

Demiurge and Emperor in Galen's world of knowledge

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The Emperor – this world-soul – I saw riding through the city to review his troops. It is indeed a wonderful feeling to see such an individual who, here concentrated into a single point, reaches out over the world and dominates it.

Hegel, 1806

The presence of a wise, powerful, skilful and provident creator figure – alternately labelled ‘nature’ (*phusis*) and ‘demiurge’ (*dēmiourgos*) – is absolutely key to Galen’s thinking, to the medical and philosophical system he constructs and articulates. This figure has, however, not yet been subject to the intensity of scholarly scrutiny that its structural significance demands.¹ This chapter is an attempt to fill in some of these gaps by investigating, in a more focused manner than hitherto, questions about where Galen’s notion of nature and the demiurge comes from and about the work it does in his world of knowledge. I examine the intellectual resources that Galen drew on in fashioning his creator, what is traditional and what original in his formulation, and the identity of both its past precedents and the contemporary features it shares, as well as the motivations that he may have had in producing the particular package that he did.

Two specific, and connected, arguments will be put forward, following on from some more general points about Galen’s demiurge, his notion of nature, as it appears and functions within his medical system and fits into his wider cultural context. First, that the Roman Emperor, in both an abstract and more concrete sense, should be placed alongside the usual suspects when considering the conceptual treasury Galen drew on in formulating his creator. So, as well as the Platonic and Aristotelian traditions which Galen explicitly acknowledges as influential, and his more hidden (but just as well-known) debts to Stoicism, the configuration of power in the Roman Empire

¹ Various aspects of the subject have been covered by e.g. Hankinson 1989, Flemming 2000, Kovačić 2001, Frede 2003 and Jouanna 2003. This still leaves many gaps, however.

made its imprint in this respect. It is not just philosophy but also politics that informed this strand of Galen's thinking. Second, that, in addition to all the other things it does and has been recognised as doing, nature, the demiurge, performs an important epistemological role in Galen's system. This concept, then, does not just emerge out of, but also puts plenty back into, Galen's world of knowledge. Furthermore, these two conclusions are linked. The kind of guarantee of the possibility of knowledge that the demiurge provides is at least homologous, and to some extent actually overlaps, with the more general service the Emperor performs for the Empire: as guarantor of its continued existence and integrity, its function and systematicity as a place to live and think.

The aim is, therefore, not just to offer a case-study for some of the wider explorations of Galen's medical and philosophical positioning to be found elsewhere in this book, an examination of what Galen does, and does not, take from Hippocrates, Plato, Aristotle and the Stoics in a particular, and particularly important, area of his thought. It also offers a different angle on his broader cultural location, with greater emphasis on the social and political factors that influenced him. These are factors that contributed to his basic intellectual constitution, and might also impact on his ideas more specifically, either in terms of his own assumptions and predilections, or those recognised and played to in his audiences, or some kind of combination of the two. Galen was, after all, a man of a certain background and upbringing striving as best he could to win fame (and sufficient fortune) as a physician, the builder and purveyor of an entire medical system, at the centre of the Roman Empire in the late second and early third centuries AD. His origins, his ambitions and the environment in which he pursued them all helped to shape his approach to the medical art, his thought and his writings.

INTRODUCING GALEN'S DEMIURGE

This discussion must begin with a general outline of Galen's creator figure, its character and performance in Galen's surviving works and in his project more broadly. Following Galen's own presentational approach, however, such an outline cannot but align this notion with pre-existing patterns of understanding. For he always sets out his ideas and argues his case, in relation to prior conceptualisations of problems, past authorities and ongoing debates. This is both an expository and locational short-cut, efficiently allowing Galen to demonstrate his mastery over the tradition as he moves beyond it in various ways. Still, the focus in this first section

is more specifically on the entry of the demiurge into, and operation within, Galen's system, career and *oeuvre*, on his own formulations with regard to nature. I then turn to more detailed analysis of intellectual lineages, borrowings and connections, to the particular combination of resources Galen uses, and the contextual as well as conceptual reasons for that package.

FIRST APPEARANCES, DEVELOPMENT AND IMPACT

Any serious engagement with Galen's demiurge, his notion of nature, inevitably focuses on his physiological (and indeed more generally foundational) *magnum opus*, *On the Function of the Parts*. For this is the work in which this creator figure really emerges as a key player in the Galenic system, and has an absolutely starring role; though this move was announced, and much preparatory work was done, in *On the Natural Faculties*, and further support was subsequently offered in *On Anatomical Procedures*. There is also some interplay with the later books of *On the Doctrines of Hippocrates and Plato* and other roughly contemporary treatises such as *On Mixtures*; but, by and large, following the composition of *On the Function of the Parts*, the existence, and workings, of provident nature are just taken for granted in the rest of Galen's *oeuvre* (at least as it survives). This part of the system seems to have been firmly established, and can then be relied upon without further discussion. The matter is revisited in two late works – in *On the Formation of the Foetus* and *On My Own Opinions* – but the existing position is basically reasserted, with some clarification, nuance and circumscription; still nothing really new emerges.²

It should thus be noted that the emergence of Galen's demiurge comes relatively early in his career. He claims, in his bio-bibliography *On My Own Books*, that the first book of *On the Function of the Parts* was composed, alongside the first six of *On the Doctrines of Hippocrates and Plato*, during his initial stay at Rome in the early AD 160s, both commissioned by the intellectual consular, Boethus.³ Despite Boethus' intervening death, while governing Syria, Galen completed these two, large-scale, works not that long after his return to the Imperial capital at the end of that decade.⁴

² *On My Own Opinions* (*Prop.Plac.*) is considered Galen's last work, perhaps written around AD 210; *On the Formation of the Foetus* (*Foet.Form.*) was written probably sometime in the previous decade. See the *CMG* editions (vols. V 3.2: 37–9 and V 3.3: 42–4 respectively) for more discussion.

³ Galen *Lib.Prop.* 1.17 and 1.6 (139.27–140.5 and 137.22–138.1 Boudon-Millot); and see more generally, Nutton 1973 and the extensive introductory sections in Boudon-Millot 2007a.

⁴ Galen *Lib.Prop.* 3.8 and 1.17 (143.4–10 and 140.3–5 Boudon-Millot); though cf. Galen *AA* 1.1 (II 217 K) for a version of events that has Boethus receive the whole work before his death.

Though he makes no explicit mention of it in the chronological, or career-structured, portion of *On My Own Books*, it makes sense to place the writing of *On the Natural Faculties*, with its repeated reference to what will be demonstrated in his forthcoming text ‘*On the Function of the Parts*’, immediately before, or perhaps contemporary with, the restart of work on that monumental opus.⁵ Indeed, there are reasons to think that this enterprise too might have begun before Galen went back home to Pergamum for a few years in AD 166. For the combination of Aristotelianism and hostility to the great Hellenistic physician Erasistratus, his teachings and followers, in *On the Natural Faculties* is striking. It reads as if it could at least have started life as a tract designed to convince a committed Peripatetic, such as Boethus, that the alleged friend of the Lyceum, Erasistratus, was in fact no such thing, and so too that current-day Erasistrateans, such as Galen’s early enemy Martialis, are unworthy of attention: the more philosophically sophisticated should look elsewhere for a physician with the right ideas.⁶

Whatever the precise timing and circumstances of their commencement, the completion of the three books *On the Natural Faculties*, the seventeen *On the Function of the Parts* and the nine *On the Doctrines of Hippocrates and Plato* is to be located in the early AD 170s, following Galen’s return to Rome at, he claims, Imperial request.⁷ This period of undemanding Imperial patronage – the Emperor Marcus Aurelius was away defending the integrity of the Roman Empire, and so left Galen to his studies and writing, as well as the care of his young son’s health – is one that Galen himself identifies as particularly productive. With his position more assured he could dedicate himself to the collection and organisation of all the notes he had taken from the lectures of previous teachers and from his extensive reading, to some further research and training and, most especially, to literary activities.⁸ This was a time for the composition of large-scale summary, positional products – such as *On the Function of the Parts* and *On the*

⁵ These references appear at Galen *Nat.Fac.* 1.6; 2.4 and 9; 3.11, 13 and 15 (*SM* III 112.4–5; 167.23–5; 201.24–202.1; 233.8–9; 248.25–249.2; and 253.14–15). Some cross-references are later additions in Galen’s oeuvre, and these could be, though there is no particular reason to think so.

⁶ Book 2 is almost entirely directed against Erasistratus, and that he is no friend of Aristotle (or Hippocrates) is implicitly the main thrust of 2.2–3, made explicit in 2.4 (*SM* III 165.7–169.5); so too the Erasistrateans. While Martialis is not mentioned by name in *Nat.Fac.*, he could be the ‘one of our Erasistrateans’ attacked at 2.2 (*SM* III 158.14–15). This would then have followed on from the assault on Martialis’ championing of Erasistratean anatomical knowledge contained in Galen’s six books on Hippocrates’ anatomy and three books on Erasistratus’, both written around AD 165 and addressed to Boethus: Galen *Lib.Prop.* 1.7–12 (138.1–139.9 Boudon-Millot: and see also n. 3 on pp. 185–6 for discussion of whether this Martialis is the same as the Martianus mentioned elsewhere in his oeuvre).

⁷ Galen *Lib.Prop.* 1.13 and 3.1 (139.9–13 and 141.17–20 Boudon-Millot).

⁸ Galen *Lib.Prop.* 3.7–9 (142.25–143.12 Boudon-Millot).

Doctrines of Hippocrates and Plato – in which Galen was able to set out in a more complete and comprehensive manner than hitherto, his views on, and understanding of, certain crucial and substantial medical themes. The writing of *On Anatomical Procedures* was rather more protracted, as it massively expanded Galen's existing works on the subject, incorporating further details learnt from his ongoing programme of dissection in order to support, through practical instruction, the account of the construction and working of the human body contained in *On the Function of the Parts*.⁹ Probably begun in the AD 170s, it was not finally finished until the 190s, after Books 12–15 had to be rewritten following the fire in the Temple of Peace.¹⁰

The fundamental conceptualisation that Galen sets out in the *On the Function of the Parts* is that the human being, and indeed the whole world, is a product of reason and design, of a provident creative power working, within material constraints, to optimise its creations. This figure is most frequently called *phusis*, 'nature', but also, and interchangeably, referred to as *dēmiourgos*, 'craftsman', and this latter terminology makes the sense in which this figure stands above humanity, as the craftsman stands above the product of his craft, reasonably clear.¹¹ On the other hand, Galen also uses *phusis* about something, a power or cause, immanent in the human body, and in charge of its basic functions, such as growth and nutrition and everyday somatic maintenance. In *On the Natural Faculties*, this *phusis* also counts among her works (*erga*) the formation of the foetus: coming into being out of the parental seed, nature forms and arranges all the parts of the body, then continues to grow, nourish and sustain them.¹² In this she manifestly exercises a number of the qualities also predicated of the demiurgic *phusis* in *On the Function of the Parts*, most especially *technē*, 'skill' or 'art', and *pronoia*, 'forethought' or 'providence', as she does 'everything for a reason, so that there is nothing ineffective or excessive, nor could anything be better disposed'.¹³ It is for his repeated contravention of this teaching, despite his theoretical allegiance to the Aristotelian dictum

⁹ On the writing of this work and its relation to *UP* see Galen *AA* 1.1, 2.2, and 4.1 (II 215–18, 285–7, and 415–21 K); and e.g. Galen *Lib.Prop.* 3.10–11 (143.12–24 Boudon-Millot).

¹⁰ See Galen *AA* 11.12 (135–6 Simon). The fire was in AD 192.

¹¹ The fact that *phusis* is feminine (and that 'nature' was to become a distinctly gendered concept in some later traditions), and the *dēmiourgos* masculine, seems of absolutely no concern to Galen. It is hard to detect any meaningful pattern in his use of the terms.

¹² Galen *Nat.Fac.* 1.5–6 (*SM* III 107.24–112.23); and 2.3 (*SM* III 161.10–162.11).

¹³ πάντα τινὸς ἕνεκα ποιουῖσαν, ὡς μηδὲν ἄργον εἶναι μηδὲ περιττὸν μηδ' ὄλως οὕτως ἔχον, ὡς δύνασθαι βέλτιον ἑτέρως ἔχειν: Galen *Nat.Fac.* 1.6 (*SM* III 112.2–4); and see also e.g. 1.13 and 2.3 (*SM* III 128.22–3 and 159.10–12) for nature as skilled and provident (even 'just').

that ‘nature does nothing in vain’, that Erasistratus, and his followers, are so roundly attacked in this text.¹⁴

This raises the question, however, of the precise relationship between the concept of nature in *On the Natural Faculties* and in *On the Function of the Parts* and of the mechanism by which the *phusis* of the former somehow replicates the actions, and the design, of the latter. The problem is made more acute since Galen is quite explicit that the immanent nature lacks the rationality of the demiurge, and is not to be confused with the soul (*psuchē*) of the human being as it manages perception, locomotion and thinking.¹⁵ This is, moreover, a question that Galen himself admits he has no answer to as he revisits these issues several decades later in *On the Formation of the Foetus*.¹⁶ He is torn between wanting to align the power that constructs the embryo with the demiurge, with a rational soul or indeed the Platonic world soul on account of the wisdom and reason demonstrated in this construction, along with the skill, and being unable to countenance such a conclusion for a number of practical and theological reasons. Thus he still finds a lower level of control, through a nature confined to the human, compelling in various ways. So, more often than not, he allows a certain slippage between the two, and, in many ways, it is the repetition of *technē* and *pronoia* across the board that is the main point, which is fundamental to the way Galen understands the world and the human being in it, his cosmology and physiology as a seamless whole. Still, it is Galen’s creator figure who provides the focus here, and that means foregrounding *On the Function of the Parts*. However, *On the Natural Faculties* definitely forms part of the same intellectual package, and is interesting for the ways it both does, and does not, fit quite perfectly with what was to come.

On the Function of the Parts itself explains, comprehensively, and in considerable detail, Galen’s understanding of the structure and functioning of the human body, as something planned and realised by a figure possessed of the key qualities of *pronoia*, ‘foresight’ or ‘providence’; *sophia*, ‘wisdom’ or ‘intelligence’; *technē*, ‘skill’ or ‘art’; *dunamis*, ‘power’ or ‘capability’; and even *dikaiosunē*, ‘justice’.¹⁷ This figure – nature or demiurge – must be divine, though more than that Galen cannot say in terms of substance or

¹⁴ Arist. *PA* 658a9; specifically evoked at e.g. *Nat.Fac.*2.4 (*SM* III 167.12–13).

¹⁵ Nature lacks reason at *Nat.Fac.* 2.3 (*SM* III 162.14–24); and is not soul at 1.1 (*SM* III 101.1–5), though in the following lines Galen says he does not mind if *phusis* is called the vegetative (*pbutikē*), and *psuchē* the sensory (*aesthētikē*) soul (in the Aristotelian manner). The distinction being made is the same, it is just a linguistically inferior way of doing so.

¹⁶ Galen *Foet.Form.* 5–6 (*CMG* V 3.3 82.10–106.13).

¹⁷ I list the qualities in the rough order of frequency with which they accompany the creator in the text (singly or in combination); though variation in vocabulary makes precise calculations difficult.

content. His interest lies in the results of these qualities, and in humanity in particular, rather than in what exactly possesses such powers. It is through the construction of human beings themselves that these wider cosmological truths are revealed, since these beings are so manifestly made, in part and whole, for the best (in the circumstances). But the obvious operation of foresight, wisdom, skill and power entails only that there is a qualified operator, and in Galen's world such an operator must be divine; it does not require corporeality or incorporeality, for instance, or dictate character, identity or location in any other way.¹⁸

This understanding, as articulated in *On the Function of the Parts*, had, according to Galen, an immediate and rapidly spreading impact. This was the big book, the *pragmateia* as he always refers to it, which made his reputation, not just as a brilliant practising physician but also as a theorist, the proponent of an entire medical system.¹⁹ Its ideas and teachings were quickly picked up and promoted, both by those doctors who had been trained in 'traditional medicine' (*palaia iatrikē*), and by Peripatetic philosophers, for Aristotle himself had produced a similar work.²⁰ Galen's growing fame led, of course, to jealousy and slander amongst his rivals, and, eventually, his friends broke down his high-minded resistance to engaging his critics. Reluctantly propelled back into the public arena by his companions, Galen then demonstrated, through a combination of oratory and dissection performed over a period of several days, the truth and accuracy of all his statements.²¹ Further anatomical writing and display followed, and it is with this sequence, with his successful defence of all his claims and doctrines, and subsequent advance into and over the territory once held by his enemies (such as the execrable Lycus), that the biographical section that begins *On My Own Books* closes and thematic bibliographic organisation takes over.²² This then seems to be the moment of Galen's real arrival, not just in the Imperial capital, but in the heart of Imperial

¹⁸ It is the limits of Galen's knowledge in these respects that are the focus of *Plac.Prop.* 2 (*CMG V* 3.2 56.12–58.21, with comm. at 132–40) and also *Foet.Form.* 5–6 (*CMG V* 3.3 82.10–106.13).

¹⁹ In his self-promotional treatise, *On Prognosis (Praen.)*, it is his practical brilliance, particularly in prognosis, that marks Galen's first stay at Rome, for example, though he also performed anatomical demonstrations to appreciative elite audiences.

²⁰ Galen *Lib.Prop.* 3.12 (143.24–144.7 Boudon-Millot). The *palaia* here is a term of approbation, and Galen is presumably referring to doctors trained in the Hippocratic tradition, that is, who share a similar background to himself; and it is (as will become increasingly clear) Aristotle's *On the Parts of Animals (PA)* that he means.

²¹ Galen *Lib.Prop.* 3.13–15 (144.7–25 Boudon-Millot).

²² Not that biography vanished from the text at this point but it ceases to function as an organising principle: the chapters now gather together all his works on 'anatomy' or 'prognosis', not all the books written during a particular period of his life. See Boudon-Millot 2007a for discussion of the work's structure.

medical culture. His intellectual position and social standing have now been established, consolidated and confirmed, and systemic elaboration can now occur on this basis.

RHETORIC AND AUTHORITY IN *ON THE FUNCTION OF THE PARTS*

The arguments of *On the Function of the Parts* themselves require more detailed examination in terms of their structure and presentation, as well as content, before moving on to some more specific issues. Right from the outset, it should be stressed, Galen presents this treatise as a conversation with Aristotle, Plato and Hippocrates on the topic of the ‘usefulness’ (*chreia*) of the parts of the human body. Usefulness, in this context, relates to the soul, for the body is ‘the instrument’ (*organon*) of the soul, and the human body has been constructed by nature, in whole and parts, as most befits the character of the human soul.²³ So, for example, nature gave to ‘intelligent’ (*sophos*) and ‘godlike’ (*theios*) man, hands, not horns or hooves.²⁴ Hands can be put to peaceful and warlike purposes alike, enabling clever humanity to craft and utilise weapons much more potent than the horns so appropriate to the fierce bull, and to take advantage of the hooves provided to the swift, proud horse. The horse can be tamed and ridden by man, who can thus outrun, or overpower, creatures with stronger or faster bodies, but not such godlike souls.

According to Galen, Aristotle had already recognised the key role of the human hands, and correctly contradicted Anaxagoras in asserting that it is because of his great intelligence that man has hands, not because of his hands that he is the most intelligent.²⁵ However, despite having adopted the right fundamental approach to understanding the world and the human body, Aristotle fails to carry through his programme in any detail, missing, or misconstruing, many usefulnesses of many somatic parts. The human fingernails are a good case in point, and one which Galen chooses to illustrate what he has to offer, and how much further old insights can now be taken, under the right management.²⁶ Nor is it just Aristotle who has fallen short in this respect, but also his teacher, the divine Plato, who made shockingly disparaging remarks about the fingernails, alleging that they are mere practice runs, warm-ups, for making actually useful and necessary claws for animals.²⁷ Aristotle’s view is a small improvement, since he does

²³ Galen *UP* 1.2 (I 1.13–3.24 Helmreich). ²⁴ Galen *UP* 1.2 (I 2.11–13 Helmreich).

²⁵ Galen *UP* 1.3–4 (I 3.25–6.17 Helmreich); cf. Arist. *PA* 687a7–18 and 20–1.

²⁶ Galen *UP* 1.5–8 (I 6.18–12.7 Helmreich).

²⁷ Plat. *Tim.* 76e. On Plato’s divinity and other aspects of Galen’s relationship to this key authority see De Lacy 1972.

make the fingernails useful to some extent, claiming them (rather vaguely) as protective, though still in contrast to the more practical utility of animal claws.²⁸ But what, exactly, do the nails offer protection against, Galen asks. Nothing really, he replies. It is, rather, the combination of hard, sharp nails and soft pliable finger tips that gives human hands the greatest scope and flexibility, in gripping, picking up and manipulating the greatest range of different items, from the smallest and hardest to the largest and softest. So protection is just a small part of a much larger, and differently oriented, picture.

Even the man who, Galen claims, came closest to realising the perfect formation, the precise fitness for purpose, of the fingernails, that is, the great Hippocrates himself, did not do enough.²⁹ For the obscurity and concision of his writing means that many fail to comprehend him, and there are gaps in his accounts (though not errors). So, building on the insights of all three – Aristotle, Plato and Hippocrates – and taking into consideration a wider set of discussions on the subject among both physicians and philosophers, Galen provides ‘a complete account of the usefulness of each part’.³⁰ This goes beyond the recognition of purpose and skill in the constitution of humans and other animals, to seeing total optimisation in all the parts. Galen sets himself up as able to explain everything, every aspect of the human body, down to the smallest fingernail and eyelash, as made to perform a particular function, having a particular usefulness in relation to the whole being, and made for the best, ideally suited to perform that function. He is not, he repeatedly asserts, refuting, but rather amending and extending the teachings of his three most favoured ancient authorities.

All this discussion, this positioning, comes in the opening sequence of the treatise, in which Galen has basically assumed skill and purpose in the construction of the parts, a skill and purpose that has not yet found its true interpreter. That is, someone whose exegetical prowess can do full justice to the depth and detail, the totality and finesse, of the artistry manifest in the human being, and whose name might just be Galen. That there is a cosmic entity able and inclined to provide animals with the bodies their souls deserve is simply taken for granted. A provident nature appears in the initial preamble without any kind of introduction or explanation.³¹ Galen does eventually register that the matter has been disputed, that some have argued against purpose and skill, and he will name the leaders of

²⁸ Arist. *PA* 678b22–5. ²⁹ Galen *UP* 1.7 and 8 (I 11.9–20 and 15.13–16 Helmreich).

³⁰ Galen *UP* 1.8 (I 15.16–17 Helmreich): ἅπαντα προτραπέντες γράψαι περὶ τῆς χρείας τῶν μορίων ἑκάστου.

³¹ The first, entirely unheralded, appearance of creative nature is at *UP* 1.2 (I 2.10 Helmreich).

this opposition – Epicurus for the philosophers and Asclepiades for the physicians – before the end of Book 1, but he begins neither by facing up to, nor facing down, that opposition.³² He prefers to sketch out his own approach in relation to those with whom he is, broadly, in agreement, aligning himself with a certain set of authorities whom he will then surpass.

In making no positive arguments for the validity of the pro-design programme itself, and concentrating instead on the ways in which his version of that programme will be better, fuller and more accurate than what has gone before, Galen indicates the presentational method that will be enacted throughout the work. The idea that the construction of the human body, in all its complexity, is due to the application of wisdom and planning will never, abstractly, be proposed or supported. Rather, this proposition will be demonstrated in practice. The strength and comprehensiveness of his account of the human being, the fact that Galen can explicate everything in this manner, that the argument from design works, and, indeed, that the human body is a marvellous thing, will be made, repeatedly, to speak for themselves.

This method can easily be illustrated by returning to the exemplary case of the fingernails, a part of the larger, even more emblematic, human organ, the hand. Hands, as Galen explains, are for gripping, holding and manipulating things, that is their *chreia*, their ‘usefulness’, for the human being, and it is a vital, defining, usefulness for humanity in the Galenic schema.³³ Moreover, everything about the human hand plays its part in that crucial function in an optimal manner. Their multitudinous bones with a myriad of attachments for all the muscles involved, the plentiful supply of nerves and blood vessels, the arrangement of the whole package in a particular pattern of flesh that produces the critical configuration of fingers and thumb (with their flexibility and sensitivity), all the way down to the fingernails themselves – it all works absolutely ideally.³⁴ So, how can you do anything other than marvel at nature’s skill and forethought when confronted with the intricacies of the human hand in all its perfection? Even the fingernails are perfect, Galen explains.³⁵ Their moderate hardness is ideal: nature made them harder than flesh, but softer than bone, so that they can offer the best possible assistance to the hands in doing their job, and help them operate most effectively and robustly. They have been formed rounded, and continually growing in length, in order to replace what is worn away in use for the same reasons. Thus this passage concludes,

³² Galen *UP* 1.21 (I 54.11–16 Helmreich). ³³ Galen *UP* 1.5 (I 6.17–9.9 Helmreich).

³⁴ Galen *UP* 1.11–24 (I 20.25–63.8 Helmreich). ³⁵ Galen *UP* 1.11 (I 20.25–23.6 Helmreich).

‘everything about the fingernails shows the utmost foresight/foreknowledge on the part of *phusis*’.³⁶ It is just not possible, then, to observe this kind of achievement and think of chance and contingency rather than wonderful design, Galen clearly implies.

Occasionally he does attack the opponents of skill and purpose, the ‘chorus’ of chance, more directly over a specific point. So, in discussing the muscular arrangement in the hand, all the bony attachments as they interact with muscles of different size and orientation, Galen takes on what he avers are the views of Epicurus and Asclepiades that some tendons are much thicker than others, not because they are going to have to work harder, so good planning and building has toughened them up, but because they have worked harder.³⁷ Rubbish, retorts Galen, babies are born with these tendons already more developed, before they have seen any real action at all; and on this argument, more assiduous workers would have four arms and legs and the idle one or none. This approach, leaving matters to the operation of chance and contingency, just does not work. If the human body is to be comprehended properly in both a medical and a philosophical sense, as something doctors treat and as a cosmic entity, then realising, recognising and praising the role of the demiurge is central. This basic message is repeated incessantly all through *On the Function of the Parts*: there is absolutely no escape.

Neither *On the Natural Faculties* nor *On Anatomical Procedures* offer anything different in this respect. The former essentially adds to the repetition, taking the same persuasive approach over slightly different territory. Similarly, there is no direct line of argument from dissection to providence in *On Anatomical Procedures*; the support it provides is for the accuracy of the descriptive parts of *On the Function of the Parts*. From Galen’s demonstrable anatomical rectitude (in contrast to others’ errors), presumably the rest is meant to follow; the truth of the whole physiological and cosmological package is thus implied, and occasionally just assumed. The closest Galen in fact comes – in his extant works – to tackling the dispute between design and chance as such, more abstractly, is in the final book of *On the Doctrines of Hippocrates and Plato*; but it turns out not to be that close after all.³⁸ The discussion takes some very specific turns in its engagement with the larger, framing, theme of the nature of similarity and difference: how to recognise real relationships between things, and ideas, as part of

³⁶ Galen *UP* 1.11 (I 23.5–6 Helmreich): οὕτω μὲν εἰς ἄκρον ἤκει προμηθείας τῆ φύσει τὰ κατὰ τοὺς ὄνυχας.

³⁷ Galen *UP* 1.21 (I 54.11–57.26 Helmreich). ³⁸ Galen *PHP* 9.8 (*CMG* V 4.1.2 590.12–596.29).

the conceptual equipment necessary for competent involvement in debates about the way the world works.

EPISTEMOLOGY

The final point to make on Galen's persuasive strategies here, on his failure to demonstrate in any formal or systematic way the skill and providence of nature, is that he clearly assumes that most of his audience will broadly share his world-view in this respect. This is not, actually, where he has to work the hardest, though he may shout the loudest about the wonderful works of the demiurge. The challenge to *On the Function of the Parts* was, precisely, about its descriptive accuracy, which is why *On Anatomical Procedures* is the ultimate supporting text; and Erasistratus is attacked for his fraudulent adherence to design in *On the Natural Faculties*, not his opposition. In this latter text also, Galen demonstrates more clearly than elsewhere why that might be, why Galen might well feel he can count on cosmological consent even if agreement in other areas is more tricky. In its engagement with the Peripatetic community at Rome (and beyond) and also its understated alliance with the most popular philosophical school of the Roman Empire, Stoicism, *On the Natural Faculties* orients itself towards the already sympathetic as well as illustrating, with barely a mention of Plato, the contemporary range of that sympathy.³⁹ Galen just did not need to ground those claims in the same way as he needed to argue for others.

The other side of this coin is that one of the functions of a provident and optimising nature that emerges from these texts is, itself, loosely epistemological. Ungrounded, nature nonetheless acts to provide solidity and security to the system, as she works to make the world fully explicable. *Phusis* enables someone to look at fingernails, or eyelashes, and instead of being baffled, or being thrown back on vague, and rather empty, references to atoms and chance, a fuller, more substantial explanation can be offered. Hands have a usefulness that means they need fingernails and need them formed in a particular way, eyes have a function (sight) that means they require the protection of eyelashes and so on. It is the figure of the creator, of the demiurge, who has delivered on these needs and who thus holds this totalising explanatory matrix together.

So, when Galen describes himself, in the biographical passage that links the medical and philosophical bibliographies of *On My Own Books*, as having been brought to the brink of Pyrrhonian *aporia*, of despair at

³⁹ Galen *Nat.Fac.* 1.12 and 2.4 (*SM* III 120.7–121.16 and 168.2–14); cf. *Foet.Form.* 6.5 (*CMG* V 3 3 92.22–3).

the possibility of knowledge, by the failures of his Stoic and Peripatetic teachers of logic, it was not just his training in geometry and arithmetic that came to his rescue, but also the demiurge.⁴⁰ From the bottom up and top down, respectively, the existence and functionality of both numbers and nature enabled Galen to get a fix on the world. It is, in fact, a place of order in which certainty is possible, as the mathematical disciplines show; and a place that can be understood concretely as well as abstractly, for the wisdom of the creator provides content and substantiates the cosmic order. It is provident nature who, thus, underwrites the know-ability of the universe and guarantees its susceptibility to rational enquiry, since it is, itself, the product of a rational mind (not unlike Galen's, in fact).

ANALYSING GALEN'S DEMIURGE

As promised, this outline of Galen's creator figure, its appearance and development, role and function in Galen's career and *oeuvre*, his system and world-view, has inevitably referred to the various intellectual traditions that contributed to Galen's notion of nature, his demiurge. Most prominent, explicitly laid claim to, are the authorities Hippocrates, Plato and Aristotle; but the Stoics have also been mentioned. In addition, attention has been drawn to the broader social and cultural setting in which Galen operated. This whole package now requires further scrutiny and assessment.

In particular, the question needs to be asked: to what extent is the lineage Galen constructs and advertises for his concepts and understanding an accurate one? Perhaps Stoicism should be elevated from the status of largely unsung ally to that of closest friend in this respect? For the Stoics are acknowledged to be amongst the ranks of the righteous in *On the Natural Faculties*, indeed to have a foremost position amongst those committed to nature's provident design; but this move is made implicitly and little credit is granted. Elsewhere, of course, Galen is deeply hostile to aspects of Stoic doctrine; so, for instance, the agreement between Hippocrates and Plato in *On the Doctrines of Hippocrates and Plato* is essentially forged in opposition to Chrysippus' views on the soul. Still, Galen's *phusis* certainly shares qualities with her Stoic counterpart, and these congruities demand further investigation. Nor need the Porch be the only source of undercover influence; the added emphasis on providence in the Galenic system might owe something to the growing importance of this virtue amongst the Emperor's attributes over the second century AD. *Providentia*, the Latin translation of *pronoia*, becomes a frequently represented personification

⁴⁰ Galen *Lib. Prop.* 14.1–6 (164.2–165.13 Boudon-Millot).

on Imperial coinage from Trajan onwards, and this virtue is also part of a wider contemporary discourse of praise and exhortation addressed to various Emperors.⁴¹

This, more social or political zone of influence on Galen should, moreover, not be seen in conflict, or even contrast, with the more intellectual patterns also outlined; the two are intertwined and inseparable. One of the main arguments of this essay is that Galen should not be seen as operating in some kind of academic bubble, his writings cannot simply be put into dialogue with the writings of the Hippocratic corpus, of Plato and Aristotle, and other philosophers and physicians without reference to the broader historical context. Galen himself, certainly, highlights the purely philosophical perspective and presents his most meaningful engagements as being with past authorities – and the phenomena – against the errors of the present. But that present has him more firmly in its grip than he likes to admit: he is a product of, and an effective operator in, Roman Imperial society and the marks of that empire and society are to be found all over his *oeuvre*.

HIPPOCRATES AND PLATO

Given Galen's general claim to Hippocratic filiation, and that so much of his own claim to authority depends on the authority already vested in the legendary Hippocrates, in his positioning himself as the true heir of literate Greek medicine's founding father, it is hardly surprising that Galen should enlist Hippocrates as a key ally in his cosmology.⁴² Hippocrates also, more broadly, brings the medical tradition to the party. Still, his recruitment to the cause of a provident and skilled creative nature is basically fraudulent, and, though Galen may well not have been the first to make this move, it is quite hard to imagine that he was unaware, at least, that Hippocrates' relationship to his teleological and physiological conceptualisations was quite different from that of Plato and Aristotle.⁴³

⁴¹ On the frequency of representations of the *providentia augusti* (as distinct from the *providentia deorum* that might be involved in Imperial successions and accessions) on Imperial coinage and more general discussion of these Imperial virtues see Noreña 2001. For further discussion, including the dating of the first appearance of *providentia* as an Imperial virtue on the coinage of Trajan, see also Wallace-Hadrill 1981. The wider discourse is in Latin and Greek, switching between *providentia* (e.g. Plin. *Ep.* 10.66 and 77) and *pronoia* (e.g. D. Chr. *Or.* 3.43 and 50 and [Arist.] *Reg.* 14).

⁴² On Galen's relationship with Hippocrates see e.g. Smith 1979; Manetti and Roselli 1994; Flemming 2002.

⁴³ Galen is following an established pattern in recreating Hippocrates in his own image, generally if not necessarily in this particular case (though he counted the Stoicising Hippocratean Aephicianus amongst his teachers: *Ord.Lib.Prop.* 3.10: 98.25–99.1 Boudon-Millot): see e.g. Flemming 2008.

There are two main strands to Galen's recruitment of Hippocrates to this cause. One consists in a set of general and entirely spurious, though often repeated, claims about Hippocrates constantly singing nature's praises, calling her 'provident' (*pronoētikē*) and 'skilled' (*technikē*).⁴⁴ The other involves mobilising a set of Hippocratic sound-bites ruthlessly ripped from their context and re-interpreted to serve Galen's particular purposes. The usual suspects in such cases are the phrases: 'Nature is sufficient in everything for everything', 'Our natures are the physicians of our diseases', and 'Nature, being well-instructed, does what is needed without being taught'.⁴⁵ While none of these statements directly contradicts Galen's notion of *phusis*, none of them exactly supports it either, however hard he pushes them. In between the two is Galen's most popular assertion in respect to Hippocrates' view of nature: that he calls her 'just' (*dikaia*) is the refrain in *On the Function of the Parts* and picked up elsewhere also.⁴⁶ This is presented as a particularly Hippocratic epithet, a roughly synonymous forerunner of 'providence' and 'skill'. Now *dikaia* and *phusis* do appear together in the Hippocratic treatises *Fractures* and *On Joints*, but the meaning of the former is much more on the literal side of balance, proportion and fittingness than Galen implies. Following dislocation or breakage, the instruction is that bones and joints are to be returned to, and then bound into, the balanced position in conformity with nature (*dikaian phusin*); while one Hippocratic passage informs its audience that the head of the thigh-bone alone has a balanced nature (*dikaian phusin*), in (alleged) contrast to the irregularities of the arm bones.⁴⁷

It is very hard to see anything other than conscious distortion and deceit in these claims, in Galen's attempt to align Hippocratic doctrine with his own in these respects. It is the importance of the Hippocratic lineage to him that comes through most strongly. In contrast, his positioning in relation to Plato, who is also, if derivatively, divine, is more genuine and justified. Thus, the term *dēmiourgos* is borrowed from Plato's *Timaeus*, and with it, as already mentioned, Galen is emphasising the transcendent position of his creator figure rather than a more Stoic immanence; or, at least, he allows the demiurge to exercise a transcendent pull on the more neutral, or shared,

⁴⁴ See e.g. Galen *Nat.Fac.* 1.12 (*SM* III 122.6–129.3); *UP*3.10 and 5.9 (I 172.15–17 and 277.24–7 Helmreich). These virtues are never predicated of nature, in any form, in the Hippocratic corpus, as it survives.

⁴⁵ See e.g. Galen *PHP* 9.8 (*CMGV* 4.1,2 596.21–4) and *Nat.Fac.* 1.13 (*SM* III 128.23–129.3): the citations are from Hp. *De Alim.* 15 and *Epid.* 6.5.1.

⁴⁶ See e.g. Galen *UP* 1.22; 2.16; 5.9; 9.17; 11.2; and 16.1 (I 59.20–2; 116.9–10; 277.24–7; II 50.10–11; 116.10–12; and 376.6–7 Helmreich); and e.g. *Nat.Fac.* 1.13 (*SM* III 128.23–129.3).

⁴⁷ See Hp. *Fract.* 1 and *Art.* 62 for settings; and *Fract.* 37 for the thigh bone.

notion of ‘nature’, without being entirely decisive.⁴⁸ The other point of distinctly Platonic emphasis in Galen’s system is on the constraint of the existing matter with which the demiurge must operate. Galen famously opposes this understanding to Moses’ belief that ‘everything is possible to god’, but this is also a zone of difference with Stoicism: not that the Stoics went anywhere near creation *ex nihilo*, but the relationship between god and matter is of a different character for them.⁴⁹

Less Platonic, however, is Galen’s endlessly repeated stress on the ‘skill’, ‘wisdom’ and ‘providence’ of the demiurge. There is intelligence – *nous* and *logos* – involved in Plato’s creation, and it was motivated by god’s *pronoia* – for producing order from chaos would be an improvement in the state of things and would be a good outcome – but the actual work of fashioning humanity, and other living things, is not done by the demiurge himself, but by his subordinates, the ‘young gods’, and the motif of *technē* is nowhere invoked.⁵⁰ On the other hand, the Stoics talk of their active principle, god, in its more demiurgic moments, as ‘designing (*technikē*) fire’, as well as intelligent and provident, and they also refer to it as ‘nature’.⁵¹ Moreover, it has to be said that in *On the Doctrines of Hippocrates and Plato* Galen explicitly accepts some aspects of Plato’s cosmology only equivocally. He considers the suggested role of the ‘young gods’, particularly as conduits for the passage of the immortal substance of the soul from the demiurge to humanity, as merely plausible, not proven; indeed he argues that it is presented in this way in the dialogue itself.⁵² Nor, indeed, in his various later musings on these issues, on the character of the divinity involved and the means by which various ends are achieved, particularly in embryonic formation, does Galen show much engagement with current developments within Platonism that had important implications for the position of the demiurge.⁵³ Followers of Plato were certainly amongst his interlocutors, and he records that one of his Platonist teachers suggested that the ‘world

⁴⁸ Though the Stoic active principle, or god, could also be described as *dēmiourgos* (e.g. D.L. 7.137–8), or, in Latin, *opifex* (Calcidius *Comm. in Tim.* 293.4); so the transcendent pull is there too.

⁴⁹ See Galen *UP* 11.14 (II 158.2–159.19 Helmreich), where Plato leads the sensible Greek contrast with Moses (though Moses’ approach is preferable to Epicurus’).

⁵⁰ See e.g. Plat. *Tim.* 47e3–48a5: *nous* and *logos*; 30c1: *pronoia*; 41a3–d3: the demiurge’s address to the gods he has brought into being.

⁵¹ See e.g. Stob. 1.213, 15–21 for Zeno on ‘designing fire’; and also e.g. Aetius 1.7.33 for equivalence with god and intelligence (*nous*); providence is added by e.g. D.L. 7.147 (*pronoētikē*) and Plut. *Mor.* 1050d (*pronoia*). On Stoic nature see also e.g. D.L. 7.148–9. Galen is aware of the Stoic position, see e.g. *MM* 1.2.10 (X 16 K).

⁵² See *PHP* 9.9.1–14 (*CMG* V 4.1.2 596.30–600.30).

⁵³ See e.g. Opsomer 2005a, though I cannot accept his conclusions about Galen (78 n. 143), however tentative. On Galen as not engaging in debate with contemporary (Middle) Platonism, see Chiaradonna, ch. 11 below.

soul' might form the foetus, but Galen cannot agree and in general all his discussions with philosophers on these topics have been fruitless and frustrating.⁵⁴

Galen is thus more interested in a direct relationship with Plato, unmediated by his followers, as is also the case for Hippocrates; and this is a selective relationship too.⁵⁵ Plato may be 'divine' but that does not mean Galen is signed up to the whole programme. He can pick and choose, based on criteria of truth and utility that engagement with Plato's ideas and writings have helped forge, but without providing any kind of overriding force. Galen chooses, then, a strong commitment to a rather loose version of Platonic cosmology: to the clear sense of a 'directed teleology', as R. J. Hankinson calls it, that a rational, transcendent entity, such as the demiurge, provides, and to the constraints of 'necessity' of the material world as an intrinsic part of the package; as for the rest, the details, he was unimpressed and not that bothered.⁵⁶

That it was in these very areas that much current Platonist activity was focused presumably only helped foster his detachment from them and his general feeling of superiority. Still, this should not diminish either the importance of what Galen does take from Plato, here and elsewhere (for example, in the field of psychology), or the significance of his Platonic borrowings in the development of classical medicine more broadly. As Phillip De Lacy has noted, while Plato's had long been a name to conjure with, in a vague and unspecific way, Galen is apparently the first physician to make a serious effort to incorporate some fundamental Platonic doctrines into his vision of the medical art, at both a methodological and conceptual level.⁵⁷ The other point to make here, also following De Lacy, is that Galen's Plato is himself a borrower, dependent on Hippocrates for many of his ideas and inspiration; and it may be that the historical and situational ease of this argument is part of what makes Plato so attractive to this Hippocratic physician.⁵⁸ Certainly this partial merger is a profitable one for Galen in various ways as a medical priority is established in all things, and Plato thus gets to do some of the work for an essentially Hippocratic cause; while Hippocrates moderates the Platonic perspective on the nature of the demiurge.

⁵⁴ This suggestion comes at *Foet. Form.* 6.32 (*CMGV* 3,3 104.25–106.2) amidst general disparagement of current philosophical discussions on these matters.

⁵⁵ See De Lacy 1972. ⁵⁶ Hankinson 1989: 211–18.

⁵⁷ De Lacy 1972: 39; there are, of course, speculative links made between Plato and Philistion of Locri, in the early days, but nothing of real substance emerges: see e.g. Nutton 2004.

⁵⁸ De Lacy 1972: 36–8.

ARISTOTLE AND THE STOICS

Galen is following a better-trodden path in his engagement with Aristotle, as earlier comments about Erasistratus illustrate. Indeed, the relationship was a reciprocal one, and the Peripatetics had a long-standing involvement with medical ideas and thinking too. So it is no surprise to find that the predominant philosophical allegiance of the first elite audience Galen acquired for his anatomical demonstrations and physiological disquisitions in Rome was Aristotelian. This is the Greek senatorial circle surrounding the philosopher Eudemus, with whom Galen scored an outstanding prognostic success, winning massive bragging rights over his colleagues and rivals soon after his arrival in the imperial city.⁵⁹ This set included not just Boethus but also Paullus, soon to be Urban Prefect; Severus, who would be consul and Marcus Aurelius' son-in-law; Barbarus, the uncle of the emperor Lucius (though his school commitments are not made explicit); and, to some extent, at least before his disruption of a Galenic performance of dissection allegedly caused a loss of favour, Alexander of Damascus.⁶⁰ This last is a philosophical figure over whom much ink has been spilt, but who initially appears as the instructor of Boethus in Peripatetic doctrines, also learned in Platonic matters, and then becomes a public exponent of Aristotelian philosophy at Athens, perhaps the first holder of one of the official philosophical 'chairs' instituted in that city by Marcus Aurelius in AD 176.⁶¹

At least the first book of *On the Function of the Parts* was written for Boethus and directed at this milieu more broadly, and the statements made about Aristotle in that opening sequence, and already alluded to, can be taken as summarising Galen's approach. There are, of course, some specific errors which Galen is keen to correct, and is not shy to point out; but broadly speaking he presents himself as completing the project of *On the*

⁵⁹ Galen's successes with Eudemus are recounted at Galen *Praen.* 2 (CMG V 8.1 74.12–82.17). Galen may have had some prior family connection to Eudemus (76.29).

⁶⁰ All, except Alexander, appear in connection with Eudemus at *Praen.* 2.24–7 (CMG V 8.1 80.15–82.7); and then when Alexander behaves badly, *Praen.* 5.7–21 (94.24–100.6). See commentary in Nutton 1979 for biographical details.

⁶¹ Much discussion has been devoted to the question of identity with Alexander of Aphrodisias – now rejected. Alexander of Damascus' elevation is mentioned at *AA* 1.1 (II 218 K). Such a preferment might well have been assisted by Alexander's connections with this select group of the cultured elite, the scions of some of the great eastern families who were first to enter the Roman senate under Vespasian and Trajan, and who often had Imperial associations: Barbarus, a friend of Herodes Atticus, the man to whom selection of the first holders of the philosophical chairs fell (Phil. *VS* 2.2), would have been particularly helpful in this respect.

Parts of Animals.⁶² He will, he says, provide a really full description of the usefulness of each and every part, nothing will be omitted or labelled useless; and further anatomical details will be offered about exactly how each organ fulfils its function. That is, moreover, basically what he does do, with, of course, a Platonic demiurge adding direction to Aristotle's teleology and bringing providence into the sublunary world, which does raise the question of how Aristotelian the end result is: is this completion or transformation?

Galen himself gently raises the question in *On Mixtures*, a treatise composed at roughly the same time as *On the Function of the Parts* and as part of the same package of fundamental expositions.⁶³ In general there is quite an Aristotelian flavour to the work, and Galen aims, amongst other things, to rescue the Stagirite from misinterpretation in respect to his views on mixtures (*kraseis*) of hot and wet, a misunderstanding that has him wrongly aligned with the Stoics and the medical followers of Athenaeus of Attaleia in this respect.⁶⁴ On the other hand, Aristotle does seem to come close to committing another error common in this field, that of giving causal priority to the qualities involved in constituting the human body and disregarding 'the skilful (*technikē*) power' that forms the parts to suit the characters of our souls.⁶⁵ So, for example, the eye sockets and mouth are not such large openings because of a particular concentration of heat, and its exhalation, during their construction but because eyes and mouths need to be a certain size in order to fulfil their appropriately designed function. However:

About this, even Aristotle had his doubts: whether there was a more divine origin (*archē*) of these things, and not just formation according to the hot, the cold, the dry and the wet.⁶⁶

Galen does not push the point any further, being content simply to reiterate his own view that the qualities are just the instruments of a distinct formative power.⁶⁷ This fits a wider pattern of presentation, moreover, and he would, of course, be happy to admit a mixture of Platonic and Aristotelian influence on his ideas, to see, indeed, Plato resolving Aristotle's uncertainty here, completing the job, and so putting a more decisive stamp on his own

⁶² In addition to discussion of fingernails, see e.g. *UP* 8.3 (I 494.14–453.9 Helmreich) for sustained criticism of Aristotle's view of the brain.

⁶³ Ilberg 1892: 504 and 513, dates the work to AD 169 or shortly thereafter.

⁶⁴ Galen *Temp.* 1.3 (8.28–10.3 Helmreich). ⁶⁵ Galen *Temp.* 2.6 (79.11–23 Helmreich).

⁶⁶ Galen *Temp.* 2.6 (79.23–6 Helmreich): περί ταύτης γάρ τοι και ὁ Ἀριστοτέλης ἠπόρησε, μή ποτ' ἄρα θειοτέρας τινὸς ἀρχῆς εἶη και οὐ κατὰ τὸ θερμὸν και ψυχρὸν και ξηρὸν και ὑγρὸν.

⁶⁷ Galen *Temp.* 2.6 (79.26–9 Helmreich).

system. That would not be entirely fair, however, since Galen's debt to the teleological approach of *On the Parts of Animals*, and to Aristotle's methodology and conceptual frame more broadly, is just as crucial as any Platonic reliance, as is made plain in *On Mixtures* as much as anywhere else.⁶⁸

In many respects also, Galen here reflects contemporary Peripatetic trends. There was more providence in the Aristotelianism of the early Empire than there was in Aristotle, and, as Alexander of Damascus illustrates, relations between Platonism and the Peripatetics could be quite cosy at the time.⁶⁹ Not that Galen himself puts it that way – his engagement is, again, directly with Aristotle and his works, and he can be very hostile to present-day Peripatetic philosophers. However, there are definitely signs that he considered his elite Aristotelian audience to be his most important one in the formative part of his career.⁷⁰ What *On Mixtures* also reveals, especially when taken in conjunction with its partner treatise, *On the Elements according to Hippocrates*, is that the competitive angle in his address to this prominent Peripatetic circle went beyond the pseudo-Aristotelian Erasistrateans, such as Martialis, and included also the followers of Athenaeus of Attaleia, a pupil of Posidonius who had established a medical school that incorporated many Stoic doctrines in its version of the medical art, that is the '*pneumatikoi*'.⁷¹ This latter grouping was not just a particular target in his foundational writings on physics but also human physiology, and it is easy to see why this might have been the case. Whatever their precise associations with Aristotle, the *pneumatikoi* certainly had an encompassing and theoretically developed medical system at their disposal, of the kind – the reach and coherence – that Galen aspired to; and the similarity was not just of shape and structure but also some significant substance.⁷² Not only in terms of a shared commitment to continuous matter, as opposed to corpuscles or atoms, for example, but also, presumably, to its skilled and providential organisation in bodies.⁷³

⁶⁸ See Moraux 1985a: 327–44; and on Galen as strongly indebted to Aristotle in this respect (but also highly critical on specific points) see van der Eijk, ch. 12 below.

⁶⁹ See e.g. Sharples 2002: 1–40.

⁷⁰ Compare e.g. Galen *De Sem* 1.3.1–1.4.1 (CMG V 3,1 68.3–70.27) with *Lib.Prop.* 3.12 (143.24–144.2 Boudon-Millot).

⁷¹ Galen *Temp.* 1.3 (8.28–10.3 Helmreich) and *Hipp.Elem.* 6 (CMG V 1.2 102–114). On Athenaeus and the *pneumatikoi* more generally see e.g. Wellmann 1895; Nutton 2004: 202–6.

⁷² So Galen often says, of both Athenaeus and his successor Archigenes, that they have provided the fullest coverage of either a particular topic, or the whole medical art (e.g. *Hipp.Elem.* 6.1): full but mistaken.

⁷³ It has to be said that it is Athenaeus' physics and aetiology that Galen concentrates on, and little pneumatic physiology survives; but it is hard to imagine that Stoic providence did not play a part in it.

This early sense of particularly sharp competition with the *pneumatikoi*, Galen's acute need to differentiate himself from, and surpass, their vision of medicine and all its theoretical underpinnings, in part because it was the closest to his, in form and content, is then one of the contributing factors to Galen's rather odd approach to the Stoics. As has been remarked by various scholars, Galen is rather unfairly negative towards the Stoa, given that he shares so many of its key teachings and ideas.⁷⁴ The occasions on which he acknowledges this affinity are far outnumbered by those on which he passes over it in silence. Similarly, the few words of praise or appreciation he has to offer specific Stoic doctrines or authorities pale into insignificance in comparison to his vociferous hostility to Chrysippus' psychology. Moreover, this attitude is in flat contradiction to his proclaimed policy of intellectual independence. Galen repeatedly asserts that he is no unthinking loyalist or sectarian but he will take, adapt and develop what is true and useful from wherever he finds it: and his ability to gain at least some critical distance from both Plato and Aristotle (though not Hippocrates) indicates that this is not an empty claim, even if it is rather exaggerated in various respects.⁷⁵ He should then, even on his own terms, have been able to do the same with the Stoics, albeit with a different emphasis.

The figure of nature, or the demiurge, illustrates several of these points: it is a good example of strong conceptual affinity obscured, if not denied, without any explanation being offered. In addition to the general convergences of terminology and character between his creator figure and Stoic nature already referred to, the closest roughly contemporary formulations to those of Galen in *On the Function of the Parts* come from the Stoic Epictetus, whose teachings were not just an influence on the emperor Marcus Aurelius but were also known to Galen himself.⁷⁶ The context and emphasis is more ethical than physiological in Epictetus' various discourses on *pronoia*, and he is not interested in explaining the workings of the human body, as Galen is; but he does seem committed to the idea that every bit of the human being has been constructed by nature, well, and for a purpose. So, putting aside the many obvious and large-scale manifestations of nature's providence in the world, and attending to the apparently trivial, he asks what about the hairs on the chin, for instance, which must surely be completely useless?⁷⁷ In fact *phusis* has made very good use of

⁷⁴ See e.g. Manuli 1993: 53–61; and Gill 2007: 88–120.

⁷⁵ See e.g. *Ord.Lib.Prop.* 1.3–4 (88.13–89.7 Boudon-Millot).

⁷⁶ Galen wrote a (lost) work *For Epictetus against Favorinus*, (*Lib.Prop.* 14.21: 168.10–11 Boudon-Millot).

⁷⁷ Arr. *Epict.* 1.16.

them, in the most appropriate manner possible, as the means by which male and female are distinguished. A beard signifies a man, and its lack a woman: there is no need for personal announcement for nature has already done the announcing, and with a sign (the beard) that is itself 'beautiful, becoming, and august (*semnos*)'.⁷⁸ For this, and other achievements, nature deserves piety and praise, hymns to this divinity are the most important and worthwhile that can be sung. Similarly, in *On the Function of the Parts*, Galen counts the differentiation of male and female amongst the usefulnesses of beards.⁷⁹ The more august (*semnoteros*) man requires an august (*semnos*) covering for his chin, whereas women have no such quality and so lack beards; so too men's outdoor life means they need more protection from their hair, on their face as well as head, than women who stay indoors.⁸⁰ Furthermore, hotter men gather more of the thicker residues that nature employs to nourish hairs on their heads than colder women, so having two evacuative routes for this residue is also beneficial. There is more elaboration in Galen as well as a different emphasis and orientation, but the points of convergence, even identity, with a more broadly shared overall framework are clear none the less.

This might be argued to overstate the case somewhat, however, for there are obvious differences as well as similarities between Epictetus and Galen here. The main point for Epictetus, as well as ramming home, again, the fundamental principle of recognition and reverence for providence in all things, a principle that Galen would absolutely agree with, is a moralising one. What nature has made different should stay different, and not be confounded by, for example, shaving the beard.⁸¹ Indeed, this is the general movement in Epictetus, and other Stoics, from providence to the regulation of human conduct, whereas for Galen, though there is a sense of nature as an ethical norm lurking in the background, the movement is primarily from providence to explanation, to the achievement of human understanding. Perhaps then the affinities and congruities are more apparent than real. The sharing of terminology and ideology, the fact that both Epictetus and Galen sing hymns to provident *phusis*, and that both construe beards, at least to some extent in the same way, and use some of the same formulations in doing so, all this hides deeper divergences,

⁷⁸ Arr. *Epict.* 1.16.13: καλὸν . . . καὶ εὐπρεπὲς καὶ σεμνόν.

⁷⁹ Galen *UP* 11.14 (II 153.27–155.16 Helmreich).

⁸⁰ On the significance of the argument being structured this way around, i.e. that women and men have got the bodies they need to fit their social roles and standing, rather than vice versa, see Flemming 2000.

⁸¹ A point made even more explicitly by Epictetus' teacher Musonius Rufus in a passage that also talks about nature's providence in the hair department: *Fr.* 21 (Lutz).

which is perhaps why Galen rejects the alliance offered. Christopher Gill has certainly raised this possibility in relation to the Stoic and Galenic views on designing nature, and he wants, more generally, to explore the real philosophical distance that exists between the two with a view to understanding their vexed relations.⁸² He is right to insist that such matters of substance be put on the agenda, but it is not obvious that Galen is, at a fundamental level, closer in his way of thinking to Plato and Aristotle than he is to the Stoa. So it seems that the search for a general theory of Galenic philosophical relations, for rules that can be applied across the board, continues – or continues to be – chimerical. For it may well be that the rules are those of Galen's shifting and contingent self-interest.

This is, of course, to return to the wider cultural context in which Galen operates, to his early rivalry with the *pneumatikoi* and the resultant downplaying, if not suppression, of the Stoic dimensions to his thought. Indeed, the competitive character of ancient medicine more generally, in tandem with his Hippocratism, may well have helped propel Galen into the embrace of Plato. This gave him something distinctive in his medical milieu, but something recognisably authoritative none the less, and it supported a more imperial creator figure too. A somewhat compromised, or fuzzy, Platonic transcendence combined with the Stoic emphasis on providence gave Galen's demiurge or nature a more purple hue than either possessed independently. 'O great Emperors', says an anonymous leading senator to Marcus Aurelius and Commodus in delivering the first *sententia* in support of their proposal to regulate the financing of spectacles (*munera*) around AD 177, 'thus the harvest of your great foresight (*providentia*) will come forth.'⁸³ The speaker presents this measure as one of real thought and moral principle, deriving from the providence of these rulers, their unwavering concern for 'the health (or security) of the empire', exercised, as this proposal comes, from above, from, indeed, a position infused with divinity.⁸⁴ This inscribed oration picks up on recurrent themes in Imperial representation, praise and exhortation, themes that were as familiar to Galen as anyone, and were part of the discursive fabric of his world.⁸⁵

⁸² Gill 2007: 101.

⁸³ Lines 12–13 of the *Aes Italicense: o magni imp̄ (=imperatores) . . . etiam fructus tantae vestrae providentiae emerget*: see Oliver and Palmer 1955: 320–49 for text and discussion.

⁸⁴ Line 2: . . . *salutem publicam* . . . and the Emperors are described as *sanctissimi* at lines 17–18 (cf. l. 28).

⁸⁵ The particular connection between Imperial *providentia* and the security, the basic well-being, of the Empire in this discourse is emphasised by Charlesworth 1936: 107–32.

This is not, however, to privilege such circumstances, either the realpolitik of a successful medical career in Imperial Rome, or the sedimented ideologies of the Empire above all else; to cast Galen as a philosophical mercenary, unprincipled in his eclecticism, or as an over-determined intellectual product of his times. He clearly did have choices and was genuinely committed to many of his foundational views; but the cultural preconceptions of the imperial Greek elite will have played their part too, and there is always room for manoeuvre within and beyond any framework, not just in terms of emphasis and presentation. Consideration of all these factors and complications might help in answering perhaps the most interesting question to emerge from this discussion, which is: why a demiurge at all? Following Galen the existence of his provident nature has been taken for granted so far, but, in fact, one thing that has been revealed by this analysis is the possibility that it could have been otherwise. Or, at least, there seems to be a lack of compulsion, no necessary cause, so far. This point requires examination in conclusion.

CAUSING GALEN'S DEMIURGE

Galen clearly does not get his notion of nature from the authority he gives greatest priority to, that is Hippocrates. The works of the Hippocratic corpus, both those Galen rated and those he did not, are united in their indifference to such a notion, an indifference that could be more easily used against Galen than in his support, though it is best left to its own devices. While his demiurge does have a genuinely Platonic flavour, it cannot be argued that Plato made him adopt a particular cosmological outlook. The Pergamene's Platonic allegiances were just not of that kind, Galen was quite capable of taking or leaving any one of Plato's key tenets. Indeed, within Platonism itself, for example, the demiurge was rather less crucial than the immortality of the soul. Nor, of course, can Galen be said to have acquired his concept of a skilful and provident nature from the Stoics, despite what he shares with them. At least, the fact that the Stoics had a certain worldview, in itself, did not operate in its favour. None the less, what providence, the designing fire, had to offer Stoicism as a totalising philosophical system might well have had a more positive appeal, as also the common ground between Stoics, Platonists and even Peripatetics, in these areas, a common ground that was increasingly recognised and explored in Galen's day.

On this more general level, then, the attractions of a creator figure, as such, without any particular school clothes on (though they might be added

later), were twofold, both external and internal to Galen's construction of medicine, though with considerable blurring between the two. The main point to make, however, is that this is all about Galen's ambitions, intellectual and personal, for his vision of the medical art and himself, in a particular historical context. Plato and Hippocrates, Aristotle and the Stoics, are part of that context in a whole host of complex ways, but their causal effects are of a rather secondary nature.

So, from within the system, a skilled and providential nature provided a way of tying everything together, explaining it all, being more coherent and comprehensive than anyone else. As Hankinson has argued, if the teleological path is chosen, a full-on, directed teleology such as Galen propounds is probably the most productive and robust option to go for: there are systemic advantages over the non-directed Aristotelian version, for example, in terms of the quantity and quality of explication generated, its reach and security, at least on its own terms.⁸⁶ From the outside, the pull came from the sense that this was an argument that was already won, a point of existing agreement, not just with Stoics, Platonists and Aristotelians, but many outside the boundaries of the philosophically educated too. For Galen to turn this common conception to a medical end, the understanding of the human body, would not be too hard; indeed it had probably already been successfully achieved by the *pneumatikoi* so Galen needed to be less Stoic than them, to accentuate the differences in various ways. This fit with pre-existing assumptions, outlooks and forms of argument would assist in the building of consent to his wider system, and acceptance of the outstanding position it produced for its author: outstanding in the sense of extending and developing that set of ideas, which is how Galen presents himself more broadly.

Now, part of the work already done for this world view, part of its continuing purchase, is political. For the idea that everything is as it is on account of divine providence, that a skilled and optimising force has made the universe and human beings within it, and has made things for the best, is rather reassuring for the social elite whose position, obviously, forms part of this excellent arrangement. The only difference within humanity which has here been explicitly explained as a product of *pronoia*, *sophia*, *technē* and *dikaiousunē*, is that between men and women; but the direction and force of the exposition is, implicitly, a much more general one. The existing social and political order is thus suffused with value and cannot but

⁸⁶ Hankinson 1989.

gain ideological strength from the process. Moreover, there is a figure that creates and maintains that order, who imparts that value, keeps the system together, unified and coherent, in the Empire just as in the cosmos; there is continuity throughout, as Emperor and demiurge combine. That helped Galen on his way, both to putting a provident creator into his system, and in characterising that creator; it all made sense and works on every level.⁸⁷

⁸⁷ This chapter was completed before the publication of *On the Avoidance of Grief* (Boudon – Millot 2007b).