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Galen on Medicine as a Science and as an Art

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Abstract. This article discusses the notion of the art of medicine in the work of Galen of Pergamon (129 – ca. 213). On the one hand Galen propagates an exalted role and status for medicine as a genuine science based on unshakable theoretical foundations and of equal standing to philosophy; on the other hand, he seems to operate with 'lower' notion of medicine, as based on experience but also as conjectural and fallible.
It is argued that Galen's concept of medicine can be shown to be more coherent than has been supposed (although not without certain inherent tensions) when it is considered in the light of methodological passages from both Aristotle and Plato. Of these, Plato's Phaedrus 270c–d appears to have been of particular importance to Galen. This passage contains a description and commentary on Hippocrates' method, thus linking Galen's two great masters of the classical past, Plato and Hippocrates, as representatives of philosophy and medicine respectively. What is more, it adumbrates an ideal of scientific procedure in which reason and experience, logic and practical utility, have been combined in a way that suited (and helped shape) some of Galen's most deeply held convictions about the nature and purpose of his art. The element of uncertainty and fallibility involved in its practice, i.e. in the treatment of patients, is due to the built-in constraints of physical reality; it does not detract from the status of medicine itself.

Keywords: history of medicine, Galen, medicine as a science, medicine as an art, Plato, Aristotle

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1. Introduction

There appears to be a problem, or at any rate a pressing question, regarding the status of medicine according to Galen [1, p. 269-271][1] – there is an unresolved tension between medicine as a practical art, dealing with individual patients, conjectural in its predictions and uncertain in its results, on the one hand, and medicine as a science, exact and firmly based on general and obvious truths, on the other. Are we dealing with a lower and a higher form of medicine that Galen never quite managed to reconcile? Is the difference between a clinical practice and a physiological theory?[2] It is an issue that does not only present itself to modern students of Galen's works but can be traced back to passages in the works of Plato, Aristotle as well as Hippocratic tracts such as *On Ancient Medicine*. By Galen's time, the issue had become standard, or traditional. Thus the pseudo-Galenic author of the *Introduction, or the Physician*, devotes a separate chapter to the question of whether medicine is an art (τέχνη) or 'science'[3] (ἐπιστήμη)[4]. The dilemma as such goes back to Aristotle's distinction between the two[5], but pseudo-Galen uses Stoic definitions

[1] Cf. [2], [3], [4].
[2] The thesis of Vegetti [2]; cf. [5].

[3] As is clear from pseudo-Galen's treatment (as well as key passages such as those from Aristotle referred to *infra*, n.5) the terms at issue primarily refer to mental *states* or dispositions rather than bearing an 'institutional' sense: thus 'knowledge' in the strong sense defined by Greek philosophers (most notably Aristotle and the Stoics) is an alternative rendering for ἐπιστήμη, where it often is quite possible to translate '(applied) science' for τέχνη. On the ancient concept of τέχνη it is still worth reading Isnardi Parente [6, 7].
[4] *Int*. V 1, pp.10.11-12.6 Petit [= XIV, 684-687 K.]. On authorship and date see the introduction to the edition by Petit, XXXVI-LI, who convincingly shows on linguistic, stylistic and doctrinal grounds, that the author cannot be Galen; names cited and other indications show that the tract is to be dated to the second half of the 2nd century AD.
[5] See Arist. *EN* VI, 3: 1139b14-1141b8, esp. 981b20-23, 26-28; *Met*. I, 1:980a22-982a2. The difference turns on art being productive and aiming at some practical use whereas knowledge in the strict sense is speculative and is pursued for its own sake. For our purposes the opening passage from *Metaphysics* had additional interest for its reference to medicine as illustrating the difference between experience and art: the physician cures individuals, not humankind: for this experience (ἐμπειρία) being concerned with individuals may suffice; in fact, theory (λόγος) without experience often leads to failure. Even so, art ranks higher than mere experience because it involves knowledge of causes and universals, *Met*. 981a13-b7.

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in explaining why medicine should count as an art rather than a science[6].

Galen himself in defining the art of medicine (ἰατρική, scil. Τεχνὴ) as the *science* (or knowledge, ἐπιστήμη) of what is healthy, diseased and neither (*Ars med*. 1b, p. 276.6-7 Boudon [I, 307 K.]) seems to cut across the traditional Aristotelian distinction[7]. In the context, however, he tells us that 'science' is to be taken in a general rather than specific sense (ibid. 8-9), suggesting that it is not to be taken in any technical (including Aristotelian) sense. On the other hand, we find him a little further on stipulating that medicine *as an art* goes beyond particularities: its technical nature involves a level of universality: it is concerned not only with 'this or that' but with 'such-and-such.' This again is strongly reminiscent of Aristotle's stipulations in the key passage *Metaphysics* I, 1 (in particular 981a18-27). Obviously, this could mean different things as to how Galen positions himself in regard to Aristotle, including the possibility that he is making selective use of Aristotelian concepts.

Galen not only was familiar with the relevant philosophical works by Aristotle, Plato and many other philosophers but he sought to connect the philosophical and medical traditions, as is evident from such programmatic treatises as *The Best Doctor is also a Philosopher* and, on a far more ambitious scale, *On the Doctrines of Hippocrates and Plato*. In the former he argues that the ideal physician is well-versed in each of the three parts of philosophy (logic, physics, ethics); in the latter he argues that Hippocrates and Plato are in agreement about the main issues of philosophy and medicine and in so doing projects into the past a tradition of good philosophy and medicine. This project is of course a way of showing up his credentials as a medical practitioner and theorist as well as a philosopher. Even if it takes what, in many ways, is an original shape, it can also be seen as another contribution to a long-standing debate on the relative status of philosophy vis-a-vis competing forms of intellectual endeavour such as mathematics (i.e. mainly astronomy as applied mathematics), medicine and rhetoric. Plato was among the first to start this discussion when he dealt with the nature, purpose and value of rhetoric in the *Phaedrus*. Indeed, at *Phaedrus* 270b-c Plato actually recommends Hippocratic medicine for its method – another key passage to which I will return in due course (§ 3). Subsequently, Aristotle was far more systematic in assigning a status to each discipline, drawing a clear borderline between theoretical and practical 'philosophies' or sciences[8] on the one hand and the arts including medicine on the other[9]. Even so, his determination in the opening chapter of *Metaphysics* shows that the difference between art and philosophy is gradual rather than absolute, at least in one important respect (notably, the role played by universals and causal explanation) and in his *On Sense Perception* he notes that students of nature conclude [scil. their inquiry] with the principles of medicine, whereas physicians who practice their discipline in a more philosophical way start from the principles of natural philosophy (*De sensu* 436a17b2). On the side of the philosophers of nature, Aristotle may well be thinking of the Platonic *Timaeus*, which ends with sections on human physiology, disease and well-being (69a-92c). Clearly, Galen envisages an ideal of philosophical medicine that goes beyond this overlap of principles. Yet Plato and Aristotle had shown that there was no unbridgeable gap.

But the discussion on the relation between medicine and philosophy did not stop with Plato and Aristotle. Galen's concept of medicine also reflects further enrichment from the Hellenistic period. This was marked by two developments of relevance here: (1) on the part of the philosophers an increased sensitivity to epistemological issues and indeed the effective development of epistemology as a separate branch of philosophy; (2) the flowering of arts such as astronomy (i.e. applied mathematics) and medicine (especially the advances made in 3rd century BC in Alex-

[6] As noted by Boudon [1, p. 285]. The Stoics characterize ἐπιστήμη as fixed, stable and incontrovertible by argument, whereas mere τέχνη is a system of concepts aimed at some useful purpose in life. Ps.Galen dismisses the former as unattainable even for philosophers in their study of nature, let alone in medicine (p. 10.17-22 Petit).

[7] The definition (if not the ensuing explication) derives from the great 3rd century BC Alexandrian physician and medical scientist Herophilus: see Testimonies 42-45 Von Staden (all from Galenic and pseudo-Galenic works); cf. [8, p. 89-110].

[8] For the plural ἐπιστήμαι as used interchangeably with φιλοσοφίαι see *Met*. VI, 3: 1026a18-23.

[9] See *supra*, n. 5.

andria in anatomy and physiology and associated with the names of Herophilus of Chalcedon and Erasistratus of Keos in particular), leading their practitioners to lay claim to greater cultural authority. Some philosophers, notably Epicurus and the Pyrrhonian Sceptics, responded by rejecting the claims to high epistemic status for the τέχναι (though not their usefulness within clearly circumscribed bounds)[10]. More relevant to Galen's concerns was the response by the Stoics, who elevated the concept of τέχνη so much as to define philosophy (including its physical part) as the art with respect to life (an idea that goes back to Socrates). This made the determination of the relation of philosophy to the other arts all the more urgent in the case of the Stoics. On the whole, they saw philosophy as the master art, which avails itself of the results of the more specialized inquiries of medicine, astronomy and the other *technai* to underpin the Stoic vision of the natural world as determined by divine providence. The Stoic natural philosopher is therefore primarily interested in causal explanation. But opinions and tastes differed as to how far this should extend. One striking figure among the Stoic ranks was Posidonius of Apamea, the greatest intellectual of the first century BC, who went further in his insistence on causal explanation than most of his predecessors and actively contributed to more specialized fields, such as geography, oceanography, anthropology, history, and still others, though hardly, it seems, to medicine[11]. Even so, he was admired and praised by Galen, not least because Posidonius combined his interest in causes with a concern with geometry as providing a model for ordering scientific knowledge. As we shall see, an interest in an axiomatic-deductive model inspired by Euclidean geometry was also what Galen liked about the Aristotelians' view of knowledge and demonstration[12]. But he may even have been influenced by some of the determinations made by Aristotle in regard to the concept of *technê*.

In what follows I shall consider Galen's position against the backdrop made up of these various influences and authoritative voices, building on relevant work by Hankinson [4, 19-22], Boudon [1] and others (see Bibliography). My discussion is slanted towards philosophical sources, which, in my view, have not been sufficiently explored. I will argue that Galen's position is more coherent than it has often seemed because of the neglect of these sources. It should not be taken for granted that a coherent picture will emerge. Galen's extant works span some fifty years. In many cases he sets out to attack and refute opponents of various kinds, lending these works a dialectical quality, which is apt to result in inconsistencies of various sorts. Perhaps it is unreasonable to expect complete and detailed coherence. Even so, I think it is at least legitimate, or methodologically sound, to work on the assumption of prevailing coherence, that is to say, I will employ the principle of charity. Consistency, of course, is what Galen valued, in others but also as something after which he strove himself.

2. The Art of Geometry and the Aristotelian Model of Science

In his *On My Own Books* Galen not only catalogues his works, but also includes vivid episodes of intellectual autobiography. In so doing he provides useful information on his education. Thus the first half of chapter XIV (pp. 164-165 Boudon, XIX, pp. 116–117 K.) offers an account of how he fared as a student of philosophical logic, which he had hoped would enable him to assess scientific theories advanced by others or, if necessary, find the truth himself. His teachers were all distinguished Stoic and Aristotelian philosophers but after some time he found that their teachings left him empty-handed: they proved useless for scientific demonstration. What's worse, Galen found that disagreement (διαφωνία) rife among the philosophers. It was not just that the main

[10] Thus Sextus Empiricus' *Against the Professors* [= Adversus Mathematicos] is directed against the pretensions of the practitioners of the so-called liberal arts (τέχναι) combining originally Sceptical and Epicurean arguments. For the Sceptics see further Barnes [9], Hankinson [10, p. 251-261]; for Epicurus see Sedley [12], Blank [12], and (on Epicurus and medicine), Tieleman, forthcoming 2016 [13].

[11] On Posidonius' interest in and work on the more specialized sciences see Kidd [14], id. [15, p. 9-16]; Tieleman, forthcoming 2016 [16].

[12] See Galen, *PHP* IV, 4.38, p. 258.19-22 De Lacy, *ibid*. VIII, 1.14, p. 482.33-34 DE L. [17] (= Posid. T83, T84 EK). On Posidonius' use of geometry see Bréhier [18] (repr. in: Etudes de philosophie antique. Paris, 1955. P. 117–130); Kidd [15, p. 14-16].

schools (Stoics, Aristotelians, Platonists) held different and often incompatible theories; each of these schools was also internally divided. So as far as his teachers were concerned, Galen would have drawn the standard Sceptical conclusion from the prevalent disagreement, viz. suspension of judgment: "I would have fallen into the impasse of the Sceptics" (p. 164, l.25 B.), that is to say, become a Sceptic himself – indeed, one of the cruder, Pyrrhonist variety![13] But he narrowly escaped this predicament by falling back on what he had learned from his father about geometry, arithmetic and calculation. In fact, Galen adds that his father in turn had learned these disciplines from his (Galen's) grandfather and great-grandfather – as a precious family heirloom that was passed on from generation to generation. Galen's father Nikon was a master craftsman, an architect. The mathematics in question, then, was applied mathematics used in architecture, engineering, astronomy and other arts. Galen believed that these arts produced indubitable results, results that were obvious and true. Here Galen mentions as examples the prediction of eclipses or the construction of sundials and water clocks. These results were not only clear and useful but they also showed the existence of the unshakable foundations Galen had been looking for all along. These were the foundations on which the geometrical methods were based[14].

So is this the happy end of our story? Did Galen return into the safe haven of family traditions concerned with geometry and useful arts, after a fruitless and potentially damaging excursion into philosophy? But that is not quite the story that is told here. It was Galen's revered father who had made him study philosophy under representatives of all the main schools in the first place. Galen did not abandon his interest in philosophy but returned to it in the knowledge that the disagreement among philosophers could be overcome, given the model provided by geometry, as vindicated by the arts of proven benefit to humankind. In fact, Galen tells us, there was one philosophical school that showed less internal disagreement than the others – Aristotle's followers, the Peripatetics (*Lib. prop.* XIV, p. 165.17-18 B.). The reason for their high level of unanimity was that they followed the geometrical mode of demonstration. In other words, Galen indicates that in regard to the theory of demonstration one can learn useful things from Aristotle and his school in particular. One should think of the axiomatic-deductive model of knowledge expounded in the *Posterior Analytics*. Reason and experience furnish the starting points – axioms, existential postulates and definitions — on which the sciences can be shown to depend. From the same work – *On My Own Opinions* – we learn that Galen commented upon the *Posterior Analytics* and other logical works by Aristotle and was in touch with the commentary tradition concerned with the Aristotelian *Organon*[15]. In another work of methodological relevance, *On the Doctrines of Plato and Hippocrates*, Galen recommends Aristotle and his pupil Theophrastus as the best authors on the theory of demonstration, and in this connection he refers to his own commentaries, in which he has explicated what these philosophical masters of the past had said in their often concise and unclear way: "I say that the best accounts of demonstration were written by the old philosophers, Theophrastus and Aristotle in their *Posterior Analytics"* (*PHP* II, 2.4, p. 104.3–5 De Lacy; transl. De Lacy, slightly modified).

"What premises ought one to seek as appropriate and proper to the problem at hand? These have been discussed at length, both in the rather unclear and brief statements made by the ancients, and in what we wrote in our clear and full explanation of those statements" [scil. in *On*

[13] Galen was hostile to Scepticism, especially in its Pyrrhonist variety: see Tieleman [23] with further references.

[14] On Galen's father as knowledgeable about the geometrical sciences and as guiding his intellectual development see *Pecc. Dign.* 8 = V. 4 K. = p. 28 De Boer. On the geometrical sciences as yielding indubitable results and resting on secure foundations see also in the same work V 80-86 K. = pp. 53–59 De Boer, with Tieleman [24, p. 34–35]. The family tradition of practicing geometry-based professions is also mentioned in Galen's newly discovered *De Indolentia* (Περὶ ἀλυπίας, "Avoiding Distress"): chs. 58–60, p.19 BJP, pp.39–40 Garofalo-Lami.

[15] See *Lib. prop.* XIV, 9-15, p.166.1167.5 Boudon [= I, 41-42 K.]. On Galen and the Peripatetic tradition see Moraux [25]. Galen's stress on indemonstrable truths as providing the foundation of the edifice of knowledge, while Aristotelian in origin, was further enriched by Hellenistic epistemological notions, most notably that of the axioms being *obvious* or *evident*. On this aspect see esp. Lloyd [26]; cf. also Hankinson [19, 20].

Demonstration] (ibid. II, 3.1, p. 108.21–25 De Lacy; transl. De Lacy).

"If [...] a person has been well-trained in the discovery and recognition of different kinds of premises, my answer to him need not be long, no more than it need be in answering the Peripatetics. *For my argument with them will follow their own teachings* (*ibid*. II, 3.23, p. 114.22–24 De Lacy; transl. De Lacy's; italics are mine)[16].

So does this mean that for Galen at least the arts (τέχναι) and philosophical logic are reconcilable and, indeed, that they have been reconciled by him? This is certainly one possible conclusion to draw. As we have seen, the arts and Aristotelian methodology-cum-logic are seen as united by the geometrical model and the obvious truths on which it rests. But there are also questions, ambiguities, and tensions. Aristotle's own concept of art, as we have seen, does differentiate it from demonstrative reasoning leading to knowledge. Is this aspect simply ignored by Galen as something that could not be fitted into this otherwise Aristotelian picture? Indeed, Galen often links the concept of art (τέχνη) and science (ἐπιστήμη) in a way that cuts across Aristotle's distinction between the two concepts, as he did in his definition of medicine in the *Art of Medicine* (see above, p. 2)[17]. In the preface to his *Commentary on Hippocrates' Nature of Man* Galen argues that Hippocrates' τέχνη rests on his ἐπιστήμη of the physical elements (*HNH* 1, prol. XV, p. 15.17-16.5 K.). This could, perhaps, still be explained in terms of the overlap between physics (in its ancient sense) and medicine in regard to principles noted by Aristotle in his *On Sense Perception* (see above, p. 4). But nothing prepares us for the distinction presented by Galen in *On the Constitution of the Medical Art* (1, p. 56.19–26 [3]), where we have theoretical, practical, productive ('poietic') and acquisitive (κτητικαί) *arts* (τέχναι). This is clearly the Aristotelian trifold division (theoretical, practical, productive) with the acquisitive (comprising various forms of hunting) added from Plato, *Sophist* 219c-d, but with 'physiology' (φυσιολογία) subsumed under the theoretical class and medicine under the productive one, as in Aristotle (for whom, however, *each* art is productive).[18] So we are dealing with an amalgam of Aristotle and Plato. The addition of the acquisitive class is not the only Platonic element. I believe that the striking use of τέχναι as the overarching concept here should also be explained by reference to Platonic influence. It is Plato to whom we should turn now.

3. A Key Passage from the Platonic Phaedrus (270c-d)

From a historical point of view there is no conflict between Galen's use of Aristotelian logic and dialectic and his well-known admiration for Plato. Platonist handbooks from the Imperial Period show that by Galen's time Aristotelian logic had become part of the Platonist curriculum. In fact, it was seen as an elaboration by Aristotle of what was already contained, in embryonic form, in the Platonic dialogues. It was therefore permitted to use Aristotelian logic to explain Plato's work.[19] Clearly this also suited Galen's view of the philosophical and medical past: his syncretism is marked by a distinct orientation toward authorities of the past.[20] This feature too reflects a tendency that was common by his time: old is good[21]. This holds true of the specific pattern of authorities of whom he approves or whom he excludes from the tradition. Thus he sometimes draws a contrast between a broad coalition consisting of Plato, Aristotle and the Stoics and Epicureanism or the Methodist school of medicine[22]. There are also

[16] On the method as applied in the context of these quotations (*PHP* I-III) and its relation to the exegetic tradition concerned with Aristotle's work see Tieleman [24], Pt. I; cf. also Hankinson [19], Tieleman [27].

[17] See the passages assembled by Boudon [1, p. 277-282].

[18] See Boudon [1, p. 272-273], who, however, does not comment on the Platonic and Aristotelian backdrop.

[19] This point of view represents a form of syncretism initiated by the early first century BC Platonist Antiochus of Ascalon (130-120-68 BC) in particular. Antiochus also saw Stoicism as a development of Platonic philosophy. He thus set a pattern that is encountered more often among so-called Middle Platonists and, *mutatis mutandis*, in Galen too. On similarities between what we know of Antiochus and Galen see in particular Hankinson [22]; cf. Tieleman [23, p. 86].

[20] On Galen's view of scientific progress including his idealization of Hippocrates see Hankinson [21].

[21] On this attitude, which was widespread by Galen's time, see Pilhofer [28].

[22] For instance, in regard to the physical elements (as opposed to atoms) as basic realities, see e.g. *MM* I 2, X.10-18 K. There are, of course, cases where Aristotle and the Stoics cannot be aligned with Plato (and Hippocrates) and are rejected all the more strongly, e.g. in the case of the seat of the intellect: see *PHP* I-III: see Tieleman [24], Pt. I.

certain peculiarities in how Galen viewed intellectual tradition as compared to what we find in the work of his contemporaries. For one there is his linking of philosophy and medicine, a point we have noticed above. His great tradition of a philosophical medicine, or (to borrow Temkin's expression) medical philosophy, as we have seen, has two fountainheads – Plato and Hippocrates. Their harmony or agreement not only concerned doctrinal issues, such as the soul, but also scientific method, most notably the method of division or *diaeresis*. Galen could find in Plato many examples of its use but moreover a passage – *Phaedrus* 270a-d – where Plato recommends the method by appealing to Hippocrates as the greatest authority of the art of medicine. Here, then, Galen's two great heroes were united in a most gratifying way and with respect to one of his greatest concerns[23]. The method of division itself could be seen as closely linked with the Aristotelian conception of definition: definitions of classes are made on the basis of differentiae[24]. Moreover, division (which assumed many forms) appears to have found its way into the exegetical tradition concerned with the Aristotelian handbook of dialectical disputation, the *Topics*, where it appears as one of the *topoi* or modes of argument[25].

But it is worth taking a closer look at this key passage (which is too long to quote in its entirety) and what it actually says about the method of the arts with medicine as its main example. First, one should analyze (or divide, διελέσθαι) the nature (φύσις) of one's subject — in the case of medicine, the body — considering whether it is simple or comprises more forms and, on this basis, determine the characteristic powers, actions and affections of the simple thing or its forms (b3, c4, c10–d6). This procedure is what makes it an art or expertise (τέχνη) and the one following it an expert (τεχνίτης) as opposed to mere practice (τριβή) and experience (ἐμπειρία) (b5–6). The concept of nature is linked, as we have seen to that of form (εἶδος) and that of being or essence (οὐσία) (d1, d5, e3). Plato speaks of "that nature of the whole" (c2) as that from which the method of division starts. While it is clear that this is a call for starting from a comprehensive ('holistic') or complete view of one's subject, it is unclear whether Plato takes Hippocrates to mean the nature of the whole *world* or the nature of the whole *body*. The latter point certainly held a certain appeal to Galen (who was averse to medical specialization), but it is also clear that he was in favour of taking into account environmenta l factors, following in this regard well-known Hippocratic writings. But this long-standing issue of Platonic exegesis need not detain us here.

For our purposes it is important to note that the explanation of the method of division comes with a conceptual apparatus (notably, essence, power, action) that Galen shares with later Platonists and uses for his own analyses as when he deals with such subjects as the soul[26] or God[27]. From the relevant passages it is also clear that Galen could also find these terms in the *Aristotelian* tradition concerned with the demonstrative method. This is particularly clear in the case of Plato's call to determine the nature of the essence of the subject under investigation. Moreover, to direct one's investigation in this way means that one goes beyond mere experience and practice (as opposed to theory) in line with what is required for an art or expertise (τέχνη): Socrates: In both of them [scil. medicine and rhetoric] we must analyze (or divide, διελέσθαι) the nature – of the body in the one and of the soul in the other: not only practice and experience but art is needed to restore the body to health and strength by using medication and diet and to impart the convictions and virtues you want to the soul by employing the arguments and customary rules of conduct (270b4-9)[28].

Galen deals with the method of division as employed by Plato and Hippocrates most extensively in *PHP* IX, including passages from the *Phaedrus*, though, perhaps surprisingly, not 270c-d. But we need not doubt it was important to him. Thus he cites and discusses it in *On the Method of Healing* (I.2, X, 13–14 K.),

[23] Cf. Tieleman [27, p. 53].

[24] De Lacy (1966) 123, pointing to *PHP* IX, 5.13, p.566.17-26 De Lacy.

[25] See on different kinds of division (*diaeresis*) Galen, *PHP* IX, 9.44; cf. Cic. *Top*. 31. On Galen and the tradition of dialectical topics see further Tieleman [24, p. 110-126].

[26] See *PHP* IX 9.42–46; cf. Plato, *Soph*. 247e3-4; Tert. *De an*. 14.3, Iambl. *In Alc*. fr. 4.12-16 Dillon.

[27] *Prop. Plac.* ch. 2 Boudon-Pietrobelli.

[28] Aristotle also argued that art (τέχνη) added theory to practice, or experience: see *supra*, n. 5.

explaining that Plato thinks it proper to use in his investigation of the soul the same method as that employed by Hippocrates in studying the body. Galen here gives a particular twist to the text: he speaks as if Plato aligns medicine with *philosophy*, i.e. the part dealing with moral psychology, whereas, in fact, Plato speaks of the study of the soul as a subject addressed by the art of *rhetoric* (270b1–5). But we should not be too quick to conclude that Galen willfully suppresses an unwelcome point. He may have taken Plato to map out an agenda for rhetoric that can in fact only be fulfilled by philosophy; or, put differently, to turn rhetoric effectively into philosophy.

Plato's remarks on the method of the arts in the *Phaedrus* and in particular 270c-d also feature prominently in Galen's commentary on the Hippocratic *On the Nature of Man*, quoting the passage on no less than three occasions. In particular, he argues that Hippocrates in this treatise does indeed employ the method described by Plato (which he has no doubt is by Hippocrates himself). In the preface Galen first quotes *Phaedrus* 270c1-d7 explaining the procedure of starting from the nature of the whole, then deciding whether it is simple or complex; if the former, determine its power; if the latter, count its forms and determine their actions and affections and how they interact. Galen takes this as an account of correct procedure in the study of nature in general (HNH, *Prooem*. XV, pp. 4-5 K). A little further on (p. 12 K.) Galen again quotes *Phaedrus* 270c1-5 about starting from the whole of nature, claiming that Plato refers to no other treatise than the *On the Nature of Man*.

It seems clear that the *Phaedrus* passage exerted a strong appeal on Galen for more than one reason. First of all, and obviously, it links Plato and Hippocrates and hence the methods of philosophy and medicine. Among other things, this opens up the possibility of propagating the notion of medicine as a rational and noble art[29]. Moreover, the concept of the scientific method it actually adumbrates suits Galen's interest in combining experience and reason[30]. Plato, too, combines conceptual starting points with experience and the actual application of what reason has defined, distinguished or designed, viz. in restoring a particular body to health. Clearly this is a concept of art that merges theoretical, practical and productive aspects, contrary to Aristotle's more narrowly defined concept. So Galen's concept of art, it seems, is more Platonic than Aristotelian, merging as it does philosophy, science (or knowledge, ἐπιστήμη) and art (τέχνη). Even so, Galen is capable of accommodating the Aristotelian theory of science in most other aspects, in line with a tendency among other admirers and followers of Plato in his day. As we have seen in section § 2, what attracted Galen to the Aristotelian theory was its being modelled on another art, geometry, as a body of knowledge derived from basic obvious truths.

4. Epilogue

Galen was a stickler for utility, pointing to the arts as a model of rationality pressed into the service of humankind with its needs and aspirations. In fact, philosophers had always highlighted the aspect of utility in theorizing about the concept of art. For Aristotle, however, the utility of arts such as medicine lies in their producing something else, i.e. in having an external goal. This differentiates them from, and makes them inferior to, philosophical knowledge, which is pursued and valued for its own sake. Seeking a concept of art that combines practical relevance with scientific knowledge in a full sense, Galen turns to Plato's recommendation of Hippocratic medicine in the *Phaedrus* (270c-d). Here he found the building blocks for his more exalted notion of medicine as a pursuit on a par with philosophy. This is not to say that the resulting concept is without its tensions. There is a conjectural aspect of medicine in its clinical applications. A treatment or therapy may fail — which

[29] For this upgraded concept of medicine see also Galen's *Exhortation to the Arts* (5.2, p. 88.24-89.2 Boudon [= I, 7 K.]), where doctors, philosophers, geometricians, astronomers and grammarians are all in the inner circle, closest to the god Hermes, 'master of Reason and Practitioner of all Art' (*Protr*. 3.1, p. 87.4-5 B. = I, 4 K.). These are the practitioners of what Galen near the end of the treatise calls the 'rational and noble arts' (λογικαί ... καὶ σεμναὶ, scil. Τέχναι, *ibid*. 14.5, p.117.3-4 B. = I, 38 K.).

[30] See esp. Frede [29](repr. in: Essays in Ancient Philosophy. Oxford: Clarendon Press, 1987. P. 279–300), who argues persuasively that this Galen thus effectively overcomes between the Rational (or Dogmatist) and Empiricist schools of medicine.

could reflect badly on the doctor and his art and even lead to claims that medicine is not an art at all! In its defence, Galen introduces the notion of 'technical conjecture,'[31] which is a way of allowing for the fact that no two individual humans or cases are exactly alike and that, in therapeutic interventions, results remain to a greater or lesser degree unpredictable. It is a limitation inherent in the material reality the doctor has to work with; it is not a limitation imposed upon human knowledge: in principle we may gain full mastery of the art of medicine as a form of knowledge. Following the rules of the art one may aim well but still miss one's target [32, p. 300].

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[31] E.g. *Loc. Aff.* VIII, 145.12–13; cf. Allen [30], Boudon [1, p. 288–296].

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