and commeth fyrste to the composycyon of mustarde and than he hath sollycytude of all the body without shewyng any thyng wysely. For as yf it were lefull after to haue ones purged all the body forthwith to fede it with holsome and good meates, of vocyferacyons, and exercytacyons, and of iestynges and of the maner of chaunge of lyuyng by certayne cyrcuytes and actes. Than of the vomytes made by Rayffortz and for sunme and conclusyon he hath ordeyned the elebora. It is hym selfe that hath promysed to heale al diseases easely, but I can nat vnderstande howe that any hath so wel healed, eyther in more longer space of tyme, or by more vnprofytable labour. Nowe than lyke as we haue seen by vsage and experyence put we the case that there be any to whom it behoueth to cure an vlcere malygne and Cacoethes put we the case also that there is any other that is in health but bycause he hath scratched hymself in any party, as on the arme, and sodaynly is rysen a blyster or pustule. Than wⁱⁿ a whyle after there commeth an ytche to the party and after the pustule is broken there commeth an vlcere dyscoloured with fre[...]yng vnegally and that such thynges is come in. iiii. dayes fro the begynnyng. To this purpose let the mayster Thessalyen answere me in what ma[...]r it behoueth to heale suche an vlcere. I call it [e]ntyerly malygne & cacoethes. And therfore forth [...]th I wyll consyder what is the disposycyon and [a]fe[ct]ion of al the body. For I wyl inuent of what [...]de the humour superflue shal be; as well by the [...]mptomes of y^e vlcere as by the sygnes of all the . Than forthwith I wyll purge the sayde su[...]e humour w^{out} taryeng y^t all y^e elbow of y^e [...]ent get any dysease stoburne & waywarde to [...]yon. But the sectatours of Thessalus that wyt they that obserue his preceptis wyll tary vlcere be olde, bycause it maye retourne to wonderous, and merueylous communte of in[...]rate vlcres, as yf it were nat moche better to [s]howe the communte of contumace & waywarde vlcres the which wold indyke the curacyon, and nat of the inueterate vlcres. Afterwarde y^e sayd Thessalyens wold do one of both eyther they wold cut the vlcere and make it as it were fresshe, and approche the partyes as for to knyt them, or elles they wolde fyrste vse of the salue that is made of mustarde. And all that proffite nat, they wyl haue theyr refuge to vocyferacyons, & gestacyons, and other exercytacyons, and to the maner of lyuyng that chaungeth by cyrcuytes and after they wyll moue vomytyng by rayffert and yf the vlcere be nat cured by suche thynges they mynystre elebore called veratran in latyn. And yf the elebore serue of nothyng they sende the pacyent in to Lybie for the chaunge of ayre, vndoubtedly Thessalus ought to adde this worde. After this excellent and synguler curacyon of frowarde and rebel vlcres. For of trouthe the Thessalyens stay in vocyferacyons, gestacy[o]ns, & other lyke thynges, as yf they shuld couer the euyll habytude of the body (whiche the Grekes call Cachexte) and nat the vyce of the humour (that the Grekes cal Cacoehymie) Is it nat merueyle yf they confesse nat to knowe the vlcere Cacoethes as soone as it is made and that they tary tyll it be olde? And that often they vse cyca[t]ryce and open many tymes or they vnderstande what to do? seynge also that they councetyl them that haue the feuers in what maner soeuer it be to passe the excesse that ought to come the thyrde day or no? God knoweth howe they haue wel and parfytly knowen the contemplacyon of the Cryse, and in what maner they may fore [b]e the great encreasyng of the sore.

What commeth therof moste often? Of a certaynte it commeth that the pacyentis abydeyth in theyr beddes and consume throughe theyr defaulte which myght haue ben healed the seconde daye. Of a trouthe nat ones, or twyes, or thryes alonely, but .vj. C. tymes haue we wasshed many febricitans incontinent after y^e fyrste actes, which we haue seen done by our preceptours and maysters. And consequently haue permytted them to lyue without feare in their maner accustomed, as they that shuld no more haue the feuer, whom wyse Thessalus that hath exigit y^e fyrste dyete, that is to wyt nat to eate in thre dayes shuld ha[u]e dried vp and consumed in makyng them sterue for hungre in thre dayes longe. Than as I coniect he wolde fede them a lytell on the fourth day and [s]o nourysse them by lytel and lytel in suche wyse th[at] the .vj. or .vij. day they shuld scantly be able to aboute theyr customable besynes, they that ne[...] had the feuer but ones onely. Of trouthe he com[...]med his pacyentes alway in theyr dyseases the [...]iche ryght easely myght haue ben holpen. For so were that the vlcere began to swell at y^e be[gyn]nyng, it myght haue ben holpen in few dayes, [T]hessalus wolde suffre it to renne a yeare or more. taryed often so long tyll the sayd vlcere often [...]e produced cycatryce and wolde often open it to wit yf it were contumaced. Than after that he had begon y^e curacyon he purgeth nat forthwith the body, but fyrste of all vsed his salue of mustarde, and than his Iestes, vocyferacyon, & certayne maners of lyuyng, & than his vomyte of rayffort. And fynably of the Elebore what it is? any other thyng than to lyngre a hole yere? That is to wyt (by the lyuyng god) whan the pacient may be healed in .vj. dayes or in .vij. at the moste shulde we prolonge a moneth to knowe yf the vlcere be Cacoethes and wycked and than that we shulde begyn the curacyon? But what necessitye was it to speke of the propre commynite of vlcres iueterate, seyng that they are mutyle in the curacyon albe it that it were lefull to wryte, nat of the commynite indicatryce, but of the curacyon of vlcres, nat inueterate, but contumaced and rebell. For it happeneth that some vlcres and diseases are contumacy and rebellyon to heale. Howbeit indicacyon curatyfe is nat taken of this contumacy and rebellyon. But it is the disease that gyueth the fyrste indicacyon of healyng. And of the sayd fyrste indycacyon are founde the remedies as I haue declared. That is the maner to heale by Methode, as that we do in folowyng the auntyentes, yf it so be that Methode is an vnyuersall way, which is commyng to all partytuler thynges. Here is Thessalus be gyled, for he weueth that all y^e knowledge of them that do any thyng by Methode, is Methode surely it behoueth that he that doth any thyng by Methode haue notyce and knowledge of the lyke and vnlyke. Neuerthesse that is nat Methode that is [t]o wyt the sayde notyce of lyke and vnlyke. Also Arystotyll and Platon affermeth it nat whiche Thessalus dare falsely alledge. But at this tyme is nat conuenient to reffute & reproue suche purposes wherfore I wyll retourne agayne vnto the Methode curatyfe, promyttyng to shew that there is a prynciple of Methode in all curacions, and that the way that ledeth fro this prynciple to the ende is semblable in all partytuler thynges, wher by (albeit that in all dyseases it semeth that there is one propre and pryue Methode to heale) neuerthesse in all thynges there is one commyn gendre for it behoueth alwayes to begyn at the indycacyon that is taken of the dysease that we entende to heale. And than we must esteme and dyscerne yf the cause of the disease be ceased a redy, or yet presently it augmenteth & maketh the sayde dysease. Yf the sayde cause be alrede ceased, we must come so y^e Methode wherof hath ben treated in y^e thyrde boke of this worke. But yf the sayde cause yet presently make the dysease, the Methode is treated in the .iiij. boke. By the whiche Methode thou shalt fynde the remedies of a phlegmon and of a [...]euer, and shortly to speake of all maladyes. That [i]s to wyt, yf nothyng is done, thou shalt nat take [...]ayne to enquiry the precedent causes but shalt begyn onely at the dysease. But yf any thyng be done

presently thou shalt prepose two fynalytees of curacyon. And than do the other thynges by order, as it is sayd. Nowe it behoueth to merueyl of Thessalus dyscyples nat for bycause they fayle in such thynges, but bycause they do vse these names, Dyspathies, Metasyncrises, Imbecyllitees, [f]yrmytudes, and sondry other such names. And yf ye questyon them what suche names meane they wote nat what to answeere. For to knowe what it sygnyfyeth that they call in all inueterate vlceres Metasyncrynien ten exu in Greke they answeere nat with one accorde, nor clerely, nor prudently, yf that it were an auncient name, or vsurped by any of the Grekes, at aduenture we myght vnderstande of that they haue wryten, what thyng it sygnyfyeth. But bycause it is a propre name vnto theyr stupydite, that is to wyt, that is come of the supposycyon and Hypothese of Asclepiades lyke as their other decrees, is it nat then iust & reasonable that they iustify theyr dreames? That is to wyt, from whens this that is sayd Syncrinestai ta somata [...]ai diacrinestai. As ye wolde sayd medle & dyuyde the body. And that it were onely leafull to vsurpe suche names, to them that call and constytute the lytel body Atomes, and the poores, and conduytes or the indiuidnes, & vacuyte. And fynably the impatable and inalterable thynges to be the fyrste elementes. As that for certayne they vsurpe and contynually vse such maners. Moreouer Thessalus in his Canon whan he confermeth the pryncples reneweth some thyng besyde that which was put in wrytynge by Themyson and Asclepiades and ensigneth clerely what he wyl say, for he hath nat esteemed all togyther as As[cl]epiades. That is to wyt euyn in such wyse as in Symmetrye, that is to say, that in competent and commoderacyon of smal conduites lyeth and consisteth the helth. And in Ametrie, that is to saye in vncompetence and immoderacyon in them the dysease. Also that curacyon or sanacyon is none other thyng but a retourne to the fyrste symmetrye or commoderacyon of the sayd conduytes but he weneth that all the state and condicion of the sayd conduytes must be chaunged. And of this opynyon is proceded y^e name of Metasyncresis, which may sygnyfy as moche as Metaporopoesis in Greke. That is to say, mutacyon of the state of pores & smal conduytes. Howbeit it was nat leful for hym to vse the name of Dogmatystes, in places where he commaundeth to eschue the vncertayne and darke names & onely haue the vnderstandyng attentyfe in the communittees whiche appere euidently. Than his dyscyples and seruauntes answeere that he must nat be herd as a dogmatyke whan he vseth of these names, Mais alephos, that is to say, symply. For of a trouthe some of his dyscyples are accustomed to susteyne and defende hym in this maner in reuokynge vs agayne to another name, that is Arphi[...]a, whiche we translate, symplenes. The whiche name (of a trouthe) I can vnderstande what it sygnyfyeth. For yf he dyd sende vs agayne to a name more vayne (that is in Greke vioticos) the whiche they expose doth signyfy as moch as semblably to the vulgare of men. Truly as moch shuld it be to say Aphelos nat duely nor ryghtwysly but without arte or scyence. For the men that are the moste lyghtest and quicke of speche vse names of artes and sciences, vnder some sence that hath no foundacyon. And whan they are demaunded what they mene, they can neyther tell nor shewe. The which thyng th[e]se Thessalyens confesse to be theyr decent custome, the which thyng we do obiect them, and for certayne they wyll also confesse that they vnderstande nat partfytly & exactly what is Metasyncrasis, yf it be sayd of y^e mutacyon of poores, that in Greke is called Poropoaia, in dede it shulde haue some vnderstanding, and sygnyfy somewhat, but vayne in many maners, bycause that our bodyes are nat composed of corpules motes nor of poores. And yf they were true, yet shulde it nat be possyble to shew in what maner Mustarde myght chaunge or alter the state & condycyon of the poores. And yf any can shew it, yet shuld he nat be consentynge and confermed to theyr secte, seyng that they saye, to be content with the apparent communittees, wherby that they vse no more such

names, and that they hyndre and let vs no more, for it is leaful without the name of Metasyncrysis, to say in other wordes the curacyon of froward vlceres[s], as the Emperykes do. Also we haue shewed in the seconde boke, howe the sayde Thessalyens ar[e] lykewyse abuse at the vocable Atonias, that is to say, Imbecilite, for they take the name as the emperykes, for it sygnyfyeth none other thyng, but that the actions is nat kepte. But yf they propose that there is any facultees and vertues that gouerneth man, whiche we afferme, and almoste all the auncyentes, besydes that they gaynsay to the preceptes of Asclepiades, they propose vncertayne thynges, of the which the Auctours agre nat wel togyther howbeit they commaunde to flye suche thynges. But tell me Thessale clerely, what bet[e]keneth this vocable Metasycresem? yf thou say that it betokeneth to chaunge the poores & small conduytes, thou begylest thy selfe, and vsurpest vncertayne thynges yf thou say that it is as moche to saye, as to yelde the party of y^e body stedfast and hole, or al the man, thou sayst no more to this purpose than the Emperykes, excepte the nowne. For they knowe wel that man becommeth hole by other remedyes, but they knowe nat by what cause and reason the remedyes restore helth. For none of the Emperyeke can tell yf the faculte of medycament chaungeth the poores nor yf it make symmetrie and commodoracyon nor yf it altereth the qualyte of the pacyent party, howbeit the Emperykes are discrete yf they say y^t they knowe onely one thyng, that is to wyt, yf they haue noted and obserued often tymes, that vtylyte hath folowed whan y^e me[d]ycament of Mustarde hath be mynystred to such a sore, and in such tyme. Neuertheles they speake nat of Methode, nor reyse theyr browes at it. And be nat pleased with suche notyce, and myssaye nat the auncyentes, nor dyspraise nat Hyppocrates, nat estemyng hym as nothyng but they alowe hym and afferme that he hath sayde all verytable thynges. But yf Thessalus here that myspryseth Hypocrates, and al the other maysters, vnderstandeth nat that all the preceptes that he hath wryten of the frowarde and rebell vlceres ben Emperykes. Albeit yf he wrote them wel & commodiously it shulde be somewhat profytable but it appereth nat that he hath done so seyng that he parnerted the ordre of remedyes and vsed remedyes for the party, or that al the body was prepared. In good soth it is a sygne and argument of an vntaught and great ygnorance (seyng that in this thyng almost all the maysters of medycyne do agre, albeit that in sondry thyngis they iarre) that is to wyt, that all the body muste be emptyed and purged of all his out waxynges, or that any partye be take subiecte to the stronge and vehement remedyes. For who soeuer wolde iudge, eyther by experyence or by reason (for there is none other thyrde maner to iudge, nor in what arte soeuer it be, nor in any partye of lyfe) he shall fynde y^t it is a great incommodyte to mynystre to y^e sore party any salue or plaister that is bytter and hote, or he prouideth for all the body, which fyrste requyeth his propre cure. For the sayd medycament draweth to it from all the body in y^e maner as cucurbyte and ventose doth the excrementes and superfluytees. And so it cleueth and stycketh to the sayd party greued and sore, in suche wyse that with great payne it may be scantly pulled of. Wherefore it must be asked of these Thessaly[e]ns, from wkens y^e sayd fantasy came to Thessalus to wryte fables and toyes, as touchyng the curacyon of frowarde and rebell vlceres, seyng that none Emperyeke, nor racyonall hath so wryten before. Albeit neyther Thessalus, nor any of his dyscyples and sectatours dare nat afferme that suche ordres or remedyes do agre w^t experyence or with reason. Moreouer they can nat shewe in what maner of tyme indyke and nat the disease, nor also (that is yet more) howe Th[e]ssalus is nat all holly folyshe and dul, that iudgeth that the cause must be esteemed y^t letteth and kyndreth the cycatryce of vlceres, the whiche cause is to be done awaye and lykewyse seeth nat that it suffyseth, and that y^e length of tyme of vlceres s[e]rueth of nothyng with this he considereth nat that he must do thus, nat onely in

vlceres, but also in all other dyseases, as the auncyentes do admonysshē. But they answerē nothyng to these purposes, but that they say alwayes, that we do nat vnderstande them wel, as yf they knew parfytely y^e thought of Hyppocrates, and of all the auncyentes. And afferme that Thessalus hath a good opynyon when he sayth that there is a communitie of y^e inueterate vlceres, and that Hyppocrates vnderstode it so in the booke of vlceres, which wryteth in this maner. It is profytable that the blode do flowe continually from y^e olde sores, in what maner that it hath ben seen nedefull. At all aduentures than what may come to speake sommarily of the sentence and intelligence of Hyppocrates, thoughē I haue nat promysed that I wolde speake of it in this place but that which I wyll say shall be of the interpretacyon, of the wyt & knowledge of the auncyentis. The whiche as we haue sayde as yet hath gyuen no seet, but studyenge w^t symple and pure thought to inuent some thyng profytable to helth, it is wel semyngē that they haue founde some thynges by vse & some by reason. Than dyd they wryte theyr inuencyons many tymes without gyuyngē any reason to theyr inuencyons, & somtyme they dyd, the which they haue done for cause of the profyte of the readers. For they trusted to be profitable to theyr successours, as to the good and ryght vsage of inuented thynges to knowe the reason of theyr inuencyon) and haue wryten it dyligently. To the contrarye, where they haue esteemed that it shulde be superflue to recyte, they haue obmysed and left some. Nowe it is well knowne to all after that I holde my peace, that the auncyentes haue well loued shortnes of speche, and pryncypally for that cause. Nat a lonely Hyppocrate, but also all the other auncyentes. Somtyme w^tout makynge mencyon of the myddel moste added the thyrde thyngē. For yf the fyrste thyng be sygne of the seconde, the thyrde necessarily foloweth after the seconde. For this cause the fyrste they put y^e thyrde, obmytting and leauyng the seconde. I haue shewed sondry tymes howe the auncyentes and chyefly Hyppocrates haue wryten suche thynges. And he that wyll knowe and parfytely vnderstande the maner of interpretynge, that the auncyentes had, ought to be exercysed in theyr style and maner of wrytynge. For this tyme I wyl expose onely that which I haue purposed that is to wryte the vlceres the which (after wel and duely to haue done all thynges requysyte) althoughe they be nat cured, the maysters in medycyns call them Cacoethe in greke, we call the malygne or wycked, stoborne and rebell. Nowe haue we spoken in the booke afore what curaciom of vlceres is. Than these vlceres here all are called Caroethe, inueterate, and dinturnes in vsynge such names indyfferently. Lykewyse for to knowe the dysease Cacoethe is (that is to saye waywarde, stoborne or rebellious for to heale) it maketh somewhat with y^e other sygnes, neuerthe[l]esse the dyuturnyte, or that the said vlceres be cal[le]d dyuturnes, of longe continuaunce. And inue[te]rate, as waxen olde and in dede ar[t] suche that maner of conuenient indycacyon of curynge it must be inuented bycause that the vlcerate [p]arty is yll ordred and paynfull. That inuented, [t]he maner of curynge is euident. But thou must [...]ye, howe so? Of a trouthe yf thou heale the vlce[r]ate parties, provided that they onely are payned, but yf all the body habounde in vycyous, and corrupt humour. In emptyenge & clensynge the sayd humour for truely the sygne of the vycyous humour is the dyuturnyte of the vlcere, but y^e inuencyon of that which is vtyle and expedyent commeth nat fyrste of the dyuturnyte, but of the malyce of the humour wherby these thre thynges folowe eche other by ordre. That is y^e sygne, thaffection, and the curacyon. The sygne is the dyuturnyte, thaffection is the vyce of the humour, and the curacyon is the euacuacyon of the sayd humour by this meane ye shal fynde that the auncyentes many tymes after the fyrste anone make mencyon of the thyrde, leuyng the myddylmoste. As Hyppocrates dyd whan he said it is vtyle to cause the blowe flowe often out of vlceres inueterate in what maner that it be, so that the thyng be seen behouefull nat that the dyuturnyte

indyketh the curacyon but the vyce of the blode. For a lytel after he sayth thus. The vyce of the blode hyndereth greatly the healyng of the sayde vlcres. Also putrefaction of blode and all thyng that is come by transmutacyon of blode letteth all other vlcres for to heale. Anone after whan he speaketh of vlcres that come nat to festring he sayth this wyse. The vlcres may nat be closed togyther yf the lypes and partyes that are rounde aboute it become swarte or blacke, bycause of the rotten blode, or varyce (that is to say a tumyde vayne) that causeth the fluxion yf ye heale nat the sayd partyes that be aboute it. Afterwarde he wryteth of the cure of the varices. And furthermore he maketh mencyon of the purgacyon of all the body, as well in other woundes, as in them where there is feare and daunger of rottennesse (called in Greke spha celos) and also in serpentz vlcres, and in al Eschirmenes, that is to say that are eaten and reade. And thus Hyppocrates is accustomed to name the vlcres that be reed by any humour. And also whan he speketh of them that ensueth he sayeth in suche wordes. In euery vlcere where as chaunceth to come Erysipclas all the body must b[e] purged. And fynally yf ye rede dylygently the boke of vlcres, ye shall fynd[e] that he taketh indicacyon of the dysease alway, as somtyme of the tyme, but that is to knowe the disease. And that it is so, ye may knowe it at the beg[n]nnyng of the sayd boke, which is such. It b[e]hou[e]th nat to moyste y^e vlcres, what so[...]uer they be, but with wy[n]e. Then telleth he the cause saying. For the dry vlcere is y^e nerest of helth, & the moyste to [...]orenes. Then anone after he sayth for y^e vlcere moys[t]e, but y^e is drye is hole, & therfore in all the [...], in asmoche as he hath constituted y^e ende of al [th]e [...],ure of vlcres to be drynesse forth w^t he hath [wo]nde the particuler thyng[e] admonysshing vs many [...],ymes of y^e sayd ende for when he wryteth in this maner. Euery vlcere y^t is dyuyded w^t a cuttyng in[...],ument or sharpe poynted receyueth medycament [...],is mynysire at y^e begynnyng in bloody & rawe vl[...],s, y^t which medycament in greke is called Enhameon, or otherwyse a drying medicine y^t letteth it to come to suppuracyon for it becommeth dryer bycause of the fluxyon & shedyng of y^e blode, & yet agayne Hyppocrates sayth. All vlcres y^t are purged in tyme behoueful, so y^t they come alway to more drynesse, in the moste parte of them come none o[u]ergrowynge nor superfluyte of flesshe, but that there is bruse, and agayne. Yf any vlcere may nat cleue or growe togyther, the moyste flesshe is the cause. In all these passages Hyppocrates admonyssheth vs of the fyrste indicacyon curatyfe of vlcres. For of a very trowth the curacyon of an vlcere (yf as) & beyng but vlcere is meane and moderate dryinge, wherof the demonstracyon hath ben gyuen in the boke afore, but the curacyon [o]f an vlcere y^t is coniunct w^t another affection, wherof the cure ought to procede, is nat lyke an vlcere alone, but the fyrste curacion shal be of y^e same affection, and the seconde of y^e vlcere. For yf there be eyther phlegmon or swart colour, or ecchimosi, or erisipclas, or tumour, y^t is called [h]edema in the vlcerate party, fyrst ye must begyn y^e curacyon at one of the sayde affections, howbeit euery one knoweth well y^t the vlcere somtyme nat onely is nat wel & commodiously cured, but becommeth moche greater, for yf in the parties rounde about y^e vlcere there is eyther bruse, phlegmon, or other tumour, we must fynde the propre curacyon of the said affection, & haue it for a certayne y^t it is nat possyble to heale y^e vlcere, yf y^e place where it is be nat cured fyrste. And therfore Hyppocrates putting vs in memory y^t which he had treated in y^e begynnyng of his boke to wryte al y^e other thingis comprised aboue, y^t are [...],sent when he sayth. Euery vlcere y^t is dy[u]yded w^t a cuttynge instrument, or sharpe poynted receyueth medycament called Erhaemon & dyssycatyfe that letteth the vyle matter. But yf the flesshe be contused or cut remedy must be gyuen, in such wyse that it come soone to suppuracyon for in so doynge it shal be the lesse gr[o]ued with phlegmon. And al[s]o it is [n]e[c]essary that the flesshe that hath ben contused, and

incis[e]d, the whiche putryfyeth, and commeth to suppurac[i]yon, in collyquieng and meltyng, and after that the newe flesshe is engendred. By these w[o]rdes Hyppocrates sheweth manifestly that al d[i]seases of the vlcerate partyes ought to be desic[...][t]e except them that we wyl sodaynly brede pus, t[h]at is to say rotten matter and passyng forth [b]e teach[e]th vs that pus or suppuracyo[n] is made w^t[s]ome put[re]faction. Nowe all thynges putrifie by heate and moystnes and therfore the Cathaplasme made of barley meale (se[y]ng that they chaufe and moyste) we shal m[i]nystre, to all dyseases whe[...][t] is expedyent to engendre pus. For the barley [...][e]a[...]e with water and o[...]e, and lykewyse breade [w]ith oyle, or also a fomentacyon with moch hote water, and the strength of the salue called Tetra[...]ne make, and fynally all thynges that warme [a]nd moyste, forthwith engendre rotten matter or pus. And for y^e cause in y^e parties where as phlegmon is, yf there be all redy vehement pulsacyon in such wyse that there is no more hope of the curac[i]on of the sayd partyes without suppuracyon all the auntyentes appl[e] the sayd suppuratyfe medycynes, and nat sooner. The which thyng Hyppocrates sheweth playnly in y^e wordes beforesaid, wherby he byddeth to drye moche the wounded partyes without brusure. And they that be with brusyng, it behoueth to brynge them soone to suppuracyon. Moreouer whan he sayeth, that all vlceres that be nat well and duely purged, & begyn alway to brede & encrease, in them the flesshe ouer groweth greatly but they that are purged as it behoueth, and alwayes commeth to drines, in them the flesshe ouergroweth nat, but yf that there be contusyon. Of trouth to [t]he purpose, whan he addeth, but yf that there be contusyon, he reduceth vs to mynde of that he hath sayde before. That is to w[y]t all vlceres requyre for to be dried, but they where as is brusynge. For yf ye do lay to the partyes where as is phlegmon, a Cataplasme that is hote and moyste, it is nat done by the fyrste & pryncypal reason. That is to saye, as remedy to y^e sore, but asswagyng of the symptome and grefe. For the remedies of phlegmon ar of dissicatyfe vertue. Herken nowe what Hyppocrates sayeth. The playsters of tumours called Cedemata, and phlegmons that consysteth rounde aboute, be verbascon soden, and leaues of trifolium rawe, and the leues of Eperitron soden pol[...]m. All these medycamentes haue vertue dissicatyfe, as we haue shewed in the bokes of symple medycynes. And the sunme and shorte cure of the partyes where as phlegmon is, is done by the remedies that doth away all y^e hole dysease. Or yf y^e said remedies haue left any thyng remanyng y^t commeth to matter, it is nedeful to haue another medycament bytter & strong, y^t may make suppuracion. Or y^t the skynne y^t is aboute it be thynne, & that yⁿ wylt nat y^t the pacyent be sooner delyuered o[f] i[t], ye must make incysyon but of the cure of phl[e]gmon by barley meale is sooner lenition than curacyon, & fyghteth agaynst the dysease, & of y^e dyfierence of such thyngis we shall sp[o]ke hereafter more at large. N[o]we me thynketh to haue manifest[ly] shewed how Hyppocrates hath commaunded y^t all vlceres ought to be dyssyccate, & that he hath ordeyned & confermed y^t it is the end of the curacyon. In asmoche as the indicacyon is taken of the dysease, & nat of the ty[p]e. And yf any desyre to haue greater persuasyon, let hym red[e] dylygently al the b[o]ke of Hyppocrates, that he hath wryten of vlceres. For he shal vnderstande clerely that there is one generall indycyon of all vlceres, that is to wyt y^t which we haue shewed in the precedent boke. And also y^t there is none indycacyon that is taken of tyme, nor at vlceres, nor a[...] p[h]legmon, nor at other greues. And therfore we are comen to the purpose & place to speke. It is a thyng iust and trewe to shewe that Hyppocrates hath ben inuentour, nat onely of that we haue sayd be[f]ore, but also of all other thynges that is for to be knowen to hym that ought to heale an vlcere well. For it appereth that he hath inuented the reason and maner to heale the symple vlceres, and that are without other affection, which lyeth and consisteth in dissiccacion. But also

partyculerly by the kyndes of euery dysease. For eyther the vycious humours flowe no more in the sore partye, or els it floweth styll. Yf it flowe no more, it behoueth onely to succour and remedy the party that is payned. That is to wyte yf it appere pale, blacke, or read, it must be scarified and made to blede. Then afterwarde (bycause that I maye vse his wordes) must be layde therupon a sponge more dryer then moyste. I thynke that no persone is ygnoraunt that this partycle (that is to wyte than) hath in this place any strength of denyall, as yf he sayde thus drye and nat moyste. And afterwarde ought to be applyed remedies dyssyccatyues. And than (yf it be requisyte) for to drawe blode agayne, and forth with after make suche thynges as is abouesayde, vnto the tyme that the helth be all togyther gotten. And yf the lypes of the vlcere appere harde and stony, they must be cutte, wherof is spoken in this wyse. Yf the vlcere that are cyrculer and rounde be caued somewhat, it behoueth to cut in maner of a cyrcle the parties that are commen in swellynge, which in Greke is called call apostema. Eyther a hoole or halfe a cyrcle accordynge to the length. Also it is wrytten of all tumours that are coniunct with an vlcere how it ought for to be cured, Lykewyse of the varyces for by the occasyon of them the vlcere is waywarde and rebel to be healed, yf that any humoure of the sayde varyces do flowe in the vlcerate parties. In lykewyse whan the fluxyon of humour commeth [f]rom all the body, he byddeth that all the bodye be purged without takynge of any indicacion of tyme. And for certayne it shuld be a laughyng thyng that so many of dyuers and often contraryes shulde be taken of a communte. For put the case that any indycyon of tyme be taken yet fynally it must be sayd what it is, and compryse it in a sunme as Thessalus doth (nat onely we) whiche hath alway an indycyon of the dysease of the body that is stopped, that is to wyt that it be vnlosed and another vnlosed of the body to be stopped. Lykewyse in the vlceres, y^t that is fylthy requireth to be clensed, that y^t is caued to be fylled, that y^t is egal to be festred. And that that ouergrowen f[l]esshe, that it be had away, as Thessalus selfe is authour. Let hym shewe than that there is a thyng proporecyoned in the dyuturne and inueterate vlceres, as there is in all them aforesayd, whiche is nat possyble to hym, for he byddeth that they shulde be cut. But what is that racyonall indycyon taken of tyme and than to vse remedies of Mustarde of the whiche he taketh and vsurpe[t]h this vayne worde Metasycrisis? after that he prouoketh vomytes, by Raffortz. And at the last whan he fyndeth none other remedy to vse Elebore? Of the which thynges shal be spoken more playnly hereafter, whan we shall shew that no indicacyon in what dysease soeuer it be nat taken of tyme. Albeit that y^e tyme is somtyme sygne of the dysease. But I fynde agayne a[t] Hyppocrates, wherof I merueyle of his great dylygence in all other thynges, and chyevely y^e he hath nat forgotten y^t whiche is pryncypally to be consydered, of the mayster in medicyns touchyng to indicacion. Nat onely in one dysease or two, but in all. That is to wyt the indycacyon y^t is taken of the myghtynes of the dysease, which the Methodykes onely haue nat left (whiche is no merueyle) but also dyuers of the racyonalles, & Emperykes althoughe it be in dyuers maners. For when they say y^t they haue obserued the euacuacyon of the cours of to moche blode they confesse manyfestly y^t they haue no regarde of other thynges y^t appere in the sores for to come to such euacuacyon, which y^t I say therfore y^e purgacyon is euacuacyon, the which is nat indicate by the cours of to moche flowyng of blode, but also for bycause y^t (althoughe y^t there be no cours of redoundyng blode) we must somtyme come & haue refuge to the sendyng of blode, in greke called phlebotomy? For when the disease is great, with the force of strengthes there is none but he make phlebotomy, yf he be expert in the workes of the arte. And sothly we se y^t the emperykes commeth to the sendyng of blode when any is fallen from a hye place. Or when there is any parties sore brused & hurte w^t any wounde thoughe y^t the pacyent were hole & sounde before

& without superhabundaunce of blode. By the whiche it appereth y^t it is nat the redoundyng of blode y^t indicateth the phlebotomye, but it is the myghtynes & vehemency of the dysease, & the force of the strengthes, acceptyng alway children. And by an other reason, as yf a man be hole & sounde & in no wyse hurt & is ful in habundaunce of blode, for all y^e it is nat necessary to take his blode from hym. For to some, fastyng may satysfye, to another small eatyng, to another[e] flux of the wombe, or purgacion, or haundyng of batthes, to another onely besynes, or habundaunt fretyng may be ynoughe. But the phlebotomye is nat necessary to such folkes, as the emperykes say also. Lykewyse purgacyon is nat comuenable in the onely habundaunce of vycious humour. But lyke as the phlebotomye is made eyther for habundaunce of blode, or for the magnytude & fyersnes of the dysease, also the purgacyon is made for the habundaunce of some other humour, & for the vehemency & force of the dysease. As touchyng the myssyon of blode we haue treated in another boke, & shall treate hereafter. In this present boke I wyl speke of the purgacyon. For they y^t be dyseased desyre it. Nat onely bycause y^t it euacueth the superflue humour & noysome, wherw^t they be greued, but also to put it out & be clensed. And for this cause Hyppocrates aswel in his other workes as in y^t that he hath wryten of vlceres considereth the vehemency & strength of the dysease to y^e indication of purgyng sayth thus. Purgacyon by the bely is profytable to many vlceres, to the woundes of the heade & of the bely, & of the artycles, or also yf there be daunger of rottennes in the bone, or where sutares behoueth, or also to gnawyng. Lykewyse to serpent vlceres & other affections y^t maketh the vlceres long in healyng. And also where as rollynges must be vsed, in all suche affections behoueth purgacyons. By these wordes it is clerely shewed y^t purgacyon is profytable to all vlceres & woundes, at al & euery tyme y^t they are greatest. For in asmoche y^t nat onely the sayde affections, but also other be made greuous & great in thre maners. That is to wyt eyther for y^e exc[e]llency & nobyltye of the party, & myghtynes of the dysease, or bycause y^t the sayd maladyes & affections are Cacoethe, y^t is wycked. Hyppocrates hath made mencyon of all these thynges by them selves. That is when he sheweth of woundes of the heade, & bely, the dygnyte & excellency of the party y^t is hurt. I thynke y^t it is manyfest to all y^t here must be vnderstande nat onely the inwarde bely, but also the superyour. For in diuidyng y^e tronke which is betwene the necke & the legges, is two great capacityes. The fyrste is contayned vnder the Thorax. The seconde vnder the fondement, y^t is to the membrane y^t is stretched vnder labdomen, & for certayne y^e wounde y^t hath perced wⁱn the Thorax, or wⁱn the ars hole is very daungerous, pryncipally yf any of the inwarde partyes be wounded. Lykewyse there is but few but he knoweth well y^t all woundes of the artycles are Cacoethes and wycked. The whiche thyng the Emperykes vnderstande by onely experyence. And they y^t haue studyed to haue the scyence of the nature of the body, vnderstande it by the nature of y^e hurt partyes. For in the synewes and bony places & without flesshe there is daunger of payne, wakyng, & pryuacyon of rest, & also of con[v]ulsyon. Such woundes abouesayd, & such as be styched, y^t is to say y^t are so great y^t they haue nede to be sowed, or at leest wayes of byndyng or rollyng requyre purgacyon. & We haue sayd in the next boke afore y^t all the great vlceres ought to be conioyned, eyther by seames or by byndyngis, lyke wyse y^t the vlceres where there is daunger of the corruption of y^e bones are w^t magnytude of phlegmon. Also they y^t are w^t erosion be cacoethes & wycked, & procede of euyl humours. And also cankers commeth of bylyous excrementes. That is to wyte coleryke superfluite, & al other olde vlceres commeth of such a cause wherfore in all y^e vlceres aforesaid Hyppocrates commaundeth to purge by y^e bely, and folowyng after he addeth these wordes. In all vlceres wherto erisipelas is commen the body must be purged in the party moste vtile for

the vlcere, so y^t the purgacyon be made eyther by the vpper parties or by the inwarde, wherof he hath taught vs the dyff[er]ence in the boke of humours where he by[n]deth to retourne to the contrary parties & deryuat to the syde. And when there is great fluxion y^t it behoueth to make another vlcere in the contrary parties, & therof he speketh in the said boke, wherof yf yet agayne yf the fluxyon be impetuous & great we shal make reuulsion in the contrary parties, y^t is to wyt yf the vlcere be in the vpper parties, by purgacyon downwarde, yf the vlcere be in the inwarde parties, in purgyng the vpper bely. But yf the fluxion be stopped all redy, in such wyse y^t it is drawen to, & fixed in the membre, it is more expedyent to dryue it out by the next places, seying that the translacyon & transporte is by y^e parties y^t be next it. Seyng also y^e thaccesse & actraction of the purgyng medycament is more easy & prompte nere then fer. The which reason belongeth also to another party of y^e art, y^t is to wyt of y^t which treateth of the purgacyon of humoures, as it is well knowen to all, & therefore hereafter it shall be necessary to repete it, and make it all parfyte. Nowe wyl I shew y^t the force or yf ye wyl cal it the myghtynes, or fyersnes, ought to be stablysshed & ordeyned by indicatrice of phlebotomye, or of purgaciom, and y^t Hyppocrates was y^e fyrste inuentour of the sayd indicacyon, which I wyll shewe as touchyng to other dyseases in the bokes y^t folowe, & in this present boke I wyl treate of vlceres. I haue all redy spoken clerely of the purgacyons. For syth it is so y^t euery dysease is greuous & fyers in .iiij. maners, y^t is eyther by precellence & noblenes of y^e partye, or for the strength & magnytude of y^e affection & dysease or for y^e wyckednes & frowardnes of the same, called in greeke Cacoethia. Hyppocrates hath made mencyon of all these thyngis where as he spake of purgacyons, but some perchaunce shall say. Howe than? doth nat Hyppocrates perswade somtyme for to drawe the blode for the same causes abouesaid? It semeth y^t he commaundeth them thus, but in few wordes, & neuertheles nat without demonstracyon, as he is accustomed, & also all the other auntyentes. Thou shalte vnderstande y^t it is thus. Fyrste yf thou rede agayne his wordes y^t are such. In all vlceres newly made, but yf it be in the bely, it is expedyent y^t forth w^t it flowe in blode eyther more or lesse. For by y^t meane the vlcere shall be lesse greuous by a phlegmon, & also the places y^t are about it. And after these wordes y^t be wryten in his boke of vlceres (yf y^u hast mynde of it) y^t he hath often proposed it in his other bokes. Howe y^t medycyne ought to be immytatour nat onely of nature, but also to those thyngis y^t are profitable when they come to theyr, propre & natural flyryng y^u shalt clerely vnderstande y^e mynde of Hyppocrates, that is, y^t blode must be drawen when the woundes are great. For yf it be expedient y^t the blode flowe in suche vlceres, & that be nat leten slowe, y^u must adde & supply that y^t is nedefull. T[h]ese wordes y^t he wryteth after the declaryng thus, & conioyneth them forth w^t to them abouesayd. It is profytable y^t the blode be leten flowe many tymes from the inuetera[te] viceres (in what soeuer maner y^t s[h]all be seen opportunate) aswel in the vlcere, as in the parties about it. For in asmoche as he hath sayd before y^e blode ought to be taken from euery grene wounde, seing y^t he made no mention of veterate vlceres, it wold haue we[...]ed to some y^t he had onely spoken of grene or fresshe woundes, wherby he hath well added y^t it behoueth to drawe blode from y^e inueterate & olde soris. Now syth it is so y^t the doctryne y^t we haue taken of hym is perpetual & alway trew, that is how fluxyon ought to be drawen (the whiche begynneth) as y^e contrary parties, & that whiche is all redy fyxed in the partye ought to be purged, eyther by the sayd paynfull party, or by y^e next party to it. It is nowe easy to vs to conclude of the detraction of blode, how from the begynnyng it ought to be doone in the partye ferre of & moste dystaunt, & then in the vlcerate parties. Lykewyse yf ye adde to the abouesayd thynges y^t Hyppocrates admonysshed to empty the superflue humour, somtyme ye shal vse detraction of blode, y^t is

when the blode surmounteth. Somtyme ye shal gyue a medycament y^t hath vertue to purge y^e humours coleryke or melancolyke, or els phleume. Hauyng euer in mynde in all these workes howe none of them is the curacyon of vlceres. In asmoche & as vlcere. But rather of cacomye y^t is coniunct w^t the vlcere, or of Pletore, or of phlegmon, or of herpes, & other lyke dysposycyon, w^tout to forget y^t any of the accydenes of the vlcere gyue any force of his propre indication, as magnytude. In the boke afore we haue spoken of vlceres, wherin we haue exposed all the differences of vlceres, how many, & what they be, & what is the indycacyon of eche of them. Howbeit I haue nat spoken in y^e sayd boke howe somtyme to purge is taken of the force & vehemence of the disease, bycause it shuld be to longe demonstracyon. Also in the sayde boke I haue nat conioyned y^e cure of al the body w^t the vlceres, but I haue wryten it in this present boke, in asmoche as it is good & vtile for y^e thyng proposed. For the parfyte & absolute exposycyon of this kynde of indicacion, which we haue sayd is taken of y^e myghtynes & strength of the dysease, shal be also treated of hereafter. Lykewyse of the indicacion taken of the age, and also of it y^t is taken of purging of humours. And lykewyse the indicacion y^t is taken of the payned parties shal be parfytly declared in the bokes y^t foloweth. For as nowe we haue onely made mencion of the curatyfe indicacion, which may be taken of the nature of the sayde partyes, y^t is to wyt of y^e temperaunce & substaunce, w^tout touching of y^t which is taken of the situacyon of the fourme & fygyre, of the vtylyte & vsage, & of y^e felyng sharp & dull, Nowe then let vs speke of the sayd indi[c]acions y^t is profytable to the curation of vlceres. The party y^t is sharp of felyng ought asmoche as [i]s possyble to be cured w^tout dolour or payne. The [l]ater of suche remedies is treated in the bokes y^t be wryten of symple medycamentes. But the par[t]ye y^t is but of small felynge receyueth stronger remedies, yf the disease requyre it so. Now we must consydre the strength of the pryncipal membre, as we shal say more at large when we speke of phlegmon. But yf it be nat a pryncypall membre, it is lefull surely & without daunger to lay to it such maner of medycament as mytygate & asswage, the grekes call it Calastyce, we shal speke of it playnly h[er]eafter. At this present tyme we wyl shew y^e reason & maner to heale, which is taken of y^e situaciom & fygyre of the partyes, & than we wyl impose the ende of this fourth boke. For this cause we haue cogitate & inuented y^t we must gyue medicamentis to drynke to hym y^t hath his ventricle vlcerate, whiche vulgarly is called y^e stomacke, & yf the bulke y^t properly is called y^e stomacke, y^t the grekes cal cesophagus be vlcerate, the sayd medycamentis ought nat to be taken & swallowed at ones, but by lytel & lytell in contynuyng, bycause of the passage, & also of the touchyng there come vtylyte in the vlceres y^t are in y^t party, & nat for to contayne the sayd medycamentes y^t be adherent, as in the vlceres of the ventricle. Lykewyse we haue indicate & shewed by the sytuacyon & fygyre of the sayd party y^t such medycamentis ought to be made grosser & thycke, & more gleymy & cleuyng, bycause y^t the bulke is a passage of the thynges y^t is eaten & dronken. For y^t cause it hath nede of remedies y^t may draw to it, & almoste in all partes to be coagulate & cleuyng, & nat such as are th̄yne & easy to renne & flete lyghtly. And also the cours & thycke medycamentes do crud & make concrecyon in y^e partyes of the bulke or oesophage, & they y^t be gleymy do cleue to. Lykewyse in vlceres y^t are in y^e thycke & inwarde guttes haue more nede of remedies which are cast out & put out by the syege, in asmoche as the said thyck[e] are next to y^e syege. But of the vlceres y^t are in the intestynes vpwarde & thynne, bycause they be ferdest from the syege, & are set in y^e myddle situacion, requyre both the two medycyns, y^t is to wyt, those y^t are receyued by y^e mouth, & those be infused and cast out by the syege. Nowe for certayne the commune indicacion of all y^e interyour partes is y^t we ought to chuse those thyngis y^t be moste famylyer to the nature of man, be they metes or

medycyns. And y^t we leaue & cast away all contrary thynges. Albeit y^t in the vlceres whiche be in the outwarde parties, the vsage of such medycament be nat noysom as is aerugo, aes vstun, & aeris squama & cadmia, & panpholix commonly called thutie, & argenti spuma, y^t is litargiri, & ceruse. Such & lyke medycamentis ought nat to be vsed nor admynystred to the vlceres of y^e inwarde partyes, of whose nature we haue wryten in the boke of temperantes, and in the boke of the symple medycynes. And yf ye wyl bryng y^e vlcere to a festre or cleuyng ye ought to chuse tarte meates & gleymy y^t haue no maner of erosyon. But yf ye wyll clense the vlcere ye must chuse thynges y^t absterge or wasshe moderatly, as rawe homny, which aboue al thyng is clensing thus. As touching scarre potions & meates they are commonly known ouer all. I cal austere which in greke hyght (styphon) y^t is to say a lytell adstryngent. For soure or vytter is it y^t is tarte (in greke stryph[e]ion.) The medycyns y^t may be taken surely and without daunger is treated of in the bokes of medicamentes. Neuertheles we wyl say some formulary for the inwarde vlceres such medycamentes are holsome, as hypocistis, & balaustium, y^t is the floure of tame pomgarnets, & galla, & malicoriun, y^e is the huske or pyl of the pomgarnet, terra samea, et leminun, y^t is terra sigillata, & the pyth of Rhus, y^t is symac, also the iuce of roses, & achatia, & other lyke, which anoy nat the bowels & inwarde perties. And ye must shew & gyue y^e sayd medicamentes w^t some decoction of tarte thynges, as decoction of quinces, of lentister, or of the hyghest boughes of rubus, or of vynes burgeons, or grene myrtylles, or w^t tarte wyne. It is now manyfest & none is ygnoraunt, y^t he must beware of drynkynge of wyne yf there be phlegmon, or els there is no daunger. In lykewyse it is wel known & euydent y^t the said medycamentis must be prepared & receyued w^t the decoctions, & moyste thyngis. Also ye must medle togyther fraga, cauthu, & genme, chyefly to y^e vlceres y^t are in the bulke & resophage. Also it was commaunded to make gargarysynes to the vlceres y^t are in the parties called fauces & pa[r]ysthmia, but in the vlcere y^t is in the sharpe artere called tracheia, the pacyent must be layde vpryght, & kepe the medycament longe tyme in his mouth in losyng all y^e muscles y^t be in y^t place. For in so doynge some parte of the medycament wyll flowe by lytel & lytel in to y^e artere sensibly & manyfestly. As we may know when the sayd artere is well disposed after the nature of it, y^t somewhat of y^e which is dronken renneth & passeth throughe it. But lykewyse as in helth & good lust it must be kept y^t it influe nat to moche, so in it must in dysease for feare y^t it engendre nat y^e cough. For as longe as the humoure descendeth in euery parte nygh the tunycles of y^e artere as water doth by a wal it exciteth nat y^e cough, but yf some thing passe in the myddes of the way of the spert, y^t is the ayre, forth w^t it bredeth the coughe. All the indicacyons of it is taken of y^e situacyon & fourme of the partye. Lykewyse also hunny must be medled in all medicamentes destined & ordeyned to the vlcere of the Thorax & the lunges. For yf ye vse onely tarte medycyns they wyll remayne in y^e bely. Then thynstrument of the dygestyon and distrybucyon of the sayd medycamentis ouer all the body shal be hunny. Also of theyr sodayne passynge as a vehicule, with y^t there is hunny it noyeth nat the vlcere. Lyke maner all and as many tymes as there is vlcere in y^e bladder & in y^e raynes it must be myxed w^t the medycamentes of the vlceres, nat w^t hunny, but with some dyurytyke medycamentes, y^t is such as prouoketh & styrreth to pysse. I thynke that y^t is patent & manyfest to euery man, after y^t I holde my peace, y^t is to wyt y^t they can knowe & dyscerne the vlcerate parties by theyr substaunce, action, vtylyte, position & fygure, the which hath ben shewed playnly in the boke of the sygnes of y^e payned parties, but this is nat now y^t tyme to speke of them. I wyll retourne to y^e Methode curatyfe, & I say that nat onely the thyngis abouesaid, but also many other are the indicacyons of the fygure, & sytuacyon of the parties. For ye can nat well & commodiously bynde the sore

party, but yf fyrste ye haue taken indicacyon eyther of y^e fygure, or of the sytuacyon, or of both two togyther. Nor ye can nat set the pype of a clyster ryght w^out such indycacyon. It is also many tymes necessary to make iniectiom of the medycamentes in the bladder by the yerde, wherfore it is no nede to make mencyon here y^t totally ye can nat wel vse a syring of bras y^t the grekes call Cathering, but yf ye knowe parfytely the posycyon, & fygure of all the bladder. Than in all these thynges it appereth clerely y^t the payned place indicateth moche to all the curacyon, but of the ruptions (y^t the grekes cal Regmatha) dyuers indicacions are concurraunt to one purpose, & pryncypally y^e indicacion y^t is taken of y^e posicion ought to be examyned. For seyng y^t the rupcyons be hyd in the depth of y^e body, therfore they requyre other curacions than the vlceres y^t appere outwardly, & bycause y^t all holly & alway such rupcyons be with ecchymosis or ecchymonia, & somtyme w^t contusyon about the broken flesshe, therfore there be dyuers indicacyons curatyues therin, for alway the curatyfe indicacions are correspondent to y^e nombre of y^e affections & dyseases, which we shal shew more playnly when we speake of phlegmon, howe the dyseases y^t are in y^e depe places requyreth stronger medycamentis, than they y^t be at y^e superfluyte of the body. Than for the least I do thynke for to be manyfest and pacyent, y^t it is necessary that the strength of medicamentis y^t are mynstred outwarde be resolued & dymysshed when the party y^t shuld be holpen & remydyed is hyd in the dypenes of the body, & therfore it behoueth asmoche to intende & augment the vertue of the said medycament, as it shulde be remysed & dymynysshed in y^e depth of the body. Certaynly all acchymosis or ecchymonia indycateth vacuacyon for remedy of y^e cure, wherby it hath nede of medycamentis moderatly hote and dry, for they y^t dry excessyuely, of trouth do dygest & resolue at y^e begynnyng more euydently than they y^t be weyke, but also some party of the dysease scryous, & dyffycyle to heale, we shal speke of it hereaft dylygently, for as now we haue spoken ynough, after as it belongeth to the matter. Of trouth all the medicamentes & oyntmentes, y^t moysteth & heteth more then they y^t all the grekes call chalastica, y^t is to say laxatyfes, also amonge the sayde medycamentes all they y^t declyne somewhat to drynesse, neuertheles be nat yet clere nor manifest contraction (they be called syntatica in greke) such medycamentes ben the remedies of all ecchymosis. But ye must take good hede y^t the medycamentes applycate to the ruptions y^t are in depenesse of the body haue stronge vertue, and y^t they be sourer & digestyfe, y^t is resolutyfe. (And for to say sommaryly) y^t such medycamentes to be of greater force & effycace, in asmoche as lecchymosis is ferther of, from the skynne vnto the depenes of the body. In suche affections & dyseases the vsage of the herte bytuleth, y^t is to say ventose shuld nat be inutyle, which is an instrument inuented & excogitate of maysters for to make vyolent attraction. And when ecchymosis is all dygested & resolued, than it is parmytted to drye the broken flesshe, moche, & to conioyne it w^t lygature, & to do all y^t is conuenable to coalesse & close an vlcere togyther. Than yf ecchymosis be soone digested & resolued y^e broken flesshe gathereth togyther & waxeth playne easily, but yf the sayde ecchymosis tary longe or it be resolued, moche fylthynes bredeth in it, & occupyeth y^e space y^t is betwene the labyes or lyppes of the vlcere, so y^e the rupciom can nat close, wherfore it foloweth y^t all these thynges abouesayd admonyssheth vs for all causes, how smal soeuer they be. For though that some hath had rygour, y^t is to say vnegall concussyon of all y^e body, or that it hath nat made good concoction, or y^t it hath had the feuer, or y^t it hath ben ouer weryed or fatygate, anone it shall haue payne in the sayd partye where as the ruption is. For bycause of the sayd ruption haue ben vnyed & nowryssneth togyther, but haue alonely ben approached one to another, wherby it foloweth y^t a lytell thyng may departe them easily, & fyll the place w^t superflue humour, but what engendreth it in such rupcyons

continually but now ecchymosis, & lyke vnto the fyrste, that is to wyte when y^e flesshe was fyrste broken, except y^t presently ecchymosis is made of more toughe & subtyl corrupcyon, & at y^e begynnyng it was made of blode. And herfore now it digesteth & resolueth more easily than it dyd at y^e begynnyng. And thus that whiche we haue sayd hytherto shall suffyse for the dysputacyon of vlceres. The[r]fore as nowe I make an ende of this fourth boke. Thus endeth the fourth boke of the Methode of Claude Galyen. Here fynyssheth the Questyonyary of Cyrurgyons, with the formulary of lyte[l] Guydon in Cyrurgery. And the spectacle of Cyrurgyons with the fourth boke of the Terapentyke or Methode curatyfe of Claude Galyen, with the trea[t]yse of vlcere[s]. Newly translated out of the Frensshe (at the in[s]tigacion and coftes of the ryght honest parson[s] Henry Dabbe stacyoner & bybsyoposyst in Paules church yearde) by Robert Coplande of the same faculte, within the moste famous & opusent Marchaunt of London, the .vii. day of Nouembre, the yere of our Lorde [1]541 In the vviii yeare of the raygne of our soueraygne & moste faythful kynge Henry the viii. Imprynted by me Robert wyer for Henry Dabbe & Rycharde Banckes. Cum priuilegio regali ad imprimendum solum per leptonium annum.

To the Reader.

Deare Brethren, and friendly Readers, wee haue here according to the trueth and meaning of the Author, set forth this needefull and necessarie worke concerning the Anatomie of mans bodie, being collected and gathered by Maister Thomas Vicary, and now by vs the Chirurgions of S. Bartholmewes Hospitall reuiued, corrected, and published. And albeit this treatise bee small in volume, yet in commoditie it is great and profitable. Notwithstanding, if the things therein conteyned be not discreetly and wisely studied and applied, according to the true meaning of the Author, we haue to tell you hereof, that therein is great perrill, because through ignorant practitioners, not knowing the Anatomie, commonly doth ensue death, and separation of soule and bodie. Furthermore, whereas many good and learned men in these our daies, do cease to publish abroade in the English tongue their workes and travelles, it is for that if any one fault or blemish by fortune be committed, either by them or the Printer escaped, they are blamed, yea and condemned for ignorant men, and error holders. But now we cease here from these points to trouble the gentle Reader with longer discoursing, for whose sakes and commodities we have taken these paines: wishing that men more skilfull and better learned would have borne this burthen for us. Craving onely this much at your handes, for to correct our faultes favourably, and to reporte of the Author courteously, who sought (no doubt) your commodities onely, and the profite of the Common-wealth without praise and vaine gloire of himselfe. Thus we the Chirurgions aforesaid, commit you the blessed keeping of Almighty God, who alwaies defend and increase your studies and our. Amen.

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