# *Introduction*

## I.1 Vital Unity in Galen

ἐκ δέ νυ Φοίβου
ἰητροὶ δεδάασιν ἀνάβλησιν θανάτοιο.

Callimachus, *Hymn to Apollo*[1]

Callimachus' *Hymn to Apollo* mentions medicine very briefly, but a couple of short lines are enough to make two points: medicine is a divinely bestowed expertise and the goal of this expertise is to postpone death. Both of these points are echoed in the works of Galen of Pergamum, whom Andreas Vesalius famously called the 'prince of medicine'. As the moniker indicates, Galen was one of the most significant figures in the history of medicine in Europe and the Middle East, and his very large extant corpus is replete with information about ancient understandings of the body and its vital functions.

Galen is not, however, only a medical writer. Although he has much to say about treating of wounds, setting bones and curing fevers, his philosophical education and philosophical interests are also prominent in his attempts to theorise the human body and its nature. Arguably, his medical and philosophical interests often go together, informing each other in profound ways. Just like doctors in Callimachus' hymn receive their knowledge from Apollo, so he builds his understanding of human nature on studying divine matters. Galen showed considerable interest in the questions pertaining to divine design and teleology, and he was not averse to exploring more general connections between religious practices and medicine.[2] However, it is the more philosophical topic of the divine design that proves to be a key commitment and the crucial point of contention in

[1] *Ap.* 2.45–6.
[2] For Galen's theological views and his relationship with religions more generally, see Tieleman (2005, 2016) and Walzer (1949). On Galen's view on prophecy in medicine, see van Nuffelen (2014).

polemics, not the notion of divinity and attendant practices informed by broader culture. Throughout his works, Galen describes himself as firmly committed to the ancient version of creationism,[3] in the sense that he is convinced that the world was designed by the benevolent designer. One of the constant refrains and motifs of his monumental *On the Usefulness of Parts* is the remarkable efficiency of the design of the body,[4] which renders it a cohesively functioning entity.[5]

However, the entanglement of medicine and philosophy is even more palpable in what Callimachus describes as the goal of medicine: the knowledge of how to postpone death, in other words, the knowledge of preserving and extending vitality. This preoccupation is a dominant theme in Galen, not just in the sense of practical medical knowledge but also in the sense of seeking to understand the human nature so that medical practice can be informed and improved by it. What is the vitality that doctors must learn to preserve, under the divine tutelage? If doctors are to do their job, this question requires a non-abstract answer: it requires identifying and locating the vitality in the body. What is it exactly in the body that must be preserved in order to keep a patient alive and healthy?

Galen has much to say about various parts and elements constituting the body and their significance. In fact, perhaps a bit too much: his tendency to posit multiple body constituents without providing an explanation of how they are all related has been noted in the scholarship.[6] This volume is a study of how Galen theorises the relationship between a part and the whole. It looks at different classifications of body parts that he makes, the definitions of parthood, the way he constructs the relationship between different parts and the different roles he assigns to the parts. In short, it is a study of how Galen takes the body 'apart', not in an anatomical but in a conceptual way informed by anatomy, and then puts it back together again into a single entity that breathes, eats, moves and interacts with its environment.

In as much as it is a study of parts and wholes, this work concerns Galen's engagement with metaphysics. The relationship between parts

[3] Sedley (2007) is an extensive study of the origins and various aspects of this tradition. Although the monograph is primarily focused on the philosophers from the Archaic to the Hellenistic periods, it also contains an epilogue on Galen who 'exploits, and advances the pagan creationist tradition like no one before him, and so with all the skill and insight of a practicing scientists' (243).

[4] In *On My Own Books* (*Lib. Prop.* 3.12 (143, 24–144, 6 Boudon-Millot=19.20–21K)), Galen describes this treatise as written in Aristotelian, as well as medical, traditions. It thereby resembles a treatise written by Aristotle himself, namely *Parts of Animals*, although Galen claims he corrects Aristotle's errors. See Hankinson (1998: 386–8).

[5] Hankinson (1989).

[6] Van der Eijk (2020: 64).

and wholes was a preoccupation of the ancient Greek and Roman philosophers, and Galen's reflection on the topic is well-entrenched in this tradition.[7] He presents himself as a follower of Plato.[8] However, he also adopts many elements of the Peripatetic tradition, which shapes his understanding of human nature in formative ways.[9] Oftentimes, he associates his stance with a tradition to which he assigns many fairly different philosophical schools. For example, in his attack on the atomist style of monism (in the sense of positing only one type of matter as fundamentally composing the body),[10] he contrasts it with the four-element theory, which he attributes not only to Hippocrates but also to an array of respectable philosophers, especially Aristotle and Chrysippus.[11] This approach is part of Galen's broader project of refuting mechanistic physiology. Such a confluence of popular philosophical influences is not

[7] Sextus Empiricus dedicates a section of his *Against Professors* to refuting *tout court* theories of parthood (*M* 9.331–58). Recent scholarship showed that Plato (Harte 2002) and Aristotle (Koslicki 2008) offer philosophically complex reflections on parthood; see also Barnes (1988), which lays important ground for examining this topic, and Holmes (2020), which argues that the notion of *sumpatheia* is a lens through which ancient mereological views are developed.

[8] For broader discussions, see de Lacy (1972) and Singer (1991, 2014: 18–20); for specific dialogues, see Das (2020: 3–5); Vegetti (2000) and Vinkesteijn (2022) on the *Timaeus*; on the *Phaedrus*, see Rocca (2006), Rosen (2013) and Tieleman (2020), see also Chapter 2. During Galen's lifetime, the prevalent version of Platonism was the so-called Middle Platonism, see Chiaradonna (2009) for his interaction with the tradition.

[9] See van der Eijk (2009), Singer (2014: 20–38) and Vinkesteijn (2022). See also Gottschalk (1987: 1166–71), Kovačić (2001) and Moraux (1984). Holmes (2020: 77) points out that Aristotle (unlike Plato, who is preoccupied with mathematical unity) had important vitalist commitments when it comes to unity. Aristotelian thought certainly forms a crucial background to Galen's thought, but it is also worth noting that Galen's work deals with medical realities and is circumscribed by practical goals.

[10] Galen's attack on this type of monism and commitment to pluralist element theory are explored in the scholarship fairly extensively, see, for example, Hankinson (2017a) and Kupreeva (2014); see also Caston (1997). Material monism is common to many Presocratics, especially Ionians, see Barnes (1982: 38–44); and it has been pointed out in the scholarship that atomism, which posits the existence of the many by definition, has some important connections to the monist arguments concerning the unity of matter, see Sedley (2008). A useful way of systematising and clarifying what is at stake has been proposed by Patricia Curd who distinguishes three types of monism in ancient philosophy: material monism, which posits a single kind of matter that constitutes everything in the world; numerical monism, which advocates for the existence of a single entity in the world; and, finally, predicational monism, which maintains that each existing entity can only hold one predicate about what it is, and this predication must be non-marginal (1998: 65–6). See also Barnes (1982: 155–302) and Makin (2014).

[11] *Hipp. Elem.* 5.14 de Lacy (1.451K) and 9.20 de Lacy (1.486K), respectively. Chrysippus is an interesting case, because Galen chooses him as the representative of cardiocentrism that he attacks in *PHP*. Although Chrysippus often serves as a target, Galen is nonetheless influenced by Stoicism in several respects, see Tieleman (2009); see also Lloyd (2008). On Galen's claim that he inherits his physics from Hippocrates, see Hankinson (2008a).

unusual for someone writing in the second century CE,[12] which makes Galen's work a product of its time too. This is not to say that Galen ought to be studied as just another eclectic late Platonist. Unlike many of his contemporary philosophers, Galen grounds his views on the vitality and the unity of the human body in a minute physiological and anatomical detail. On one striking occasion, he criticises the focus of the contemporary philosophers on the *kosmos*, arguing that the puzzles of the human body are no lesser. In the treatise *On the Formation of the Embryo* he argues that the study of motion need not concern itself with cosmology alone, and the body presents equally wonder-worthy phenomenon.

Having rebuked the Epicureans for rejecting the notion of the benevolent designer, Galen goes on to consider the question of how the design takes place, viz. what its substance is. First, he discusses the possibility that the gods, having constructed the seeds of animals and plants in a way that allows them to grow and function on their own, depart and let these processes take place by themselves, referencing philosophical and scientific ideas.[13] However, he is concerned that it is not possible for the moisture found in the act of generation to carry out so many complex actions over a long period of time without an error. Without attempting to find a resolution, Galen moves on to what he calls an even more astonishing matter, namely, that no one of those who write on *phusiologia* either observed or investigated how that which is happening throughout entire life and is seen by all of us happens. He specifies his point by raising a question of what is at work in the activities (ἐνεργεῖαι) of the body parts.[14]

It is important to note that Galen is not merely rejecting 'philosophical' enquiry in favour of a medical one. On some occasions, Galen contrasts medical practice and overtly abstract philosophical theory, thus clearly suggesting that these are distinct, and the former can be done without the latter,[15] but it is not entirely the case here. He goes on to list various attempts to theorise muscle motion and the shortcomings of these

[12] In terms of cultural history, this is the so-called Second Sophistic period. For seminal studies, see Schmitz (1997) and Swain (1996); also articles in Bowersock (1974). For a discussion of Galen in particular and the Second Sophistic, see Kollesch (1981) and von Staden (1995, 1997a).

[13] See Berryman (2009: chapter 6, esp. pp. 208–9) reading the passage against the background of developments in mechanics.

[14] *Foet. Form.* 6, 6 Nickel (4.689K): ἔτι δὲ θαυμαστότερον, ὃ διὰ παντὸς τοῦ βίου γιγνόμενον ἁπάντων ἡμῶν ὁρώντων οὐδεὶς τῶν τὴν φυσιολογίαν ἀπαγγελλομένων οὔτε κατενόησεν οὔτ' ἐζήτησεν, ὅπως γίγνεται. τί δὲ τοῦτ' ἔστι τὸ κατὰ τὰς ἐνεργείας τῶν μορίων. On the notion of activities, see Debru (2008: 265–6). Also important here is the Aristotle-derived methodology, starting with what is evident to the senses and examining the non-evident essence or function of the organ, see Tieleman (2008: 56–8).

[15] For example, in *Prop. Plac.* 7.3–4 (86 Lami Garofalo).

theories.[16] First is the theory – rejected by himself and most other doctors – that each muscle is like an animal. He then notes that the theory he himself espouses, which states that the nerves move muscles, faces some difficulty in explaining the presence of some very small nerves in the muscles, not to mention the fact that people and animals seem to know which muscles to move without being aware of them.[17] Galen wraps up this discussion by noting that the question of the soul constructing the animal is problematic, with a single exception: it is clear that a providential creator designs human bodies.[18] Although the problem of muscle motion is informed by medical enquiries, Galen clearly aims to present it as belonging together with more standard questions about the mind-body relationship. When he introduces the problem, he uses the example of the finger bones and joints being moved in a variety of ways to show that the nature of muscle motion is unclear, adding that those who wish to understand the nature of the universe and the heavenly bodies ought to concern themselves with this problem instead.

The point Galen makes here is quite striking. He argues that two seemingly different types of enquiries, into the soul and *kosmos* on the one hand and into muscle motion on the other, belong together. Both of them belong to the broad discipline of *phusiologia*. Such grouping can be motivated by the view that *phusiologia* is a study of the primary elements.[19] Both investigations reveal comparable insights about nature, or at least, the investigators of the nature of the muscle motion are not missing out on any profound insights. In fact, Galen's phrasing, presenting one investigation as preferrable, suggests that working out the activities of the body parts might be a more sensible way of studying nature. From these passages alone, *phusiologia* emerges as a highly distinctive kind of specialisation, combining both medical and philosophical elements. With this point,

[16] A comparison with such texts as Plutarch's *Virt. Mor.* 442D is enlightening. The latter states that pneuma, sinews, bones and other parts, although irrational, spring to action when prompted by the ὁρμή sent by the reasoning part, and uses this as evidence for dualism. Galen's exposition of the difficulties that arise when attempting to account for the details of motion sounds like a fair reprimand to those who, like Plutarch, would use such examples to establish their point, without seeing that his illustration raises more problems than it answers. Of course, we could say that for the sake of Plutarch's argument, it is enough to know *that* body parts move at will or rational reflection. Yet, as Galen will show, there is more than one theory for accounting how the motion at will takes place in the body; some theories would lend support for their arguments, and some would not.

[17] *Foet. Form.* 6, 7–16 Nickel (4.690–3K); see also Chapter 4 on the nervous system.

[18] *Foet. Form.* 6, 16 Nickel (4.693K); see also Gill's discussion of this section of the treatise too, pointing out that, interestingly, Galen does not discuss Platonic dualism as an option here, that is, that an embryo is produced by immaterial soul and matter (2010: 134–5).

[19] As stated in *MM* 2.5 (10.107K).

Galen is engaging in and aiming to modify the discourse with a complex history that existed long before his lifetime.

## I.2 *Phusiologia*

In the Archaic and Classical periods, the ancient Greek term *phusiologia* primarily referred to the study of nature as whole and included the thought of Presocratic philosophers.[20] Galen's contrast between those who claim to be *phusiologoi* and those who study of muscle motion also invokes the primarily philosophical association of the term. It seems that Galen is arguing for a new, medical concept of *phusiologia*, but the term entered medical vocabulary before his time as denoting a branch of medicine.[21] Galen himself ascribes the discovery of its principles to Hippocrates and a number of philosophers who respected his authority, including Plato, his successors Speusippus and Xenocrates, Aristotle and Theophrastus as well as the Stoics Zeno and Chrysippus.[22] He singles out the Peripatetic tradition for being in particular agreement with Hippocratic principles of *phusiologia* (τὰς Ἱπποκράτους ἀρχὰς τῆς φυσιολογίας) and claims to have demonstrated this point in other treatises, including *On the Elements According to Hippocrates*, *On Mixtures*, its sequel *On Anomalous Dyskrasia*, *On the Best Constitution of the Body* and *On the Natural Capacities*.[23]

[20] Nutton (2012b: 28). It is also worth noting that the distinction between philosophy and medicine is by no means sharp in antiquity, see Frede (1987: 227–34, 243–4). For medicine-related interests of various Presocratics, see Longrigg (1993: 26–81). See also papers in Vasallo (2017), showing the range of the Presocratic 'physiological' endeavours.

[21] A quite different question is whether Galen was read in this way by his contemporaries and successors; see Slaveva-Griffin (manuscript in preparation, chapter 1) for the argument that Galenic texts mark the point at which *phusiologia* became increasingly medicalised and understood as a medical undertaking.

[22] *MM* 1.2 (10.10K). The context here is an attack on Thessalus the Methodist for criticising such famous doctors as Diocles, Praxagoras and especially Hippocrates. In a long and rhetorically charged rebuke, Galen invokes the authority of philosophers to show that no respected figure disagrees with Hippocrates. He is not charitable to the Methodists. For a more in-depth study of the methods of this school, see Frede (1987: 261–78) and Tecusan (2004); see also Salas (2020a) for the argument that Galen's definition of disease probably originated in connection to this tradition, which shows that he was more indebted to the Methodists than his criticism of their understanding of medicine would lead one to believe. Regarding the question of how the Stoic views fit into the Galenic theory, and how compatible they actually are with Aristotelianism, see Gill (2010: 76–84).

[23] *MM* 1.2 (10.15K); see also *MM* 1.2 (10.17K) for the claim that Hippocratic *phusiologia*, and all the aforementioned philosophers (on the grounds of *phusiologia*), showed that considering the nature of the body overall is necessary for curing any disease; see also Jouanna (2013: 308). See Hankinson (2008a: 2011–17) for a discussion of how Galen makes the elemental theory 'Hippocratic' in this work; see also Hankinson (2016: 243–7). There are some commonalities in the treatises that Galen lists as propounding the Hippocratic *phusiologia*: the theory of the four qualities – the hot, the cold,

These treatises are also polemical, dominated by disagreements with various Hellenistic doctors as well as their followers. Especially prominent are the disagreements with the Epicurean-inspired forms of atomism that play a prominent role in *On the Natural Capacities* and *On the Elements According to Hippocrates.* Ultimately, Peripatetic tradition is significant to Galen not only because of the claims it makes but also because it represents an alternative to popular but quite incorrect way of theorising bodily functions.[24]

Despite significant pedigree, the term *phusiologia* shows up relatively rarely in Galenic corpus, and even when it does, it is fairly ambivalent: on the one hand, *phusiologia* is not necessary and, in certain cases, even distracting. On the other hand, it can be useful.[25] One of the more detailed discussions unpacking this notion occurs in *On the Constitution of the Art of Medicine*, and it is a good example of how Galen muddles the concept in the analysis that is meant to clarify the matters. Here, he makes a distinction between theoretical and productive arts, raising the question of which category medicine belongs to. He distinguishes arithmetic, astronomy and *phusiologia* from such arts as dancing or house building. While the latter are concerned with their action (whether producing a result or not), the *telos* of the former is to investigate the nature of the object.[26] Having noted that it is not hard to figure out which category

the dry and the wet – and their mixtures play a prominent role in all of them. However, there is little sign of systematic attempt to establish *phusiologia* as the investigation of elements. Of all these treatises, only the very first and the very last contain cognates of *phusiologein* (*Hipp. Elem.* 5.4 de Lacy (1.449K); 9.21 de Lacy (1.486K); *Nat. Fac.* 1.14 (133, 22 Helmreich=2.245K); 2.4 (165, 14 Helmreich=2.88K) and (166, 21–22 Helmreich=2.90K)), and of these two, only the *On the Elements According to Hippocrates* provides an extensive theoretical discussion of the primary elements.

[24] In *Nat. Fac.* 2.4 (168, 9–14 Helmreich=2.92–3K), Galen claims that Erasistratus has no connection to the Peripatetic *phusiologia*. According to him, this tradition originates with Hippocrates and then is advocated by Aristotle and the Stoics. See also Berryman (2009: 178).

[25] Nutton (2012b: 30–1). Interestingly, pseudo-Galenic texts (following the tradition of Hippocratic rationalism) appear to be more enthusiastic about its importance than Galen himself. Arguably, this might be owing to the fact that such texts as *Def. Med.* 11 (19.351K) use it as a distinctly medical term, while Galen uses it in a way that reflects its philosophical heritage. In order to *phusiologein*, one has to engage in questions that go beyond medical concerns and interests. See Singer (2014) for a discussion of Galen's ambivalent relationship with philosophy.

[26] *CAM* 1, 1 Fortuna (1.227K): Ἐπειδὴ τῶν τεχνῶν ἔνιαι μὲν ἐν μόνῳ τῷ θεωρῆσαι τὴν φύσιν ὧν ἐπισκοποῦνται πραγμάτων ἔχουσι τὸ τέλος, ὡς ἀριθμητικὴ καὶ ἀστρονομία καὶ φυσιολογία. This distinction of course predates Galen, it can already be found in Plato's *Statesman* 258D–E. Aristotle's *Metaphysics* 6.1 (1025b25–7) classifies ἡ φυσική, the study of those substances that contain the principle of motion and rest within themselves, as a theoretical science (rather than practical or productive).

medicine belongs to, he goes on to state that it is clearly a productive art, as its results can be shown.[27]

There is a clear and fairly sharp distinction between *phusiologia* and medicine. It seems like these are fundamentally different *types* of arts. However, the sharp distinction becomes much more blurry as the treatise progresses. Soon thereafter, for example, Galen notes that medicine requires the knowledge of simple parts: their substance (*ousia*), construction (*diaplasis*), size, number and combination with each other (*sunthesis*).[28] Although this requirement pushes medicine close to the theoretical sciences according to his own conditions set for each category, Galen keeps on developing the house-building simile without acknowledging the blurring distinction.

Furthermore, the simile changes from building the house to knowing what it is. He compares wishing to know the constitution of a human body to wishing to know precisely what kind of a thing an existing house is.[29] Galen avoids using the term 'nature' here, but such an investigation would be at least adjacent to investigating nature, if not identical to it. He adds that a person, wishing to understand some particular house, would use the methods of dialysis and analysis, just like the human body is known by anatomy. He goes on to compare the perspective of the house builder with that of god and nature and – intentionally or accidentally – distances medicine further from house building by identifying those with an interest in medicine with the examiners of the house, not its builders.[30] Thus Galen's simile elucidating the nature of medical art goes askew, but it illustrates very well the uneasiness in his treatment of the concept of *phusiologia*.

On the one hand, there is more to medical activities than *phusiologein*; medicine also involves a crucial practical component. In fact, practice is surely the very point of medicine. Presumably, Galen would not object to the claim that medicine that does not produce any results is not medicine at all; in that case, it would be more proper to call it *phusiologia*. On the other hand, not investigating what the body is, how it is constituted and how it functions seems hardly an option for medical practitioners as Galen describes them here. This ambivalence about *phusiologia* as an area of

[27] *CAM* 1, 7 Fortuna (1.229K).
[28] *CAM* 2, 2 Fortuna (1.230–1K).
[29] *CAM* 2, 3 Fortuna (1.231K): Ὥσπερ οὖν ὁ τὴν ἤδη γεγενημένην οἰκίαν ὁποία τίς ἐστιν ἀκριβῶς γνῶναι βουλόμενος.
[30] *CAM* 2, 4 Fortuna (1.231K).

interest to medicine mirrors Galen's multifaceted engagement with rationalist and empiricist traditions of medicine.

## I.3 Empiricism, Rationalism and *Phusiologia*

Galen's engagement with the two traditions has been at the forefront of Galenic scholarship for a while,[31] but its parallels with *phusiologia* are rarely noted. The practitioner of medicine that Galen portrays in this passage is a rationalist. The practitioners of this Hellenistic school of thought identify their intellectual pedigree with the Hippocratic tradition, and the distinguishing aspect of this tradition is the emphasis on the theoretical understanding of the body *qua* the principles underpinning the functioning of the entire natural world. In other words, the rationalists are committed to the belief that the theoretical knowledge of human nature including the causal principles that govern it, is necessary for a successful medical practice.[32] This view is also reflected in the aforementioned passage. The commitments of the rationalist doctors appear very distinctive when they are contrasted with the commitments of empiricists.

Medical empiricism is a more striking stance, since the members of the sect make experience, either personal or commonly accumulated, the grounds for medical practice. This is not to say that the dichotomy between the rationalists and the empiricist is straightforward. While rationalists' medical practice links them with philosophical discussions of the natural world, human nature and the principles that govern both, the empiricists do share substantial ties with philosophy too, primarily sceptic epistemology.[33] In order to account for their methodology that prioritises experience over any type of theoretical explanation, the empiricists, perhaps somewhat paradoxically, built sophisticated epistemological accounts about sign inferences as well as such methods as 'transition to the similar' that allows them to postulate similarities between different medical cases without committing to any view about the underlying causes.[34]

[31] Important work is collected in Frede (1987); see especially 'The Ancient Empiricists' (chapter 13) and 'On Galen's Epistemology' (chapter 15); see also Hankinson (2022a) and Kupreeva (2022).

[32] See Allen (2001: 93–4) and Hankinson (1998: 306–18).

[33] This is not to say simply that the empiricists are sceptics. Sextus Empiricus famously eschews the empiricists from the association with Pyrrhonism in favour of Methodism (*PH* 1.236; see also Allen (2001: 89–99). At the same time, it is worth noting that some empiricists might have had more affinity with Pyrrhonism than others; see the discussion in Frede (1987: 248–60).

[34] Allen (2001: 107–22); Hankinson (1998: 312–16); it is also worth noting that empiricists, like almost all the other large schools, were not monolithic. See Hankinson (1998: 317–18) for the

Galen himself, as a self-styled follower of Hippocrates, has strong affinities with rationalism,[35] although his attitude towards the rival empiricism is also far from critical. He praises empiricists for their systematic and consistent approach to medical methodology.[36] The strength of this method lies, according to Galen, in successful therapeutic practice. He even goes so far as to argue that it is better for doctors to be empiricists rather than follow a flawed rational method.[37] The theoretical understanding of the constitution of the body, therefore, is clearly not absolutely necessary for medical practice and, consequently, an experience-based approach is an attractive alternative in principle.[38]

Having said that, Galen himself identifies with the rationalist tradition. The affinity to this tradition is evident in his methodology, as the theoretical notion of demonstration is key for fashioning his own approach to the study of the body.[39] The reason for that emerges in his discussions of complex illnesses. When an illness is a matter of a single pathological condition, either the rationalist or the empiricist method will do. When more than one condition is present in a patient, an empiricist doctor will be ill-equipped to determine the proper treatment and only rational methods can offer a solution.[40] He also rebukes empiricists for their advice to turn away from *phusiologia* and not try to understand human nature the way philosophers do, going all the way to the primary elements by means of reason.[41] Ultimately, Galen approves of the principles of both

argument that such figures as Menodotus and Heraclides of Tarentum might be examples of the more moderate version of empiricism, admitting some usefulness of theory.

[35] For example, in *MM* 5.10 (10.347K), he writes that empiricists discover by experience what 'we' find by indication, see also *MM* 3.7 (10.204K). He repeats the claim he made earlier in the treatise, that both rationalists and empiricists have a way of figuring out what treatment would work, although neither has a way to find everything in *MM* 3.1 (10.159K); see also *MM* 13.6 (10.896K) for a similar claim in the context of pharmacology. Galen also criticizes both in *On the Therapeutic Method*, although the general aim of his critique in both cases is specific practices rather than their respective principal methods.

[36] *MM* 1.4 (10.32K).

[37] *MM* 13.16 (10.916K). See also Frede (1987: 235–7).

[38] Frede (1987: 295). Galen's own methods also place great importance on experience. On the difference between the empiricist and Galenic use of experience, see van der Eijk (2005: 292).

[39] As the key treatise, *On Demonstration*, is not extant (though see Havrda 2015), this method has been well studied on the basis of the other works that are extant; see, for example, Lloyd (1996); Morison (2008: 69–75) and Tieleman (1996, 2022).

[40] *MM* 10.10 (10.707K). See also *MM* 3.2 (10.173K) for the same argument in a pharmacological context. Another interesting case is diagnostics by taking into account customs of a patient in *MM* 9.16 (10.655K). Here, Galen argues that experience of a patient can only tell an empiricist how a certain practice affected the person so far, not what accumulated effects of that practice might be in the future. Thus, the inability to calculate the effects of some practice by reason raises the possibility of prescribing something harmful. See also Hankinson (1998: 309–11) for a discussion of the same kind of argument in Galen's *On Medical Experience*.

[41] *MM* 2.5 (10.107K): ἄχρι τῶν πρώτων στοιχείων ἀνιόντες τῷ λόγῳ.