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IV

TEUN TIELEMAN

GALEN'S PSYCHOLOGY

1. *Introduction*

In the course of the 19th century psychology began to emancipate itself from philosophy, both conceptually and institutionally. In most western countries this process was completed around the middle of the last century. It was integral to the self-image of the young discipline that it saw itself as "the science of mental life".[1] As such, it favoured experimentation and quantitative methods. This approach was typical of Gustav Theodor Fechner (1801-87), Hermann von Helmholtz (1821-94), Wilhelm Wundt (1832-1920), who count as its founding fathers precisely for this reason. To be sure, it is possible to trace more distant ancestors but most histories of the discipline do not go further back than the 16th and 17th centuries, i.e. the period in which modern science arose. Descartes (1596-1650) and others were influential in propounding the view that the study of the mind should conform with, or at least not contradict, the discoveries made by the emerging science and indeed adopt its methods.[2]

[1] This definition constitutes the opening of William JAMES' (1842-1910) masterpiece *The Principles of Psychology* (New York 1890; several reprints).

[2] Over the past decades a great number of histories of psychology have appeared, see e.g. R. THOMSON, *The Pelican History of Psychology* (Harmondsworth 1968); W.S. SAHAKIAN, *History of Psychology. A Source Book in Systematic*

Strictly speaking, then, it is anachronistic to speak of psychology with reference to medieval or ancient philosophers, who lacked the very term.[3] Yet it may be pardonable to do so provided we keep a constant eye on the specific historical and philosophical context conditioning pre-modern theories on mental life. With this caveat in mind, we can also speak of Galen's psychology. As it is, his work in this area offers a striking anticipation of two features I have just marked out as distinctive of modern psychology. First, Galen too grafts his theories onto the most advanced scientific knowledge available in his day, in particular the anatomy and physiology as it had been developed by Hellenistic science and further enriched by himself and others. Of central importance here was the discovery of the nervous system.

Secondly, Galen was acutely sensitive to methodological issues and requirements. Here too scientists, most notably Herophilus, were his models both as to their effective use of experimental methods and as to their sense of the limitations on what could in any given case be scientifically established. However, Galen's methodology is not wholly derived from the scientific or medical tradition. He is also indebted to the later exegetical traditions connected with the Aristotelian *Organon* and the Platonic dialogues. In consequence, we have to take account of both the medical and the philosophical traditions when studying the way in which Galen addressed problems relating to the mind.

Earlier work in this area has, understandably, focused on two treatises in particular — *On the Doctrines of Hippocrates and*

Psychology (rev. ed. Itasca Ill. 1981); D. HOTHERSALL, *History of Psychology* (New York 1984).

[3] The term has been traced back to the Dalmatian humanist M. MARULUS (MARULIC), who is on record as having completed around 1520 a tract entitled *Psichiologia de ratione animae humanae liber I*. Its earliest extant occurrence is in J.TH. FREIGIUS' *Ciceronianus* (1579); cf. also the monograph by O. CASMANN entitled *Psychologia anthropologica sive animae humanae doctrina* (1594). See further E. SCHEERER, in *Historisches Wörterbuch der Philosophie*, hrsg. von J. RITTER — K. GRÜNDER, Bd. 7 (Darmstadt 1989), *s.v.* 'Psychologie', cols. 1599-1601, with further references.

Plato (*PHP*) Books I-VI and *The Capacities of the Soul Follow the Temperaments of the Body* (*QAM*). It is also marked by a heavy concentration on Galen's relation to past authorities such as Plato, Hippocrates and the Hellenistic scientists.[4] This *status quaestionis* calls for two things in particular. First, we should adduce more Galenic treatises. Some are not specifically devoted to the soul but contain a host of relevant observations and arguments illustrating Galen's attitude, or attitudes, toward this matter. Two texts of this kind have only recently been made accessible or better accessible, viz. Larrain's new edition of fragments of Galen's commentary on the Platonic *Timaeus*[5] and Nutton's edition of the *On My Own Opinions* (*Sent.Prop.*).[6] Secondly, it

[4] On psychological themes in the *PHP* see PH. DE LACY, "The Third Part of the Soul", in *Le opere psicologiche di Galeno*, a cura di P. MANULI e M. VEGETTI (Napoli 1988), 43-64; P. MANULI, "La passione nel *De placitis Hippocratis et Platonis*", in *Opere psichologiche*, 185-214; R.J. HANKINSON, "Galen's Anatomy of the Soul", in *Phronesis* 36 (1991), 197-233; ID., "Actions and passions: affection, emotion and moral self-management in Galen's philosophical psychology", in *Passions & Perceptions. Studies in Hellenistic Philosophy of Mind*, ed. by J. BRUNSCHWIG and M.C. NUSSBAUM (Cambridge/Paris 1993), 184-222; J. MANSFELD, "The Idea of the Will in Chrysippus, Posidonius, and Galen", in *Proceedings of the Boston Area Colloquium on Ancient Philosophy* VII (1991), 107-45; T. TIELEMAN, *Galen and Chrysippus On the Soul. Argument and Refutation in the* De Placitis *Books II and III* (Leiden 1996); ID., "Galen on the Seat of the Intellect. Anatomical Experiment and Philosophical Tradition", in *Science and Mathematics in Ancient Greek Culture,* ed. by T. RIHLL and C.J. TUPLIN (Oxford 2002), 256-73; ID., *Chrysippus On Affections. Reconstruction and Interpretation* (Leiden 2003). On *QAM* see L. GARCIA BALLESTER, "La 'Psique' en el somaticismo medico de la antiguedad. La actitud de Galeno", in *Episteme* 3 (1969), 195-209; ID., (1971) "La utilizacion de Platon y Aristoteles en los escritos tardios de Galeno", in *Episteme* 5 (1971), 112-20; P.L. DONINI, *Tre studi sull'aristotelismo nel secondo secolo d.C.* (Torino 1974), 132-57; G.E.R. LLOYD, "Scholarship, Authority and Argument in Galen's *Quod animi mores*", in *Opere psichologiche*, 11-42. A somewhat larger selection of relevant treatises underlies the brief overview in P. MORAUX, *Der Aristotelismus bei den Griechen von Andronikos bis Alexander von Aphrodisias* II (Berlin/New York 1984), 773-85; cf. also the observations made by DEUSE (see n.7). I have not been able to use the older monograph by E. CHAUVET, *La psychologie de Galien* I-II (Caen 1860-7).

[5] Carlos J. LARRAIN (Ed.), *Galens Kommentar zu Platons Timaios*, Beiträge zur Altertumskunde 29 (Stuttgart 1992).

[6] *Galen. On My Own Opinions.* Edition, Translation and Commentary by V. NUTTON, Corpus Medicorum Graecorum V 3, 2 (Berlin 1999).

may not be exaggerated to say that much current research has a blind spot where the contemporary philosophical backdrop is concerned.[7] In order to make up for this neglect I shall compare Galen's arguments with what is to be found in Platonist authors of the Imperial period such as Alcinous, Porphyry and Jamblichus whenever this seems appropriate and illuminating. By considering Galen against the backdrop of contemporary Platonism, we may also get a clearer picture of his own specific contributions.

By exploiting more material and comparing other philosophers we may gain a fuller understanding of Galen's project of bringing the Platonic tripartition of the soul scientifically up-to-date — a project that seems deeply problematical. I shall argue that Galen did obviate some of the most pressing problems. Further there is the issue of the substance of the soul. It is well known that Galen disclaims knowledge of this matter. Still he keeps returning to it and it seems worth taking a closer look at the options he considers and their philosophical presuppositions. This point of view will reveal how deeply Galen was immersed in the philosophical debates of his day.

2. *Galen On the Soul*

Did Galen mark off the soul as a separate object of study? He used the Old Academic but later more general division of philosophy into logic, physics and ethics, e.g. in his manifesto *The Best Physician Is Also a Philosopher*.[8] But more often he sets,

[7] Galen's position is considered against the Middle Platonist backdrop by W. DEUSE, *Untersuchungen zur mittelplatonischen und neuplatonischen Seelenlehre* (Wiesbaden 1983), 100-2, 49-51; cf. also H. DÖRRIE, *Porphyrios'* "Symmikta Zetemata" (München 1959), 169 f.

[8] Cf. A.C.J. HABETS, *Geschiedenis van de indeling van de filosofie in de Oudheid* (Diss. Utrecht 1983), 127 ff. On the marriage between medicine and (parts of) philosophy envisaged by Galen see M. ISNARDI, "Techne", in *La Parola del Passato* 16 (1961), 257-96; M. VEGETTI, "Modelli di medicina in Galeno", in *Galen: Problems and Prospects*, ed. by V. NUTTON (London 1981), 47-65; cf. ID.,

in Aristotelian fashion, theoretical and practical philosophy against each other, with logic as an instrument rather than a part of philosophy.[9] We need not doubt that he subscribes to the view shared by Aristotle, the Stoics and Platonists and reflected in the doxographic tradition[10] that the topics of the soul's nature, structure and bodily seat belong to physics, which is part of theoretical philosophy.[11] The soul's virtues and affections, by contrast, traditionally belong to ethics. This is not to say that the boundaries between ethics and physics are strict. Thus the theory of affection (or emotion) depends directly on the conception of the structure of soul, i.e. which, if any, parts or powers it comprises. The soul's substance, by contrast, is taken by Galen as a purely theoretical subject. This is particularly clear from the long-standing antagonism between Platonic and Aristotelian dualism on the one hand and Stoic monism on the other. Galen opted for the first alternative in its Platonic version, viz. the tripartition involving one rational and two non-rational parts, which he also ascribed to Hippocrates and to Aristotle (albeit with the important qualification that the latter spoke of powers rather than parts, see below, p. 142). The moral philosopher needs to know only this tripartition; he does not need to take a stand on the soul's substance (mortal/immortal, corporeal/incorporeal) or its location for that matter.[12] Galen took the distinction between the moral and physical approach to be illustrated by Book 4 of Plato's *Republic* and by the

"L'immagine del medico e lo statuto epistemologico della medicina in Galeno", in *ANRW* II 37.2 (1994), 1672-1717.

[9] *PHP* 9.7.9-17 (= V 779.16- 782.3 K); 9.9.9-10 (= 794.6-17 K); *Sent.Propr.* 15.5, p.120.9-13 Nutton.

[10] For Aristotle, see e.g. *De an.* 1.1, 402 a 6-7, 403 a 27-28; for the Stoics see DIOG.LAERT. 7.133. The later Platonist position is represented by ALCIN. *Didasc.* pp. 166 ff., 176 ff. Hermann. For the doxographic (*Placita*) tradition see esp. AËTIUS, chs. IV and V.

[11] On this and what follows cf. HABETS, *Geschiedenis van de indeling* (see n.8), 127 ff.

[12] See e.g. *Plat.Tim.* III: CMG Suppl. I, p.12.16-21 Schröder-Kahle; *On Traits of Character,* pp.192-3 Kraus; *Sent.Prop.* 14.5, p.114.19-23 N.

Timaeus respectively. In the former dialogue, Plato is supposed to have limited himself deliberately to the tripartition as such, whereas in the latter he also discussed the bodily seat of each of the three parts of the soul.[13] But insofar as the moral philosopher refers to the soul's structure, he is drawing on physics. Thus Galen on occasion refers to the soul's structure and related issues as belonging to the "physical (or: natural) part of moral philosophy".[14]

In his *On My Own Books* (*Lib.Prop.*) however he does avail himself of these distinctions. Here he lists several treatises concerned with the soul as "Treatises pertaining to Plato's philosophy".[15] Among them are the extant treatises *PHP*, *QAM* and *Sent.Prop.* *QAM* is wholly devoted to the mind-body problem and so in fact to the soul's substance. In *PHP* and *Sent.Prop.* too the soul is the main subject, though the question of its substance is avoided as much as possible. Another title that features among this group is *On the Parts and Powers of the Soul* in three books. It is no longer extant but looms behind the closing section of *PHP* Book 9 (9.9.42 & 46 = V 803.10-17 & 804.15-805.3 K), to which I shall return below. Later Platonists such as Porphyry and Iamblichus devoted tracts to the same issue.

When Galen assembles these treatises as pertaining to Platonic philosophy, this means of course that he discussed Platonic doctrines in all of them. But another aspect seems also involved in this heading, viz. the fact that Galen here discussed Platonist questions, that is to say questions concerning the soul that were topical or controversial among the Platonists of his day. This is confirmed by a comparison of their contents with the relevant sections from extant Platonist literature from the same period. I shall give some examples of this in due course.[16]

[13] Cf. *PHP* 5.7.1-2 (= V 479.14-480.4 K); *Sent.Prop.* 8.3, p.82.9-15 N.

[14] *PHP* 9.9.9 (= V 794.6-17 K); *Plat.Tim.* III 2, p.12.18-21 S.-K.; *Sent.Prop.* 13.7, p.108.18-25 N.

[15] *Lib.Prop.* 13, p.122.7-18 Müller.

[16] I may add that therapeutical concerns do not seem to have influenced the place assigned by Galen to psychological issues within his conception of medicine-

3. *Galen's Agenda*

So much for the place assigned by Galen to the issues concerning the soul in his enterprise of a medical philosophy as a whole. Let us now take a closer look at the issues themselves. A traditional agenda of topics had developed under the influence of Aristotle's *On the Soul* (Περὶ ψυχῆς, *De anima*) in particular. Aristotle's monograph stands at the beginning of a long line of treatises with the same title. The Stoic scholarch Chrysippus (c.280-204 BCE) wrote one and so did the Christian apologist Tertullian (c.160-240 CE) and the Platonist philosopher Iamblichus (c.250-330 CE) — to name but a few. Plato was incorporated in this tradition when his *Phaedo* received the alternative title *On the Soul* (Diog.Laert. 3.37). But of course the Platonic *Timaeus*, *Republic* Book 4, the *Phaedrus* and other dialogues were considered relevant as well.

The distinctive tenets of philosophers and physicians on each of the traditional issues could conveniently be looked up in doxographic literature by those who composed monographs dealing with the soul (see Aëtius, chs. IV and V). These traditional issues were: whether or not the soul exists, what its substance (οὐσία) is, how many powers it has, of which kind the powers are, where in the body they are located, etc. This agenda can be traced back to Aristotle's *On the Soul*,[17] but it became far more standarized than it had ever been in the work of the great master himself. It is also reflected in the arrangement of subject-matter over the first six books of *PHP*, in accordance with this programmatic statement from the opening of Book 2:

> Having proposed to inquire into the doctrines of Hippocrates and Plato I began with that which is first in importance, from which I showed that almost all particular details

cum-philosophy. He did not have our modern concept of psychiatry, see J. PIGEAUD, "La psychopathologie de Galien", in *Opere psichologiche* (see n.4), 153-83, esp. 182. This is not to say (as Vincent Barras reminds me) that he was lacking in interest in many afflictions that we today label psychiatric.

[17] See ARIST. *De an.* 1.1, 402 a 23 ff.

> follow. This is their teaching about the powers (δυνάμεις) that govern us, their number, the nature of each and the place that each occupies in the body (*PHP* 2.1.1 [V 211-212.3 K] = Book 1, Test. II, third text, De Lacy).[18]

Thus Books 1-3 and 6 are concerned with the question of location and Books 4-5 cover those of number and quality.[19] Conspicuously absent from Galen's check-list list are two standard issues, viz. those of existence and substance. He may have justified their omission in the lost beginning of Book 1. In other treatises Galen argues that the soul's existence is evident from the motion of the organism. This point can be paralleled from several Platonist (and other) authors.[20] It reflects the Platonic definition of the soul as the "source and principle of motion" (πηγὴ καὶ ἀρχὴ κινήσεως, *Phaedr.* 245 c 9). From the Platonist tradition Galen also takes the distinction between motion/power (δύναμις)/substance,[21] which goes back to Plato's definition of

[18] Similarly 3.1.1 (= V 285 K); cf. ARIST. *De an.* 1.1, 402 a 7 f., 402 a 23-b 2, 402 b 10-403 a 2; Ps.ALEX.APHR. *Mantissa*, p.101.1-2 Bruns; PORPH. Fr.253 Smith, *ap.* STOB. I p.353.2, 13-14 Wachsmuth. For the doxographic tradition see the Aëtian *Placita* IV 2-3 (the substance of the soul), 4 (its parts), 5 (location of the regent part), 6, 8-13 (various powers: sense-perception, imagination, thought, speech); cf. also STOB. I 49. pp. 318 ff. W. It is certain that Galen used doxographic schemas from the tradition represented by Aëtius, see J. MANSFELD, "Doxography and Dialectic. The *Sitz im Leben* of the Placita", in *ANRW* II 36.4 (1990), 3141 ff.; TIELEMAN, *Chrysippus On Affections* (see n.4), ch.2.

[19] For these items as determining the structure of Galen's discussion see also *PHP* 5.7.1-2, 7 (= V 479.14-480.4 & 481.4-8 K). From a methodological point of view the differentiation between the powers precedes their assignment to particular organs, see next p.

[20] *Sent.Prop.* 14.1, p.110.4-24; *Plat.Tim.* III 2, p.11.9-20 S.-K. For Platonists using this argument see CIC. *Nat.deor.* 2.32; ATTICUS fr.7, ll. 51-64 Des Places, *ap.* EUSEB. *PE* 15.9.10-11. Cf. also Ps.ALEX.APHR. *Mantissa*, p.101.3-4 Bruns; SEXT.EMP. *Math.* 8.155 (bodily motion an "indicative sign", ἐνδεικτικὸν σημεῖον, of soul). On the question whether or not the soul exists in doxographic literature see previous n. and J. MANSFELD, "Doxography and Dialectic" (see n.18), 3188.

[21] See TERT. *Anim.* 14.3, IAMBL. *In Alc.* 4.12-16 Dillon. Iamblichus arranges his subject-matter of his *On the Soul* on the basis of this distinction, see J.M. DILLON *ad loc.* (p.233), who points out that in later Platonist literature it has become a general metaphysical principle applicable to other spiritual forces also. Thus GAL. *Sent.Propr.* 2, p.56.16 ff. N. applies it to God, arguing that he does

the criterion of being as the power to act or be acted upon (*Soph.* 247 d 8-e 4).[22] In later authors such as Galen this definition is operative in philosophical method. Since motion, or activity, is obvious to perception, it permits us to infer the presence of a particular power, taken as the cause of the activity at issue. Power in turn is linked to substance as an active property of it. Philosophers who like Galen were saturated in the Platonist-cum-Peripatetic ontology took substance as ontologically prior to power and activity. From a methodological point of view, however, what comes first is the activity, i.e. the perceptible phenomenon.[23] That is to say, Galen starts from obvious activities to infer the presence of particular powers. Thus emotions and voluntary movements are *seen* to be different in kind and so point to two different causes or powers.[24]

In this context we should understand Galen's well-known if not notorious statement that whenever we are at a loss as to the being of something we use the term power (*Nat.Fac.* 1.4, II 9 K.; *Sent.Prop.* 14.1, p.110.15-21 Nutton). Thus, suspending judgement as to the soul's substance he prefers to speak of the powers that govern us (see e.g. *PHP* 2.1.1 [= V 211-212.3 K] quoted above).

not know His substance, just as he disclaims knowledge of the substance of the soul. See also the contribution of Michael Frede to this volume. On Galen's linking of activity and power as a Platonist motif see also M.R. BARNES, "The Background and Use of Eunomius' Causal Language", in *Arianism after Arius. Essays on the Development of the Fourth Century Trinitarian Conflicts*, ed. by M.R. BARNES & D.H. WILLIAMS (Edinburgh 1993), 217-36.

[22] Λέγω δὴ τὸ καὶ ὁποιανοῦν κεκτημένον δύναμιν εἴτ' εἰς τὸ ποιεῖν ἕτερον ὁτιοῦν πεφυκὸς εἴτ' εἰς τὸ παθεῖν [...] πᾶν τοῦτο ὄντως εἶναι· τίθεμαι γὰρ ὅρον τὰ ὄντα ὡς ἔστιν οὐκ ἄλλο τι πλὴν δύναμις.

[23] Obviously, this feature is more Aristotelian than Platonic in origin. The version Aristotelian methodology developed by Herophilus is also one of the influences to be reckoned with when it comes to explaining Galen's position, see H. VON STADEN (Ed.), *Herophilus. The Art of Medicine in Early Alexandria* (Cambridge 1989), 115-25, 130-4 (including T50a-b, T58, T59a). There can be no doubt that Galen's stress on empirical verifiability bears a Herophilean stamp.

[24] *PHP* 2.7.18 (= V 271.3-11 K); 5.7.9 (= V 481.13-17 K); 5.7.83-7 (= V 502.1-503.18 K); 6.3.5 (= V 520.13-521.1 K); cf. 5.4.2 (= V 454.11-15 K).

The existence of soul was almost universally accepted in ancient philosophy and science.[25] The persistence of the idea of soul may seem surprising in view of the thorough-going physicalism of Hellenistic science, in particular the physiological theories of Herophilus and Erasistratus. These scientists had limited the scope of soul to the two functions they had been able to ascribe to the nervous system, viz. perception and voluntary motions. Both designated the *pneuma* ("breath") in these vessels as the vehicle or even (Erasistratus) substance of the soul. They no longer attributed bodily processes such as digestion to the soul but demoted these to the status of natural operations. Galen too retained the concept of soul but again extended it to cover growth and digestion. He assigned these functions to the Platonic third or appetitive part of the soul as he understood it and which he situated in the liver.[26] I shall return to this (problematic) feature of his physiological system presently. Suffice it to note here that for all his dependence on Hellenistic science, Galen chose to stuck to the Platonist tradition on this particular point.

But his doubts as to the soul's substance also marks a departure from the position of at least Erasistratus. In *PHP* Book 7 we find an intriguing passage (too long to quote) where Galen does discuss the question of substance — although he reaches no positive conclusion. Both common experience and anatomical experiment show that the escape of the *pneuma* from the

[25] The Peripatetic philosopher Dicaearchus and the Herophilean physician Andreas stand out as exceptions, see H. VON STADEN, "Body, Soul and Nerves: Epicurus, Herophilus, Erasistratus, the Stoics, and Galen", in *Psyche and Soma. Physicians and metaphysicians on the mind-body problem from Antquity to Enlightenment*, ed. by John P. WRIGHT & Paul POTTER (Oxford 2000), 105.

[26] He was also willing to speak of 'nature' with reference to the functions in question: see e.g. *PHP* 6.3.7 (= V 520.5-18 K); cf. *Hipp.Epid.VI* 5.5, CMG V 10.2.2., p.272.27 ff. Wenkebach-Pfaff (= XVIIB 250.15 ff. K). 'Nature' was the Stoic term used, in line with the Stoic *scala naturae*, according to which 'nature' or 'natural pneuma' defines the mode of existence of plants (and embryos of animals), see A.A. LONG, "Soul and Body in Stoicism", in *Phronesis* 27 (1982), 34-57; T. TIELEMAN, "Diogenes of Babylon and Stoic Embryology. Ps. Plutarch, *Plac.* V 15.4 Reconsidered", in *Mnemosyne* 44 (1991), 106-125.

brain induces temporary loss of consciousness but not death. This, he argues, strongly suggests that the *pneuma* is the soul's "first instrument" (the Aristotelian term) rather than its substance (7.3.14-22 [= V 604.14-606.15 K]). In another part of the same book where he discusses sense-perception as involving optical pneuma, he returns to the question of the substance of the soul: this is either *pneuma* (a position he ascribes to both the Stoics and Aristotle) or incorporeal. The latter option — which represents the Platonist position — entails that the *pneuma* is the soul's "first vehicle (ὄχημα)" — the Platonic term.[27] Galen does not express a preference for either option. In the present context it is sufficient for him to argue that the psychic *pneuma* through its communion with the optical *pneuma* renders the latter luminous. It is intended to justify why Galen does not want to decide upon this question, i.e. whether the soul is incorporeal or corporeal, whether it is immortal or mortal — fundamental polarities in Platonism.[28]

4. *Options*

In *PHP* Galen operates with a division of the options open in the debate on the number of parts or powers of the soul.[29] As is clear from this division, this question is inextricably linked to that of their location. The fullest version of this schema is to be found at 6.2.5-6 (= V 515.12-516.6 K):

[27] See e.g. *Tim.* 44 e 2, 69 c 7; *Phaedr.* 247 b 2; cf. *Tim.* 41 e 2; *Phaedo* 113 d 5. For the Platonist tradition cf. ALCIN. *Didasc.* 23, p.176.14 Hermann.

[28] This passage should be compared with Galen's later reflections on the soul's substance at *Hipp.Epid.VI* 5.5, pp.270.21-274.11 W.-Pf. (= XVIIB 246.8-253.3 K). Referring to his discussion in *PHP* (*ibid.* p.271.8-9 = XVIIB 247.13-16 K), he sticks to his agnosticism in this matter and even argues that a Hippocratic passage which seems to state that the soul is innate heat cannot be authentic.

[29] For Galen's view that a complete "division of the problem" (διαίρεσις τοῦ προβλήματος) should constitute the basis for scientific or philosophical discussion see esp. *PHP* 4.1.15-17 (= V 365.4-366.5 K); cf. 5.6.40-41 (= V 477.9-18 K); 3.1.18. (= V 289.8-11 K).

> Plato, holding that they [i.e. the forms, εἴδη, of the soul] are separated by their location in the body and differ greatly in essence (ταῖς οὐσίαις πάμπολυ διαλ⟨λ⟩άττειν), has good reason to call them both forms and parts (εἴδη τε καὶ μέρη). But Aristotle and Posidonius do not speak of forms or parts of the soul but say that there are powers of a single essence which has its base at the heart (δυνάμεις ... μιᾶς οὐσίας ἐκ τῆς καρδίας ὁρμωμένης).[30] Chrysippus not only subsumes anger (θύμος) and desire (ἐπιθυμία) under one essence (οὐσία) but also one power (δύναμις) (*PHP* 6.2.5-6 ~ Posid. Fr.146 E.-K.).

The same division of options underlies the following passage from Book 5, where Galen offers a critique of the form of psychological monism represented by the Stoic scholarch Chrysippus:

> My purpose is to show that it is not in a single part (μόριον) of the soul nor by virtue of a single power (δύναμιν) of it that both judgements and affections (πάθη) occur, as Chrysippus claimed, but that the soul has both a plurality of powers of different kinds (ἑτερογενεῖς) and a plurality of parts. That the powers of the soul are three in number and that by them we desire, feel anger, and reason — this is granted by both Aristotle and Posidonius. But that they are also spatially separate from each other, and that our soul not only contains many powers but is composed of parts that differ in kind (ἑτερογενῶν) and in substance (οὐσίαις), this is the doctrine of Hippocrates and Plato (*PHP* 5.4.2-3 [= V 454.11-455.4 K]; transl. De Lacy's, slightly modified).

According to this division of options Plato is credited with three essentially different parts, situated in three different organs. By contrast, Aristotle and the Stoic Posidonius who opted for one central organ are credited with one form underlying three powers. Galen does not attempt to explain what it means for the soul or its parts to be in a certain place, having decided to skip

[30] For this phrasing see also *ibid.* 6.1.1 (= V 505 K); cf. PORPH. Fr.251, p.269,31 f. Smith, *ap.* STOB. I p.349.3-4 W.

the question of its substance, i.e. whether or not the soul is corporeal. On the other hand he links the aspects of part and bodily seat (but cf. Galen's later explication in his *QAM* that the parts of the soul are the forms immanent in the three vital organs, below p. 150). The term 'substance' or 'being' (οὐσία) here serves to bring out that in speaking of parts one refers to essentially different 'forms' or 'kinds'. The Greek term εἶδος had been used by Plato himself in a relevant sense, as when he said that plants "share in the third kind (εἴδους) of soul", viz. the appetitive part (*Tim.* 77 b 3-4).[31] As such, it feature prominently in the context of the above passage. Here Galen is not so much concerned to refute the Stoics or Peripatetics but takes part in a dispute among Platonists. Presumably under the influence of Peripatetic criticism certain Platonists had abandoned the idea of the soul having separate forms or parts as incompatible with its unity and hence immortality. Exactly which Platonists Galen has in mind here must remain uncertain. But a version of this view was advanced by the Platonist Severus, a contemporary of Galen's.[32] Versions of it are attested for Nicolaus Damascenus (c. 5 BCE- 64 CE)[33] as well as Porphyry's mentor Longinus (early 3rd c. CE, see below).[34] Against their view, Galen devotes the second chapter of Book 6 to showing that Plato himself had spoken about forms of the soul. As is clear from the above division, the postulate of parts (rather than powers) and their separate location presuppose one another. Of

[31] Michael Frede drew my attention to this passage as illustrating the relevance of the sense 'kind' born by the term εἶδος.

[32] See EUSEB. *PE* 13.17.1-6, II p.239.9 ff. Mras with DEUSE, *Untersuchungen* (see n.7), 102-108, esp. 104 ff. Cf. J. DILLON, *The Middle Platonists. A Study of Platonism 80 B.C. to A.D. 220* (London 1977), 262-64.

[33] See PORPH. *ibid.* (see n. 30) p.353.12-354.6 W.(= F 7 Roeper/T 9 Lulofs) with P. MORAUX, *Der Aristotelismus bei den Griechen* I (Berlin/New York 1973), 481-87.

[34] PORPH. Fr.253, p.272.32 ff. Smith, ap. STOB. I p.351.11-19 W. cited *infra*, p. 145; cf. also Fr.253, p.274.77 ff. Smith, ap. STOB. I p.353.1-11 W. Highly relevant is TERT. *Anim.* 14, insisting that the idea of powers (as opposed to parts) is fundamental to that of the soul's unity and immortality.

this Plato had not offered a *demonstration*, however. The mythic account of the *Timaeus* could hardly count as such. This then is what Galen has to provide himself. He sets out to do so in Books 1-3 and 6, where he demonstrates that each of the three organs is the seat of one of the Platonic parts (Books 4-5 establish the tripartition as such, irrespective of the status of the faculties as either parts or powers, in line with the schema at 6.2.5 [V 515.12-516.1 K]). This demonstration takes the form of an inquiry into the distinctive *function* of each of the three organs. Identifying function with essence (*PHP* 1.8.12-15 [V 202.17-203.14 K]), Galen successively establishes the 'being' or essence of each of these organs in order to determine whether this suits his definition of the Platonic parts of the soul. Thus the brain is shown through anatomical observation and experiment to be the functional centre of perception and voluntary motion and hence the seat of the Platonic rational part.

To be sure, this way of linking of essence and function with respect to particular organs is Aristotelian rather than Platonic in inspiration. Indeed Galen effectively operates with the notion of immanent form. But we should not forget that immanent form was cheerfully accepted and reconciled with that of transcendent form by many Platonists of Galen's day.[35] But what then is the relation between the essence of the brain and the soul? In *PHP* Galen does not go into this inevitable question. But in *QAM* he will take the obvious next step of identifying the three parts of the soul with the form of each of the main bodily organs (see below, p. 150).

The Platonist backdrop can be further illustrated by comparing *PHP* 6.2.5 (= V 515.12-516.1 K) with Porphyry Fr.253

[35] See e.g. DILLON, *Middle Platonists* (see n.31), 137, 274 (note that Galen's term εἶδος was used for immanent form, whereas ἰδέα was reserved for transcendent form); cf. J. WHITTAKER, "Platonic Philosophy in the Early Centuries of the Empire", in *ANRW* II 36.1 (1987), 110 ff., who notes that "a further prominent feature of the Middle Platonic scholastic tradition is the attempt to interpret Plato in the light of Aristotle and where possible to accomodate the one to the other" (p.110).

Smith, *ap.* Stob. I p.351.8-19 W. and Iamblichus, *De anima, ap.* Stob. I pp.367.10-369.4 W. (= Fr. 10-12 Finamore-Dillon). Porphyry writes:

> It should be said that power (δύναμις) differs from part (μέρους) because one part diverges from another in kind (κατὰ γένος) and character, but powers belong to one and the same kind (γένος). This is why Aristotle declined parts with regard to the soul, but accepted powers: for the differentiation between parts immediately introduces a difference of substrate, whereas the differentiation between powers also occurs in one substrate.[36] Longinus, too, held that the living being did not have a plurality of parts but was without parts, though not without a plurality of powers, saying that according to Plato the soul comes to have a plurality of parts in bodies, being without parts when on its own; but if it is without a plurality of parts, it does not thereby have but a single power; for it is possible for a single thing without parts to have more than one power.

The passage from Iamblichus (which is far too long to quote) distinguishes between the same options in the same terms. The pattern of similarities and differences that emerges indicates that none of these authors (Galen, Porphyry, Iamblichus) depends on one of the others but that all depend on a common tradition. The traditional schema featured three main options in terms of the part/power distinction we have just explained, viz. the Platonic, Aristotelian and Stoic conceptions of the soul's structure. These three passages provide a nice example of how a schema of this sort could be used for the particular purpose each of them was pursuing. Galen associates the allegedly deviant Stoic Posidonius with the Aristotelian position. This suits his project in *PHP* Books 4 and 5 of playing

[36] This sentence is translated from Wachsmuth's text. Smith inserts a sentence (l.34 τὸ δέ ἑτεροδύναμον … l.35-6 εἰσάγειν), which is grammatically incorrect (note the genitive ὑποκειμένου) and paleographically unaccountable.

off Posidonius against Chrysippus.[37] Similarly Porphyry links his teacher Longinus to Aristotle, while having little interest in the Stoic doctrine which he almost completely suppresses (but note the reference to the option of a single power near the end of our passage). Longinus strikes a compromise by opting for powers with respect to its disembodied state and parts when it has taken up residence in the body.[38] This saves both the Platonic reference to parts and the unity and immortality of the soul.

Iamblichus, like Porphyry, explains the concepts of part and power (pp.367.10-368.11 W.) before presenting the schema of options (pp.368.12-369.4 W.). He does not attach the name of a later philosopher to the traditional division, limiting himself to a *précis* of the three main options (Stoic, Aristotelian, Platonic). But in marked contrast to Porphyry and Galen, he expands on the Stoic view on the parts and powers of the pneumatic soul (cf. *SVF* II 826, 831). Common to all three authors is the way in which they regulate the relation between the concepts of being, part and power. This also holds good for Iamblichus, even if he is the only one to draw attention to the corporeal conception of the soul advocated by the Stoics.

The Platonist backdrop to Galen's argument in *PHP* becomes still clearer from its closing section, *viz.* 9.9.41-46 (= V 803.7-805 K). This passage lists a number of examples of how the logical method of diaeresis or division can be applied. The powers of the soul (like the powers of the physical elements) are given in illustration of the thesis that

[37] Opinions still differ as to the extent to which Galen's portrayal of Posidonius as an adherent of psychological dualism is historically accurate. See now TIELEMAN, *Chrysippus On Affections* (see n.4), ch.5, for a full discussion and further references. Galen's inclusion of Posidonius into the Platonist division of options under discussion here should exhort us to exercise a due amount of caution as to Posidonius' acceptance of the Platonic trifold division, albeit in terms of powers rather than parts.

[38] The key text here is *Tim.* 35 a (on the context of which see also *infra* p. 149), from which Platonists such as Longinus could derive some support, see esp. the phrase τῆς ... περὶ τὰ σώματα γιγνομένης μεριστῆς (scil. οὐσίας), 35 a 2-3.

> ... substances (οὐσίας) are not divided into the powers (δυνάμεις) in them but that each substance, being undivided, has some activity (ἐνεργεῖν τι) in accordance with the powers in it (45).

Thus they [i.e. anonymous philosophers referred to a little earlier, 44, p.608.21 De Lacy = V 804.11 K) do not say

> without qualification that the substance has a power but at one time they add of burning or cooling or drying or moistening,[39] at another time of receiving impressions and reasoning and moving itself, or some of the other activities of this kind that we do (ἐνεργοῦμεν) with the rational soul, which is itself one but has many powers... (46).

When we compare this passage with 6.2.5 (= V 515.12-516.1 K), we may infer, first, that the basic schema of options in Book 6 results from an application of the method of diaeresis or division, in keeping with Galen's insistence on this method elsewhere as an indispensable tool for stating the options that are open in any debate.[40] But in the account from Book 9 we receive some further information. The distinction between substance and powers is explained as one between "unqualified underlying substance and its properties" (τῆς ὑποκειμένης οὐσίας ἀποίου καὶ τῶν συμβεβηκότων αὐτῇ, 44, p.608.19-21). We may take it that substance here stands for corporeal substance, with the properties being taken as incorporeal.[41] On the other hand, the schema at 6.2.5 suggests the Aristotelian sense of secondary substance, i.e. essence or form. In that case the properties are accidental properties in the Aristotelian sense. But in regard to

[39] *Viz.*, in the case of the physical elements.

[40] See *supra*, n. 29.

[41] Cf. the argument directed by the author of the pseudo-Galenic tract *The Qualities Are Incorporeal* against the Stoic position on the properties (XIX 463-484 K); ALCIN. *Didasc.* ch. XI. Like these authors, Galen at *PHP* 9.9.45 (= V 804.12-14 K), argues that the Stoic view would entail an endlessly repeated division; cf. also IAMBL. *ap.* STOB. I p.367.17-22 W. (on the context of which see above in text).

PHP 6.2.5 too we have noted that the concept expressed by the term οὐσία presupposes underlying material substance. In sum, there seems to be an ambiguity involved in Galen's use of the term in *PHP*.

In addition, we find here another instance of the triad substance/power/activity in connection with the distinction between unqualified being or substance (οὐσία) and its properties we have just noted. I have already pointed to Plato's statement of the criterion of being (*Soph.* 247 d-e; above, p. 139). But one also hears an unmistakable echo of *Phaedrus* 270 c-d. Here Plato describes the Hippocratic method as applied to the nature of the soul: first one establishes through division simple substances and then the powers characteristic of these substances. Here too, then, division halts at substance and substance underlies the powers. The fact that Plato subscribes to what he takes as the method of Hippocrates suits Galen's central thesis in *PHP* of the basic agreement between the two great masters. We need not doubt that this well-known passage was among Galen's personal favourites.[42] Even so he does not cite it here or anywhere else in *PHP*. But then the particular mode of division applied to the soul in this passage was not designed by Galen directly on the basis of this Platonic passage. As De Lacy rightly notes in his apparatus of references, we have a very similar division of types of division in ch. 5 of Alcinous' Platonist handbook.[43] Right at the end of the book and following the passage we have just quoted there is a reference to a (lost) treatise (*PHP* 9.9.46). A little earlier in the same section Galen characterizes the same treatise as dealing with the forms of the soul in accordance with Plato's doctrine (*ibid.* 42).[44] In sum, there is no denying the Platonist scholasticism of the closing section of *PHP* Book 9.

[42] Cf. *MM* X 13-14 K; *Comp.Med.Gen.* XIII 594 K.

[43] De Lacy refers to Albinus but this once common mistake seems now at last to have been superseded, see e.g. WHITTAKER, "Platonic Philosophy" (see n.34), 83 ff.

[44] On this treatise see *supra*, p. 136.

Keeping the conceptual distinctions of *PHP* Book 9 in mind, we may turn now to a further piece of evidence, Galen's exegesis of a notoriously difficult passage from the Platonic *Timaeus*, 37 a-b, printed as nr. 11 by Larrain in his edition of additional fragments of Galen's commentary (see above, n.5). Here Plato describes how the Demiurg installs two kinds of motions in the human body, one analogous to the sphere of the fixed stars, the other to the sphere of the Zodiac. These circular motions (κινήσεις) or rotations (περίοδοι) represent the soul's cognitive activity. Clearly Plato wishes to make an epistemological point: human reason is capable of coming into contact with both unchangeable being and the world of becoming. The two circuits of the soul represent the two kinds of cognition, knowledge and opinion, corresponding to these two spheres of reality. What we have here, as Aristotle already saw,[45] is the common principle of knowing like by like.

For Galen, however, the problem arises how to explain these rotations from an ontological point of view. These rotations are clearly different. How then can they both belong to one entity, viz. human reason? His solution lies in the distinction between substance and properties we have encountered in *PHP* Book 9. Plato, he argues, speaks of the two circular motions in terms of substance (οὐσία), but what he really means to say is that they are *properties belonging to* the substance of the rational part of the soul. Galen goes on to explain these properties or motions in terms of mental functions such as opining and cognizing.

We may feel that Galen grossly distorts Plato's meaning. But the conventions of ancient exegesis allowed Galen ample scope to update Plato. Once again his use of the term makes οὐσία one wonder whether it indicates the transcendent being or corporeal substance. In the context he stresses, in typical fashion, the corporeal basis of psychic life. This may seem un-Platonic, but in

[45] ARIST. *De an.* 1.2, 404 b 16 ff. Cf. also ALCIN. *Didasc.* 6, p.158.18 ff. Hermann.

fact this kind of reading was not without parallel.[46] In fact Plato himself had drawn attention to the soul's dependence on bodily factors in *Timaeus* 86-88. Not surprisingly, this aspect features also prominently in other extant fragments of Galen's commentary (see Frs. 6-10 Larrain). Secondly, he employs the substance/power distinction in a way which he could take to be justified by the key passage from the Platonic *Phaedrus* I have just referred to (see above, p. 148). Galen, then, is applying the time-honoured exegetical principle of explaining *Homerum ex Homero* to Plato.

I proceed to another key passage, viz. *QAM* 4, pp.44.2-45.2 Müller (= IV 782.4-783.7 K). Galen's *QAM* has been excellently discussed by Lloyd and others (see above, n.4). I confine myself to a few observations on the points I have raised sofar. In *QAM*, as we have noticed (above, p. 143), Galen identifies the soul with the form (εἶδος) of each of the three main organs, form being explained in terms of the mixture of bodily elements. What we have here is the marriage of the Platonic tripartition-cum-trilocation with the Aristotelian definition of the soul as the form of the body. This clearly supports Galen's main thesis that corporeal factors influence our mental functioning including character in a morally relevant sense. From a historical point of view, the explanation of Aristotle's definition in term of the elemental qualities had been anticipated by Peripatetics such as Andronicus of Rhodes to whom Galen refers (*QAM* 4, pp.44.2-45.2 Müller). He caps the latter's view of the soul as the *power resulting from* the blend of elements, arguing that it is the mixture itself. This point may be related to the fact — we have repeatedly noted — that Galen sees power as an attribute of the underlying substance and hence ontologically derivative. But given the close connection between substance and power, the difference seems largely one of perspective. For Galen it held

[46] According to the account of Platonic philosophy transmitted by Diogenes Laertius, Plato considered the substance of the soul to be three-dimensional *pneuma*, 3.67.

the additional attraction of its affinity with Hippocratic ideas on powers as resulting from mixtures of the elements, or elementary qualities.[47] Further, we may note that Galen in this late treatise finally takes a stand as to the sense of οὐσία in relation to the soul, opting for immanent form according to Aristotle's distinction (see esp. *ibid.* pp.44.20-45.2).

G.E.R. Lloyd has demonstrated that Galen is not clear about exactly what is implied by the term "follow" in the title of the treatise: "The capacities of the soul follow the temperaments of the body".[48] At face value Galen seems to upheld a version of what is today called epiphenomenalism, denying any causal role to the soul. Still he upholds moral responsibility. And, more pertinently perhaps, he elsewhere does ascribe influence to the soul on bodily states: mental affections such as fear or distress can be lethal under certain circumstances. So it remains risky to apply modern labels in view of later connotations which do not fit Galen's original position.

5. *The Parts Of the Soul: Location and Interaction*

In *PHP* Books 4 and 5 Galen stresses the fact that the tripartition as such[49] can be based on obvious phenomena, i.e. the powers or motions that are "different in kind".[50] In other words,

[47] As Professor Jouanna has reminded me, Galen seeks support for the thesis of *QAM* from several passages from the Hippocratic *Airs Waters Places* illustrating the influence of the environment on the body and of the body on the soul. Other ideas from the Hippocratic writing may also help explain certain emphases in Galen's outlook, e.g. the prominence given to the concept of power (δύναμις). On its in Hippocratic physiology see J. SOUILHÉ, *Étude sur le terme* δύναμις (Paris 1919), 32-6; G. PLAMBÖCK, *Dynamis im Corpus Hippocraticum* (Wiesbaden 1964); M.R. BARNES, *The Power of God. Δύναμις in Gregory of Nyssa's Trinitarian Theology* (Washington 2001), 28 ff.

[48] See LLOYD, "Scholarship, Authority and Argument" (see n.4), 33 ff.

[49] That is to say, leaving aside the question of the status of the faculties distinguished as either powers or parts, see *supra*, p. 143.

[50] *PHP* 5.7.7-8 (= V 481.3-13 K); 5.7.83-85 (= V 502.1-16 K); 5.7.87-88 (= V 503.10-504 K); cf. *Sent.Prop.* 8.2, p.82.3-8 N.

these motions can be divided according to three powers, viz. the powers that had been distinguished by Plato and also, he holds, by Hippocrates, Aristotle and Posidonius (see *PHP* 6.2.5 [= V 515.12-516.1 K], quoted above, p. 142). He seems to be thinking of our experience of mental conflict whether through introspection or our observations of other people. He quotes Plato's story in *Republic* Book 4 about Leontinus wavering over whether to go and have a look at some corpses of executed criminals (*PHP* 5.7.45 ff. [= V 491.8 ff. K]). On a more technical level, Galen subscribes to Plato's use of the principle of non-contradiction in the same book as proving the necessity of differentiating between separate psychic faculties.[51]

When it comes to demonstrating the bodily seat of the three capacities and hence proving their status as parts or forms of the soul, Galen no longer appeals to obvious phenomena or common experience. This demonstration (which had not been undertaken by Plato) calls for technical experience, that is to say, anatomical observation and experiment. At first sight, Galen's project of providing Plato's psychology with a firm basis in anatomy and physiology seems a rather hazardous undertaking. (And his reading of Hippocrates as agreeing with Plato on this score seems downright frivolous.) In practice, he sets out to prove Plato correct in the light of later, mostly Hellenistic, science. Still, the task is somewhat less daunting than it might initially appear to be. In the *Timaeus* Plato draws extensively on the medical science of his own day. But he is often rather vague on anatomical details. The reason lies in the purpose in this dialogue. On the one hand Plato wanted to lend a degree of scientific respectability to his account of the cosmos. But on the other hand he selected those scientific insights which could be pressed into the service of an overriding philosophical aim — the determination of man's place in a providentially ordered cosmos. Thus his account of the human soul and its location in the body is governed by moral concerns rather than an interest

[51] *PHP* 5.7 (= V 479.14-504 K); 9.9.22 ff. (= V 797.10 ff. K).

in anatomical or physiological detail. This tendency of the Platonic *Timaeus* has been pointed out by several modern scholars beginning with Cornford and need not be dwelt upon.[52] What is less widely known is that there was even an ancient tradition which preferred to take the Platonic tripartition as having moral significance only.[53] Even so Galen could represent Plato as having had the correct insight about the function of the brain as the seat of reason and hence perception and voluntary movement. In his commentary on the *Timaeus* he acknowledges the fact that Plato and certain physicians in his day had no inkling of the nervous system and its workings (*Plat. Tim.* III 6, CMG Suppl. I, p.15.18-20 Schröder-Kahle). It was sufficient to show that Plato had at least been on the right track.

In regard to the spirited part residing in the heart the account at *Tim.* 69 d-70 d had only to be made more precise insofar as Plato does not distinguish between arteries and veins — which was a scientific insight of later date (entertained by e.g. Praxagoras, Erasistratus). Galen of course considers the heart as the centre of the arterial system only. The Platonic assumption that the heart was the seat of certain psychic functions (notably anger) and the centre of bodily heat continued to be widespread and respectable among philosophers and scientists well into Galen's day and beyond. In the schema of options employed by Galen, as we have seen, this assumption is common ground between the main contestants in the debate; that is to say, there was no difference from the Peripatetics and Stoics on this point.

More problematic was the third or appetitive part, which had been located by Plato in the belly (*Tim.* 70 d 7-e 2). Galen however assigns it to the liver as the structural and functional centre of the veins. He had to make this adjustment in view of the

[52] F.M. CORNFORD, *Plato's Cosmology: The* Timaeus *of Plato Translated with a Running Commentary* (London 1937), 20, 282; P. HADOT, "Physique et poésie dans le *Timée* de Platon", in *Revue de Théologie et Philosophie* 115 (1983), 113-33, esp. 118; C. STEEL, "The Moral Purpose of the Human Body. A Reading of Timaeus 69-72", in *Phronesis* 46 (2001), 105-128.

[53] Cf. PORPH. Fr.253, ll.14-15 Smith.

role assigned by post-Platonic science to the liver in the processes of digestion and growth.[54] Of course this made the liver exquisitely suited to house the appetitive part (though understandably Galen choses to ignore the fact that Plato in the *Republic* adds money as object of desire to food and drink and sex, *Rep.* 9, 580 e-581 a). Not only did Plato not assign any role to the liver with respect to nourishment, he gave this organ an altogether different role to play, viz. as a kind of television screen on which reason projects images that calm down unruly desire lurking in the belly (*Tim.* 71 a 3-d 4; cf. 80 d-81 e). Moreover, Galen ignores the role of the liver in divination accepted by Plato (*Tim.* 72 b-c). The attempt to bring Plato scientifically more up-to-date with respect to the liver (as well as other physiological points) can be paralleled from other Platonists.[55] This might help explain why he did not bother to acknowledge that there was a real difference between himself and Plato on this point.

Galen's anatomically based tripartition entails a rather strict separation between the parts, where Plato shows more interest in the coherence and interaction between the parts. We should not suppose that this strict separation is wholly due to Galen's anatomical reading and so peculiar to him. If we compare Alcinous' manual (which may or may not predate Galen), we find a very similar reading of Plato, including a reference to the brain as the centre of the nervous system (separation: chs. 23-24; nerves: 17, p.173.8 Hermann). Still, Galen's no doubt represents the most extensive and detailed attempt to reconcile the Platonic tripartition with the later advances in science. He offered a fairly coherent account of the three ἀρχαί of the organism — brain, heart and liver — as the centres of functions that corresponded

[54] This insight is first attested at ARIST. *PA* 3.7, 670 a 27; cf. N. MANI, *Die historischen Grundlagen der Leberforschung* I (Basel-Stuttgart ²1965), 35 ff. (Plato), 41 ff. (Aristotle).

[55] Cf. PLUT. *Virt.Mor.* 11, 450 F; Ps.TIM.LOCR. 46, p.218.10-1 Thesleff-Marg; PS.HERACLIT. *All.* 18, p.22 Buffière; APUL. (c. 155-? CE) *Plat.*; PORPH. Fr.253, ll.84-85 Smith. Cf. DILLON, *Middle Platonists* (see n.31), 326 f.; TIELEMAN, *Galen and Chrysippus* (see n.4), XXX f.

to the each of the three Platonic parts. But he fails to account for the anatomical and physiological basis for the necessary interaction between the three parts, or so it seems. This problem seems to subvert his whole enterprise.

It has been said that Galen omits to discuss the necessary interaction between the parts of the soul, to which Plato devotes ample attention.[56] His silence on this point is taken as an indication that he is in very serious trouble indeed. Galen's project of updating the Platonic tripartition entails a strict, anatomically based separation between the parts. But can he explain their interplay and conflict in physiological terms? How does desire in the liver and anger in the heart influence reason in the head and *vice versa*? A related problem is that Galen, having demonstrated the liver's role in digestion unwarrantably, it seems, infers that it is the seat of desire in the full-blown Platonic sense of a conscious, morally relevant mental phenomenon. Here too he fails to provide a justification, at least in his discussion in *PHP* Book 6.[57]

A few passages which have sofar been overlooked suggest that Galen did address the above problems. In a recently published fragment from his *Timaeus* commentary (Fr.14 Larrain) Galen repeats the point — which he had argued at length in *PHP* — that the heart is not the centre of the nervous system, but he adds something else: certain nerves reach the heart from the head *in view of the service the former needs to render the principle contained in the latter, i.e. reason.*[58] Contrast Galen's insistence in *PHP* on the mutual independence of the brain and the heart (esp. *ibid.* 2.6 [V 262.11-267.6 K]). In the same fragment

[56] Cf. MANSFELD, "The idea of the Will" (see n.4), 131 f.; HANKINSON, "Actions and passions" (see n.4), 208; cf. DE LACY, "Third Part" (see n.4), 61 f.

[57] See HANKINSON, "Anatomy of the Soul" (see n.4), 230; T. TIELEMAN, "Plotinus on the Seat of the Soul: Reverberations of Galen and Alexander in *Enn.* IV 3.23", in *Phronesis* 43 (1998), 321 f.

[58] On Galen's view on the heart, its automatism and connection with the nervous system see further R.E. SIEGEL, *Galen's System of Physiology and Medicine* (Basel/New York 1968), 44 ff.; C.R.S. HARRIS, *The Heart and the Vascular System in Ancient Greek Medicine. From Alcmaeon to Galen* (Oxford 1973), 267 ff.

from his commentary Galen says that the heart has "to take part in the higher principle", which must mean that it is capable of listening to it.[59] This point refers to Plato's well-known and graphic portrayal of anger arising in the heart, *Timaeus* 70 a 7-b 8.[60] Here the spirited part is said to respond to reason when this reports a certain wrong done to us and calling for revenge. This Platonic passage also inspired an intriguing passage from Galen's *On Preserving Health*:

> Anger is not simply an increase, but a kind of boiling, so to speak, of the heat in the heart; this is why the most distinguished philosophers say that its substance is of such a kind. For the craving for revenge is an inessential property rather than the substance of anger (2.9.5-6, p.61.24-28 Koch [= VI 138.7-12 K]).[61]

Galen argues that the definition of anger as a kind of seething or boiling pertains to its substance or being (οὐσία), whereas the definition of anger as a desire for retribution expresses an accidental feature (συμβεβηκός). Both definitions were widespread and not confined to one particular school.[62] But the distinction drawn by Galen clearly reflects Aristotle, *De an.* 1.1, 403 a 29-b 2, where Aristotle says that the first is typical of philosophers of nature and pertains to matter (ὕλην) and the second is used

[59] Fr.14, ll.1-14: ὅτι ἀπὸ ⟨τοῦ⟩ ἐγκεφάλου πάντα φαίνεται τὰ κατὰ τὸ ζῷον νεῦρα τὴν ἀρχὴν ἔχοντα, ἀφ' ὧν καὶ εἰς τὴν καρδίαν ἀποφύσεις μικραὶ παραγίνονται. καὶ γὰρ καὶ ταύτην ἔδει μετασχεῖν τῆς ἄνωθεν ἀρχῆς ὑπηρετήσειν ταύτῃ μέλλουσαν ....

[60] Cf. Galen's discussion of this passage, *PHP* 3.1.31 (= V 292.8-17 K).

[61] Ὁ μέν γε θυμὸς οὐδ' ἁπλῶς αὔξησις, ἀλλ' οἷον ζέσις τίς ἐστι τοῦ κατὰ τὴν καρδίαν θερμοῦ· διὸ καὶ τὴν οὐσίαν αὐτοῦ τῶν φιλοσόφων οἱ δοκιμώτατοι τοιαύτην εἶναί φασι· συμβεβηκὸς γάρ τι καὶ οὐκ οὐσία τοῦ θυμοῦ ἐστιν ἡ τῆς ἀντιτιμωρήσεως ὄρεξις.

[62] See PLAT. *Tim.* 70 a-b (boiling: 70 b 3; revenge: 70 b 4); ARIST. *De an.* 1.1, 403 a 29-32 (on which see in text); for Stoicism see CHRYSIPP. *SVF* II 886, *ap.* GAL. *PHP* 3.1.25 (= V 290.17-291.7 K), where Galen remarks on the similarity between Chrysippus' description and Plato's, *ibid.* 31; STOB. II p.91.10-11 W.; DIOG.LAERT. 7.113 (*SVF* III 395, 396); for Epicureanism see PHILOD. *De ira*, col. XLI 29 f. Indelli. Note also the very similar definitions from various schools collected by Seneca at *De ira* 1.2.3 with COOPER *ad loc.*

by dialecticians and refers to "the form and definition" (τὸ εἶδος καὶ τὸ λόγον), i.e. essence. Galen's reference to the most distinguished philosophers must refer to Aristotle and to Plato in view of passages such as *Timaeus* 70 a 7-b 8. But in fact Galen typifies the two definitions differently from Aristotle, taking the physical one as essential — quite in line with his general emphasis on corporeal factors. He retains the alternative definition in intentional terms, but, as we have noticed, demotes it to accidental status, presumably because it represents an evaluation of one's situation and hence reason. Galen, then, appears to have adapted Aristotle's well-known distinction so as to suit his understanding of the interaction between the two Platonic parts concerned. The physical effects shown by the heart and the judgement that revenge is called for are both involved in anger, as already Aristotle had taught. But Galen seems to take affections such as anger as blind, non-cognitive forces, though capable of interacting with reason.[63] A very similar picture of the respective roles allotted to the rational and spirited parts and of their communication is presented by Plato at *Tim.* 70 a 7-b 9.[64] In fact, Galen seems to read the Aristotelian distinction in the light of this Platonic passage in particular.

The passage from Galen's *Timaeus* commentary we have just mentioned indicates how their communication could be conceived on the anatomical and physiological level. Clearly this goes beyond anything to be found in the Platonic *Timaeus.* Indeed the original Platonic tripartition involves the ascription of both cognitive and motivational aspects to each of the three 'parts' of the soul. It seems that Galen for his part took the step to which his project of modernizing Plato scientifically had forced him to separate the two aspects.

[63] For a similar picture of the interaction between reason and non-rational functions as manifest from vehement emotions, see also *Loc.Aff.* VIII 227-228 K (a reference I owe to Jim Hankinson).

[64] Elsewhere Plato has no qualms about ascribing cognitive functions to the non-rational parts of the soul and even here describes the spritied part as obedient to the demands and threats of reason, *ibid.* b 7-9.

But is there any evidence for an analogous or similar solution in regard to the third or appetitive part? As De Lacy has already pointed out, Galen holds that hunger and thirst arise in the so-called mouth of the stomach, and they are transmitted by a nerve to the brain — not to the liver or to the brain by way of the liver.[65] But this seems to deprive the liver of its function as the centre of desire. The obvious next step to take is to locate desire as a mental phenomenon in the brain. But Galen sees no problem here, or so it seems. Is this a blind spot, caused by his Platonist bias? His attitude becomes more understandable and coherent once we realize that he equated the Platonic appetitive part with the level of soul possessed by plants, quite in line with Plato's ascription of this part to plants (*Tim.* 77 b). Thus in his *On the Use of Parts*, in explaining why there is only a small nerve to the liver, Galen argues:

> Insofar as this organ is the source of the nutritive soul, the kind that is also in plants, it appears to have no need for a nerve. I pass over the questions whether it should be called nature or nutritive soul (*UP* 4.13, I p.226.18-22 Helmreich [= III 308.17-309.3 K]).

Accordingly the activities of the liver are natural activities, and its powers are "natural powers" involved in nourishment and growth, *viz.* attraction, retention, alteration, expulsion.[66] So even if he is prepared to call these 'natural' functions psychic, he distinguishes between them on the one hand and others such as desire on the other.[67] This difference arises from the fact that

[65] *UP* 4.7, I p.201.19-202.2 Helmreich (= III 275.8-15 K); 16.5, II p.394.18-24 Helmreich (= IV 289.6-11 K); *Hipp.Epid.III* 3, 15, p.118.22-24 W.-Pf. (= XVIIA 664-665 K); cf. De Lacy, "Third Part" (see n. 4), 62.

[66] *Hipp.Epid. III* I 17, p.46.12-15 (= XVIIA 566 K), *ibid.* II A, p.71.6; *Hipp.Prorr.* CMG V 9, 2, p.56.4-8. See further De Lacy, "Third Part" (see n.4), 54 ff.

[67] This distinction also surfaces in the context of the issue of the soul's immortality. In one passage dealing with the soul's οὐσία Galen sides with those Platonists who ascribe mortality to the appetitive part (ἐπιθυμητικόν): *Hipp.Epid.V* 5, p.272.22-273.1 W.-Pf. (= XVIIB 250 K): τινὲς δὲ οὐ μίαν, ἀλλ' ἰδίαν ἑκατέρα τὴν οὐσίαν εἶναι φασι καὶ οὐ σμικρῷ δέ τινι διαφερούσας, ἀλλ ' ὅλῳ τῷ γένει, ὅπου γε

desire and related emotions involve sensation and hence the nervous system. Thus desire, as we have noticed, includes the sensation of hunger and thirst. This dualism goes beyond the Platonic text. Presumably Galen adopted it under the influence Hellenistic predecessors such as Herophilus, who described as psychic those, and only those, functions that were operated by the nervous system they had just discovered. Herophilus too qualified other functions as 'natural'.[68] This involves a more restricted concept of soul, restricted, that is, to the orbit of consciousness and hence a purely mental phenomenon. This represents a striking anticipation of the modern concept of the mental as the subject-matter of psychology.

But where does this leave Galen and his defence of the Platonic tripartition? His explanation of the sensation of hunger and thirst is in fact more compatible with the Platonic text than his position in *PHP* Book 6. After all, as we have seen (above, p. 154), Plato installs desire in the stomach not the liver, saying that anger and desire are made obedient through "the narrow channels" (τῶν στενωπῶν, *Tim.* 70 b 5-7). This point could even be presented as anticipating the discovery of the nervous system.[69] Yet an appeal to Plato in this context would have revealed the discrepancy from *PHP* Book 6, where Galen assigns appetition to the liver without any qualifications (a move which, as we have noticed, entails a distortion of the Platonic account as well).

Another move which did involve an actual departure concerns the appetitive part as the locus of sexual desire. The liver qualified as the bodily seat of the Platonic ἐπιθυμητικόν because post-Platonic science had established its role in digestion and growth. But obviously it could not house the function of reproduction, which Plato also ascribes to his third part. In other

καὶ τὴν μὲν φύσεως φθαρτὴν εἶναι ἡγοῦνται, τὴν δὲ τῆς ψυχῆς ἄφθαρτον. Cf. DEUSE, *Untersuchungen* (see n.7), 101.

[68] See VON STADEN, "Body, Soul and Nerve" (see n.25), 89 ff.

[69] That Plato and his contemporaries did not know about the nervous system was acknowledged by Galen and was not at issue, see *supra*, p. 153.

works Galen elevates the testicles to the status of ἀρχή in addition to the three 'Platonic' ones of *PHP*.[70] It may seem surprising that this problem does not come up in the latter work (it can hardly be explained away by arguing that *PHP* Books 1-6 were written early in his career). In my view this feature bears witness to the fact that the discussion conducted here is to a large extent determined by the schema of fixed options set out at *PHP* 6.2.5 (as quoted above, p. 142). Another example (which we have already noted, above, p. 153) is Galen's omission to consider the possibility that the brain is the seat of the emotions as well as reason.[71]

We may conclude that Galen did address the problem of the interaction and coherence between the three Platonic parts by subsuming some of the relevant functions under the nervous system. He did so in works written some time after *PHP* Books 1-6 and in a way which meant an — unacknowledged — departure from some of the assumptions in these books.

6. *Conclusion*

In certain respects Galen behaves more like an empirical Platonist than a modern scientist engaged in an open-ended quest for knowledge. He remains caught in a traditional schema of options that are in principle open in the debate on the human soul. We have also seen that he follows a traditional agenda of topics. The ontological distinctions involved are Aristotelian in origin but had by Galen's day been fully absorbed by Platonism.

[70] *Ars Med.* 4, I 314 K; *MMG* 2.4, XI 97 K; *UP* 14.10, IV 186 ff. K. Véronique Boudon drew my attention to these passages and to the problem of their compatibility with the position taken by Galen in *PHP*.

[71] Doxographic schemas were used for what Galen calls 'dialectical' disputations on issues such as the seat of the soul, see *Loc.Aff.* VIII 157-159 K, esp. 157.17-18 with MANSFELD, "Doxography and Dialectic" (see n.18). Obviously these dialectical debates were not open-ended but aimed at reaching a verdict in favour of one of the competing options distinguished in such a schema.

Thus, as we have seen, certain Galenic key passages can be paralleled from more or less contemporary Platonist texts. Moreover we have found that he contributes to a contemporary debate among Platonists on the issue of whether the soul has parts or powers. This issue was connected with that of their location and that of the substance (οὐσία) of the soul. In *PHP* Books 1-6 Galen mounted an extensive vindication of the trilocation of the soul as presented by Plato in the *Timaeus*. The localization of reason, anger and appetite in three different organs committed him to the view that the soul consisted of three parts rather than powers. Put differently, there were three forms or kinds (εἴδη) of soul — the term already used by Plato. In *PHP* Galen suspends judgement as to its substance (corporeal/incorporeal, mortal/immortal) but in the work of his old age, *QAM*, he explicates his position in this matter by adapting a Peripatetic theorem: form is to be understood as the blend of corporeal elements of the main organs.

Galen's defence of the Platonic tripartition-cum-trilocation in the context of contemporary philosophical debate seems to sit uncomfortably with the ideal of a science free of partisanship and prejudice. Still it would be rash to conclude that philosophical schemas and debates were merely obstacles to scientific progress. Philosophical logic helped shape the sophisticated anatomical experiments designed by Galen to demonstrate the location of psychic functions.[72] Here the Platonic *Timaeus* left Galen ample room for his own innovations, most notably his exploration of the nervous system. Indeed, some new material suggests that he interpreted the Platonic tripartition-cum-trilocation of the soul in such a way that the brain as the functional centre of the nerves became the integrating factor in mental life.[73]

[72] Cf. TIELEMAN, "Galen on the Seat of the Intellect" (see n.4), 256-273.

[73] I want to record my gratitude to the other participants in the colloquium for their valuable comments and questions which are acknowledged at appropriate places in the text. Jonathan Barnes and Michael Frede also made a few suggestions of a more general kind which were equally helpful in preparing the final version. Of course, these scholars do not bear any responsibility for the resulting text.

DISCUSSION

J. Barnes: Your paper provides much food for thought, and is a model of the Utrecht school of ancient philosophy. I would like to raise one point which seems to me questionable. I agree that very many imperial authors used handbooks, epitomes, doxographies etc. as aids to writing their own works, if not as sources of information. But can it really be thought that Porphyry would go to a doxography to ascertain the views of Aristotle or of Longinus, or that Galen's central thesis about Plato and Hippocrates, authors whom he knew intimately, was taken from a manual?

T. Tieleman: To be sure, authors such as Galen and Porphyry were directly acquainted with the work of Plato, Aristotle and other philosophical classics and so did not *need* to rely on doxographies, manuals and the like to ascertain their views. But in practice, and contrary to present-day expectations and conventions, they also used literature of this sort. Thus Galen in *PHP* quotes extensively from Platonic and Chrysippean treatises but also uses a schema of options (e.g. 6.2.5 [= V 515.12-516.1 K], see above, p. 142), which can be paralleled from Porphyry and Jamblichus. That is to say, these authors avail themselves of the same division of three different options that are open in the debate on the parts of the soul, viz. associated with the names of Plato, Aristotle and the Stoics (Chrysippus) respectively. These options, as we have noticed, are based on same ontological distinction between the concepts of part and power. Galen and Porphyry embroider on the traditional schema by including Posidonius and Longinus respectively. The basic trifold division must be a product of the Platonist scholasticism of their age.

Similar use was made of the schemas of tenets provided by so-called doxographic literature. J. Mansfeld (Utrecht school)

has demonstrated this for a wide range of philosophical authors including Galen ("Doxography and Dialectic" [see above, n.18]). Often they will have known such divisions of options (or at least a number of them) by heart, presumably as a result of their philosophical education. In sum, we should reckon with the possibility that Galen uses a pre-existing doxographic schemas. But if his use of doxography, manuals and the like can be established on the basis of parallels, the questions remains how and why he used this sort of literature. In his *On Affected Parts* he says that doxographic schemas were used for dialectical disputation (*Loc.aff.* VIII 157.17-18 K). Elsewhere he insists on the need to employ a division of the options that are open in a particular debate (*PHP* 4.1.14-17 [= V 364.12-366.5 K]; 3.1.10-20 [= V 287.16-290.4 K], where note the doxographic schema, *ibid.* 10-15; cf. Aët. 4.5). Particularly striking is his ascription to Zeno the Stoic and Epicurus (!) of the same view on the nature of emotion (*ibid.* 2.4-6) — an ascription which he clearly has not checked in any original texts (cf. *PHP* 5.6.40-42 [= V 477.9-478.9 K]). The view ascribed to Aristotle at *PHP* 6.2.5 (three powers — viz. the Platonic ones — located in the heart) does not appear to result from Galen's study of the relevant Aristotelian works either. In fact, he omits any mention of the standard Aristotelian distinction between five faculties as listed e.g. at *De an.* 2.3, 414 a 31-33). Nowhere does Galen corroborate his ascription by means of Aristotle's own words. As to Hippocrates and Plato, I think that we are agreed that Galen's admiration for them was genuine and based on his own readings of their works. It also inspired the main thesis of *PHP* that these two thinkers were in essential harmony on the most important issues (involving, as is only to be expected, a great deal of exegetical effort). In the case of the soul's structure Galen's thesis of their agreement can be paralleled from doxographic literature as well. I do not wish to argue that he simply took the idea from a specimen of this genre (Aët. 4.5.1, with Tieleman, *Galen and Chrysippus* [n.4], XXXIV-V). But I do believe that it makes sense to compare Galen's representation of the positions

at issue with what is to be found in the kind of contemporary literature he is known to have used on a number of occasions. And why should we brush aside an indication that Galen was not the only one in his time to endorse this in our eyes odd thesis about the agreement between Plato and Hippocrates? To know something about the later *Rezeptionsgeschichte* of their work could help explain certain peculiarities of Galen's position and determine what was original and what traditional about it.

Your point about Porphyry's relation to Longinus fits in with I take to have been Galen's procedure. Porphyry had been a pupil of Longinus. There is no doubt that he was directly familiar with the latter's views. So I do not suggest that Porphyry turned to a traditional schema to 'ascertain' Longinus' view, as you seem to assume. Longinus did not feature in the traditional schema. But he happened to be of interest to his former student Porphyry. So he fitted Longinus into the pre-existing schema, presenting the latter's position as a compromise between two of the main options: Longinus is said to side with Plato as far as the incarnated soul is concerned and with Aristotle with respect to the disembodied soul. Similarly Galen links what he presents as Posidonius' position to that of Aristotle who, unlike Posidonius, featured in the original schema. Galen has a special interest in Posidonius because in books 4 and 5 of *PHP* he had played off this Stoic against Chrysippus.

V. Boudon: Je voudrais faire une remarque concernant le lien que vous avez très judicieusement établi entre psychologie et anatomie ou plus exactement entre psychologie et physiologie quand vous faites coïncider le siège des différentes parties de l'âme avec les trois ἀρχαί, les trois principes directeurs distingués par Galien, c'est-à-dire le cerveau, le coeur et le foie. Mais en face de cette tripartition que l'on rencontre, comme vous l'avez rappelé, notamment dans le *De placitis Hippocratis et Platonis*, on trouve ailleurs une quadripartition (cerveau, coeur, foie et testicules) dans l'*Ars medica* 5 (I 319.2-3 K), mais aussi le *Ad Glauconem De methodo medendi* 2, 4 (XI 97.2-4 K) et *De usu*

partium 14, 10 (IV 186-187 K). Dans quelle mesure est-il possible, selon vous, de faire coïncider cette quadripartition galénique des ἀρχαί avec la tripartition platonicienne de l'âme?

T. Tieleman: Plato had situated the appetitive part in the belly. Galen transfers it to the liver in view of the central role played by the liver in digestion (a post-Platonic insight). However Plato had also ascribed sexual appetite to the soul's third part. Obviously this important function (connected with reproduction) could not be ascribed to the liver, so Galen in the works you mention added the testicles as the fourth ἀρχή. After all the reproductive organs were, if not indispensable for the individual organism, essential for the survival of the species. (Plato, *Resp.* 9, 581 a also attributes love of money to the appetitive part — a point understandably suppressed by Galen.) The difference between *PHP* and the three passages from other works reflects a feature of Galen's method in the former work, viz. his use of a fixed schema of pre-existing options, one of which is championed by Galen, viz. that the soul has three and only three parts, viz. those described by Plato and, he claims, Hippocrates. In the works where he assigns the status of ἀρχή to the testicles he is in a position to do more justice to the physiological facts.

M. Frede: Galen in the passage you quote (*PHP* 6.2.5-6 [= V 515.12-516.6 K]) says, quite rightly, that Plato speaks of both kinds (εἴδη) and parts (μέρη) of the soul, given that he believes that the parts of the soul separated from each other in place are very different in their οὐσία. One passage which he must have in mind is *Tim.* 77 a 6 ff., which he also discusses in *Sent.Prop.* 13. In the *Timaeus* Plato attributes to plants a soul. For, since they are alive, they are animals. They must have the third kind of soul (τὸ τρίτον ψυχῆς εἶδος, 77 b 3-4), the sort of the soul we have in the lower part of the body. This sort of soul in the case of a human being can be called, if one follows Plato, a part of the soul; in the case of plants, of course, it is not a part of the soul of the plant. Plato's way of speaking gives rise to a

discussion as to whether we should speak of parts of the soul or kinds of soul; some thought we should speak of neither, and these spoke of powers (δυνάμεις) of the soul, that is *not* of parts of the soul or kinds of soul. One issue involved in this discussion was whether one οὐσία can have more than one δύναμις, especially an οὐσία which has no parts. This is affirmed by Longinus, obviously in opposition to authors who deny it. According to Galen (*loc.cit.*), it seems, it is denied by Chrysippus, who denies that the soul has parts and reduces all functions (i.e. θυμός and ἐπιθυμία) to one δύναμις (the rational ability to assent or not). According to Galen, Aristotle is wrong to assume that one οὐσία without parts (i.e. the soul) can have three δυνάμεις. Thus Galen seems to accept the view that an οὐσία without parts can have more than one δύναμις. As far as I can see, Galen does in fact think that there are three ἀρχαί in the human body, and thus three kinds of soul. Hence I think that the texts collected under "3. *Options*" have a complexity which is not captured by the scheme which you think is underlying them.

T. Tieleman: Thank you for reminding me of *Tim.* 77 a 6 ff. as relevant to the discussion conducted by Galen. I am inclined to assume that the preference of certain Platonists for the term 'power' was primarily motivated by their wish to save the soul's unity and hence immortality. Different powers could belong to a single underlying οὐσία, whereas different parts or kinds presupposed different οὐσίαι for each of them. Hence Longinus' view that the soul has parts only when based in different bodily parts but powers *when separated from the body*.

In other words, I am not sure whether the term power was introduced as a way out of any exegetical problem arising from the fact that Plato had spoken both of kind (viz. with respect to plants) and of parts (with respect to humans). In fact, the terms εἶδος and μέρος were used interchangeably not only by Plato himself, but also by Aristotle and the late commentators in contexts concerned with division (diaeresis) in general or division

of the soul in particular (for Plato see e.g. *Phaedr.* 253 c, 265 e-266 c; *Resp.* 6, 504 a; 9, 580 d-581 e; 9, 590 c; *Tim.* 73 b-d with M. Talamanca, "Lo schema 'genus-species' nelle sistematiche dei giuristi romani", in *La filosofia greca e il diritto romano* II, Accademia Nazionale dei Lincei 374, Quaderno 221 [Roma 1977], 3-319, 24 ff.). I have not come across any passage in Galen or elsewhere where the designation of the psychic faculties as parts as well as kinds/forms seems problematic or controversial (Alcin. *Didasc.* 5, p.156.29-32 Hermann; Gal. *PHP* 9.9.42-46 [= V 803.10-805 K]).

It does not follow from 6.2.6 (= V 516.1-6 K) that Galen thought that Aristotle was wrong to assume that one οὐσία can have more than one δύναμις. Rather Aristotle was wrong in assuming one οὐσία, i.e. a soul without parts located in one organ, viz. the heart. But having assumed one οὐσία, Aristotle rightly spoke of three *powers* rather than parts. This follows from Galen's conceptual apparatus, aligning the concept of part with that of οὐσία. One kind or part (i.e. of soul) may underlie a plurality of powers (see *PHP* 9.9.39-46 [= V 802.8-805] on which see above, p. 146 f.). As it was, Galen had demonstrated that there were three bodily seats and hence three parts and three οὐσίαι. Of course Galen's strict, anatomically based tripartition rendered the unity and coherence of the soul deeply problematic. However, he thought that this was what Plato had meant and what was indicated by the anatomical facts. I have pointed to some evidence that Galen sought to save the unity of the soul by assigning an integrative function to the nervous system (which of course entails a special status for the rational or regent part). But Galen did not provide a sustained treatment of this problem, leaving this to others such as Plotinus, who wanted to built on his anatomical work for their own theory of the soul (see my "Plotinus on the Seat of the Soul", referred to at n.57).

J. Jouanna: Dans votre étude si claire et si suggestive sur la psychologie de Galien, vous avez accordé sa juste place au *Quod animi mores*. Toutefois vous n'avez pas fait référence, me semble-t-il, aux

nombreuses citations que Galien fait dans ce traité d'Hippocrate, *Airs, eaux, lieux* pour illustrer l'influence de l'environnement sur le corps et du corps sur l'âme. En quoi ce traité hippocratique apporte-t-il une illustration de ce que Galien voulait montrer?

T. Tieleman: In *PHP* Galen still clings to an agnostic position as to the substance of the soul. Nonetheless he already links psychic part and bodily part (*PHP* 6.2.5 [= V 515.12-516.1 K]). In the work of his late age, *QAM*, he takes the next step of actually identifying the substance of the soul with the form of the three main bodily organs, taking form in the sense of the blend of elementary qualities distinctive of each organ. In effect he comes out in favour of the Peripatetic view of the substance of the soul as the form of the body, combining this with the Platonic tripartition-cum-location. This view of the soul's substance suits Galen's thesis in *QAM* of the dependence of mental life on bodily states. Galen illustrates this in part by referring to the observations made in the Hippocratic *Airs Waters Places* on the influence of physical and environmental factors on mental life.

V. Barras: (1) Vous évoquez dans votre exposé le fait qu'il n'y a pas de 'psychiatrie' comme telle chez Galien (de même qu'on ne peut parler chez lui de 'psychologie' au sens strict et contemporain du terme). Il existe toutefois chez lui un très fort intérêt pour des situations cliniques 'psychopathologiques'. À votre avis, l'analyse de cette clinique galénique pourrait-elle malgré tout apporter quelques éléments à la compréhension de la 'psychologie' de Galien, de même que parfois l'examen de dysfonctionnements pathologiques permet de saisir le fonctionnement normal?

(2) À votre connaissance, Galien tente-t-il d'établir explicitement dans ses œuvres anatomiques une relation 'démontrable', évidente, entre le cerveau et d'autres organes sièges d'une part de l'âme, sous la forme d'une connexion nerveuse notamment?

T. Tieleman: (1) I take your point that Galen takes a keen interest in many afflictions that today are called psychiatric. A

more comprehensive treatment of Galen's psychology would perhaps require a closer study of these phenomena. However, the relevance of psychiatric phenomena to the issues I have raised here seems on the whole limited. An exception is a passage from *On Affected Parts* (*Loc.aff.* 3.5, VIII 157 K). Here Galen points to the inconsistency of the Pneumatic physician Archigenes, who held that in the case of mental afflictions the heart is the affected part yet prescribed medication for the head. In this particular case, then, clinical experience is directly relevant to the question of the structure of the soul and its location in the body.

(2) In my paper I have pointed to two passages which strongly suggest that Galen assigned a role to the nervous system to account for the sensation of hunger and thirst and for the genesis of anger (see above, pp. 155, 158). This involves an anatomical connection (viz. through the relevant nerves) between the brain and the belly and between the brain and the heart respectively. I may add that Galen had earlier shown an interest in the anatomical connections between the main organs, when he conducted a vivisection experiment whereby he intercepted each of the three main kinds of vessel (arteries, veins, nerves) linking the brain and heart (*PHP* 2.6.1-17 [= V 262.11-267.6 K]). From the resulting observations he concluded that neither organ has any need of the other in operating its main functions; in other words, each is the source (ἀρχή) of its own set of functions. This experiment was directed against Chrysippus the Stoic who had suggested that even if the brain is the source of the nerves it does not follow that it is the set of the regent part of the soul since it may receive its orders from the heart. But if Galen succeeds in vindicating the status of the brain as the seat of reason, it is also clear that his theory, at least at this stage, stands in need of further refinement in view of the interactions between the parts of the soul. The two other passage reveal an increased awareness of the need to address this problem and to find a solution in the structure and workings of the nervous system.