

EPISTEMOLOGICAL PROBLEMS IN GIOVANNI MAINARDI'S
COMMENTARY ON GALEN'S *ARS PARVA*

Daniela Mugnai Carrara

I

Galen's *Technē iatrikē* (*Ars medica*), generally known in the Latin Middle Ages as the *Ars parva* and subsequently, under the influence of medical humanism, by the more exact title of *Ars medicinalis*, was used for medical teaching from late antiquity and was a formal part of the curricula of university faculties of medicine from the Middle Ages until the eighteenth century.¹ The work thus had an extraordinarily long and uninterrupted life. Both its conciseness and the genuine obscurity of a number of passages—an obscurity certainly not lessened in the work's numerous translations—necessitated many interpretive expositions over the course of time. For centuries, the rich tradition of commentary that originated in this way provided material for methodological discussions that made use not only of the tools of logic but also of the theoretical positions supplied by natural philosophy and Aristotelian epistemology, the foundations of the systematization of medical culture in the West. Because of the nature of medicine as a discipline on the border of theory and practice, these commentaries provided the occasion for reflection on general concepts about the nature of scientific knowledge and, to a certain extent, the occasion for their modification. As far as medicine itself was specifically concerned, concepts of fundamental importance were developed and modified over the course of the centuries: these included notions of health, disease, and the neutral state, as well as the entire set of problems about the scope and the subject of the theoretical considerations and practical activities of the physician. In addition, the same context always gave rise to prolonged and lively discussions about the scientific status of medicine, a discipline that encompassed in its own proper sphere both theoretical considerations and practical applications.²

Within the curricula of the medieval faculties of medicine, the *Ars parva*, in addition to being read, explained, and commented on in the course of studies, was one of the canonical texts (along with the *Aphorisms* of Hippocrates) from which *puncta* were extracted for the *tentamen* and then for the

real graduation examination.³ Hence, the commentaries on this work of Galen constituted a genuine and distinct literary genre, inserted into the heart of the academic institution. We still lack a complete census of commentaries. Nevertheless, the manuscript sources and printed editions so far available make it clear that the major figures in medical culture were profoundly grounded in this Galenic text; they also lead one to suppose that a significant proportion of all academic teachers of medicine felt themselves duty bound to produce something, in the form of a commentary or *quaestiones*, connected with the interpretive problems raised by the *Ars parva*.⁴

In the period of medical humanism, notwithstanding the renovation of medical culture at various levels resulting from the new methods promulgated by “philologist physicians,” the faculties of medicine remained in general tied to medieval teaching and institutional tradition. As a result, the use made of the *Ars parva* in this period offers a privileged vantage point from which to investigate the interaction of the new tendencies of medical humanist culture with the methods and issues traditional in university culture and teaching.

Before we begin an examination of some of Giovanni Mainardi’s proposed solutions to the problems posed by the *Ars parva*, it is perhaps appropriate briefly to characterize the movement of renovation that constituted medical humanism.⁵ A sketch of some of the main features will enable us better to put the approaches and proposals of the Ferrarese physician in context and to evaluate their real significance. The new culture manifested itself in two ways: on the one hand, its proponents rejected and were bitterly critical of the *auctoritates* of medical scholasticism and vigorously promulgated a return to the pure sources of Greek medicine and botany; on the other, they brought the presentation of the classical texts of medieval medical scholasticism up to date by bringing them into line with the formal requirements of the new humanist culture.⁶

Humanism began to have significant effects on medical culture in the last decades of the fifteenth century. That was the time when generations educated in humanistic schools began to become culturally productive in the learned professions, into which, once they had completed their training with the technical instruction gained in the universities, they imported the fertile seeds of humanist method. At the same time, nonspecialists, too, were beginning to feel the need for access to the scientific as well as the literary patrimony of classical antiquity; it is sufficient here simply to mention the cases of Angelo Poliziano and Ermolao Barbaro. And it was precisely in the area of scientific culture that the awareness dawned that Greek and Latin culture had had different roles, a realization that made possible a more complex and

realistic evaluation of those two worlds, which up to that time were unconsciously confused in the vague idealization of classical antiquity. We find ourselves confronted for the first time with personages, of whom Leonicensis remains the classic example, in whom philological competence (acquired thanks to the *paideia* of humanist teachers) is united with the traditional and sophisticated philosophical medical culture imparted in the universities.⁷ This union bore fruit in the work of exceptionally well-prepared scholars who could handle competently both the linguistic and the technical aspects of ancient scientific texts and thus could renovate scientific thought.⁸

The most significant change that humanists introduced into medical culture was not, in my opinion, the rejection of scholastic language in favor of a formal renewal of language and style following classical models, though that was one important aspect. Such linguistic rejection and renewal expressed a profound value, namely the recognition that the corpus of knowledge transmitted must be clearly and securely accessible to understanding. But of much greater importance was the recovery of Greek sources and their direct use, without mediation.

Direct contact with the “living and pure sources” of Greek scientific culture was made possible by the intense activity of numerous philologists who made available, in the original texts and in the new translations, the entire scientific corpus: the authors who wrote on philosophy, medicine, botany, mathematics, and astronomy. In some cases, as in that of Galen, which is directly relevant here, important texts were recovered that either had remained completely unknown during the Latin Middle Ages or had circulated in abbreviated form. Where medicine was concerned, broader and deeper knowledge of the classical authors provided a secure instrument for a critique of the organization and procedures of university teaching, a critique focusing on the need to free medical teaching from questions and issues that were substantially extraneous to the subject. The effort to render medicine independent of philosophy and thus make it an autonomous discipline—an intention that was one of the most pronounced aspects of the work of Mainardi but certainly not a common trait of all medical humanists—did not involve, however, a rejection of Aristotelianism *tout court*. The salient point was rather a sharp rejection of the scholastic systematization of medicine as the humanists set aside texts and teaching methods strongly influenced by philosophical issues, especially those filtered through the texts of Arab authors and their followers, the “moderns.” Aristotelian natural philosophy and logic continued to provide the fundamental concepts that made possible the formulation of medical theories; but the Aristotelianism of humanist physicians was unquestionably an Aristotelianism in crisis. The direct comparison

of Aristotle and Galen both made ever more obvious the contrast between the two authors on some essential points and made ever more urgent the choice between loyalties.

II

Giovanni Mainardi of Ferrara (1462–1536) was certainly one of the most outstanding figures of medical humanism. Mainardi, who had been Leonico's pupil and was his successor in the chair of *medicina teorica* at Ferrara's Studium (1524), like his teacher brought forward a wide program of reformation of medical culture. But in his case, the proposed reformation had a stronger bias toward the practical aspects of medicine.⁹ He enjoyed a rich and varied life, both personally and professionally: university teacher and successful doctor, personal physician at the court of Mirandola (1493–1502), royal physician at the Hungarian court (1513–1518), and physician of Alfonso d'Este at Ferrara (from 1518). He traveled extensively and was in contact with many personalities on the intellectual scene of his time. After the untimely death of Giovanni Pico della Mirandola in 1494, Mainardi edited (along with his pupil Gianfrancesco Pico—nephew of Giovanni Pico) the *Disputationes adversus astrologiam divinatricem*, one of the fundamental texts of the new Renaissance culture.

The wide range of his interests and the humanistic foundation of his approach to specific problems of medical culture are clearly revealed in the twenty books of his *Epistolae medicinales*. This best-selling work, whose complete edition, after several partial editions (the first in 1521), was published only after Mainardi's death (Basel, 1540), combines the traditional genre of *consilia* with humanistic and philological discussions on a variety of medical, botanical, and pharmacological themes: topics range from questions of terminology and identification of diseases and remedies to the taxonomy of skin diseases and the cure of the plague and supposedly new diseases such as syphilis, as well as treatments for gastric disorders and internal maladies. His strong interest in botany and pharmacology and his attempt to bring them back to their original purity are well represented in this work and are also behind his *Annotationes et censurae in Mesue Simplicia et Composita* (1535), a classic text of medieval medical tradition.

The specific character of his university teaching, with its scholastic approach to traditional themes of medical culture but with the novelty of the humanistic philological method, comes to the fore in his commentary on the first book of Galen's *Ars parva*. This work, first published in Rome in 1525,¹⁰ is one of the first Renaissance expositions of Galen's text to appear after the

pioneering interpretation by Mainardi's former teacher Leoniceno of the three ordered doctrines of which Galen speaks in the proem of the *Ars parva*. Moreover, it and the commentary of Giovanni Battista da Monte are among the most important and widely disseminated commentaries produced under the influence of medical humanism. Mainardi's work bears witness to his endeavor to make a distinctive personal contribution to the convincing new interpretation of Galen's three ordered doctrines as simple "ordines docendi."¹¹ Without substantially modifying Leoniceno's revolutionary interpretation, Mainardi proposes a whole series of notable exegeses of specific points. His commentary, much more closely tied to university teaching than was Leoniceno's work, offers a valuable opportunity to investigate the extent to which medical humanism was able to make a breach in the scholastic medical system into which Galen's text had been integrated; it also allows us to see some of the differences of opinion within medical humanism, despite a common nucleus of important positions.¹² An analysis of the whole of Mainardi's commentary would far exceed the limits of this paper. I want simply to offer some examples of his method of proceeding taken both from his own introduction and from his commentary on Galen's proem. From these points one can easily identify his positions on the much-discussed problems connected with the structure of *Ars parva* and, what is more important, with the epistemological status of medicine, since he treats these subjects almost exclusively at the beginning of the work, following the usual scheme of the *accessus ad auctores*.

In form, Mainardi follows the tradition of the medieval commentators, but he always inserts innovations, both in interpreting the position of the cited authors and texts and in presenting his own opinions. The leitmotif of the whole work is supplied by the constant presence of Galen, who appears almost as a tutelary deity: "we who follow the opinion of Galen," "we who follow Galen do not hold the opinions of anyone else," "I defend myself with the shield of Galen"—these and other similar phrases are standard formulae that recur throughout the commentary.

There are a number of other noteworthy features in Mainardi's commentary that mark it as a work of startling modernity. Above all the endeavor, made necessary by the wider and deeper knowledge of Galen's thought, was to make medicine an autonomous discipline with respect to philosophy. Mainardi seeks to give medicine its own dignity and particular excellence, which in no way depend on participation in the epistemology of Aristotelian science. The effort is to eliminate, to the extent allowed by the text itself, any aspects particularly related to logic—that is, precisely those aspects on which the medieval commentators had particularly insisted. Mainardi is extremely

critical of his medieval predecessors, from Pietro d'Abano to Drusianus (Pietro de' Torrigiani, or Turisanus, the *Plusquam commentator*), from Gentile da Foligno to Jacopo da Forlì, not to mention Giovanni Sermoneta: he is even readier to recognize, at least in one case, the merits of the "Arab commentator on Galen" (Haly ibn Ridwan), though he offers many criticisms of him as well.¹³

His version of the polemic against Avicenna, the classic topos of medical humanism, is extreme: "No one should oppose to me here or elsewhere the authority of Avicenna; really I do not consider him among the medical authors but among the writers who have gathered the sayings of others." Aware of the temerity of this judgment, Mainardi adds that he discounts Avicenna's opinion only when "Galen's opinion, or invincible reason, or the evident truth of the thing itself" constrains him to dissent from the author of the Canon.¹⁴ Generally, following Leoniceno's decisive recommendation—that Galen should be explained from Galen and not from the fantasies of commentators—Mainardi rests his own interpretation on Galen's authority, collected from statements of Galen in other works.¹⁵ Besides Galen, the most frequently cited authors are the Greek commentators on Aristotle (Alexander of Aphrodisias, Themistius, Ammonius, Eustratius). It should be noted, however, that Leoniceno's range of authors cited is much richer than Mainardi's.

The historical interest manifested by Mainardi on many occasions is another particularly interesting feature of his work. Not only did he begin his preface with a biography of Galen, but more than once he presents the reader with a historical reconstruction of the origin and development of problems before giving his own interpretation. This concern with putting things in historical perspective perhaps resulted from knowledge of the proem of Celsus' *De medicina*, recently rediscovered by humanists.¹⁶ In any case, it seems that inserting the problems into a historical process contributes importantly (perhaps without Mainardi's fully realizing it) to a relativistic assessment of the various interpretations given over the course of time. In a cultural context in which the authorities of the past, including the recent past, were rarely questioned, Mainardi's historical approach gave him one more legitimate reason to propose his own interpretations.

Attention is also paid to issues connected with the organization and transmission of medical knowledge. Naturally, these issues were important for the medieval commentators as well, but the interest in them among humanists was of a very different kind.¹⁷ In Mainardi's case, attention to organization of teaching involved referring to authors different from the traditional ones as well as deliberately deciding to avoid as far as possible the numerous

questions traditional in commentaries on the *Ars parva* that had more to do with dialectic than with medicine. According to Mainardi's curt judgment, such questions were a waste of time for the physician.

Mainardi's reflections about the methods and procedures of research and of what is now called scientific discovery seem open to innovation. He affirms that "someone who is discovering something in a certain way teaches himself." Nothing prevents him from subsequently teaching someone else "by the same procedures [lit., order] that he has taught himself."¹⁸ This extremely felicitous and unusual image with which Mainardi defines the process of research not only breaks the rigid structure of the medieval relation between teaching and learning, between master and pupil, since in this case the learner is a pupil of a very particular kind; more important, it reveals an open and accepting attitude toward the possibilities offered to anyone who follows a line of "discovery" (invention) in an art or science. His remark becomes even more significant if it is linked to his negative judgment of the excessive obsequiousness toward the *auctoritates* among his predecessors. Such an attitude, according to Mainardi, had enormously damaged medicine, impeding new developments different from those recorded in the works of the past.¹⁹

Some solutions are proposed by Mainardi on the basis of his own translation of the Galenic text. Mainardi was convinced that many problems that were particularly difficult to solve had originated in misunderstanding of and consequent bad translations from the Greek text. He himself therefore translated afresh the pericopes of Galen's text to which he appended his commentary. This new translation was especially helpful in allowing him to handle concepts of health, sickness, and the neutral state. Mainardi in fact translated the first two of these as *saluber* and *insaluber*, suggesting also the suitability of *aegrotativus* (and *aegrotabilis*), instead of *sanus* and *aeger* (the medieval terms). By so doing, he stressed disease as a process, not an ontological entity—a conceptualization certainly more attuned with discussion of the latitude of qualities and of the passage from one qualitative state to another.²⁰

III

Let us now examine in detail some points of the commentary. Mainardi proposes to abbreviate the treatment of arguments that had become classic topoi in the *accessus*. Therefore he does not follow the use of the "moderns," who write in the proem of every work a huge quantity of things, smuggling them in as Aristotelian when in reality they are entirely extraneous to Aristotle's thought and, in any case, "have more to do with dialectic than with medicine."²¹ But he could not, obviously, completely free himself from the

constraints imposed by the traditional genre of commentary and by the audience of students he was addressing. Thus, he limits himself to information about the author, the title, and the subject of the work, and the order that the author had followed in the exposition. Following the biographical information with which Mainardi prefaced his commentary are brief notes about the title.²² Cutting short the disquisitions of his predecessors on this subject (which he condemns as “puerile”), he confines himself to observing that in the Greek manuscripts we find the title *Ars medicinalis* and not *Ars parva*. A more interesting inquiry about the title, Mainardi remarks, would be why Galen had used the term *ars* only for this work.

Previously, Mainardi had held that the term *ars* referred to the teaching of medicine by the method of definition here used by Galen. But after more careful reflection, he concluded that the reason for this terminological choice was that all the main points of medicine were encompassed, as in a compendium, in this work. The other works of Galen take their titles from the part of medicine they cover. By contrast, the *Ars parva* deals with the essential elements of medicine, according to the very definition of medicine, which, since it is valid, encompasses the principles—that is, the essential elements—on which all the specific aspects of medicine rest: bodies, signs, and causes. The *Ars parva*, therefore, presents statements that are the results of demonstrations carried out elsewhere.²³ As for the subject of the work, Mainardi notes that the Greeks, when speaking of a single work, are concerned to designate not the “subject” but the *scopos* and *prothesis*, that is, the “goal” and the “intention,” which have a wider scope than just the subject. The intention, expressed by Galen himself, is to teach medicine by the definitive doctrine: the subject, then, is that of the whole art, namely health.²⁴

Mainardi does not agree with those who consider the text an epilogue, a summary, as it were, of Galen’s entire output. Nor does he agree with those who consider it a handbook for beginners. The difficulty of the work and Galen’s own statement oblige us to consider it an aid for the mnemonic recapitulation of the whole discipline rather than an introductory text. In Mainardi’s view, once students have mastered this work with the help of a good teacher, they will be able to tackle the other works of Galen on their own. Conversely, a good exposition of this work seems the most efficacious and appropriate way for an excellent teacher to crown his didactic efforts.²⁵

This last topic does not reflect an idle classificatory whim, as at first sight one might surmise, but is inscribed in the general framework of discussions about the best way of arranging in a rational order the prescribed books of the academic curriculum. The urge to reform the medical curriculum was typical of humanists; it gave Giovanni Battista da Monte the occasion, some

years later, to write his two prefatory letters “de ordine legendi Galeni opera” for the Giunta Galen of 1541 and 1550.²⁶

The most interesting aspect of this introductory section, from the epistemological point of view, is Mainardi's treatment of problems concerning the subject of medicine. These problems are directly linked to the discussion about the scientific status of the discipline in the commentary on the first pericope of the book, which concerns the controversial definition of medicine that Galen places as an epigraph to the *Ars parva*. Right from this point, Mainardi anticipates the arguments that lead him to deny the status of *scientia* to medicine and proudly to claim it instead as an art—but an art of high epistemological profile to which all other liberal arts and philosophy itself must serve as propaedeutics.

As for the problem of establishing the real subject of medicine, Mainardi assails the belief of many of his predecessors that the human body was the primary subject of medicine. Such a position was unacceptable to Mainardi because it rendered medicine dangerously dependent on philosophical speculation about the elements. Following Galen, Mainardi denies that the body, the undoubted object of the operative part of medicine, is also the subject of medicine's theoretical consideration.²⁷ The true subject of medicine is health, and for the sake of health the physician develops his theoretical reflections, operates, and finally is acknowledged in his professional specialty with respect to other workers (*artifices*). Since medicine is a productive or, better, a restorative art, it is defined by what it restores, not by that on which its restorative action is conducted. Many restorative arts can deal with the same subject: for example, in restoring a house, different arts work on the roof, the walls, and the floor. These different arts are not distinguished from one another by theoretical consideration of the house itself as a unit, but by that which each of them repairs. Since medicine is obviously unable to produce human bodies, but can preserve or restore health, it must be distinguished from the other arts by health and not by the human body.²⁸

To this discussion of the definition of the subject of medicine in Mainardi's preface we can add his comment on the definition of medicine given in the work itself. According to Galen, “Medicine is the science of things that are healthy, not healthy, and neutral. It does not change anything if someone says ‘unhealthy.’ What is important is to understand the term ‘science’ in the common sense.”²⁹ This definition had been identified through the pseudo-Galenic *Introductio sive medicus* as that given by Herophilus, and Mainardi himself places great confidence in that attribution; indeed, in many cases he escapes apparently insoluble problems with the hypocritical

assertion, “in any case this definition is not by Galen.” However, Galen’s use of it was still perplexing. Galen’s epistemological attitude is, in fact, rather ambiguous. It encompasses two different concepts of medicine, neither of which matches the definition of a science according to Aristotelian criteria. Galen’s anatomical, physiological, exhortative, and polemical works transmit an iatrosophistic concept of Alexandrian origin. This position considers medicine as a *technē theōrētikē*, strictly linked to logico-mathematical knowledge and endowed with a high epistemological profile owing to the control of causes provided by anatomy. By contrast, the clinical works transmit the Hippocratic concept of medicine as a *technē poiētikē* which produces and maintains health. It would therefore be a productive art, like painting, sculpture, architecture, and shipbuilding. But it could also be seen as a *technē epanorthōtikē*—that is, similar to the techniques through which houses, shoes, and clothes are repaired. In either of the latter two forms, medicine is an empirical technique that occupies a very low place in the Aristotelian hierarchy of scientific knowledge.³⁰

The Arabs received primarily the Alexandrian iatrosophistic concept of medicine. With the reception of Arab medicine and, contemporaneously, Aristotelian philosophy in the West, that concept was inserted into the Western tradition of empirical medicine.³¹ Although Averroës’ *Colliget* (1.1) speaks of medicine as “ars operativa,” Avicenna’s opinion (*Canon* 1.1) that medicine was a science, subordinate to natural philosophy, was the primary source of inspiration for the medieval commentators on the *Ars parva*. In the university context, the stress on the learned aspects of medicine, the strengthening of its ties to natural philosophy, and emphasis on its high epistemological profile were developments guaranteed to earn for physicians the dignity and the honors of a learned profession endowed with great social prestige, on the model offered by the faculties of law.³² As we can see from commentaries by Taddeo Alderotti, Pietro d’Abano, Torrigiano de’ Torrigiani, Jacopo da Forlì, and Ugo Benzi, the question of whether medicine should be defined as science or as art was discussed interminably. While some commentators tried to deal with the unequal epistemological level of theoretical and practical medicine by claiming, as Taddeo Alderotti does, the status of science for the theory of medicine and that of art for its practice, others, such as Bartolomeo da Varignana and Dino del Garbo, declared medicine an art, stressing its practical aim and reclaiming its independence from natural philosophy. Mainardi, like the rest of his predecessors (except perhaps for Leoniceno, who was aware of the eclecticism of Galen’s thought),³³ does not seem to have been aware of the flexible meanings that the terms *epistēmē* and *technē* were acquiring in Galen’s day, at the very time that philosophy was losing the con-

notation of profound knowledge of causes and taking on the sense of a theoretical *technē*. In that environment—largely thanks to Galen's own efforts—medicine was rising to the status of a theoretical *technē*, as the ruling scientific discipline in the cultural panorama of the period.³⁴

But for Mainardi, as for most previous Latin commentators, the contrast between science and art was a very sharp one, so that he felt obliged to try to solve the problem of positioning medicine as one or the other. After noting, following Leonicensio, that even though Galen uses the definition put forward by Herophilus, he does not seem entirely to approve it, Mainardi emphasizes how important it is to understand the term *scientia* not in the strict sense but in the common sense, broadening its meaning to include productive arts such as medicine.³⁵ Mainardi realized that the problem of whether or not medicine could be allocated the status of *scientia* was a very old one. He provided his readers with a historical reconstruction of the various solutions proposed, taking as his starting point the pseudo-Galenic *Introductio sive medicus*. The Methodists held that all of medicine should be considered a science; Erasistratus thought instead that the part of medicine that dealt with causes and matter belonged to science, whereas the curative and prognostic part was conjectural. Galen always held it to be a productive art, like those of architecture, shipbuilding, and other similar things, which no one thought should be considered sciences. Ammonius, Eustratius, and Averroës were of the same opinion. However, Avicenna followed the opinion of the Methodists and considered as science both the part of medicine that reflects on principles, which came to be called theory, and the part that teaches how to operate, which came to be called practice. Most of the moderns follow Avicenna and think that medicine can be called both science and art, believing that these two definitions are not contradictory, provided neither is understood in the strict sense.³⁶

Mainardi supports his own opinion with the authority of Galen: “We who adhere to the opinion of Galen do not deny that in a certain way [medicine] can be called a science; however, we hold that in the proper and absolute sense it is an art, because it has an operative *habitus* and reaches its goal—health—not by necessary but by contingent means. Moreover, it has to do not with being but with generation and the things that can be produced by us. All these characteristics, according to Aristotle, are distinctive traits distinguishing art from science.”³⁷ Mainardi decisively rejects the solution put forward by Pietro d’Abano, who proposed an ontological distinction between the moment of discovery and what some historians might call a period of “normal science.”³⁸ Pietro wanted in this way to distinguish a period of the art, which would correspond to the moment of finding out and establishing

the discipline, and a period of science, when the discipline was already perfected. Mainardi thought this a ridiculous idea.³⁹

As we have already noted, the problem of the relations between medicine and philosophy is closely connected with that of the scientific status of medicine. Galen, in harmony with the culture of his time, was relatively uninterested in metaphysical problems and therefore made natural philosophy, ethics, and logic propaedeutic to medicine in his system.⁴⁰ Avicenna, on the contrary, subordinated medicine to natural philosophy, and the medievals for the most part followed him.⁴¹ Mainardi firmly denies that medicine could be referred to any part of philosophy, not even to natural philosophy. He cites as support for his opinion the Aristotelian topos according to which the activity of the physician begins where that of the natural philosopher leaves off.⁴² He specifies that the physician and the philosopher could both deal with disease and health, but from very different points of view. The physician considers the things that lead to operation, while the philosopher is concerned with speculation for own sake.⁴³

Mainardi held that at this point it was useful to put the problem in historical context. As Celsus informs us, the ancients considered medicine to be a part of “wisdom,” since its first founders were philosophers. Hippocrates subsequently separated medicine from philosophy, but because he himself was a philosopher, he left some philosophical elements within it. Later, many of his successors—above all those who belonged to the sect of the rationalists, who were more philosophers than physicians—introduced many additional philosophical and dialectical elements. These elements made medicine more prestigious but also more distanced from its proper end; they made physicians worthy of admiration but not actually better, since their ability to discuss improved more than did their ability to cure. For this reason, Galen reproached them.⁴⁴

Mainardi underlines the cultural comprehensiveness as well as the specific character of medicine. The former idea, which was certainly not foreign to the medieval commentators, took on a very different meaning in his work. For him, medicine, although requiring full cultural preparation in the liberal arts and philosophy itself, remained confined within the epistemological framework of an art. Medicine was assigned—mistakenly, in his view—the status of a science because anyone who wanted to learn it as it had been transmitted must be an expert in all the liberal arts and all philosophy, even though medicine itself was an art and should not be called a science in the proper sense.⁴⁵ Mainardi stresses that the structure of medicine is directed toward operation, a focus not characteristic of a science. If it were allowed that medi-

cine has the status of science, we would be obliged to admit that all the artisanal and vile crafts could be considered sciences too and that they too made use of true demonstrations, since they prove many things through cause and effect. For this reason, if the people who work in these crafts were philosophers and logicians, as are those who practice medicine, they too would have imported into their crafts many of the same philosophical aspects found in medicine.⁴⁶ Mainardi goes on:

Someone might think that the fact that medicine is directed toward operation does not mean that it cannot be a science . . . ; to this I will reply that it is impossible for any of the arts to be a science because, in addition to possessing a *habitus* that is productive and aimed toward external operation, the intentions that lead to their goals are reached in a contingent way. Moreover, if one affirms that there are many aspects in medicine that are not directed toward operation and can therefore be shown by demonstration, I will absolutely admit that there are such real demonstrations. However, precisely because they are demonstrations, they no longer belong to medicine—that is, to an art—but instead become part of natural philosophy.⁴⁷

In this way Mainardi dismissed the endeavor of Drusianus (Turisanus) to claim medicine as a science by restricting the definition of art to the curative part and stating that all of medicine was speculative, but not for the sake of speculation alone.⁴⁸

Mainardi's deeper knowledge of Galen also allowed him to take a definitive position on the problem of the division of medicine into theory and practice. This division, probably of late Alexandrian origin and patterned on the division of philosophy, was firmly established by the Avicennian systematization of medicine and fitted well into the organization of university studies through the separation of chairs.⁴⁹ Though Drusianus was aware that Galen had not mentioned the theory/practice division, he did not seem to find the omission important.⁵⁰ But for Mainardi, Galen's silence on this issue, and the fact that he always spoke of medicine as a productive art, was sufficient reason to condemn the division into theory and practice as artificial and illegitimate.⁵¹

Finally, Mainardi's epistemological views led him to take a noteworthy position on the already long-standing *disputa delle arti*.⁵² For him, as we have seen, it was not possible to include medicine among the sciences in the strict Aristotelian sense of the term. To do so, in his view, would completely misconstrue medicine's specific character and goals. By contrast, he was fully ready

to follow the alternate route of underlining the great cultural and professional dignity of the arts:

I would not want to be accused of doing medicine damage by including it among the company of arts in which pettifogging lawyers are accustomed to degrade us, as if it was something vile to profess an art and be called masters of it, something that they despise. The term “*art*” in fact designates something so noble that even the imperial dignity, than which there is nothing greater on earth, is defined, according to Quintilian, with the name of art. Nor does the name of art abrogate the dignity of medicine because medicine shares it with humbler arts. Indeed the name of man does not take dignity away from kings even though they share it with commoners. Furthermore art represents something noble because those who possess an art are always considered superior to those who lack it. We say not only that medicine is an art, but that it is the noblest of the arts, which Galen himself, in *De constitutione artis medicinalis*, holds as superior even to rhetoric. As far as the term “master” is concerned, it is given not only to those who practice medicine but also to those who are ready to learn it, since, as Pietro d’Abano says, those who are future physicians must be already masters of other disciplines. The excellence attached to the term master is shown by expressions such as “Roman magistrate” and “master of the knights” and “great master,” used at the court of the king of France; and what is most important of all, Christ, king of kings, does not refuse the name of master. Let us leave, however, the lawyers with their quibbles. We do not blush to be called masters of the noblest of arts.⁵³

Mainardi proudly claims for medicine and the profession of the physician the dignity of a special cultural and professional position, different from that of either the philosopher or the lawyer, in a period in which those two figures still enjoyed hegemony in the cultural scene. He thereby signals indisputably that his world was consciously undergoing great cultural and social changes. Mainardi recognizes that these changes are affecting the discipline of medicine, which is now in effect inserted into a cultural system in evolution. His awareness appears in his call for a continuing openness in scientific research:

One must think that there are many more things still to be investigated than those that have so far been discovered by human ingenuity, so much so that even today the saying of Aristotle is true that the enormous number of things we know is only the least part of the things we do not know. Therefore, because many things remain to be investigated in all the sciences, for a long time our predecessors have been wrong. They based themselves on things that had already been discovered and treated what-

ever their predecessors wrote as an oracle, and therefore they added nothing to the arts. This failure, especially in the field of medicine, was a great sin and did much damage.⁵⁴

The manifold aspects of Renaissance relationships between natural philosophy and the various disciplines that emerge in the articles in this volume give us a picture of a complex situation. Within the field of medicine, patterns of approach to new trends in culture and practice are varied and diverse, as Vivian Nutton's vivid portrayal of learned medicine in Tudor England also shows. Mainardi's critical view was the product of a very different cultural background. He practiced religiously Leoniceno's recommendation to elucidate Galen by Galen himself and not by means of alien philosophical lucubrations. Leoniceno's insistence on this point combined perfectly with Mainardi's striving to depict medicine as an independent discipline, free from heavy philosophical debts. His positions are even more significant, given the context in which they are formulated: commentary on a standard text in the university medical curriculum, that is, one of the *loci naturales* where the effects of the marriage between medicine and philosophy were most evident.

Despite the criticisms by many medical humanists of the excessive penetration of medicine by Aristotelian logic, epistemology, and natural philosophy, medical theory remained deeply embedded in a general foundation of Aristotelian philosophy. Although humanist physicians were generally inclined to side with Galen against Aristotle, the pull of a complete, well-structured, sophisticated tradition was very difficult to resist. Mainardi's position is therefore especially noteworthy. Indeed, some years after the publication of his commentary, another of Leoniceno's pupils, Giovanni Battista da Monte, in his highly successful Paduan university teaching, constantly stressed the need for medicine to maintain strong links with philosophy as the only way to attain a methodical and rational practice.

NOTES

Many thanks to Nancy Siraisi for her kindness—not least for the translation of the text read at the seminar's session, which I have not substantially altered for the printed version.

1. The text of *Ars parva* is printed in Claudius Galenus, *Opera omnia*, ed. C. G. Kühn (Leipzig: Off. Libr. C. Knoblochii, 1821–1833; facsimile reprint, Hildesheim; Olms, 1964–1965), 1:305–412.

2. On the relationship of medicine and logic, especially in the *Ars parva*, see Jole Agrimi and Chiara Crisciani, "Medicina e logica in Maestri bolognesi tra Due e Trecento: Problemi e temi di ricerca," in *L'insegnamento della logica a Bologna nel XVI secolo*, ed. Dino

Buzzetti, Maurizio Ferriani, and Andrea Tabarroni, *Studi e memorie per la storia dell'Università di Bologna*, n.s., 8 (Bologna: Istituto per la Storia dell'Università di Bologna, 1992), pp. 188–239. On the relationship of medicine and philosophy, see Paul Oskar Kristeller, “Philosophy and Medicine in Medieval and Renaissance Italy,” in *Organism, Medicine, and Metaphysic*, ed. E. F. Spicker (Dordrecht: Reidel, 1978), pp. 29–40; Graziella Federici Vescovini, “Medicina e filosofia a Padova fra XIV e XV secolo: Jacopo da Forlì e Ugo Benzi da Siena (1380–1430),” in her “*Arti*” e filosofia nel secolo XIV: *Studi sulla tradizione aristotelica e i “moderni”* (Florence: Enrico Vallecchi, 1983), pp. 231–278; and Charles B. Schmitt, “Aristotle among the Physicians,” in *The Medical Renaissance of the Sixteenth Century*, ed. Andrew Wear, Roger K. French, and Ian M. Lonie (Cambridge: Cambridge University Press, 1985), pp. 1–15.

3. On the curriculum and examination procedures at the University of Ferrara, where Giovanni Mainardi taught, see Vincenzo Caputo and Riccardo Caputo, *L'università degli scolari di Medicina ed Arti dello Studio Ferrarese (sec. XV–XVIII)* (Ferrara: Tipografia artigiana, 1990); for the *Ars parva*, see Statuto 57, 127–128; pp. 8, 44. See also Vincenzo Caputo, *I collegi dottorali e l'esame di dottorato nello Studio Ferrarese: Gli Statuti del Collegio ferrarese dei dottori di Medicina ed Arti (sec. XV–XVII)* (Ferrara: Università degli Studi di Ferrara, 1962), pp. 51–55, 114–118.

4. There is a partial census of commentaries on *Ars parva* in Justus Niedling, *Die mittelalterlichen und frühneuzeitlichen Kommentare zur “Techne” des Galenos*, inaugural dissertation (Paderborn: Druck der Bonifacius-Druckerei, 1924). On the medieval commentaries on *Ars parva*, see Per-Gunnar Ottosson, *Scholastic Medicine and Philosophy: A Study of Commentaries on Galen's Tegni (ca. 1300–1450)*, 2nd ed. (Naples: Bibliopolis, 1984).

5. On medical humanism, see Walter Pagel, “Medical Humanism—A Historical Necessity in the Era of the Renaissance,” in *Essays on the Life and Work of Thomas Linacre, ca. 1460–1524*, ed. Francis Maddison, Margaret Pelling, and Charles Webster (Oxford: Clarendon, 1977), pp. 375–386; Richard J. Durling, “Linacre and Medical Humanism,” in *ibid.*, pp. 77–106; Jerome J. Bylebyl, “The School of Padua. Humanistic Medicine in the Sixteenth Century,” in *Health, Medicine, and Mortality in the Sixteenth Century*, ed. Charles Webster (Cambridge: Cambridge University Press, 1979), pp. 335–370; *idem*, “Medicine, Philosophy, and Humanism in Renaissance Italy,” in *Science and the Arts in the Renaissance*, ed. John W. Shirley and F. David Hoener (Washington, D.C.: Folger Shakespeare Library, 1985), pp. 27–49; *Humanismus und Medizin*, ed. Rudolf Schmitz and Gundolf Keil, Mitteilung II der Kommission für Humanismusforschung (Weinheim: Acta Humaniora, 1984); Vivian Nutton, *John Caius and the Manuscripts of Galen*, supplementary vol. 13 ([Cambridge]: Cambridge Philological Society, 1987); *idem*, “Greek Science in the Sixteenth-Century Renaissance,” in *Renaissance and Revolution: Humanists, Scholars, Craftsmen, and Natural Philosophers in Early Modern Europe*, ed. J. V. Field and Frank A. J. L. James (Cambridge: Cambridge University Press, 1993), pp. 15–28; and *idem*, “The Rise of Medical Humanism: Ferrara, 1464–1555,” *Renaissance Studies* 11 (1997): 2–19.

6. On the adaptation of a medieval standard text—Avicenna's Canon—to the humanist trend, see Nancy G. Siraisi, *Avicenna in Renaissance Italy: The “Canon” and Medical Teaching in Italian Universities after 1500* (Princeton: Princeton University Press, 1987).

7. On Nicolò Leonicensino, see Dominico Vitaliani, *Della vita e delle opere di Nicolò Leonicensino vicentino* (Verona: Tipolitografia Sordomuti, 1892); Daniela Mugnai Carrara, “Profilo

di Nicolò Leonicensino,” *Interpres* 2 (1979): 169–212; and eadem, *La biblioteca di Nicolò Leonicensino Tra Aristotele e Galeno: Cultura e libri di un medico umanista*, Accademia Toscana di Scienze e Lettere “La Colombaria” 118 (Florence: Olschki, 1991).

8. For the role played by humanism in scientific thought, see Eugenio Garin, “Gli umanisti e la scienza,” *Rivista di Filosofia* 3 (1961): 259–278; Marie Boas, *The Scientific Renaissance, 1450–1630* (London: Collins, 1962); and Paola Zambelli, “Rinnovamento umanistico, progresso tecnologico e teorie filosofiche alle origini della rivoluzione scientifica,” *Studi Storici* 3 (1965): 507–546. See also Eugenio Garin, “Rinascimento e Rivoluzione scientifica,” in his *Rinascite e rivoluzioni: Movimenti culturali dal XIV al XVIII secolo*, 2nd ed. (Bari: Laterza, 1976), pp. 297–326.

9. On Giovanni Mainardi (known also as G. Manardo and G. Manardi), see *Atti del convegno internazionale per le celebrazioni del V centenario della nascita di G. Manardo* (Ferrara: Università degli Studi di Ferrara, 1963); Paola Zambelli, “Giovanni Mainardi e la polemica sull’astrologia,” in *L’opera e il pensiero di Giovanni Pico della Mirandola nella storia dell’umanesimo* (Florence: Sansoni, 1965), 2:205–279; and Vaclaw Urban, “Consulti inediti di medici italiani (Giovanni Manardo, Francesco Frigimelica) per il vescovo di Cracovia Pietro Tomicki (1515–1532),” *Quaderni per la Storia dell’Università di Padova* 21 (1988): 75–103.

10. On later editions, see J. Hill Cotton in *Dictionary of Scientific Biography*, ed. C. C. Gillespie (New York: Scribner and Sons, 1981), s.v. “Manardo, Giovanni.”

11. Nicolò Leonicensino, *De tribus doctrinis ordinatis secundum Galeni sententiam* and *Antisophista medici Romani*, in his *Opuscula, per A. Lemnium adnotata* (Basel, 1532), 62A–83A, 146C–174C. On these works, see Daniela Mugnai Carrara, “Una polemica umanistico-scolastica circa l’interpretazione delle tre dottrine ordinate di Galeno,” *Annali dell’Istituto e Museo di Storia della Scienza di Firenze* 8 (1983): 31–57.

12. On the different opinion of another leading medical humanist, Giovanni Battista da Monte, on the crucial issue of the independence of medicine from philosophy, see Schmitt, “Aristotle among the Physicians,” p. 12.

13. See Giovanni Mainardi, *In artem Galeni medicinalem commentarius*, in Claudius Galenus, *Artis medicae liber primus a Iohanne Manardo commentariis illustratus, cui Nicolai Leonicensini Quaestio de tribus doctrinis praefixa est* (Padua, 1564), fols. 22v–24r. All subsequent citations of Mainardi’s commentary are from this edition.

14. *Ibid.*, fol. 34v: “Nemo autem neque hic, neque alibi in hac mea commentatione Avicennae auctoritatem mihi opponat, eum enim in auctorum medicinae catalogo minime me habere profiteor, sed scriptorum qui aliorum dicta collegerunt, ut alias quandoque scripsi, et aliquando, deo optimo maximo aspirante, latius explicaturus sum. Quod temeritatis nemo bonus mihi adscribet, maxime ubi de Galeni agitur opinione, non enim ab Avicenna secedo, nisi quando vel Galeni sententia, vel invincibilis ratio, vel ipsa rei aperta veritas me cogit dissentire.”

15. Using this Alexandrian hermeneutic criterion, Leonicensino reverses the then-standard approach to the text. For the medieval commentators it was quite usual to explain difficult passages of Galen’s text with the support of other philosophical and medical authorities. Cf. Leonicensino, *Antisophista medici Romani*, 151C: “Galenus siquidem ex Galeno est

intelligendus. Caetera omnia sunt nugae et falsae latinorum expositorum qui Arabes in plerisque sunt imitati imaginatione.” On this point, see Daniela Mugnai Carrara, “Nicolò Leonicensino e Giovanni Mainardi: aspetti epistemologici dell’umanesimo medico,” in *Alla corte degli Estensi: Filosofia, arte e cultura a Ferrara nei secoli XV e XVI*, ed. Marco Bertozzi, Atti del Convegno internazionale di Studi, Ferrara, 5–7 March 1992 (Ferrara: Università degli Studi, 1994), pp. 19–40.

16. For the use by Renaissance scholars of Celsus’ proem to *De medicina*, but also of Galen’s *De sectis* and the pseudo-Galenic *Introductio sive medicus* (works also used by Mainardi) on the many opinions of ancient medical schools, see Nancy G. Siraisi, “Giovanni Argenterio and Sixteenth-Century Medical Innovation: Between Princely Patronage and Academic Controversy,” in *Renaissance Medical Learning: Evolution of a Tradition*, eds. Michael R. McVaugh and Nancy G. Siraisi, Osiris, 2nd ser. 6 (Philadelphia: History of Science Society, 1990), p. 173.

17. On the organization of medieval medical education, see Nancy G. Siraisi, *Arts and Sciences at Padua: The Studium of Padua before 1350* (Toronto: Pontifical Institute of Medieval Studies, 1973); eadem, *Taddeo Alderotti and His Pupils: Two Generations of Italian Medical Learning* (Princeton: Princeton University Press, 1981); Jole Agrimi and Chiara Crisciani, *Edocere medicos: Medicina scolastica nei secoli XIII–XV* (Naples: Guernini, 1988); and Nancy G. Siraisi, *Medieval and Early Renaissance Medicine: An Introduction to Knowledge and Practice* (Chicago: University of Chicago Press, 1990).

18. Mainardi, *In artem Galeni*, fol. 27v: “Sunt quidam . . . quibus ego minime assentendum duco, qui enim invenit, quodammodo seipsum docet. Nihil autem vetat quo minus eo quo semet docuit ordine alium docere valeat.”

19. See below, note 54.

20. Leonicensino’s translation was “Medicina est scientia salubrium et insalubrium et neutrorum. Nihil vero differt et si quis loco insalubrium aegrorum dixerit.” Lorenzano translated the same passage: “Medicina est sanabilium scientia, aegrotabilium et neutrorum. Nec interest si dixeris valetudinariorum.” On the editions of these new humanistic translations of *Ars parva*, see Richard J. Durling, “Chronological Census of Renaissance Editions and Translations of Galen,” *Journal of the Warburg and Courtauld Institutes* 24 (1961): 251. On the concepts of health, disease, and neutral state in some medieval commentaries on *Ars parva*, see Ottosson, *Scholastic Medicine and Philosophy*, pp. 126–194. For Mainardi’s translation, see note 29 below.

21. Mainardi, *In artem Galeni*, fol. 3r: “De subiecto ad fastidium in cuiuslibet libri exordio scribunt recentiores, multa perperam quasi Aristotelica confingentes, ab Aristotelis mente penitus aliena. Quae cum sint alio loco a nobis declarata, ad dialecticamque potius quam ad medicinam spectent, ab eis in praesentia supersedere satius duxi.”

22. Mainardi (*ibid.*, fols. 1r–2r) draws biographical information from other works of Galen: *Methodus medendi*, *De anatomicis adgressionibus*, *De pharmacis secundum genus*, *De simplicibus medicamentis*, *De differentiis pulsum*, *De antidotis*.

23. Mainardi, *In artem Galeni*, fols. 2r–3r.

24. *Ibid.*, fols. 3r–4v.

25. *Ibid.*, fols. 4v–5r.

26. See Daniela Mugnai Carrara, “Le epistole prefatorie sull’ordine dei libri di Galeno di Giovan Battista da Monte: Esigenze di metodo e dilemmi editoriali,” in *Vetustatis Indagator: Scritti offerti a Filippo Di Benedetto* (Messina: Centro Interdipartimentale di Studi Umanistici dell’Università di Messina, 1999), pp. 207–234.

27. Mainardi, *In artem Galeni*, fol. 3r: “Diximus igitur . . . iuxta Galeni sententiam, corpus humanum medicinae subiectum statui aliquo pacto non posse, subiectum dico considerationis non operis. Conveniunt enim omnes illud subiectum non esse quod per accidens et secundario, non per se et primo consideratur. Tale esse corpus humanum a Galeno capite penultimo libri de partibus artis medicinalis didicimus.”

28. *Ibid.*, fol. 3r–v: “Verum autem subiectum secundum eiusdem eodem in loco sententiam sanitas existit, ut quam medicus per se primo considerat ad quam omnem reliquam refert considerationem, et per quam potius quam per aliud quodvis ab omni alio artifice separatur. Cum enim medicina ars sit factiva, imo potius reffectiva, iuxta eiusdem Galeni sententiam in libro de medicinalis artis constitutione, per id quod reficit, non per id circa quod operatur, est a caeteris artibus distinguenda, quando et per hoc caeterae reffectivae artes distinguuntur et quidem merito cum nihil vetet varias circa eandem rem reficiendam artes versari. Ut exempli gratia, circa domum, alia quidem ars est, quae imbricum, alia quae parietes, alia quae pavimenta instaurat, nec inter se domus ipsius consideratione, utpote quae una est distinguuntur, sed eius potius ratione, quod in ipsa domo reparatur. Cum igitur medicina non corpus humanum facere, sed sanitatem conservare vel reficere possit, aliaeque artes circa idem humanum corpus aliud scilicet in eo vel conservando vel reficiendo versari possint, per sanitatem non per corpus humanum a caeteris est segreganda.”

29. Galenus, *Opera omnia*, 1:307–308: “Ἱατρικὴ ἐστὶν ἐπιστήμη ὑγιεινῶν καὶ νοσῶν καὶ οὐδετέρων οὐ διαφέρει δὲ οὐδ’ εἰ νοσερῶν τις ἔποι. Τοῦ μὲν οὖν ἐπιστήμης ὀνόματος κοινῶς τε καὶ οὐκ ἰδίως ἀκούειν χρή.” Mainardi translates: “Medicina est scientia salubrium, insalubrium et neutrorum. Non differt autem si aegrotativorum quis dixerit. Nomen vero scientia communiter et non proprie audire oportet” (30r); see also above, note 20.

30. On Galen’s epistemological thought, see Michael Frede, “On Galen’s Epistemology,” in *Galen: Problems and Prospects*, ed. Vivian Nutton (London: Wellcome Institute for the History of Medicine, 1981), pp. 65–86; Mario Vegetti, “Modelli di medicina in Galeno,” in *ibid.*, pp. 47–63; and Stephania Fortuna, “La definizione della medicina in Galeno,” *La parola del passato* 42, no. 234 (1987): 181–196.

31. See Heinrich Schipperges, “Die arabische Medizin als Praxis und Theorie,” *Sudhoffs Archiv* 43 (1959): 317–328; John M. Riddle, “Theory and Practice in Medieval Medicine,” *Viator* 5 (1974): 157–184; and Ottosson, *Scholastic Medicine and Philosophy*, pp. 68–76.

32. Siraisi, *Taddeo Alderotti and His Pupils*, p. 13; eadem, “Taddeo Alderotti and Bartolomeo da Varignana on the Nature of Medical Learning,” *Isis* 68 (1977): 27–39; and eadem, “Medicine, Physiology, and Anatomy in Early Sixteenth-Century Critiques of the Arts and Sciences,” in *New Perspectives on Renaissance Thought: Essays in the History of*

Science, Education, and Philosophy, in Memory of Charles B. Schmitt, ed. John Henry and Sarah Hutton (London: Duckworth, 1990), pp. 214–229.

On the relationship of Italian Aristotelianism and medicine, see Antonio Poppi, *Introduzione all'Aristotelismo Padovano* (Padua: Antenore, 1970); Charles B. Schmitt, “Filosofia e scienza nelle Università italiane del XVI secolo,” in *Rinascimento: Interpretazioni e Problemi* (Bari: Laterza, 1979), pp. 353–398; Eugenio Garin, *Aristotelismo veneto e scienza moderna*, Saggi e testi 16 (Padua: Antenore, 1981); and Giancarlo Movia, “Struttura logica e consapevolezza epistemologica in alcuni trattatisti padovani di medicina del sec. XV,” in *Scienza e filosofia all'Università di Padova nel Quattrocento*, ed. Antonio Poppi (Trieste: Lint, 1983), pp. 375–394.

33. See Leonicensis, *De tribus doctrinis*, 80D: “Oportuit enim ipsos cum de Galeni opinione disceptarent, eundem Galenum non Aristoteli, a quo non raro dissentit, sed magis Platoni, cuius semper summus fuit imitator, ostendere consentientem.” See also 73A and 81B.

34. See Margherita Isnardi, “Techne,” *La parola del passato* 16, no. 79 (1961): 257–296.

35. Mainardi, *In artem Galeni*, fol. 30r: “Quanquam haec definitio Herophili fuerit, ut ex introductorio et libro salubrium sexto aperte colligitur, nec a Galeno usquequaque probata, sicuti inferius ostendetur, placuit tamen Galeno ea hoc loco uti, veluti valde nota et satis commode suo proposito servienti, in qua scientiae nomen (quemadmodum ipse dicit) communiter accipere oportet, ut factivas etiam artes qualis est medicina comprehendat. Non proprie ut videlicet ex adverso contra artem distinctam et veris scientiis tantummodo conveniens.” See also fols. 37v–38r.

36. *Ibid.*, fol. 31r.

37. *Ibid.*, fol. 31v: “Nos Galeni haerentes sententiae posse aliquo modo dici scientiam non negamus, proprie tamen et absolute esse artem putamus, cum sit habitus recta ratione factivus et non sit eorum quae necessario fiunt, sed finem suum hoc est sanitatem contingenter nanciscatur, quae arti adversus scientiam distinctae sexto moralium adscribit Aristoteles. Atque circa generationem, hoc est, res quae fieri a nobis possunt, non circa esse, id est, res necessarias versentur, quo etiam discerniculo in fine postremorum resolutivorum artem a scientia Aristoteles separavit.”

38. As in Thomas Kuhn, *The Structure of Scientific Revolutions*, 2nd ed. (Chicago: University of Chicago Press, 1970).

39. See Pietro d'Abano, *Conciliator controversiarum quae inter philosophos et medicos versantur* (Venice, 1565; facsimile reprint Padua: Antenore, 1985), Diff. 3, fol. 6r. Also, Mainardi, *In artem Galeni*, fol. 31v: “Non enim Aponensi in hac parte standum, differentia tertia sui Conciliatoris exponenti, artem esse circa generationem, id est appellari artem dum invenitur, scientiam circa esse, id est, ubi iam inventa sit, ut propterea secum fateamur medicinam ab Hippocrate eam faciente, dici potius artem potuisse, quam a nobis, confiteri enim pariter oporteret omnem scientiam esse artem dum invenitur et omnem artem scientiam dum est inventa, quod certe est valde ridiculum.”

40. On Galen's philosophical thought, see Pier Luigi Donini, “Galeno e la filosofia,” in *Aufstieg und Niedergang der römischen Welt*, part 2, 36.5, ed. Wolfgang Haase (Berlin: De

Gruyter, 1972–), pp. 3484–3504; R. James Hankinson, “Galen’s Philosophical Eclecticism,” in *ibid.*, pp. 3505–3522.

41. Avicenna, *Liber Canonis* (Venice, 1582), 1.1.1, fol. 3v. Ottosson, *Scholastic Medicine and Philosophy*, pp. 68–88.

42. “Ubi desinit physicus ibi medicus incipit.” For the use of this Aristotelian passage (*De sensu et sensata* 1, 436a18–b2), on which is based the traditional relationship of medicine and philosophy, see Schmitt, “Aristotle among the Physicians,” pp. 9–10.

43. Mainardi, *In artem Galeni*, fols. 31v–32r: “Non potest etiam medicina ad aliquam philosophiae partem referri, quod enim neque ad mathematicam neque ad divinam satis per se evidens est. Sed quod neque ad naturalem, Aristotelis vulgata sententia constare potest, inde dicentis medicum exordium capere, ubi desinit philosophus naturalis. Quod non ita intelligendum est, ut negetur eisdem de rebus utrunque considerare, cum de sanitate et morbo inter ea quae parva naturalia vocant scripserit Aristoteles secundoque de partibus animalium dixerit, ad naturalem philosophum attinere aliquo modo de causis morborum pertractare. Quod primo quoque Therapeutices affirmavit Galenus et secundo libro Anatomicarum aggressionum, ait diversam utriusque esse circa dissectiones considerationem, medicumque ea tantummodo considerare quae ad opus conducunt, nudam vero speculationem ad philosophum pertinere, quod primo Colliget scripsit Averrois.”

44. *Ibid.*, fols. 32r–v: “Verum quoniam, ut scribit Celsus, primi medicinae inventores fuere philosophi, medicina ab antiquis sapientiae pars credebatur, donec eam a philosophia separavit Hippocrates. Sed quoniam et ipse philosophus fuit, nonnulla quoque philosophica suae immiscuit medicinae, licet ad ipsam professionem contracta, sicut quando in libro elementorum et de natura humana, corpus humanum ex elementis compositum probavit, quia doleret. Posteriores quoque, et hi praesertim qui rationalem sectam professi sunt, quoniam et ipsi philosophi et quandoque magis quam medici, multa philosophica interdumque dialectica immiscuerunt, quae medicinam quidem ipsam venustiore reddunt, sed a proprio fine multum divertunt, medicosque maiori admirationi, sed non propterea meliores reddunt, cum disserendi illis potius adsit quam curandi peritia et propterea eos a Galeno omnibus in locis reprehendi videmus.”

45. *Ibid.*, fol. 32v: “Indeque natum puto ut medicina inter scientias a multis numeretur, quoniam qui eam, ut nunc scripta est discere cupiunt, liberales artes omnes et universam philosophiam callere opus sit, licet ipsa per sese medicina ars et non proprie scientia sit dicenda.”

46. *Ibid.*, fols. 32v–33r: “Quod si quis eam veram scientiam esse contendat quoniam in ea verae demonstrationes fiunt . . . quarum causa, Galenus tum in fine huius libri tum alibi saepe instructum esse in demonstrationibus eum oportere mandat qui sit ad discendum medicinam accessurus. Dicam quod sicuti ordinatio ad opus facit medicinam non esse proprie scientiam, sed solum communiter, ita demonstrationes suas non proprie sed communiter dici demonstrationes, sicuti quinto libro sui Colliget, caput 8, voluit Averrois. Si quis vero neget ordinationem istam ad opus auferre nomen verae scientiae et demonstrationis is fateri cogetur omnes sellularias vilesque artes veras dici scientias debere et veras facere demonstrationes, cum et in illis multa per causas et per effectus probentur. Quod si

hi qui eas professi sunt, sicuti hi qui medicinam dialectici et philosophi fuissent, multa quoque in idem in illas transtulissent.”

47. Ibid., fol. 33r: “Et si quis adhuc resistat quoniam ordinatio eiusmodi rationem scientiae ab Aristotele primo libro postremorum resolutivorum non videtur auferre, quae est rem per causam cognoscere et quod illius est causa et quod non contingit aliter se habere. Respondebo per hanc ultimam particulam artes omnes a vera scientia excludi, quoniam cum sit habitus factivi et ad extrinsecum opus ordinati, finis intentiones non necessario consequuntur nec sunt de his quae necessario fiunt, sicut ex sexto moralium superius ostendimus et propterea id de quo ars est, aliter habere contingit. Et si adhuc non vis cedere, dicens, multa esse in medicina quae non ita secum habent illam ad opus ordinationem, quin sine illa possint demonstrari, confitebor utique veras illas esse demonstrationes, sed ita a medicina sicuti ab eius genere, id est ab artis ratione, decidere et ad naturalem philosophiam conscendere.”

48. Ibid., fol. 33r–v. See Pietro Torrigiano de’ Torrigiani, *Plusquam Commentum in parvam Galeni Artem Turisani Florentini medici praestantissimi* (Venice, 1557), 8B.

49. Nancy G. Siraisi, “Changing Concepts of the Organization of Medical Knowledge in the Italian Universities: Fourteenth to Sixteenth Centuries,” in *La diffusione delle scienze islamiche nel Medioevo europeo*, Convegno internazionale, Rome, 2–4 October 1984 (Rome: Accademia Nazionale dei Lincei, 1987), pp. 291–321; Agrimi and Crisciani, *Edocere medicos*, pp. 21–47.

50. Torrigiano, *Plusquam Commentum*, 10B.

51. Mainardi, *In artem Galeni*, fol. 34r–v: “Nunc an [medicina] theorica vel practica vel utraque dici possit videamus. Galeno ergo quoque hic haerentes, sicuti eam etiam proprie scientiam negavimus, ita nec theoreticam, nec practicam proprie loquendo affirmamus. Exigit enim ratio, ut a quocunque genere, ab eodem et species submoveatur. Nec si totam factivam esse fateamur practicam propterea dicere cogimur, practica enim a praxi deducitur, quae vox latine actionem significat, quam esse aliud a factione septimo libro primae philosophiae Aristoteles testatur. A praxi vero id est ab actione morales scientiae practicae vocantur. Aliquid tamen esse in medicina non inficiamur, quod aliorum comparatione theoreticum dici possit, quod et in libri theologiarum sententiarum proemio Scotus quoque testatur, totam medicinam practicam vere esse dicens, haberi tamen in ea, ad quod dici aliquo modo theoreticum possit, licet et ipse practici nomen non bene intellexerit, quae res multa eum de praxi superfluo scribere nec dicam male coegit.”

52. On the *disputa delle Arti*, see *La Disputa delle Arti nel Quattrocento*, ed. Eugenio Garin, 2nd ed. (Rome: Istituto Poligrafico e Zecca dello Stato, 1982); Giulio F. Pagallo, “Nuovi testi per la ‘disputa delle arti’ nel Quattrocento: La ‘Quaestio’ di Bernardo da Firenze e la ‘Disputatio’ di Domenico Bianchelli,” *Italia Medioevale e Umanistica* 2 (1959): 467–481; see also *Sapere e/è potere: Discipline, dispute e professioni nell’università medioevale e moderna*, 3 vols. (Bologna: Istituto per la storia di Bologna, 1990).

53. Mainardi, *In artem Galeni*, fols. 33v–34r: “Nec velim vitio mihi verti quasi de medicina pessime merito, quoniam eam in artium numero repono, quo legulei infringere nobis solent, quasi vile sit artes profiteri vocarique, quod ipsi dedignantur, magistri. Nomen enim artis adeo nobilem signat, ut imperatoria quoque dignitas, qua nulla aliquando in ter-

ris maior fuit, Quintiliano teste, artis nomine censeatur. Nec dignitatem artis nomen abrogat medicinae, quia sit vilioribus commune, sicuti nec hominis nomen regibus, quia sit illis cum plebecula commune. Alioqui de se nobile quid ars repraesentat, cum qui arte pollet, ea carentibus semper praeponantur. Non solum autem artem dicimus esse medicinam, sed artium nobilissimam, quam et rethoricam maiorem, libro *De artis medicinalis constitutione* facit Galenus. Magistri etiam dicuntur non solum qui iam medicinam tenent, sed et qui ad ediscendam eam accedunt quia scilicet aliarum disciplinarum magistros esse debent, ut bene scripsit Aponensis qui medicorum scholas petitori sunt. Quantae verò praestantiae magistri nomen sit et magistratus Romanorum et magistri equitum et magni magistri apud Galliarum reges adhuc custoditum nomen ostendunt et quod maius his omnibus est, quod rex regum Christus magistri nomen non recusavit. Valere igitur cum suis ambagibus leguleios sinentes, nobilissimae artis magistros dici non erubescamus.”

54. *Ibid.*, fol. 28v: “Sed illud potius tenendum esse longe plura quae nondum investigari potuerunt, quam ea quae humano ingenio sunt adinventae, ut adhuc verum sit illud Aristotelicum maximam eorum quae scimus partem, minimam esse eorum quae ignoramus. Quare cum adhuc in omnibus scientiis plurima supersint investiganda, hoc unum longo tempore peccaverunt maiores nostri, quod inventis stantes oraculique loco habentes quaecunque a senioribus scripta erant, nihil artibus adiecerunt, quod potissimum in medicina, magna cum iactura hactenus peccatum est.”

BLANK PAGE

“A DIET FOR BARBARIANS”: INTRODUCING
RENAISSANCE MEDICINE TO TUDOR ENGLAND

Vivian Nutton

Should one wish to choose any one region in which to examine in detail the introduction of Renaissance medicine and what it stood for, the example of Tudor England would surely be high on the list of preferred subjects. Its medicine and that medicine's practitioners are, when it began in 1485, obscure—few, save for the Welsh or hunters after the exotic, now remember Lewis of Caerleon, royal physician, mathematician, astrologer, and spy—yet it ends in 1603 with one of the most famous names in medical history, William Harvey, newly returned from Padua and failing, at least for the moment, to gain entry into the London College of Physicians.¹ Within little more than a century, England and its physicians had moved from northern darkness almost to center stage in European medicine. From letters, private papers, and publications—to say nothing of their grave monuments—one can gain an insight into the hopes and aspirations of those who, directly or indirectly, brought about this change and can see clearly what they themselves thought most important in the development of their medicine. Even if what they have to say touches rarely on natural philosophy in the narrow sense, as opposed to investigations of the wider world, at the very least it serves as a reminder that natural philosophy was but one key to unlock the secrets of nature.

It is important to stress, at the very outset, the low state of English learned medicine in the later Middle Ages, even as compared with its continental neighbors, let alone with Italy. In 1500 the two universities of Oxford and Cambridge between them produced at most five or six M.D.'s a decade, with Oxford somewhat more prolific than Cambridge.² A few foreign practitioners might come to England, usually in the train of prelates and princes. Henry VII employed a German, Jacobus Fries; a Frenchman, Jean Veyrier of Nîmes; and, most famous of them all, Giambattista Boerio of Genoa.³ The timorous Ferdinando de Molina in 1490 was moved to make his will because “I am now in way to depart for to go to Oxford.”⁴ That town in 1500 saw the prosecution of an Italian, Dionisio of Nola, for practicing surgery without a license, and the town of Coventry was briefly home to a Greek,