

PLATO AND THE DIVIDED SELF

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world-soul, and hence of the human soul as well. For in the *Timaeus* the demiurge structures the world soul according to numbers defining harmonic intervals.¹⁰³ In the ninth *Platonic Question*, however, the harmony metaphor applies to the *virtuous* soul, as in Plato's *Republic*.¹⁰⁴ The two perspectives can be reconciled by regarding the disharmony of the vicious soul as a distortion, yet not a complete destruction, of its original harmonious proportions. Since the soul contains in itself two heterogeneous elements that are mixed in such a way that neither of them preserves the purity it had prior to the mixture, its harmony will never be perfect.¹⁰⁵

The two parts of the soul are both powers of their own. There will inevitably be tension between them and they will continuously undergo each other's influence. Yet in a virtuous person they can coexist relatively peacefully and harmoniously.

103 Cf. *Tim.* 35b. Referring to the *Phaedo*, Plutarch explains that the soul is not identical with harmony, yet is constituted harmonically: *De an. procr.* 3.1013c–d.

104 See also *De virt. mor.* 6.444e–f.

105 Cf. *De an. procr.* 27.1026c; 28.1026e–1027a.

Galen and the tripartite soul

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I Philosophy, medicine, and the soul

Of all the philosophical doctrines advocated by Galen in his vast *oeuvre*, the Platonic theory of the tripartite soul is among those to which he is most strongly committed. In a wide range of works both philosophical and medical, Galen endorses the theory that the human soul has three “parts” (*merè, moria*) or “forms” (*eidè*): the rational, spirited, and appetitive, situated in the brain, the heart, and the liver, respectively. He identifies these parts of the soul as responsible for various physiological as well as psychological activities and functions, and claims Platonic and Hippocratic authority for the doctrine. Despite the fact that Galen suspends judgment on a number of questions concerning the soul, including its “substance” (*ousia*), corporeality, and immortality, he consistently affirms that the theory of the tripartite soul is both firmly established and an essential basis of the doctor's therapeutic activity.¹

To understand why the tripartite theory was so important for Galen we need to consider some of the larger strategic goals of his work. Galen famously argued that “the best doctor is also a philosopher,” as the title of

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1 For a concise statement of these claims see *On the Doctrines of Hippocrates and Plato* (*De Placitis Hippocratis et Platonis, PHP*) 9.9.7–10, 5.793–94 K. Note on citations: in referring to *PHP* I give the book, chapter, and section numbers in the edition of P. De Lacy (*Corpus Medicorum Graecorum* (CMG), vol. 5.4.1.2, pts. 1–3, Berlin 1978–84), as well as the volume and page numbers of Kühn's edition (*Claudii Galeni Opera Omnia*, 22 vols., Leipzig, 1821–33). For all other Galenic works I give the volume and page references in Kühn (K) unless otherwise noted.

one of his short programmatic works puts it.² This claim has at least two distinct senses. First, it means that medical theory and practice must be based on the correct philosophical theories of logic, physics, and ethics. Secondly, however, Galen holds that the doctor, like the philosopher, must engage in the care of the soul, for its condition can affect the condition of the body.³ The practice of medicine thus demands a theory of the soul, especially one that emphasizes its role in accounting for physiological functions. But if Galen's conception of medicine is philosophical, his conception of philosophy, at least in its more practical aspects, is also a very medical one. Galen claims in various treatises that medical treatment is able to affect the condition of the soul and is therefore a key component of psychic therapy. The most striking example comes in the treatise *That the Soul's Powers Follow the Body's Temperaments*, where Galen argues that certain foods and drugs can directly influence psychological traits.⁴ By bringing together the psychological and physiological aspects of the soul, Galen's version of Platonic tripartition breaks down the distinction between treating the soul and treating the body; hence its central place in his project of making medicine more philosophical and philosophy more medical.

Platonic tripartition is not the only model of the soul's activities to appear in Galen's works.⁵ And in some of his more philosophical discussions the physiological basis of the theory recedes into the background.⁶

2 *Quod Optimus Medicus Sit Quoque Philosophus* 1.53–63 K; English translation in Singer (1997) 30–34.

3 See e.g., *On the Preservation of Health (De Sanitate Tuenda)* 6.40 K.

4 *Quod Animi Mores Corporis Temperamenta Sequantur (QAM)* 4.767–821 K; English translation in Singer (1997) 150–76. Cf. *On the Exercise with the Small Ball (De Parvae Pilae Exercitio)*, 5.899–910 K; Singer (1997) 299–304, a short treatise that describes a form of exercise useful for training both body and soul.

5 In particular, Galen often operates with a model in which "soul" (*psukhê*) is responsible only for cognitive and voluntary motor activities, while all other activities of the organism (e.g., nutrition, growth, etc.) are controlled by its "nature" or *phusis*. This conception of the soul's activities can be traced back to the early Hellenistic doctors Herophilus and Erasistratus, whose pioneering investigations of human anatomy in the third century BC established the nerves as conduits for sense perception and voluntary motion; it is also associated with the Stoics. Despite Galen's emphatic assertions to the contrary, his tripartite theory is difficult to reconcile in all its aspects with this "soul-nature" model. See von Staden (2000) 79–116.

6 See the two connected works on the diagnosis and cure of the soul's passions and errors (*De Propriorum Animi Cuiuslibet Affectuum Dignotione et Curatione (Aff. dign.)* and *De Animi Cuiuslibet Peccatorum Dignotione et Curatione (Pecc. dign.)*), ed. W. de Boer (1937), CMG 5.4.1.1, Leipzig: B.G. Teubner; English translation in Singer (1997) 100–49), as well as the Arabic summary of *On Moral Character (De Moribus)* as translated by Mattock (1972) 235–60.

Yet Galen never wavers in his affirmation of the tripartite theory, and the link between its physiological and psychological aspects is fundamental to his most extended attempt to establish it in *De Placitis Hippocratis et Platonis (PHP)*, Books 1–6. Indeed, a crucial feature of this work is Galen's use of anatomy and physiology to prove the theory, according to the rigorous standards for scientific demonstration that he sets out in *PHP* and elsewhere. Galen's handling of the two primary sources for Platonic tripartition, the *Republic* and *Timaeus*, is instructive in this regard. Galen considers the argument for psychic division in *Republic* IV to be a scientific demonstration (*apodeixis*) establishing that there are three distinct "powers" (*dunameis*) in the soul, but not that they are located in different parts of the body.⁷ He recognizes, of course, that Plato discusses the location of the parts in the *Timaeus*. But he also emphasizes the provisional status explicitly granted to the theories put forth in that work, especially those concerning the substance of the soul and the construction of the body.⁸ In sum, Galen's view seems to be that Plato had grasped the essentials of the tripartite theory and proved as much of it as he could; on the other hand he, Galen, is able to complete the task because of his superior anatomical knowledge. One could hardly ask for a clearer illustration of the Galenic claim that medical knowledge can contribute to philosophical understanding.

My main purpose in this chapter is to explain and assess Galen's argument for the tripartite theory as presented in *PHP* Books 1–6. I turn to this in section IV, after discussing the basis of Galen's division of the soul (section II) and describing the psychological and physiological aspects of his theory (section III). Finally, in section V, I address some of the problems raised by the theory and suggest some ways to address them.

II Parts, powers, and the division of the soul

Galen's goal in *PHP* is to prove that the soul is divided into three "parts" (*merê, moria*) or "forms" (*eidê*). In *PHP* 6.2 he explains that there is no significant difference between the two notions, and quotes various texts to show that Plato uses both *meros* and *eidos* of the soul's three

7 *PHP* 5.7.1–9, 5.479–81 K.

8 *PHP* 9.9.3–6, 5.791–93 K. In general Galen explains the differences between the *Republic* and *Timaeus* as due to the different purposes and audiences of the two works, rather than to any development in Plato's thought. See esp. *PHP* 5.7.9, 5.481 K and *De Propriis Placitis* 13, 186.17–25 in Boudon-Millot and Pietrobelli (2005) 168–213.

elements.⁹ Despite this talk of parts, however, much of the debate in *PHP* turns on the claim that the soul has three powers or *dunameis*. Galen typically writes of the rational, spirited, and appetitive powers, and only occasionally remarks that in fact the issue concerns distinct forms or parts. By calling the parts *dunameis*, Galen emphasizes their ability to produce certain effects; he consistently uses *dunamis* in the active sense of "power" or "capacity to affect," rather than the passive sense of "capacity to be affected" (or Aristotelian "potentiality").¹⁰ Each of the three primary organs – the brain, heart, and liver – is said to be or to contain the source (*arkhê* or *pêgê*) of one of the three powers.¹¹ Where Galen does make clear that he is talking of parts rather than powers, each part is said to be a separate substance (*ousia*) that is the source of many powers, corresponding to its various activities.¹² The distinction between powers and parts is reflected in Galen's choice of imagery. Where the three-power model is foremost, Galen often appeals to the *Phaedrus* image of reason as charioteer and spirit and appetite as more or less recalcitrant horses.¹³ But when he wishes to emphasize that the three parts of the soul are substances "different in kind" (*heterogenês*), he remarks that the Platonic comparisons of the soul to mythical beasts compounded of different kinds of animal (e.g., Scylla, Chimera, or Cerberus), or to the combination of man, lion, and many-headed beast, are more apt than the charioteer model, in which the two horses are similar in form.¹⁴

The distinction between parts and powers is crucial for understanding the basic argumentative structure of *PHP*, for it is in terms of powers that Galen sets out the various positions in the debate. According to this schema, Plato and Hippocrates adopt the correct view of three powers with their sources in the brain, the heart, and the liver; directly opposed

9 5.514–19 K. Cf. *In Plat. Timaeum Comm.*, 11.21–12.21 (ad 76e7–77c5) in Schröder (1934).

10 At *PHP* 9.9.40–41, 5.802–03 K Galen says that the term *dunamis* always has the active sense of "power," and moreover that Plato always uses it in that way (a remarkable claim in light of passages such as *Phaedrus* 270d, which clearly recognize both active and passive senses). Galen perhaps has *Republic* V, 477c–480a, in mind, where faculties such as sight are described as active *dunameis*.

11 For *arkhê* linked with *pêgê* see *PHP* 2.4.49, 5.239 K; 6.8.39, 5.573 K. For *pêgê* alone see *PHP* 2.3.7, 5.220 K; 3.6.5, 5.334 K; 7.1.19, 5.592 K. Cf. *PHP* 2.8.22, 5.277 K: Galen is concerned with "the beginning that pertains to power" (*tên kata dunamin archên*), not that which pertains to "origin" (*tên kata genesin*).

12 See e.g., *PHP* 6.3.7, 5.521 K.

13 See e.g., *PHP* 3.3.4–6, 5.302–3 K; 3.3.12–15, 305–6 K; 5.5.34–35, 5.466–67 K; 6.1.17, 5.510 K.

14 *PHP* 6.2.3–4, 5.514–15 K; *In Plat. Timaeum Comm.* 11.36–12.7 Schröder (ad 76e7–77c5). Both passages draw on Plato *Rep.* IX, 588b10–e3. For the soul as a combination of man, dog, and beast see *De Moribus* 3 250–51 Mattock.

to them is Chrysippus (a single power with a single source, the heart), while Aristotle and Posidonius are said to adopt a middle view (three powers with a single source, the heart).¹⁵ It is chiefly by showing that the three powers have their sources in separate bodily organs that Galen demonstrates their character as separate parts.

As powers, the three elements of the soul are viewed primarily as sources of motivation. This is clear from a brief review of the considerations that Galen adduces to show that there are in fact three powers in the soul. First, there are cases of psychic conflict that involve simultaneous, opposed motivations, such as the thirsty person who resists the urge to drink, or Medea, whose spirit impels her to do what she knows is wrong.¹⁶ That such cases indicate the presence of different powers in the soul follows directly, Galen thinks, from the principle enunciated at *Republic* 436b9–10: "[I]t is clear that the same thing will not consent to do or undergo opposite things at the same time, in the same respect and in relation to the same thing."¹⁷ Galen focuses on the question of what produces the opposed motivations: assuming that each impulse is produced by some power in the soul, and that the same power cannot bring about opposite effects at the same time, the soul must contain more than one power. Second, Galen cites what he claims to be the evident fact that animals and children experience the passions. Since they cannot be motivated by rational considerations (for the rational part of their souls is either non-existent or undeveloped), the cause of their apparently passionate behavior must be some power in the soul other than reason: namely, spirit or appetite.¹⁸ Third, there is the explanation of passion in adults, the main topic of discussion in Books 4 and 5 of *PHP*. Echoing Posidonius' criticisms of Chrysippus, Galen repeatedly claims that the latter has given no account of the cause (*aitia*) of the "excessive impulse" (*pleonazousa hormê*) of reason that is passion on his account.¹⁹ Whether or not Posidonius himself actually rejected Chrysippus' theory of the passions in favor of a Platonist account, this criticism is not in itself unfair, and Galen cannot be accused of misunderstanding in seizing on

15 See e.g., *PHP* 6.1.1–2, 5.505–06 K.

16 For the thirsty person see *PHP* 5.7.34–42, 5.488–90 K (quoting Plato *Rep.* IV, 439a9–d8). Medea is discussed (along with Odysseus) in *PHP* 3.3, 5.302–10 K.

17 Quoted (with slight deviation from the standard Platonic text) at *PHP* 5.7.12, 5.482 K and (as a principle that is "evident to the mind") at 9.9.23, 5.797 K.

18 *PHP* 3.7.11–12, 5.337–38 K; 5.7.74–82, 5.499–501 K; *De Moribus* 1 236, 239–40 Mattock; *QAM* 2, 4.768–69 K.

19 See e.g., *PHP* 4.3.3–8, 5.377–79 K; 4.4.36–37, 5.389–90 K.

it.²⁰ In Galen's view it is impossible that reason, conceived of as a power, could be the cause of psychic impulses that are contrary to reason (*para logon*) and violate its limits.²¹ Galen's discussion in *PHP* 4 and 5 is long and rambling, and it certainly does not do justice to the Stoic theory of the passions. But his arguments for the claim that the soul has three powers do at least show clearly that he understands the division of the soul to be based on a distinction between different sources of motivation.

III Psychology and physiology

This conception of the parts as sources of motivation is fundamental to Galen's understanding of Platonic tripartition as a psychological theory. Following *Republic* IX, Galen conceives of the appetitive part as moving the soul towards the enjoyment of bodily pleasures such as food and sex, the spirited part as moving it towards honor and victory, and the rational part as moving it towards the good.²² In *PHP* Galen expresses this by saying that each part has an "affinity" (*oikeiōsis*) for its proper objects.²³ In *Quod Animi Mores Corporis Temperamenta Sequantur* (QAM) he says that each part possesses a "desiderative power" (*epithumêtikê dunamis*) that aims at the attainment of its objects; the appetitive part or *epithumêtikon* is so named from the number and variety of its desires.²⁴ Psychic harmony is understood as a balance of strength between the three parts; the best state is when reason is in charge, the spirited part is strong and obedient, and the appetitive part is weak.²⁵ Galen recognizes the possibility that either of the two lower parts can become too strong and dominate the soul; in such a situation reason may go along either willingly or unwillingly.²⁶

20 Cooper (1998, 71–111) has argued that Posidonius did not reject the central Stoic claim that the passions are (mistaken) judgments of reason; his point, rather, was that it is necessary to posit the existence of certain non-rational elements in the soul (analogous to the spirited and appetitive powers of the Platonic soul) to account for reason's being led to endorse such judgments. This may well be correct, but if so it would mean only that Galen drew a different conclusion than Posidonius from the alleged weakness in Chrysippus' account, not that he misunderstood or misrepresented Posidonius' charge itself.

21 *PHP* 4.5.16, 5.395 K.

22 Cf. *Rep.* 580d6–581e4, where each part is associated with certain pleasures (*hêdonai*), desires (*epithumiai*), and a certain kind of life.

23 *PHP* 5.5.8, 5.460–61 K.

24 QAM 2 4.770–72 K. Cf. *PHP* 4.7.35, 5.424 K; *De Moribus* 2 247 Mattock.

25 See e.g., *De Moribus* 1 238 Mattock; *De Moribus* 2 247–48 Mattock. Neither spirit nor appetite can be allowed to become too weak: *PHP* 5.5.34, 5.466–67 K.

26 *De Moribus* 2 247 Mattock. In *PHP* 4.2.39–42, 5.375–76 K, Galen distinguishes between cases where reason endorses the motivations of the lower parts and those where it

Galen sometimes describes the activities of the three parts without making direct reference to their role in moving the soul to action. In *PHP* 7.3.2–3 he distinguishes between the "works" or "functions" (*erga*) performed by the three "sources" (*arkhai*) "by themselves" (*kath' heautên*, the psychological side of the theory) and those performed "in relation to" the body (*en tōi pros ti*, the physiological side). The works of the rational part by itself are cognitive activities such as thought, memory, and imagination; those of the spirited part are the maintenance of the strength or "tone" (*tonos*) of the soul, constancy in obeying reason's commands, and the "boiling, as it were" (*hoion zesis*) of the innate heat in states of passion; and that of the appetitive part is the enjoyment (*apolausis*) of pleasure, which produces licentiousness (*akolasia*) when it is immoderate.²⁷ A sharp distinction is drawn between the rational part, with its sophisticated cognitive abilities such as thinking, memory, and imagination, and the two lower parts, to which no such activities are ascribed.²⁸ In keeping with this the virtue of the rational part is said to consist in knowledge, while the virtues of the lower parts are certain "states" (*hexeis*) or "powers" (*dunameis*) that do not involve knowledge.²⁹

resists. If reason endorses the motivations of the *epithumêtikon*, the person is "licentious" (*akolastos*); if it resists but eventually prevails, the person is "self-controlled" (*enkratês*); if it resists but is defeated, he is "incontinent" (*akratês*). On the problems raised by *akrasia* for Galen's theory see section V below.

27 *PHP* 7.3.2–3, 5.600–01 K. Galen's references to the "tone" of the soul and the "boiling" of the innate heat in connection with the spirited part reflect a tendency towards a physical understanding of psychological activities, despite his official agnosticism on the question of the substance (*ousia*) of the soul. The notion of psychic strength as tone (*tonos*) is ascribed to Chrysippus in *PHP* 4.6.1–11, 5.403–06 K; Galen appropriates the term but associates it with the innate heat rather than the Stoic *pneuma*. Cf. *De Moribus* 1 238 Mattock, which identifies the innate heat as the essence of the strength provided by the spirited part. At *PHP* 6.8.74, 5.582 K, Galen quotes the description of anger in the *Timaeus* as a state in which "the strength of spirit boils" (*hote zeseie to tou thumou menos*, 70b3), and says that later philosophers defined anger as the boiling of the heat in the heart. Galen perhaps has Aristotle *De Anima* 403a29–403b1 in mind: the dialectician will define anger as the desire (*orexis*) for revenge, while the natural philosopher will say it is the boiling (*zesis*) of the blood and the heat around the heart. Cf. *De Sanitate Tuenda* 6.138 K: the "boiling, as it were" (*hoion zesis tis*) of the heat in the heart is the essence (*ousia*) of anger, while the desire (*orexis*) for revenge is only a concomitant (*sumbebêkos*).

28 Cf. *PHP* 5.7.68, 5.498 K: in a case of perceived injustice, the opinion (*doxazesthai*) that one has been wronged belongs to the rational part, while the work of the spirited part is to assist (*epamunein*) against the wrongdoer. For the restriction of imagination (*phantasia*) to the rational part see *De Symptomatum Differentiis* 7.55–62 K, where it is grouped with memory and thought among the soul's "hegemonic" activities, and section V below.

29 *PHP* 7.1.22–32, 5.593–95 K. The virtue of the spirited part is courage (*andreia*), that of the appetitive part is temperance (*sôphrosunê*), and that of the rational part is knowledge or wisdom (*epistêmê, sophia, phronêsis*).

The restriction of higher cognitive activities to the rational part is also reflected in the different kinds of training appropriate for the three parts: while the training of the rational part is intellectual, the lower parts are trained by habituation.³⁰

The physiological basis of the theory may be described more briefly. Galen holds that the brain, heart, and liver are the sources (*arkhai*) of the three principal duct systems of the body: the nerves, the arteries, and the veins, respectively. Each of these organs also contains the source (*arkhê*) of a power or faculty (*dunamis*) which "manages" (*dioikei*) the particular system in question. The source in the brain transmits the power of sensation and voluntary movement through the nerves, that in the heart transmits heat and the power of pulsation through the arteries, and that in the liver controls everything to do with nutrition, including the production of blood in organisms that have it.³¹ At first the fact that each of the three powers manages or regulates (*dioikei*) the physiological system under its control might seem to conflict with the Platonic demand that reason must rule over and control the lower parts. But in fact there is no conflict here. The appetitive desires for food, drink, and sex are under the control of the liver, as a slave's actions are controlled by his master.³² But *virtuous* control, aiming at the good rather than the pleasant, requires a standard of moderation that can only be imposed by the rational part. The proper physiological functioning of the liver is necessary but not sufficient for the virtuous control of bodily desires.

On both the psychological and the physiological side, then, Galen's division of the soul is based on the distinction between different sources (*arkhai*): sources of motivation, on the one hand, and of bodily activities on the other. Galen therefore has some justification to claim that the physiological and psychological aspects of the theory are two sides of the same coin. In *PHP* 6 he writes that Plato and Hippocrates divided the labor between them, as it were, with the former discussing the powers

of the soul and the latter the bodily organs.³³ Yet in evaluating Galen's argument for the theory it is important to keep the two aspects distinct. For even if one accepts the physiological theory of three powers flowing from the brain, heart, and liver, there is no *a priori* reason to suppose that the sources of these powers can be identified with the three elements of the Platonic soul. I turn now to Galen's efforts to establish both the physiological theory and its close link with the psychological.

IV Anatomy and demonstration

Galen's argument rests on a theory of scientific demonstration (*apodeixis*) that he describes and deploys in a wide range of works.³⁴ According to this theory, the premises of demonstrations must pertain to the essence (*ousia*) of the subject matter under investigation; otherwise they are merely dialectical, rhetorical, or worst of all sophistical.³⁵ Furthermore, the starting points (*arkhai*) of demonstrations must be evident to either the senses or the intellect. In Galen's view, the human intellect and sense organs when functioning normally serve as "natural criteria" that yield facts or propositions that are self-justifying (*ex heautou pistos*).³⁶ Not all premises of Galenic demonstrations are *prima facie* evident to either reason or perception. However, Galen is committed to the claim that all such premises can be derived from starting points that possess the requisite self-evident character; much of the discussion in *PHP* is devoted to showing how the premises of demonstrations about the soul can become evident through conceptual analysis and empirical investigation. Where no evident facts are available for deciding a particular question, nothing more than conjecture is possible; this is the basis for Galen's dismissal of questions such as whether there is a void outside the universe as inherently speculative.

In *PHP* 2 Galen presents his discussion of the brain and heart as a model of the demonstrative method. He takes off from the Stoic claim that the "governing part" or *hêgemonikon* of the soul is in the heart. Galen claims that the essence (*ousia*) of the governing part, as the Stoics

30 *PHP* 5.5.32–5, 5.466–67 K; *De Moribus* 1 238 Mattock. The spirited part is trained by music and competitive activities such as hunting (*PHP* 5.6.20–22, 5.472–73 K; *De Sanitate Tuenda* 6.40–42 K; *De Parvae Pilae Exercitio* 5.899–900 K; *De Moribus* 3 252 Mattock). In *Aff. dign.* (note 6 above) Galen describes a method for long-term management of passions such as anger, as well as appetites for food, drink, and sex.

31 *De Methodo Medendi* 10.635–36 K; *PHP* 7.3.2–3, 5.600–01 K (the activities "in relation to" the body; see discussion above with note 27).

32 Cf. *PHP* 6.4.6, 5.534 K: the liver is not like a servant that prepares material for his master, but rather like the master himself, with authority to distribute the material as he sees fit.

33 *PHP* 6.8.57–58, 5.577 K. Cf. *De Methodo Medendi* 10.635 K: the human being is governed by three powers (*dunamis*), which Plato called three souls (*psukhai*).

34 *PHP* itself is an important source for Galen's views on demonstration; see also *De Methodo Medendi* 10.27–46 K and *passim*, and *Pecc. dign.* (note 6 above). The fundamental modern account is Barnes (1991) 50–102.

35 For the fourfold classification of premises see *PHP* 2.3.8–11, 5.220–22 K; 2.8.1–2, 5.273 K; 3.1.4, 5.286 K.

36 *PHP* 9.1.10–13, 5.722–23 K; 2.5.5, 5.241 K; *De Methodo Medendi* 10.33 K.

themselves admit, is to be the source of perception and voluntary motion. Thus to determine whether the heart contains the governing part requires determining whether it is the source of such activities. And that is best done, Galen says, by looking for anatomical structures connected to the heart that transmit the power of sensation and motion.³⁷ But it is evident from anatomical investigation both that the nerves transmit such power and that they have their origin in the brain; hence the brain, not the heart, is the source of the power of sensation and motion.³⁸ Galen presents the results of vivisection experiments designed to isolate the contributions of the brain and the heart to the organism's activities. For example, ligation of the arteries results in cessation of the pulse on the side of the ligation away from the heart, but the animal continues to breathe and can move its muscles; hence the heart is responsible for the pulse but not voluntary motion. On the other hand, exposing and compressing the brain, or cutting the nerves, deprives the animal of respiration, voice, sensation, and voluntary motion, but the pulse continues without interruption; hence the brain and nerves are responsible for sensation and voluntary motion but not the pulse.³⁹ These facts, Galen claims, establish both the respective contributions of the brain and heart and their independence from one another.⁴⁰ Galen's method in the case of the brain and heart fits his theory of demonstration quite well, and it is reasonable to conclude that he has indeed shown these organs to be distinct sources of certain physiological activities.

The physiological role of the liver is more problematic. Here an experimental demonstration of function is impossible, since the liver is not a source of evident motion like the brain and heart. As a result, Galen says that he must infer its function from the "properties peculiar" to it (*ek tôn toutôn sumbebēkotôn idiai*); these turn out to be observable structural

37 *PHP* 2.3.1–7, 5.219–20 K.

38 Cf. the concise formulation of the argument at *PHP* 8.1.22, 5.655 K: "Where the source (*arkhē*) of the nerves is, there is the governing part. The source of the nerves is in the brain. Therefore, the governing part is there."

39 For these experiments see *PHP* 2.4.42, 5.237–38 K; 3.4.4, 5.333–34 K; 6.3.3, 5.519–520 K. It is, of course, crucial that the ligation of arteries and nerves results in loss of function on the side away from the heart and brain, respectively.

40 In *PHP* 2.6, 5.262–67 K, Galen explicitly considers the possibility that the heart might transmit power to the brain or vice versa; thus the heart could be the ultimate source of perception and voluntary motion, even though the brain is the source of the nerves. To rule this out he describes the consequences of severing the arteries that connect heart and brain (loss of pulse on the side away from the heart, but voice is unimpeded) and of severing the associated nerves (loss of voice, but heartbeat and pulsation continue).

features that serve as indications of its function.⁴¹ In *PHP* 6.2–8 Galen offers a number of arguments that the liver is the source of the veins and therefore of the nutritive power. He likens the arrangement of the liver, which is connected to the stomach and intestines via the portal vein and to the rest of the body via the vena cava, to that of the "root-growth" (*rhizōsis*) in plants: the center of the root system which sends roots downward and branches upward, and which is also (Galen claims) the obvious source of the power that governs plants. The underlying assumption is that similarity of structural arrangement reflects similar function; the comparison with plants is especially revealing, Galen says, since they possess only the appetitive soul.⁴² A further sign that the liver is the source of the veins is the fact that it is the only organ to which all the veins are connected.⁴³ That the liver is responsible for blood production is indicated by the peculiar consistency of its flesh, which is more bloodlike than that of any other organ.⁴⁴ Galen's arguments here obviously rely on more sweeping background assumptions than in the case of the brain and heart; in particular, he appeals to the notion that "nature does nothing in vain" to justify some of the conclusions reached.⁴⁵ While such assumptions are of course open to question, there is no reason to conclude that Galen fails to live up to his own methodological requirements in claiming demonstrative status for some of the arguments concerning the liver. For Galen takes such assumptions to be truths which are, or which should be, evident to the mind upon reflection and empirical investigation, and he elsewhere provides extensive support for them.⁴⁶

So much for physiology. But what reasons, apart from Platonic authority, did Galen have for identifying the brain, heart, and liver as the locations of psychological activities?⁴⁷ Galen is on relatively firm ground where the

41 *PHP* 6.3.1–6, 5.519–21 K. 42 *PHP* 6.3.10–42, 5.522–32 K.

43 *PHP* 6.5.16–20, 5.542–43 K. 44 *PHP* 6.8.8–36, 5.565–73 K.

45 See esp. *PHP* 6.4, 5.532–39 K, where Galen argues against the view that the liver provides only the matter for nutrition, while the heart supplies the power.

46 In *De Usu Partium* (*UP*), for example, which is a sustained argument for the maximal economy and efficiency of nature's design. In *PHP* 8.1.25–45, 5.655–60 K, Galen claims demonstrative status for the arguments based on the analogy with plants and on the liver's unique property of connection with all the veins. Cf. Hankinson (1991) 223–29; Tieléman (1996) 55–65.

47 In fact the *Timaeus* is rather less precise on this point than Galen acknowledges. It locates the spirited part "between the midriff and the neck" (70a4) and the appetitive part "in the area between the midriff and the boundary of the navel" (70e1–2; cf. 77b4). At 71d2 *Timaeus* refers to the portion of soul situated "around the liver" (*peri to hēpar*), but Galen writes of the appetitive part as situated "in the liver" (*kata to hēpar*) at *In Plat. Timaeum Comm.* 11.27 Schröder (ad 76e7–77c5; cf. *ibid.* 12.12).

heart and brain are concerned. He takes it as evident that the heart departs from its natural activity more than other organs in cases of passion; since the spirited part is also particularly excited in states of passion, he infers that the heart is the seat of the spirited part.⁴⁸ The association of the passions with the heart was a traditional view that had been given further support by Galen's adversaries, especially Chrysippus. Galen is happy to accept these arguments, with the proviso that the presence of the spirited part in the heart does not imply that the rational part is located there as well.⁴⁹ But Galen also elaborates the traditional association between the heart and the passions into a richly detailed system in which variations of the pulse are correlated with different emotional states.⁵⁰ Since the heart according to Galenic physiology transmits the power of pulsation to the arteries, and this power evidently varies with the passions, the link between the physiological and psychological is especially close here. As for the brain, the link between perception and such activities as imagination (*phantasia*), memory, and thinking provided strong evidence for locating these activities there, once it was established that the brain is the source of perception and voluntary motion.⁵¹ Further evidence was provided by diseases involving impairment of faculties such as memory; such diseases, Galen claims, typically follow damage to the brain and are cured by treating it.⁵²

Once again the liver presents what appears to be the greatest challenge to Galen's project. Granted that the part of the soul in the liver is responsible for controlling nutrition and blood production, why should it be identified with the Platonic *epithumêtikon*? As the source of the

48 PHP 6.3.4, 5.520 K; 8.1.23, 5.655 K.

49 See e.g., PHP 2.7.7–8, 5.268 K; 3.5.40–47, 5.330–33 K.

50 At PHP 6.8.45, 5.574 K, Galen quotes Hippocrates, *Epid.* 2.5.16 (5.130 Littré), which asserts that the person with a throbbing vein in the elbow is high-spirited (*oxuthumos*). Cf. PHP 6.1.15, 5.509 K: anger (*thumos*) in the motion of the spirited part is like an abnormally large pulsation in the arteries, and faint-heartedness (*athumia*) is like an abnormally small pulsation (on the "motion" of the spirited part cf. note 27 above). For a more detailed correlation between the passions and the pulse see e.g., *De Pulsibus ad Tirones* 12, 8.473–74 K (English translation in Singer (1997) 335).

51 For the idea of memory, opinion, and knowledge arising out of sense perception, see Plato *Phaedo* 96b, where these activities are all ascribed to the brain. Cf. *De Propriis Placitis* 3 173.27–35 Boudon-Millot and Pietrobelli: Galen "dares to affirm" (*tolmô apophainesthai*) that memory, thought, and logical reasoning take place in the brain, but is even more certain that it is the source of perception and voluntary motion.

52 Cf. PHP 3.6.6, 5.334 K. In *De Locis Affectis* 8.147–60 K, Galen criticizes the Pneumatist Archigenes for inconsistency in applying treatment to the head in a case of memory loss, when in fact on Archigenes' own theory memory is located in the heart.

nutritive power, the liver is responsible for attracting food and drink from the stomach as necessary to nourish the organism; it is thus natural to identify it as the source of desires for food and drink. The urge to eat something that tastes pleasant but we know is not good for us must, Galen thinks, have a source other than rational judgment; the further claim that this source is the same power that moves us to eat when hungry and abstain when full is hardly unreasonable. Moreover, Galen holds that the part of the soul in the liver controls reproduction as well as nutrition, making it the source of the desire for sex as well.⁵³

But what exactly does it mean to say, as Galen sometimes does, that the appetitive part *has* desires? Since Galen restricts all higher cognitive activities such as thought to the rational part, he cannot mean that it has conscious desires. Galen's remarks on a puzzling passage of Plato's *Timaeus* may help to explain what he has in mind. Commenting on *Timaeus* 77b, Galen endorses Plato's claim that plants, which possess the appetitive soul, consequently share in "sensation (*aisthêsis*), pleasant and painful, with desires (*epithumiai*)" (77b5–6). But he explains that they have *aisthêsis* only in a very limited sense: they possess a capacity to discriminate (a *gnôristikê dunamis*) between what is appropriate and foreign to them. That is all that is necessary to explain the fact that they attract appropriate nutriment and repel foreign substances.⁵⁴ The attribution of *epithumiai* to plants, and to the appetitive part, can be understood in a similarly limited way: to say that the appetitive part has *epithumiai* is just to say that it attracts what is appropriate to it; in other words, its striving to attain its objects is its *epithumia*.⁵⁵ Thus at PHP 6.8.52, 5.576 K, Galen takes the fact that Plato describes the appetitive part as "desirous (*epithumêtikon*) of food and drink" (*Timaeus* 70d7) to indicate that he also endorsed Galen's physiological theory that the liver attracts food and drink from the stomach; this suggests that to be "desirous" of food is closely linked with, if not limited to, attracting it.

53 Galen claims that Plato and Aristotle agreed in attributing control over growth and reproduction, as well as nutrition, to the appetitive soul: PHP 6.3.7, 5.521 K.

54 In *Plat. Timaeum Comm.* 11.9–20 Schröder (ad 76e7–77c5). In *De Propriis Placitis* 15 189–90 Boudon-Millot and Pietrobelli, Galen distinguishes the *gnôristikê dunamis* in plants from ordinary sense perception: plants cannot grasp any of the objects of sight, sound, taste, smell, or touch, but can only discriminate between what can and cannot nourish them.

55 Drawing on the same passage of the *Timaeus*, Porphyry argues in *Ad Gaurum* that plants have *aisthêsis* and desire (his term is *orexis*) only "homonomously" (ch. 4 of the text as edited by Kalbfleisch (1895) 33–62). I am grateful to Charles Brittain for this reference.

The resulting picture is as follows. The appetitive part exerts an attractive pull on the stomach when it senses a lack of food; that pull is an urge to eat or *epithumia*. It belongs to the rational part, with its vastly superior cognitive abilities, to translate this urge into a conscious, articulate desire – “I want this cake” – and also to impose limits on the appetitive part according to what is good or bad, not just pleasant or painful.⁵⁶ Thus, the appetitive part is both the locus of desires, in the limited sense of bodily urges, and the source of conscious desires in the rational part.

So Galen's identification of the three parts of the Platonic soul with the physiological powers governing the body is not as implausible as it might at first appear. Indeed a clear line of thought runs through *PHP* 1–6 despite Galen's rambling exposition and sometimes bitter polemic. Galen accepts the Platonic argument that the soul has three powers, conceived of as sources of motivation, and makes effective use of Posidonius' criticism of Chrysippus to support it. By any reasonable standard his physiological experiments demonstrated the presence of independent sources of motion in the brain and heart; further evidence suggested that the liver was also such a source. The traditional association between the passions and the heart, bolstered by the theory of the pulse, seemed to establish that the passions arise in the heart; and the brain's higher functions were naturally associated with its role as the source of perception and voluntary motion. Finally, the liver's role as both the locus and source of desires follows directly from its physiological role in the management of nutrition and reproduction. Galen, then, had good reason to claim that he had provided strong support to the Platonic theory by drawing on the results of his anatomical and physiological investigations.

Perhaps the most glaring flaw in Galen's procedure is that he seems to have ignored certain possible options in the debate. He does not grant serious consideration to what is arguably the basic intuition underlying the Stoic and Peripatetic theories that he attacks, *viz.*, the idea that there

56 Cf. *De Symptomatum Causis* 7.130–31 K, which describes how the evacuation of certain parts leads to a “natural desire” (*phusikê orexis*) for replenishment. Eventually this results in the veins drawing food from the stomach; the perception (*aisthêsis*) of this suction is hunger, a “psychic desire” (*psukhikê orexis*). Here Galen operates with the *psukhê-phusis* model mentioned above (note 5) rather than the tripartite theory. But he often identifies *phusis* with the appetitive part of the soul, and the functions of *psukhê* correspond broadly to those of the rational part. Thus the passage can be taken as describing a process by which desires in the appetitive part, which are closely associated with physiological attraction, lead to desires in the rational part. On the importance of the stomach here cf. note 63 below.

must be a unified center of all psychic activities, regardless of the organ in which it is located. Indeed, Galen's convincing demonstration that the source of perception and voluntary motion is in the brain could be combined with the argument for a unified center of psychic activities to yield the conclusion that all such activities have their source in the brain. Galen never considers this option, though it is a view espoused in a text that *prima facie* had good Hippocratic authority: *On the Sacred Disease*.⁵⁷

Yet it should be clear what Galen's response to this objection would be. Since he considers the existence of three powers in the soul to be firmly established, he is able to take on board the traditional arguments that the passions are connected to the heart while rejecting the conclusion that reasoning takes place there as well. Combined with the physiological evidence for the brain and heart as independent sources of motion, this seemed to rule out the possibility that the brain could be the source of the passions. And this in turn undermined any argument for a single center of all psychic activities.⁵⁸ While this does not excuse Galen for failing to consider all the options in the debate, it does help to explain why he did not think there was any need to do so.

V Problems and conclusion

Although Galen's general line of argument for the tripartite theory can thus be defended, problems and tensions remain. First of all, Galen needs a physiological mechanism to explain communication between the parts. In Galen's view all voluntary motion is produced by the rational part of the soul in the brain; this sends impulses through the nerves, which in turn move the muscles, the “instruments of voluntary motion.”⁵⁹ But Galen also says that the lower parts of the soul are capable of producing voluntary

57 Galen mentions *On the Sacred Disease* rarely (never in *PHP*) and never attributes it to Hippocrates himself (see Grensemann (1968) 48). His position is at least consistent, even if there is a strong suspicion that the judgment of inauthenticity is prompted by the very point at issue here, *viz.*, the treatise's identification of the brain as the locus of the passions as well as thought (see ch. 14, 6.386–88 Littré).

58 Cf. *PHP* 3.5.45–47, 5.332–33 K.

59 For the theory and the phrase (*organa kinêseôs tês kath' hormên*) see *De Motu Musculorum* 4.367 K and *passim*. Galen recognizes no relevant distinction between *hormê* and *proairesis* in connection with action; the phrases *kinêsis kath' hormên* and *kinêsis kata proairesin* are thus interchangeable (*PHP* 8.1.1, 5.648–49 K; cf. *De Motu Musculorum* 4.372 K). For the phrase *kath' hormên* in the general sense “voluntary” (a typical usage in later philosophical literature), see Inwood (1985) 250–57.

motion.⁶⁰ Clearly, then, they must be able to transmit their impulses to the brain in some way. The lower parts also need a way to receive the commands of reason. Galen recognizes the need for communication between the parts, and indicates that it is provided by the nerves which link the brain to the heart and liver.⁶¹ Yet no details are supplied. Furthermore, it might be thought that the nerves to the heart and liver would endow them with the limited cognitive abilities that they have; for according to Galen's understanding of the nervous system, the brain transmits the power (*dunamis*) of perception to the organs to which it is connected in such a way that they become endowed with that power in their own right.⁶² Yet Galen does not explain the cognitive abilities of the lower parts in this way.⁶³ In these respects, then, his physiological theory is somewhat underdeveloped.

A more fundamental problem is raised by the explanation of *akrasia* or weakness of will. Galen holds that spirit and appetite can and sometimes do move us to act over the objections of reason: reason may either follow the impulses of the lower parts, resist them and prevail, or resist and be overcome (i.e., *akrasia*).⁶⁴ But since the rational part initiates all voluntary motion, Galen seems committed to saying that it approves of all such motion. If that is so then it is unclear, on both the physiological and the psychological levels, how a person could voluntarily act in a way that reason did not approve.

One way to address this problem would be to distinguish between reason's role as a source of motivation and its function of deciding on action. Action contrary to one's reasoned judgment would then be possible if the "deciding faculty" of the rational part chose to follow the impulses of the

60 PHP 5.7.1, 5.479 K: "the parts of the soul that move us by volition (*kath' hormen*) are three in number."

61 For the nerves from brain to heart see PHP 1.10.1, 5.206 K and 2.6.4, 5.263 K. For the nerve from brain to liver see UP 4.13, 1.226–28 Helmreich (3.308–11 K), where the need for communication is explicitly linked with the demands of the tripartite theory: the three parts are connected by "offshoots" (*apophuseis*) so that they may "heed" (*epaiein*) one another.

62 PHP 7.7.17–19, 5.641–42 K.

63 At UP 4.13, 1.226 Helmreich (3.308–09 K), Galen remarks that insofar as the liver is the seat of the nutritive soul, which also exists in plants, it needs no nerve at all. At UP 4.7, 1.201–03 Helmreich (3.275–77 K) the stomach is said to be able to perceive that food is lacking by means of a power transmitted through large nerves from the brain (cf. *De Symptomatum Causis* 7.128–31 K and note 56 above). It is remarkable that Galen does not mention the liver in this connection, given his view of its physiological role as set forth in PHP. Cf. De Lacy (1988) 61–62.

64 PHP 4.2.39–42, 5.375–76 K (note 26 above).

lower parts rather than the intellect. Galen sketches out such a conception of the rational part near the end of *De Moribus* (ch. 4 253 Mattock). The intellect is said to stand in the same relationship to the rational soul as the eye stands to the body; in addition to the intellect, the rational soul possesses the faculties of "feeling" (i.e., perception), "imagination," "memory," and "the faculty by which deliberate movement is produced." "Thought and scrutiny," the activities of the intellect, are said to investigate what is "represented in the imagination"; this leads to a decision, the desire to act, and the movement of the muscles and limbs. But Galen goes on to explain that not all action results from thought:

Most action, thought and scrutiny is caused by a faculty in us that perceives that something is compatible with something else or that a particular speech or action must necessarily follow it, or that something is incompatible with something else and that the two things are contradictory. Division and composition and investigation of crafts and arts come only from this faculty, which is that by which the rational animals are most particularly distinguished. Other animals share the rest of the faculties with the rational animals, for they move, desire to perform actions, and imagine them. What I mean by "imagination" is every movement that is produced in the soul because of the movements that happen in it when a change occurs in the body.

(*De Moribus* 4 253 Mattock)

Since animals can move although they lack the capacity for thought and deliberation, their ability to do so evidently depends only on imagination and the "faculty by which deliberate movement is produced." A similar explanation holds for infants, in whom the rational soul is not yet developed.⁶⁵ Despite some uncertainty, the Arabic summary makes it reasonably clear that Galen is offering an account of action as flowing from a faculty of decision in the rational part.⁶⁶ Since this faculty is stimulated by what occurs in the imagination, imagination has a crucial role in producing action.⁶⁷ To explain *akrasia*, then, we need only suppose that a

65 *De Moribus* 1 239 Mattock: Every infant "has in its imagination an image of that which suits it and that which does not suit it," as well as a love of the former and a hatred of the latter; this leads it to seek the former and avoid the latter.

66 For "choosing" (*proaireisthai*) as one of the activities of the governing part of the soul in addition to thinking (*ennoein*), remembering, and reasoning (*logizesthai*), see *De Locis Affectis* 8.127 K. Voluntary motion (*kata proairesin*) is characteristic of animals as opposed to plants: *De Naturalibus Facultatibus* 1 2.1 K.

67 The idea is Aristotelian; see *De Motu Animalium* *passim* and *De Anima* 3.9–11, with the discussion of Nussbaum (1978) 221–69. For *phantasia* in Galen as a faculty that involves mental images such as might be produced by sense perception see *De Symptomatum*

person's deciding faculty is poorly developed and susceptible to following the impulses of the lower parts rather than the results of rational thought and deliberation.

The problem of animal movement is in fact analogous to that of *akrasia* in humans. Here also there is an apparent contradiction. For Galen frequently states that animals are irrational or do not possess the rational soul; but if the rational soul is responsible for perception and voluntary motion, then it is unclear how animals can perceive or move voluntarily. As the above-quoted passage shows, what the denial of the rational soul to animals really amounts to is the claim that they do not possess the higher rational faculties of thought and deliberation (it is by such faculties that man is "most particularly distinguished"); *a fortiori*, rational considerations cannot motivate their behavior.⁶⁸

The role of the imagination in producing action suggests that it may be crucial in mediating the communication between the rational part and the lower parts. As for the transmission of impulses from the lower parts, we need only suppose that the rational part perceives the excited states of the lower parts, leading to the formation of a mental image or impression that results in action. And granting the lower parts access to mental images formed in the rational part could explain both how they can have access to sense impressions and how reason is able to command them. In *PHP* 5 Galen quotes with approval a passage of Posidonius in which the latter explains that a vivid impression or image (*phantasia*) is much better able to produce the passions (i.e., in Galen's terms, affect the lower parts of the soul) than rational persuasion.⁶⁹ The notion that reason communicates with the lower parts by means of images of course recalls reason's projection of images (*eidōla* or *phantasmata*) on the liver in the *Timaeus* (71a–e). Galen's point in limiting *phantasia* to the rational part may have been to stress that the lower parts have the power only to receive such images, not to produce them.

None of this is worked out by Galen in any detail. But it suffices, I believe, to show that the problems of the physiological connection between the parts, and of weakness of will, are not in themselves fatal objections

Differentiis 7.60–61 K, which describes the delusional visions that result when *phantasia* is affected by disease.

⁶⁸ Cf. the beginning of *Adhortatio ad Artes Addiscendas* (1.1 K; Singer (1997) 35), where Galen remarks that while "the so-called irrational animals" clearly do not possess the kind of reason that results in speech, it is possible that they possess "internal" (*endiathetos*) reason within their souls.

⁶⁹ *PHP* 5.6.24–26, 5.473–74 K = Posidonius fr. 162 Edelstein-Kidd.

to Galen's theory of the tripartite soul, as has sometimes been claimed.⁷⁰ I hope in any case to have shown that Galen succeeds in articulating a coherent Platonic theory that can serve as a basis for his work in medicine and therapy of the soul, and that he makes powerful use of anatomy to support it. To that extent, Galen's bold project of bringing philosophy and medicine together might fairly be judged a success.

⁷⁰ Mansfeld (1991) 138–45.