

Galen on Black Bile and Melancholy

Introduction

Melancholy has been making a comeback. Books on melancholy abound, there have been calls to reinstate melancholia within the classificatory system of mood disorders and Lars von Trier's film *Melancholia* has been a cinematic success.¹ As is well known, the term, as well its primary meaning and symptomatology hail from ancient Greek medicine. Melancholy has changed much through the ages, but a quick comparison between the modern diagnostic criteria of depression and the descriptions of melancholy in ancient medicine shows that there is much similarity between the two.² Practically all the basic diagnostic criteria for the various forms of depression distinguished in the DSM were already associated with melancholy in antiquity, many of which ancient doctors and philosophers related to the qualities and activities of the black bile itself: depressed mood, changes in weight, loss of pleasure in activities, slowing down of thoughts and movement, psychomotor retardation, diminished ability to think, suicidal thoughts or inclinations, sleep problems (either oversleeping or insomnia), social isolation and anxiety, a heavy feeling in the body, inclination to substance-abuse ... As Andrew Solomon, the author of the modern day bestseller *The Noonday Demon*, aptly remarks: "The shape and

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- 1 Some examples are the anthologies by Radden (2000), Dandrey (2005), Ter Borg (2005) Blamberger, Kellerer, Klemm and Söffner (2015); the works on melancholy with regard to specific authors such as Pensky on melancholy in Benjamin (1993), Ferguson on Kierkegaard and melancholy (1995), Ferber on Benjamin and melancholy (2013), Enderwitz on melancholy in Freud, Conrad and Ford (2015), Traverso on Marxism and melancholy (2016), Radden on Burton's classic *Anatomy of Melancholy* (2017); general or more specific histories of melancholy such as Toohey on melancholy and the sense of self in ancient literature (2004), Lund on melancholy in early modern England with focus on Burton (2010), Middeke and Wald on the history of melancholy from early modern times (2011), Dickson, Ingram and Sim on depression and melancholy 1660–1800 (2012), Feld on the history of melancholy and its role in philosophical and religious thinking (2013), Bell on the history of melancholy and self-consciousness (2014), Lertzman on environmental melancholia (2015), Bollas on melancholia and a modern loss of meaning (2018), Eng and Han on racial melancholia (2019), and of course Andrew Solomon's international bestseller on modern depression and its long history (2001); for the argument for reinstating melancholia in the classificatory system of mood disorders, see Fink and Taylor (2007, 2008), Taylor (2006); Lars von Trier's critically acclaimed *Melancholia* premiered in 2011.
 - 2 Jackson (1986) ix; Dandrey (2005) 13; Bell (2014) 3 f.

detail of depression have gone through a thousand cartwheels, and the treatment of depression has alternated between the ridiculous and the sublime, but the excessive sleeping, inadequate eating, suicidality, withdrawal from social interaction, and relentless despair are all as old as the hill tribes, if not as old as the hills.³

Besides these similarities in symptoms, many of the questions surrounding depression nowadays, can already be distilled from the ancient texts. Why does someone become melancholic? What is the cause for the excessive fear and sadness that melancholic people experience? How are bodily and psychic symptoms and causes related to one another? What is the classificatory boundary between the normal and the abnormal or between health and disease? Can we say that someone is more or less melancholic? Indeed, to what extent does melancholy entail gradual divergence from normal phenomena, rather than an essential difference? And what are effective therapies for melancholy? From the perspective of these striking similarities, as well as from that of the suffering that depression currently causes for an enormous number of people, the current interest in the history of melancholy makes sense; we might learn something valuable from this history.

Galen is known as the most influential medical writer of antiquity and perhaps we could say that in the period between his own life and somewhere around the end of the Middle Ages or early modern times, he was generally one of the most influential writers when it came to the subject of human afflictions and diseases.⁴ Yet, the subject of black bile and melancholy in Galen has been insufficiently studied.⁵ The general idea seems to be that Galen was not much interested in the subject of melancholy, or did not add substantially to

3 Solomon (2002) 286.

4 Cf. Nutton (2008).

5 Flashar (1966) 105–118 has provided a solid but basic introductory overview in his chapter on Galen as a part of his excellent general introduction to ancient theories of melancholy; Klibansky *et al.* (1964) is a wonderful work on the history of melancholy, but focuses almost exclusively on the *Problemata* and its reception while Galen remains nearly completely ignored; Jouanna has written a few insightful papers on melancholy in ancient Greek medicine, including Galen, as well as on the humoral theory which becomes established with the Hippocratic *On the Nature of Man* and Galen's commentary on it (these papers are collected in English in an edition by Philip van der Eijk, 2012); Stewart (2016) has recently produced a dissertation devoted to Galen's theory of black bile, and we shall relate to his work in our discussion of black bile in Galen *ad locum*. Other general histories of melancholy, such as some of the ones mentioned in previous notes, understandably do not provide any in-depth discussion of Galen's work, but base themselves on more specialized works such as those mentioned in this note.

its tradition.⁶ Galen, however, is almost unparalleled for his ability to synthesize his philosophical and medical predecessors into a new, relatively coherent whole, which subsequently often turns out to have an immense influence on the centuries to come. I hope to show that this could be said with regard to the subject of black bile and melancholy as well. In order to do so, we shall have a look at Galen's main predecessors on the topic first and then turn to Galen himself. The development of the notions of black bile and melancholy had, until Galen, been elaborated through various preceding traditions. It is safe to say that with Galen the development of these notions culminates in a way that goes on to be unparalleled for more than a millennium to come. That is, until Ficino brings about a new focus on the *Problemata's* notion of melancholy genius, and until, almost two centuries later, Burton writes his encyclopaedic *Anatomy of Melancholy*.

Much work has been done on the history of black bile and melancholy in ancient philosophy and medicine more generally. Therefore, it suffices to give brief overviews of the authors and texts that have influenced Galen the most: the Hippocratic Corpus, Aristotle and the Peripatetic *Problemata* xxx,1, and Rufus of Ephesus' books on melancholy. With regard to other, less important predecessors – some of which we shall discuss or refer to briefly in the course of our discussion – there is often not much textual evidence and what there is has been adequately analysed elsewhere.⁷ We shall focus on aspects from

6 Bell (2014) 42, states that Galen had a 'relative lack of interest in melancholia'; cf. Pormann and van der Eijk (2008), Appendix 1, who see Galen's discussion of melancholy in *Loc. Aff.* as possibly 'little more than a Galenic summary of Rufus' ideas on the topic without proper acknowledgement'. and state that 'Galen appears to have added very little to Rufus' clinically as well as therapeutically impressive account of melancholy'. I think both are right to some extent, since Galen wrote more about other topics and Galen's account of melancholy leans heavily on Rufus, but as this case-study hopes to show, there is much more to be said.

7 Diocles will be briefly discussed in the context of Galen's notion of the 'hypochondriac' melancholy, see *infra*, 325–6, and see van der Eijk (2001) for a collection, translation and commentary of his work; cf. Flashar (1966) on melancholy in Diocles, Celsus, Aretaeus and Soranus, 73: 'Wenn uns die Melancholie als Gegenstand medizinischen Denkens in der Folgezeit [i.e. after Diocles] nicht begegnet, so könnte man zunächst vermuten, dies liege daran, daß uns die großen Werke der alexandrinischen Medizin verloren sind. Aber es spricht vieles dafür, daß in ihnen von der Melancholie gar nicht die Rede war'. Klibansky et al (1964) 92–101; Jouanna (2012) 241 f.: 'A well-known problem of post-Hippocratic Greek medicine is posed by the great lacuna caused by the loss of the writings of the medical authors in the three centuries after him. Melancholy as an illness did not reappear in the direct tradition until Aretaeus of Cappadocia, a doctor from the first century AD, and Galen, a doctor from the second century AD. Between these two periods, we possess only indirect information. We know that Diocles of Carystus, in the fourth century, had discussed a form of melancholy, different from that of Hippocrates, affecting the stomach. Galen quotes fairly long extracts. However, the lacuna in the history of melancholy in Greek medicine from the Hellenistic

these three main predecessors that surface in Galen, such as: the ambiguous status of black bile itself, which is sometimes defined as an exceptionally detrimental or unnatural substance that causes disease, sometimes as a useless by-product of digestion and sometimes as a normal part of our constitution; the elementary qualities of black bile, which are mostly cold and dry but sometimes also involve hotness or heating; the element and season of black bile, generally earth and autumn, but sometimes also spring; the relation of black bile to melancholy and other affections; the symptoms of melancholy and their particular relation to the properties of black bile; the primary associations that accompany black bile and melancholy and their relative normality; the psycho-somatic nature of melancholy.

There is excellent scholarship available on these particular texts with regard to the subject of black bile and melancholy specifically, notably including the work of Flashar, Jouanna, Klibansky, Panofsky and Saxl, Kudlien, Pormann and van der Eijk. Hence, there is no need to reinvent the wheel. Nevertheless, a few exceptions in this regard will arise as we proceed, one of which, e.g., is the role of Aristotle and the *Problemata*. I think the possible influence (direct or indirect) of these on Galen's writings have been downplayed too much in previous scholarship.⁸ In general, I think there has been a strong focus in scholarship on the differences between all these authors with regard to black bile and melancholy. This is perhaps because the astounding similarity in the basic symptoms of melancholy over the ages has acquired a kind of self-evidence of its own, and perhaps also because specialized scholars have been (over) wary of generalizing comparisons between ancient melancholy and modern experiences of depression. However, this is in itself, as is often the case with trends in scholarship, at least to some extent a reactive attitude. Hence, it may be valuable to bring back into focus some of the common threads, which we shall do in this case-study.

Another reason to study black bile and melancholy particularly in the context of this book, is the assumption that they might offer an interesting perspective on the relation between body and soul in Galen. Melancholy is a psychosomatic condition, in which the boundaries between body and soul can

period is not only accidental. It occurred because the humoral view of man was replaced in this period by a solidist view'. Stewart (2016) 27 f., particularly on the *Anonymus Londinensis*.

8 Flashar (1966) 68: 'In Galens eigener Darstellung der Melancholie bleibt die Konzeption der *Problemata* ebenso unberücksichtigt wie in den übrigen Spätantike, in denen es ausschließlich um die krankhaften Erscheinungsweisen der Melancholie geht'. Jouanna (2012) 237 f. strongly emphasizes the differences between the medical tradition and the *Problemata* xxx,1, and the continuation of the Hippocratic legacy (over against the Aristotelian one) by later medical authors such as Aretaeus and Galen.

become rather ambiguous. Although its main symptoms are psychic, its very name refers to a bodily substance. Black bile, in turn, is conceived of as a bodily substance, but does not have much empirical credibility and is strongly linked to mental illness from the start. Moreover, by focusing on a particular disease, we might see whether the philosophical framework that came to the fore in the previous case-studies, can be given a more concrete form.⁹

1 Precedents

1.1 *Hippocratic Precedents*

As pointed out by Hellmut Flashar, the earliest instance of the word ‘melancholy’ is from the Hippocratic *Airs, Waters, Places*, which is dated among the oldest texts of the Corpus Hippocraticum.¹⁰ There, it is presented as a condition of illness that can be the consequence of very specific meteorological circumstances for people of a particular constitution. Among the many descriptions of variations in the qualities of seasons and winds that correspond to the manifestation of various diseases in people of particular constitutions, there is one that describes a dry autumn with a northerly wind, following upon a dry summer with a northerly wind:

ἢ δὲ βόρειόν τε ἦ καὶ ἄνυδρον ... τοῖσι μὲν φλεγματίησι φύσει συμφέρει μάλιστα καὶ τῖς ὑγροῖς τὰς φύσιαις καὶ τῆσι γυναιξί· τοῖσι δὲ χολώδεσι τοῦτο πολεμιώτατον γίνεται. λίην γὰρ ἀναξηραίνονται καὶ ὀφθαλμῖαι αὐτοῖσιν ἐπιγίνονται ξηραί, καὶ πυρετοὶ ὀξέες καὶ πολυχρόνιοι, ἐνίοισι δὲ καὶ μελαγχολίαι.¹¹

But if the weather be northerly and dry ... it is very beneficial to those who have a phlegmatic or humid constitution, and to women, but it is very harmful for the bilious. For these dry up overmuch, and are attacked by ophthalmia and by acute, protracted fevers, in some cases too by melancholies.

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9 Cf. Devinant (2020), for an extensive and astute analysis of Galen’s psychopathology from the perspective of the question about the soul. He concludes (among other things): ‘En effet, on constate, dans les écrits médicaux, une transposition systématique de la notion de trouble psychique à l’idée d’affection de l’encéphale : autrement dit, le psychisme est ramené non seulement au corps, mais à la tête.’

10 Flashar (1966) 21; cf. Jouanna (2012) 232 f.

11 *Airs, Waters, Places*, x, 80–90 ed. Heinemann.

Due to these specific circumstances, the bilious types become excessively dry and thick in autumn, which can lead to melancholy. The constitutions that are relatively moist benefit from these same circumstances, but since the bilious types are already dry, their dryness becomes excessive and cause of disease.¹² All moisture in their bile and blood dries up, leaving behind only the thickest and most acrid parts of it.¹³

Notably, there is no mention of black bile (μέλαινα χολή) as a separate humour or substance in this text yet, there is only the alteration of the substances bile and blood. Still, the two processes of drying and thickening as well as the timing of autumn, also occur in *On the Nature of Man*. They will become a standard part of the tradition on black bile as a humour and are fundamental for Galen, as we shall see.¹⁴ There is also no mention of a 'mental' illness here yet, the melancholy seems to be conceived only in physical terms. The designation of this condition as 'melancholy' appears to be based in the blackening of the bile, which is the result of its drying and thickening. As Flashar notes, melancholy at first probably indicated not a state in which a particular humour called 'black bile' predominates, but rather a disease that is characterized by a blackening of the bile, the latter being in itself a normal part of the constitution.¹⁵

Melancholy quickly appears as a mental illness as well, one that is particularly related to the brain. In book III of the *Epidemics*, a patient's state of mind is characterized as 'melancholic' after a list of symptoms have been summed up, all of which will become traditionally associated with melancholy:

κώμα παρείπετο, απόσιτος, ἄθυμος, ἄγρυπνος, ὀργαί, δυσφοραί, τὰ περὶ τὴν γνῶμην μελαγχολικά.¹⁶

Coma was present, aversion to food, despondency, sleeplessness, irritability, restlessness, the state of mind was melancholic.

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12 The bilious types are found in regions that are cold and dry, cf. chapter IV.

13 *Airs, Waters, Places* x 91 f. ed. Heinemann.

14 Cf. for autumn as the season of melancholy: *Epidemics* VI, 1, 11; *On the Nature of Man* VIII, 186,17–9 Jouanna; *Aphorisms* III, 22.

15 Flashar (1966) 23: 'All diese Überlegungen legen den Schluß nahe, daß das Wort Melancholie ursprünglich nicht, wie allgemein angenommen wird, heißt: Verfassung, in der der Saft 'schwarze Galle' vorherrscht, sondern: Krankheit, die charakterisiert ist durch die schwarze Verfärbung des Saftes 'Galle'.

16 *Epidemics* III XVII, case 2.

Thus, we find in the Hippocratic Corpus a notion of melancholy as a disease dependent upon specific meteorological and constitutional circumstances, a notion of melancholy as something that particularly disturbs the mind, and the relation of melancholy to a detrimental state of one's bile, that is characterized by excessive drying and blackening. But do we find a notion of black bile as a substance that causes the mental illness melancholy? According to Flashar, we do not. He concludes: 'Die Melancholie stellt sich zunächst dar als eine Krankheit, die ihre Ursache in einer schwarzen Verfärbung des Körpersaftes Galle hat'.¹⁷ Thus, it is rather the alteration of another substance that is seen as the cause of the disease called melancholy. However, Flashar also points to a development within the Hippocratic corpus, in which black bile evolves more and more into a substance in its own right, one that is part of our nature and that has the potential to cause melancholy.

Our previous quotation shows that in the Hippocratic Corpus the disease of melancholy has already assumed, in rudimentary form, the character by which it will be known for millennia to come. Its described symptoms are fear, despondency, sleeplessness, irritability, aversion to food, difficulty with speech or aphasia and possible derangement or delirium.¹⁸ Andrew Solomon seems to have been right about depression being as old as the hills. In the Hippocratic Corpus melancholy is also described as both manic and depressive, a feature that, as we shall see, will become established more strongly with the Peripatetic *Problemata* and that is at least to some extent comparable with present-day notions of the bipolar variety of depression. It is particularly related to the mind, more than other diseases, as also becomes clear from *Epidemics* VI, where it is said that there is some congruence or overlap between melancholy and epilepsy, but that those whose sickness tends more towards the body, become epileptics, while those whose sickness tends more towards the mind (ἡ δὲ διάνοια) become melancholics.¹⁹ This particular passage is picked up by Galen in *Loc. Aff.*, as we shall see below.

The most concise and well-known description of melancholy can be found in the *Aphorisms*, unfortunately completely without context:

17 Flashar (1966) 45, he mentions two possible exceptions in note 51 (*Affections* 36 and *Diseases* I 3); cf. Jouanna (2012) and also Müri (1953) 29 f.

18 *Epidemics* III, 17 case 2; *Aphorisms* VI, 23 and VII, 40; *Diseases* I, 30; *Prorrhetic* I, 14 I, 18 and I 123; *Regimen in acute diseases* 16; *Diseases* I 30; Müri (1953) 33–4; Flashar (1966) 47; Jouanna (2012) 235.

19 *Epidemics* VI, 8, 31 ed. Smith.

ἦν φόβος ἢ δυσθυμία πῶλον χρόνον διατελή, μελαγχολικὸν τὸ τοιοῦτον.²⁰

If the fear or despondency lasts for a long time, this is a melancholic state.²¹

Galen cites this passage in various works and (partly due to Galen) these main symptoms will become an integral part of the tradition on melancholy, even still as descriptions of its modern successor, depression.²²

As a separate substance of its own, rather than a degenerated or detrimental version of the bile that is a normal part of our constitution, black bile seems to become established at first in the Hippocratic *On the Nature of Man*.²³ There are some other passages in the Hippocratic Corpus where there is mention of a black bile, but it is unsure whether it is considered as a separate substance there or rather as a specific form of the 'normal' bile. It is generally considered a harmful substance that manifests itself in situations of extreme illness. One reason, perhaps, to assume that there was no concept of black bile as a separate substance in the earlier treatises of the Hippocratic Corpus until the *On the Nature of Man*, is that in other treatises we find enumerations including all of the canonical humours except black bile.²⁴

In *On the Nature of Man* and Galen's commentary on it, we find a systematization of the humours into a fourfold schema integrated with the four elemental qualities and the four seasons in the following manner: phlegm is cold and wet and predominates in winter; blood is warm and wet and predominates in spring (but blood also has an exceptional position, as we shall see below); yellow bile is warm and dry and predominates in summer; black bile is cold and dry and predominates in autumn. Together, these four humours constitute our nature; when they are mixed in a proper balance, we are healthy, while the various diseases are explained in terms of their respective predominance. As is well known, this fourfold schema will become canonical after Galen and thus crucial for the history of black bile and melancholy in general. Galen will also extend the analogies with age: blood predominates during infancy, yellow bile predominates in youth, black bile predominates during the period after one's prime, phlegm predominates old age; as well as with taste:

20 *Aphorisms* VI, 23.

21 Translation Jouanna (2012) 235.

22 For Galen's quotation: *Loc. Aff.* III, 10 (VIII 188–90 K); *Symp. Caus.* VII 202–3 K.

23 Flashar (1966) 39 f.; Jouanna (2012) 335 f.

24 Cf. Stewart (2016) 26 f. for more extensive discussion of these issues.

blood is sweet, yellow bile is bitter, black bile is sharp or acid, phlegm is salty; and the elements: yellow bile corresponds to fire, black bile to earth, phlegm to water and blood to a well-balanced mixture of the four.²⁵ This schematization is fundamental for the history of black bile and melancholy, since black bile would otherwise not be considered a common part of our constitution. With the inclusion of black bile in this basic schema that describes our common nature, black bile and melancholy acquire the potential to become a normal part of our constitution in the centuries to come.

Müri and Flashar see the addition of black bile to the other humours, which were older and more commonly established notions, as 'Systemzwang' or 'Systemtrieb', that primarily served to integrate the schema of the humours with that of the four seasons and that of the four elemental qualities.²⁶ That might seem a proper explanation, especially since it seems that previously there was no black bile in its own right, while the other fourfold divisions were already in place. But the question still remains: even if we assume it logical to add a fourth for the sake of systematization, why this one? After all, there were many recognized forms and shades of bile and other humours or bodily juices. Moreover, there was little or no empirical evidence for black bile.²⁷ As Jouanna has pointed out, the humoral theory of the Hippocratic *On the Nature of Man* was 'just one humoral theory amongst others'. He gives an example with the

25 Cf. *PHP* VIII 502,10–504,2 De Lacy (v 676–7 K) and VIII 512,25–516,17 De Lacy (v 689–93 K); *HNH* 41, 12–9 (XV 51 K); *HNH* 42,23 Mewaldt (XV 80 K); cf. Jouanna (2012) 339 f.

26 Müri (1953) 27; 'Das physiologische Modell, das auf der Zuordnung von vier Säften zu vier Jahreszeiten und auf der paarweisen Verkoppelung der Qualitäten warm-kalt-feucht-trocken mit je einem Saft beruht, trägt die Spuren mühsamen Systemzwanges noch an sich. Die schwarze Galle ist wirklich 'faute de mieux', aus dem Willen zum System darin aufgenommen worden, weil ohne sie die Vierzahl nicht zu erreichen war'. Flashar (1966) 41; 'Die Einordnung der schwarzen Galle in den Kreis der anderen Säfte ist aber deutlich das Ergebnis eines Systemtriebes'. Cf. Klibansky et al (1990) 40–8 on the Pythagorean and Empedoclean precedents for this tetradic tendency.

27 The dubious empirical status of black bile has been widely recognized, see Kudlien (1967) 77: 'Jeder Medizinhistoriker weiß, daß die berühmte 'schwarze Galle' nicht nur das faszinierendste, sondern auch das problematischste Glied der nicht minder berühmten, alten Viersäftelehre ist – unter anderem gibt es sie ja, als solche, gar nicht!' Bennett (1978) 234 f.; Bell (2014) 50: 'It might make more sense to think of the humours as theoretical postulates that helped the ancient physicians to model the invisible processes underlying disease. But the difficulty still remains: the other three humours all had real, observable physiological correlates. Blood, bile, and phlegm are visible, tangible things – only black bile is not'. Pormann (2008) 5: 'Scholars generally have no difficulty identifying the first three of these humours: blood is what we know as blood; phlegm is the mucus secreted from the nose and sometimes the mouth, especially when one has a common cold; yellow bile is the bile produced in the gallbladder and sometimes excreted during vomiting. But what is black bile, called *mélaina cholé* in Greek, whence we get the term for melancholy?'

Hippocratic *Diseases*, in which water takes the place of the fourth humour, rather than black bile.²⁸ The competing theories, however, did not leave a such a legacy as that of the *On the Nature of Man*. Stewart also emphasizes that the humoral system of the *On the Nature of Man* was not the ‘dominant humoral theory’ in ancient medicine, but that its uniqueness consisted in the constructed correspondence to the four seasons and the stages of life. However, he then simply adds: ‘It is also important for the status of black bile, which is defined as an element of the body, as opposed to a pathogenetic residue that is produced from the alteration of another substance’.²⁹ The importance of this systematization for the status of black bile is undeniable, but the question still remains: why was it, then, that the humoral theory that added black bile became so successful? Why was the choice for black bile such a success? Why would the blackened bile, which was previously considered a cause of disease rather than a normal part of our nature or constitution, be a suitable candidate to expand the humoral schema in the first place? It had negative associations from the start, why incorporate this detrimental dark substance into the nature of healthy human beings? Stewart’s work is mostly concerned with the historical importance of Galen’s interpretation of black bile and his manipulation of the previous history into something that aligns with his own theory. Galen, in his commentary on *On the Nature of Man* (*HNH*), argues that the text was the foundation of Hippocrates’ work and with his own authority ensured its legacy – that much is sure. He emphasizes its importance and attributes it to a host of other prominent physicians and philosophers without proper justification, to portray the theory as universally adopted, as Stewart notes.³⁰ Thus, we have noted that Galen played a crucial role in the installation of this humoral theory, which was to play such a dominant role in later history. But, that is not an answer to our previous question: why could *this* humoral theory, the one that included the black bile, have been so attractive in the first place, for Galen and the later tradition alike?³¹ It seems insufficient to answer this question

28 Jouanna (2012) 336; cf. Klibansky et al (1990) 45–6; Nutton (2005) 115 ff.; Stewart (2016) 22 f.

29 Stewart (2016) 28. Cf. Jouanna (2012) 338, who suggests that Galen’s use of the Hippocratic treatise was ‘one of the important historical factors behind the survival of Hippocrates and the fortune of the theory of the four humours’.

30 Stewart (2016) 29 f. Cf. Nutton (2005) 115 ff.

31 It seems that the Hippocratic humoral theory was already in antiquity particularly defined as the one that includes the black bile (which was less common than the other three humours), since we can gather from Galen’s *Adv. Jul.* that the followers of this humoral theory (including Galen) were jokingly called melancholics – or perhaps in a more broader sense ‘people that have lost their minds’ – by Julian because of their supposed preoccupation with the black bile (*Adv. Jul.* 291 K): ‘We are bound to marvel, first, at

merely in terms of Galen's authority and his apparent liking for Hippocrates in general or the *On the Nature of Man* in particular, especially considering the interest that melancholy as a disease (by then related to black bile) already had well before Galen, as we can observe for instance in the *Problemata* and in Rufus' work (with which Galen was thoroughly familiar). On this question, I think, Kudlien's study still provides a more useful point of departure.³² Kudlien points to a general appreciation in ancient Greek culture for something dark that causes madness, something that is associated with anger (*χόλος*), spilled blood, earth and the diaphragm. He argues that this appreciation existed prior to the establishment of black bile as a proper substance in itself and facilitated its conception.³³ According to Kudlien, these pre-Hippocratic, non-medical precedents need to be taken into account, since the more technical medical notion of black bile builds on them. As he sees it, these precedents leave an 'inherited conglomerate' – as he calls it, after a notion developed by Dodds – that paves the way for the later inclusion of black bile among the canonical constituents of the human body. Likewise, Klibansky, Panofsky and Saxl, in their *Saturn und Melancholie* point to these kinds of pre-scientific associations with black bile, which 'schon durch seinen Namen (*μέλας* = schwarz) mit allen bösen und nächtlichen Vorstellungen verknüpft war'. They remark, rightly so in my opinion, that the scope of meaning of the word *μέλας* in Greek, as in most other languages, is far wider than a mere designation of colour, and that this is a fact of relevance for the study of the history of black bile and melancholy.³⁴ In Aretaeus of Kappadocia, we find an explicit connection of black bile to the Homeric *χόλος*, in which the addition of blackness would express a more vehement or violent anger than the normal bile.³⁵

Besides having an obvious methodological advantage, namely that Kudlien is able to explain to some extent *why* black bile was an attractive option to include into the basic human constitution beyond a mere reference to Galen's authority and his liking of Hippocrates, Kudlien also makes a solid point about the precedents. In fact, people have remained fascinated by the substance of black bile as a part of our constitution for hundreds and almost thousands

what is said at the beginning – that we 'ought not to act entirely on black bile'. For clearly Julian implies that we, the supporters of Hippocrates, are mad (*melancholein*). (Tucson 2004)

32 Kudlien (1967); see also Kudlien (1973).

33 Kudlien (1967) 77 ff. Cf. Müri (1953) 35–7, on *χόλος* and *χολόμομαι* particularly in Homer; Flashar (1966) 37–8; Bennett (1978) 234–6; Pigeaud (1981) 122 f.

34 Klibansky et al. (1964) 55 f.

35 Aretaeus, *On the Causes and Symptoms of Chronic Disease* 1, 5 ed. Adams. Cf. Flashar (1966) 76–7.

of years after Galen – does an appeal to Galen’s authority suffice to explain this, or should we look further into what might make the notion of black bile so appealing? In the chapter on black bile in Galen below, we shall further delve into the primary associations that black bile evokes in Galen’s work in order to better understand its attractiveness. For now, I would merely make the general suggestion that there was something interesting and attractive about the incorporation of black bile into our constitution, because it effected a physiological integration of a darker side of the life of human beings into the medical and philosophical conceptual framework, a side that was associated with death, madness, heaviness and the dark depths of the earth. This is not an anachronistic projection of more modern notions of melancholy unto Galen, as we shall see, since all of these associations can already be found in Galen’s own work. When he cites the Hippocratic passage that identifies fear and despondency as the two main symptoms of melancholy, he explains these symptoms in terms of the *darkness* of the black bile. He even compares the person afflicted by melancholy to a child wandering in external darkness.³⁶ There is, then, a clear association in Galen of melancholy with the dangers of night and death, and the experience of these dangers has been fundamental for human beings from time immemorial.

We shall continue this line of thought in the section on black bile in Galen. To conclude this section, we find in the Hippocratic Corpus two possible causes of melancholy: the drying and thickening of bile that becomes black as a consequence of excessive heating of another humour, and the excess or isolation (i.e. not being mixed with other humours) of black bile as one of the four humours that need to be balanced in order for there to be health. These two options seem to be the consequence of black bile first appearing as a degeneration of normal bile and then becoming integrated into a more systematic humoral theory, to some extent already in the Hippocratic Corpus. They remain in tension in the tradition building on the Hippocratic Corpus, as we shall see, and will also resurface as the tension between an extremely harmful and more normal version of black bile. We have also seen in this section how melancholy is specifically associated with the mind and with the symptoms of fear and despondency from its inception. Finally, we have had a brief discussion on the possible underlying reasons for the attractiveness of black bile as a normal part of our constitution, which will be continued later.

36 *Loc. Aff.* 284 Van der Eijk and Pormann (III 190–1 K).

1.2 *Aristotle and the Problemata xxx,1*

The so-called *Problemata Physica* have had a profound impact on the history of black bile and melancholy with its bipolar-like description of a melancholy genius exemplified by various poets, heroes and philosophers. It was commonly attributed to Aristotle until 20th century scholars have made a convincing case that it is in all probability not a work by Aristotle himself but more likely by his successor Theophrastus or another Peripatetic.³⁷ It contains a single chapter (xxx,1) devoted to melancholy, which was to exercise a major influence, particularly on the Renaissance association of melancholy with genius and the subsequent romanticisation of melancholy.³⁸ The theory of melancholy in the *Problemata* has recently been compared to Aristotle's genuine work in a seminal study by Philip van der Eijk, showing that it depends on Aristotle's notion of the melancholic in some aspects, and could be a continuation of Aristotle's own work or thoughts in this regard.³⁹ In the following section on Aristotelian precedents for Galen's theory of black bile and melancholy, we shall build on van der Eijk's work in order to provide a brief overview of both, starting with Aristotle's genuine work and then proceeding to a discussion of the *Problemata* chapter xxx,1.

1.2.1 Aristotle

One important aspect of Aristotle's notion of the melancholic, as van der Eijk has noted, is that it is underpinned by the recognition of black bile as a distinct

37 Müri (1953) 21; Flashar (1962) 711 f. See also van der Eijk (2005) 139 including note 2 and 3.

38 Cf. Flashar (1962) 715 ff. for a brief overview of the text's 'Nachwirkung'; Klibansky et al (1990, first published in 1964) still remains the standard work on this subject; a great early modern source is Robert Burton's *Anatomy of Melancholy* (1621).

39 Van der Eijk (2005) 139–68. Cf. Schütrumpf (2015) 357 f., 369, on van der Eijk (2005): 'However, this focus seems too narrow, and what is missing in this strategy is a complementary approach as we just undertook it, that is of examining whether the specifics of the working of black bile and the theoretical framework in which this is presented can be reconciled with Aristotle's views on the causes of human behavior, and it will be this strategy I will pursue here'. It seems that while van der Eijk sought to compare Aristotle's writings on melancholy to the *Problemata* 30,1, in order to see whether the latter can be seen as a continuation of the former, Schütrumpf sought to compare the *Problemata* 30,1 to Aristotle's writings, in order to determine the extent to which the former can be reconciled with the latter (Schütrumpf concludes that the 'the views of Aristotle and Pr. 30,1 cannot be reconciled'). However, it seems clear to me that, the conclusion that the author of the *Problemata* builds on Aristotle's thoughts on melancholy is not contradicted by showing that the *Problemata* contain aspects which cannot be reconciled with Aristotle's views. For our study it is enough to note the similarities between Aristotle and the *Problemata* and there is no need to further dwell on the extent to which the author of the *Problemata* is faithful to Aristotelian doctrine.

fluid that is, moreover, characterized as a residue (περίττωμα).⁴⁰ In fact, both biles as well as phlegm, are characterized by Aristotle as residues that do not have a purpose but are rather the by-product of something that does have a purpose. This is a notable change from the late Hippocratic tradition, in which the four humours form our basic constitution and there is no mention of the humours as residues or by-products. Van der Eijk suggests that the notion of black bile as a residue might, in fact, have been introduced by Aristotle or someone in his school.⁴¹ This is interesting for our case-study, since Galen also often defines black bile (as well as yellow bile and phlegm) as a residue, a point to which we shall return in due course. It is noteworthy that Aristotle says that bile comes into being as a residue when there is something off with the blood, and that as such this residue is opposite to nutrition (blood is the substance that nourishes).⁴² As we shall see, according to Galen black bile is a kind of aberration that results from a surplus of innate heat in the digestive process. This process should normally or ideally lead to the production of blood to nourish the various parts of the body. Van der Eijk also suggests that the notion of ‘the melancholic’ as a person with a specific physiological constitution that is related to the substance of black bile, is an originally Aristotelian idea as well. From van der Eijk’s survey and discussion of all passages in Aristotle on the subject, we can summarize a few findings. First of all, the melancholic usually enters Aristotle’s writings in the context of discussions of the physiology that underpins certain psychic processes and then serves as an example of a deviation from the norm. That is to say: there is something extraordinary about the functioning of melancholics, the cause of which is their particular nature in the sense of their physiological constitution. In a discussion of sleep, Aristotle says that melancholics are great eaters and do not sleep much.⁴³ Sleep, according to Aristotle, is a consequence of the process of digestion, which causes hot exhalations to first move upwards and then, after having reached the upper parts of the body, return again downwards in a mass that causes sleep. In the case of melancholics, however, the quantity of these exhalations is small, since they do not derive much benefit from what they eat. Despite their large appetite, they remain thin, since their digestive process is apparently suboptimal. The reason for this, says Aristotle, is the coldness of the black bile, which cools the process of digestion. Several things are noticeable

40 Van der Eijk (2005) 143 f.

41 Van der Eijk (2005) 153.

42 *Somn. Vig.* 456a33: ‘... and in all cases food in its ultimate form is, in sanguineous animals, the natural substance blood ...’ (tr. Barnes); *Part. An.* 677a27: ‘But, when animals are formed of blood less pure in composition, the bile is the residue left by this’ (tr. Barnes)

43 *Somn. Vig.* 457a27 f.

here: first of all, the elemental quality of coldness corresponds to the previous Hippocratic and later Galenic tradition; secondly, the melancholic's condition is associated with a flawed digestive system, which, in different terms, is a fundamental aspect of Galen's notion of black bile and melancholy; finally, as we have mentioned, black bile is defined here as a residue (περίττωμα), which is also a pivotal aspect of black bile in Galen.

One of the things Aristotle considers extraordinary about melancholics and which does not surface as such in Galen – although it will become an important part of the broader tradition on melancholy – is their intense imagination. However, Klibansky, Panofsky and Saxl have rightly pointed out that the delusions of melancholics, which medical writers such as Rufus and Galen describe, can very well be seen as related to, or a more specific continuation of, this theme of intense imagination.⁴⁴ In the context of a discussion of the corporeal nature of recollection and possible problems with it, Aristotle states that melancholics are most powerfully moved by images (φαντάσματα κινεῖ μάλιστα), which makes it harder for them to control their processes of recollection.⁴⁵ Related to this, melancholics are exceptional with regard to their dreaming. In *On Divination in Sleep*, Aristotle explains their alleged prophetic dreams with reference to their intense imagination, which causes them to experience so many movements: given the sheer amount of images that occur to them, the images must sometimes chance to correspond to actual affairs. Also, the intensity of their imagination makes it somewhat mono-manic: the movements of their imagination are not hindered by other movements.⁴⁶ Aristotle uses the melancholic inclination toward alleged prophetic dreaming to prove that dreams must not have been godsend. After all, should they have been godsend, they would have been sent to the wise in broad daylight. It is implied in these passages that melancholics have a powerful imaginative capacity but that their rational capacity is not above average or even exceptionally weak.⁴⁷ Likewise, in *On Dreams*, the melancholics are used as an example of people that dream in a confused and incoherent manner, like people that are feverish or drunk.⁴⁸ In the *Eudemian Ethics*, we find a remarkable passage that is concerned with

44 Klibansky et al (1964) 84: 'Der Ausdruck ἀκολουθητικοὶ τῇ φαντασίᾳ scheint auf diese übertriebene Erregbarkeit der 'vis imaginativa' abzielen, die spatter für den Halluzinationszwang oder aber für eine besondere Kraft des anschaulichen Vorstellungsvermögens verantwortlich gemacht wurde'.

45 *Mem.* 453a14–19.

46 *Div. Somn.* 463b17 f., 464a31–2.

47 *Div. Somn.* 464a20 f.

48 *Insom.* 461a20 f.; for a more in-depth discussion of these passages from *Div. Somn.* and *Insomn.*, as well as their interrelation, see van der Eijk (2005) 143–8.

the starting-point of thinking and a kind of direct relation to the divine that sidesteps reasoning. In it, the melancholics, ‘the dreamers of what is true’, are again presented as examples.⁴⁹ It seems that the melancholic is portrayed here as someone with exceptional access to the divine and to truth, exactly because of an intense immediacy that is (at least partly) the consequence of a lack of reasoning power.⁵⁰ In the *Nicomachean Ethics* too, melancholics are said to follow their imagination due to its intensity, without thinking or deliberating, which makes them impulsive.⁵¹ Thus, from Aristotle’s writings we can obtain a relatively coherent picture of the melancholic, as someone that has a certain intensity of imagination that can lead to exceptional capacities, even though it is, at the same time, associated with a lack of reason.

One further passage from the *Nicomachean Ethics* deserves more extensive discussion because it invites comparison with the role of black bile in Galen and because it remains somewhat underused in van der Eijk’s otherwise full treatment.

At the end of book VII of the *Nicomachean Ethics*, Aristotle discusses pleasure (ἡδονή), or more specifically, physical pleasure. He asks why it is that physical pleasure *appears* to be highly desirable, whereas people do not believe it to really *be* desirable, as opposed to the more noble type of pleasure. Aristotle gives a twofold answer to this question. First, the bodily pleasures are a remedy against pain. Particularly those who experience excessive pain will seek out excessive pleasure to counteract it, and the bodily pleasures have a potential for excess. Second, they are sought out, again, for their intensity, by those who are not able to enjoy anything else:

οὔτε γὰρ ἔχουσιν ἕτερα ἐφ’ οἷς χαίρουσιν, τό τε μηδέτερον πολλοῖς λυπηρόν διὰ τὴν φύσιν. αἰεὶ γὰρ πονεῖ τὸ ζῶον, ὥσπερ καὶ οἱ φυσιολόγοι μαρτυροῦσι, τὸ ὄραν, τὸ ἀκούειν φάσκοντες εἶναι λυπηρόν· ἀλλ’ ἤδη συνήθεις ἐσμέν, ὡς φασίν.⁵²

For they have no other things which they enjoy, and for many people a neutral state is painful because of their nature. For the living being always suffers, as the natural scientists also testify, who say that seeing

49 EE 1248a20 f.

50 The idea that the melancholic has an exceptional relation to truth frequently recurs in the subsequent tradition and we find it still in Freud, who stated that melancholics ‘have a keener eye for the truth’. (*Standard Edition of Complete Psychological Works* 14, 246) as well as in Walter Benjamin’s work, cf. Ferber (2013) 41 ff.; it also appears in the modern ‘depressive realism’ hypothesis, cf. Bell (2014) 156 ff.

51 EN 1150b19 ff., also 1152a19 and 1152a27.

52 EN 1154b5–9.

and hearing are painful, but we have come to be accustomed to that [pain], as they say.

It is remarkable that Aristotle here starts out his discussion with what appears to be a few people who are not able to enjoy anything but intense bodily pleasures, but then proceeds to explain this lack of capacity in much more general terms: for *many* people a neutral state is painful. The explanation that he gives for this experience of pain appeals to a more universal truth again: *a living being always suffers*. Aristotle must mean here that a living being suffers as such, i.e. qua living being, considering the examples he gives of ordinary sense-perception being painful. These clarifying examples imply that we are actually always in a state of pain, to which we are simply accustomed. What started out as a description of people who need excessive bodily pleasure because they do not enjoy other things has now culminated in a remarkable description of a general ‘pain of living’, as Joachim calls it in his commentary.⁵³ Apparently, Aristotle’s point is that this ‘pain of living’ demands a kind of permanent cure, which is why an apparently neutral state is actually painful to many people and why we often seek bodily pleasure to counteract the pain. Aristotle’s own

53 Joachim (1951) *ad locum*. We cannot translate πόνος with something milder such as ‘strain’, since the hearing and seeing are described as λυπηρόν, which unambiguously means ‘painful’, and since we are still in the context of the traditional opposition with pleasure (ἡδονή). Aubry (2009) provides an insightful analysis of this passage and its broader context. Cf. also Cheng (2017), who takes the statement that the living being always suffers as a mere ‘report’ of the position of the *physiologoi*, which he qualifies as ‘strange’, ‘obscure’, ‘idiosyncratic’, ‘counter-intuitive’ and ‘extra-ordinary’, and which he considers to have ‘absurd’ consequences. Cheng partly seems to follow Warren (2007), who also takes the statement that ‘the living being always suffers’ as merely being the position of the *physiologoi*, but who does recognize that ‘Aristotle appears prepared to endorse their view’, even though Warren also considers it ‘odd’. Apart from not understanding what is so strange about it, I also do not see, on the basis of the text, why one would think this is not Aristotle’s position. He first simply states αἰ γὰρ πονεῖ τὸ ζῶον, with γὰρ indicating that this is meant to explain his previous statement τό τε μηδέτερον πολλοῖς λυπηρόν διὰ τὴν φύσιν, which also reflects his own position, and only then brings in the support of the *physiologoi* (ὥσπερ καὶ οἱ φυσιολόγοι μαρτυροῦσι) for this position, with καὶ indicating that they *also* claim this. I also do not agree with Cheng, that a contradiction would follow, as the melancholics would both have to be in a neutral state and suffering pain at the same time; this can be solved easily by recognising that the state is neutral from a normal perspective, but painful on another level, namely in the experience of the melancholic or from the perspective of those who are not accustomed to the pain – this is why the melancholic is in a pathological condition. I also think it is crucial that Aristotle, in this same passage, contrasts our experience of pleasure and pain as composite beings to that of god. While this is recognized by Aubry, it is ignored entirely by Cheng. See also Vinkesteyn (forthcoming) for more extensive discussion of this passage.

account of the Pythagorean ‘harmony of the spheres’ might be a useful analogy here: since we have been hearing the sounds of divine harmony from birth, so the Pythagoreans argue, we have no notion of a contrary silence to contrast the sound with, and thus we never notice perceiving the sounds.⁵⁴ In the same way, we could say, the living being does not notice its normal state of suffering while engaging in common activities such as seeing and hearing, because the suffering has been there since birth and there is no state of the absence of this suffering to contrast it with. Aristotle even goes as far as to compare this blissful ignorance of our normal state of suffering to a state of intoxication:

ὁμοίως δ' ἐν μὲν τῇ νεότητι διὰ τὴν αὐξήσιν ὡσπερ οἱ οἰνωμένοι διάκεινται, καὶ ἡδὺ ἢ νεότης.⁵⁵

In a similar manner, during their youth people are in a state resembling drunkenness because they are growing, and therefore youth is pleasant.

tr. ROWE, modified

This comparison with the growth of youth and with drunkenness makes it clear that Aristotle considers the accustoming to our state of suffering as something that impedes accurate perception, however desirable and normal it may be in itself. As with the harmony of the spheres, the suffering *is* actually there, but it is not perceived as such. At this point the melancholic enters the scene:

οἱ δὲ μελαγχολικοὶ τὴν φύσιν δέονται ἀεὶ ἰατρείας· καὶ γὰρ τὸ σῶμα δακνόμενον διατελεῖ διὰ τὴν κρᾶσιν, καὶ ἀεὶ ἐν ὀρέξει σφοδρᾷ εἰσὶν ...⁵⁶

The melancholics, on the other hand, are in permanent need of a remedy due to their nature, since their bodies too, because of their mixture, are constantly stinging, and they are always in a state of intense desire ...

Remarkably, Aristotle contrasts the melancholics with those who are youthful or intoxicated (notice the μὲν, δὲ construction). In contrast, melancholics do not experience pleasure, but they are rather in permanent need of remedy because their body is constantly stinging. This stinging causes an insatiable need for pleasure, which makes them become ‘licentious and bad’. What Aristotle seems to be saying here is that, as opposed to the young and the

54 *De Caelo* II 9, 290b12–29.

55 *EN* 1154b9–11.

56 *EN* 1154b11–13.

intoxicated, the melancholic perceives his or her ‘pain of living’ and is stung by it constantly. The choice for the verb δάκνω seems to suggest an immediate physical pain that is perhaps related to the acidity of black bile, which we already found in the Hippocratic tradition.⁵⁷ The question now is: why is it that these melancholics are so stung? Clearly it has to do with their particular nature or physiological constitution, their particular κρᾶσις is indicated to be the cause. It might also be that Aristotle here implies that the general ‘pain of living’ he was just referring to is experienced to a greater extent by melancholics, since their nature (i.e. their specific constitution) does not lend itself to the kind of habituation that makes the painful state appear neutral or even pleasurable, as in the case of youthful or intoxicated people or those who have become accustomed to the normal pain of sense-perception. This would fit well with the exceptional susceptibility to truth that Aristotle ascribed to the melancholics in the *Eudemian Ethics*. Another thing to take into account in this regard is the fact that Aristotle, immediately after this passage, presents an opposition between the pleasure of God as a single being, and the pleasure and pain of perishable, composite beings such as we are. God is in a state of continuous pleasure, due to his unity and simplicity. We cannot be in such a state, because our nature is a composite one: besides the divine element, there is also something else (ἕτερον τι). As Sarah Broadie has pointed out, this ‘element of a different sort’, has to mean ‘different from the divine element in us’. Aristotle presents the flight into excessive pleasure ‘as a sort of reaction against physical embodiment’.⁵⁸ It is the very fact that we are not god, or not *only* our divine part, that causes the need for pleasure to counteract the pain that necessarily accompanies the division into parts, the fragmentation of a composite being that would not have been there if our being would have been confined to the divine element. Aristotle seems to suggest in this passage that it is this pain that melancholic natures are overly sensitive to: the pain of not being god. Again, this seems to be in line with the passage from the *Eudemian Ethics*, in which the melancholics are presented as an example of people who are moved by a divine principle of movement that is prior to intellect. This is how Aristotle explained the capacity of melancholics to have prophetic dreams, there: they do not need deliberation to arrive at truth, because what moves them is prior to and better than intellect, it is god itself.⁵⁹ Perhaps the

57 Galen uses forms of the verb δάκνω regularly, to describe the effect or activity of black bile, e.g. *Hipp. Aph.* VI XVIIIB 688, 1–3.

58 Broadie (2002) 406.

59 *EE* 1248a29–33: ‘τί οὖν ἂν κρείττον καὶ ἐπιστήμης εἶη καὶ νοῦ πλήν θεός; ... ἔχουσι γὰρ ἀρχὴν τοιαύτην ἢ κρείττων τοῦ νοῦ καὶ τῆς βουλευσεως ...’

same affinity to the divine makes it so difficult for the melancholic to get used to the pain of physical embodiment.

1.2.1.1 *Conclusion*

Some of the things that come to the fore from the scattered remarks on black bile and melancholy in Aristotle lend themselves well to comparison with Galen; others do not. The topic of the melancholic's exceptional imaginative capacity, which seems to in fact be the most well-established characteristic of the melancholic in Aristotle's genuine work, seems absent in Galen. However, there might be a thin line between this irrational capacity of compulsively generating images and certain forms of delusion Rufus and Galen associate with melancholy, especially considering the mono-manic tendency that Aristotle ascribes to the melancholic's imagination and the emphasis on delusions with regard to one particular object that we find in Rufus and Galen.⁶⁰ The most important issues to take along from our brief discussion of Aristotle are the following: the notion of black bile as a residue related to the digestive process as a by-product that does not have a purpose in itself; the notion of the melancholic as a type of person that is exceptional in certain regards due to their specific constitution; the relation of this melancholic type to a feeling of pain that is related to the mortality and imperfection that characterizes human beings compared to the divine. These themes, all of which seem to be Aristotelian innovations, return in Galen, sometimes mediated by Rufus or others.

1.2.2 *Problemata xxx,1*

It seems that in chapter xxx,1 of the *Problemata*, we find, for the first time, a strong association of melancholy with philosophy and with excellence. In Aristotle, the melancholic is often ascribed an exceptional capacity, as we have seen. But this relates to their intensive imagination and is accompanied by a lack in rational prowess. The *Problemata*, by contrast, starts out by asking why all the men who stand out (οἱ περιττοί) in philosophy, politics, poetry or the arts (τέχνας) are melancholics. It seems to me that this description is so broad as to include anybody with any exceptional capacity, as is also confirmed by the subsequent inclusion of the heroes. Again, there is excellent scholarship on this text already, so it suffices to point out a few tendencies that are of particular

60 See for Rufus F13, for Galen *Loc. Aff.* VIII 190 K. Cf. Klibansky et al (1964) 84: 'Der Ausdruck ἀκολουθητικοί τῆ φαντασίᾳ scheint auf diese übertriebene Erregbarkeit der 'vis imaginativa' abzielen, die spatter für den Halluzinationszwang oder aber für eine besondere Kraft des anschaulichen Vorstellungsvermögens verantwortlich gemacht wurde'. Also 100 and 109 on Rufus specifically.

relevance for our discussion of black bile and melancholy in Galen.⁶¹ The text gives a physiological explanation for the question posed at its beginning. It appears that, due to the variability of black bile, people who naturally contain much of it are receptive to inexplicable despondency that can lead to suicide on the one hand, but cheerfulness and frenzy on the other. The first arises in them when their black bile is cold, the second when it is overheated. Thus, they have a kind of natural bipolar inclination since they seem to be able to hit both extremes in an exceptionally intense manner. Yet, when they manage to strike the rightly balanced mixture of hot and cold – here we recognize Aristotle's celebration of the right mean – they become outstanding.⁶² It has been noted that this particular theory of melancholy builds on Plato's notion of *mania* as we find it in the *Phaedrus*, and can be seen as a secularization of that notion by means of Aristotelian-based philosophy of nature.⁶³

How does this curious little text relate to the other authors that we are discussing here? With regard to Aristotle, Philip van der Eijk has convincingly argued that it 'corresponds quite well to the Aristotelian concept of melancholy' and has suggested that it may go back to 'a treatise on melancholy that may have been part of Aristotle's lost *Problemata*' or that it may have been the attempt of a 'later Peripatetic (perhaps Theophrastus) to systematize the scattered statements of the Master'. He concludes that 'in any event ... the theory

61 For previous scholarship on the *Problemata* xxx: Müri (1953) 21–38; Flashar (1962) provided a German translation (250–61) and a rich commentary (711–22) that has laid the groundwork for later studies; Flashar (1966) 60–73; Klibansky et al (1964) 55 ff.; van der Eijk (2005) 139 ff.; Schütrumpf (2015).

62 *Problemata* xxx 954b10–28. Cf. Müri (1953) 24–6; Klibansky et al (1964) 82; van der Eijk (2005) 161. I do not agree with Schütrumpf (2015) that 'One cannot find in Pr. 30.1 the conceptual framework of a mean that controls Aristotle's ethical and political philosophy'. With regard to the people with a melancholic constitution *themselves*, it clearly is a mean which they ought to aspire to, i.e. a mean between the hotness and coldness of their black bile, which both lead to extremes when they are not moderated (955a27–36). This is still the case, even if these people themselves are not a mean compared to others because they are excellent *when* they strike the right middle with regard to their mixture; one does not need to resort to 'making the middle the center of the argument' in order to accept this, let alone assume that black bile plays some part in Aristotle's notions of the mean in order for Aristotle's mean to play a role in the *Problemata* xxx,1 (see Schütrumpf's note 33 against Klibansky's reading).

63 Müri (1953) 24; Flashar (1966) 62; Klibansky et al (1964) 55 ff., 90: 'Gerade dies Aufgabe stellt und löst nun aber das Problem xxx,1. Der mythische Begriff des Wahnsinns (*μανία*) wurde durch den naturwissenschaftlichen Begriff der Melancholie ersetzt, was um so leichter geschehen konnte, als 'melancholisch' und 'verrückt' in rein pathologischem Sinne seit langem Synonyme waren und als die auch dem krankhaften Melancholiker eignende Gabe der Wahrträume und Prophezeiungen der Platonischen Gleichsetzung von Mantik und Manik entsprach'.

of Pr. 30.1 has proved to depend strongly on Aristotle's own statements on melancholics.⁶⁴ Most of the tendencies we found in Aristotle's notion of the melancholic, notably the intense imagination, impulsive nature and strong desire for bodily pleasures, show resemblance to the described effect of heat on black bile in the *Problemata* (so to one side of the bipolar whole).

With regard to Galen, there are obviously some important differences, particularly the positive associations with genius and with exceptional joy that are simply absent in Galen, and for example also the air-like nature of black bile that makes it comparable to wine.⁶⁵ These differences have been adequately described.⁶⁶ There are also, however, important similarities that might be overlooked at first – particularly when one focuses on the differences – which may then result in the view that the theory of melancholy developed in the *Problemata* does not bear any relation to Galen's writing on black bile and melancholy.⁶⁷ As Flashar has noted, Galen refers to the *Problemata* in his commentary on the Hippocratic *Epidemics*, although not particularly to chapter xxx,1. However, he does refer to it in the context of melancholy, since his reference concerns the issue of the lustful nature of the melancholic (*Problemata* iv, 30).⁶⁸ As we have seen, the question on the melancholic's lustful nature fits with Aristotle's characterization of the melancholic as someone with a strong desire for bodily pleasure. In fact, Galen ascribes the *Problemata* to Aristotle, as has been common for centuries by then.⁶⁹ This indicates that besides knowing it and therefore presumably also knowing the chapter on melancholy, Galen had reason to seriously study it, considering his general knowledge and appraisal of Aristotle and more particularly his tendency to portray Aristotle as one of his fore-runners with regard to the theory of the four humours.⁷⁰ In

64 Van der Eijk (2005) 160–8. See earlier Müri (1953) 38; Flashar (1962) 712 f.; Klibansky et al (1964) 81 f.; see also Schütrumpf (2015) for a different perspective (see notes 630 and 653 above) which I think makes van der Eijk's first suggestion, that it was part of a text written by Aristotle himself, less likely, though I do not think it weakens the suggestion that the author of the *Problemata* might be taking up Aristotle's writing on melancholy.

65 *Problemata* xxx,1 953b22 ff.

66 Most recently by Jouanna (2012) 237 ff.

67 Flashar (1966) 68: 'In Galens eigener Darstellung der Melancholie bleibt die Konzeption der *Problemata* ebenso unberücksichtigt wie in den übrigen Spätantike, in denen es ausschließlich um die krankhaften Erscheinungsweisen der Melancholie geht'. Cf. Jouanna (2012) 237 ff.

68 *Hipp. Epid.* vi, xviiB 29 K, Galen remarks that Aristotle explains this lustful nature in terms of the black bile being full of air (as it is also described in chapter xxx,1) and relates it to Diocles' notion of hypochondriac melancholy.

69 Cf. Klibansky et al (1964) 81.

70 Stewart (2016) 29 f.

the same passage, Galen places the *Problemata*, Hippocrates and Rufus in one tradition of writing on melancholy.⁷¹

As it might appear, another important difference between the *Problemata* and Galen consists of the association of black bile with both heating and cooling in the former and the association of coldness alone in the latter. Indeed, at first sight it might seem as if only the cold aspect of the bipolar melancholy of the *Problemata* corresponds to Galen's notion of black bile, while the hot aspect remains absent. But in fact that is incorrect, since Galen tends to understand the black bile as a substance that used to be hot and is now cooled down. Galen associates intense intellectual activity (associated with the hot aspect of the bipolar melancholy in the *Problemata*) with hotness and yellow bile, not coincidentally the humour that is abundant in the period preceding the season in which black bile predominates. The predominance of black bile in autumn, as well as the concomitant danger of melancholy, is a direct consequence of the cooling down of hot yellow bile, which prevails in summer.⁷² It is a fact that Galen works with four elemental qualities and four humours, while in the *Problemata* there seem to be only two elemental qualities, hotness and coldness, and there is no theory of the four humours to be found there.⁷³ However, this amounts merely to a general difference in the underlying physiological framework, which can be partly reconciled. For example, attributing to yellow bile the symptoms and qualities that are caused by heating of black bile and attributing to black bile proper the symptoms and qualities that are caused by the cooling of black bile (that is now cold but that used to be hot), might be a good way to go about interpreting the *Problemata* if one wants to maintain its general description of symptoms, while also keeping to an underlying theory of four humours and four elemental qualities. That is to say, taking into account the division of bile into yellow and black bile, Galen's account might be much closer to that of the *Problemata* than it may appear at first sight.⁷⁴ But we shall return to this subject below, in our discussion of Galen.

71 Specifically, he claims Rufus chose to write φόβος ('fear') instead of ψόφος ('noise') for the passage from the *Problemata* (iv, 30), since this fits the symptomatology from the Hippocratic Corpus (xviiB 29,16 K f.).

72 In the Hippocratic *On the Nature of Man* itself, in a passage quoted by Galen in *HNH* 44,25–45,1 Mewaldt (xv 84 K), it is even said that it is the same bile that persists through summer and autumn: 'The bile of summer also dominates the body in autumn'. (tr. Hankinson)

73 Cf. Van der Eijk (2005) 159.

74 In this regard, it is also relevant to note that, as Walter Müri has observed, there is a parallel between on the one hand, the development of black bile as a separate substance – that is to say, the division of 'bile' into yellow and black – and on the other, the addition of autumn to the three other seasons by a division of summer (see below) into two separate seasons.

There are also other notable features on the cold side or the depressed variant in the *Problemata* that show continuity with the previous Hippocratic or later Galenic tradition: the emphasis on despondency and fear as the main symptoms that potentially lead to the desire to commit suicide (954a20 f.; 964b34 f.; 955a10);⁷⁵ the taciturn tendencies of the melancholic (953b13–4);⁷⁶ the notion of a sadness without a cause (954b15);⁷⁷ the distinction between acquiring an excess of black bile because of one's diet and having it naturally as a part of one's original constitution (954a25–30);⁷⁸ the distinction between a normal and harmful amount and state of black bile with its accompanying ambiguity (953a10–14; 954b18 f.).⁷⁹ To these we can add the association of melancholics with stuttering, lisping or other problems with speech from *Problemata* XI,38 and the association of melancholics with the need for release of sexual desire in *Problemata* IV,30.⁸⁰ These parallels have been overlooked, perhaps because of a focus on the notion of melancholic genius, which was to become so important in later tradition from Ficino onwards, and which is absent in Hippocrates and Galen. Given the common ground between Galen and this text from the *Problemata*, it seems likely that Galen was, directly or indirectly influenced by the discussion of melancholy in the *Problemata*. Something else to take into account here, is the fact that Rufus leans heavily on the Peripatetic discussion of melancholy and refers to it explicitly as well,⁸¹ while Galen in turn refers to Rufus as his main predecessor – besides

75 Hippocrates: *Epidemics* III XVII, case 2; *Aphorisms* VI, 23; Galen: *Loc. Aff.* III, 10 (VIII 188–90 K); *Symp. Caus.* VII 202–3 K.

76 *Hipp. Epid.* III XVIIA 789,13–14 K, where Galen explains the change from not speaking (σιγῶσα) to excessive speaking (λόγοι πολλοί) in terms of the difference between a melancholic and phrenitic condition respectively, also *Hipp. Epid.* III XVIIA 785,5–786 K, where Galen explains the silence and gloominess of a patient in terms of her having a more atrabilious blood.

77 Galen: *Symp. Caus.* VII 203,4–7 K; *Plen.* VII 576,10–13 K; *Loc. Aff.* VIII 418 K.

78 Galen: *Loc. Aff.* VIII 177 K.

79 See our discussion of black bile in Galen below. Cf. Klibansky et al (1964) 80: 'Freilich ist es den Nachfolgern des Aristoteles nicht immer leichtgefallen, eine scharfe Grenzlinie zwischen der natürlichen Melancholie und der krankhaften Melancholie zu ziehen, denn es bedarf keiner Erörterung, daß selbst eine wohltemperierte Melancholie stets in Gefahr ist, durch eine vorübergehende Steigerung der Gallenmenge oder, und vor allem, durch eine erhitzende oder erkältende Beeinflussung der Gallentemperatur in eine akute Krankheit umzuschlagen.'

80 Also *Problemata* XXX,1 953b32. See Galen's *Loc. Aff.* VI,5 (V 418 K), where he compares the sad and hopeless facial expression of people that repress their sexual needs with the appearance of melancholics.

81 See Pormann (2008) 7 for a brief enumeration of parallels and van der Eijk's essay in the same edition, 160–6 for more extensive discussion.

Hippocrates – on the subject. Besides the explicit reference Galen makes to Rufus in *At. Bil.*, van der Eijk and Pormann have shown that Galen’s writings on melancholy in *Loc. Aff.* also lean heavily on Rufus’ work, to say the least.⁸²

1.3 *Rufus of Ephesus*

The physician Rufus of Ephesus, whose work is mostly dated to around the turn of the 1st century AD, was perhaps Galen’s most important predecessor on the subject of black bile and melancholy.⁸³ Galen mentions him as the best of ‘the more recent writers’ on the subject at the start of his own *On Black Bile*, and even remarks that for those willing to listen there is nothing missing from Rufus’ treatise.⁸⁴ Coming from Galen, this is certainly exceptional praise for someone who is not Hippocrates or Plato. Rufus wrote two books on melancholy, of which we now only have fragments, mostly in Arabic. These fragments have been collected in an excellent edition with translation and commentary by Peter Pormann, which also includes additional essays by other scholars on Rufus and melancholy.⁸⁵ According to Pormann and van der Eijk, Galen’s writings on melancholy in *Loc. Aff.* rely on Rufus’ work to a large extent, and might indeed be ‘little more than a Galenic summary of Rufus’ ideas on the topic without proper acknowledgement’.⁸⁶ Hence, it will be useful, to say the least, to discuss Rufus’ work before we turn to Galen himself.

1.3.1 Basic Distinctions

In line with the ambiguity we have already found in the Hippocratic Corpus between a black bile that is inherently harmful and related to disease and the black bile that is a regular part of our constitution, Rufus also seems to distinguish two kinds of black bile: the natural black bile that is mixed in with the blood and only becomes harmful under specific circumstances, and the black bile that is a result of burning and cooling of other substances, most notably yellow bile and blood.⁸⁷ The first kind of black bile can be a normal part of our constitution without being harmful, as long as it has settled down, like a sediment in the blood. When it is stirred, it can become harmful, but as long as it is regularly evacuated or piled up in the spleen, it does not cause melancholy.⁸⁸

82 Pormann (2008) 4–9, 178 and 265.

83 For his dates see Pormann (2008) 4, 115 f. and 139 f.

84 *At. Bil.* v 105 K.

85 Pormann (2008).

86 Pormann (2008) 265.

87 Fr 7,1, 11,21, 68,1, 71,7.

88 Fr 21,7 f., Fr 28–31.

This notion of black bile as a sediment of the blood is to become an integral part of Galen's theory of black bile, as we shall see below. The other black bile is the result of burning and cooling: when yellow bile is burned, it turns into black bile and causes madness; when it is cooled it leads to depression. The latter kind clearly shows affinity to the discussion in the *Problemata*. It also leaves its print on Galen's work, since Galen considers the black bile that is the consequence of the burning of another humour, mostly yellow bile, as the most dangerous kind of black bile and as the kind that always leads to delirium.⁸⁹

Furthermore, the division into three distinct types of melancholy that we find in Galen seems to go back to Rufus as well, though Rufus seems to have focused his analysis on one of these types, the so-called hypochondriac type.⁹⁰ There is mention of two other types in Ishāq Ibn-Imrān's rendering of Rufus' work, but there they are not further specified.⁹¹ Galen differentiated between a hypochondriac, encephalic and general type of melancholy in *Loc. Aff.*, so it seems likely that this distinction essentially goes back to Rufus too, as Pormann and van der Eijk suggest.⁹²

Another distinction we find in Rufus's work is that between an acquired melancholy that is the consequence of bad diet, and a melancholy that comes with one's nature and original mixture (ἐκ φύσεως καὶ τῆς ἐξ ἀρχῆς κράσεως). However, this distinction occurs only once in the extant fragments.⁹³ The description of the acquired kind of melancholy is also reminiscent of that of the bipolar-like description we found in the *Problemata*: at first, when the yellow bile is excessively heated, the melancholic becomes extremely active, bold and delirious; but then, when 'the bile is burnt up, they become downcast, sad and fearful'.⁹⁴

All of these basic distinctions – the two kinds of black bile, the three types of melancholy and the difference between an acquired and natural melancholy – structure Galen's discussion of black bile and melancholy, as we shall see below.⁹⁵

89 *Loc. Aff.* v111 176–77 K; *Nat. Fac.* 11 136 K; *At. Bil.* 147–8 K.

90 Pormann (2008) Introduction 5, Fragments 4, 5 and 38; for Galen, see *Loc. Aff.* chapters 9 and 10 from book III, also rendered in Pormann 265 ff., with translation.

91 Fr 5.

92 Pormann (2008) 82 and van der Eijk (2008) 172 f. See also Flashar (1966) 92–4.

93 Fr 11, 22 f.; on the other hand, van der Eijk (2008) 173, notes parallels for the difference between a natural melancholy and one that is the consequence of habit in Plato's *Rep.* ix 573c7–9 and Aristotle's *Nic. Eth.* 1152a27–33.

94 Fr 11, 23–5.

95 Cf. Pormann (2008) 8.

1.3.2 Hypochondriac Melancholy and Digestion

The hypochondriac type of melancholy derives its name from its location of origin: it starts out in the region beneath the ribs (ὑποχόνδριος).⁹⁶ This is proven, according to Rufus, by the observation that pain diminishes when the belly is relieved or when patients vomit, and that the disease often occurs through indigestion.⁹⁷ The hypochondriac type of melancholy is also repeatedly associated with flatulence and constipation, which fits well with some of Galen's notions on the evacuation of black bile, as we shall see.⁹⁸

We have previously noted that Aristotle ascribed to the melancholic type a flawed digestive system, and we find melancholy to be strongly linked with food and digestion in Rufus as well. Melancholy is often explained as a consequence of the body's inability to get rid of a superfluous residue – the black bile – and often arises in the stomach. Rufus associates the black bile, or the 'melancholic humour', with bad digestion and characterizes it as a residue, as did Aristotle.⁹⁹ The emphasis on the stomach that we find in his fragments might be partly because Rufus supposedly only discusses the hypochondriac melancholy that arises in the region under the ribs by definition. Vomiting and purging through medication are generally proposed as a remedy. That is to say, the way to deal with the melancholic condition consists chiefly in the evacuation of the residue that does not seem to serve a purpose in the first place, so that the body is not completely dominated by its qualities, notably its dryness.¹⁰⁰ Although, under specific circumstances, Galen does find a purpose for black bile (for instance, after it has undergone a certain alteration, it can serve as nutriment for the spleen), the idea that black bile comes to be as a by-product of the digestive process and needs to be evacuated subsequently is central in his work as well. Rufus also suggests some other treatments that seem to be mostly physiological in nature, many of which suggest a direct

96 Fr 6,7.

97 Fr 6, also 40,25–33.

98 Fr 7,11.

99 Fr 11,10: 'Why do they constantly suffer from indigestion? Because their body is turbid and full of superfluities, and the belly is therefore bad-tempered throughout owing to the melancholic humour'. (tr. Pormann)

100 Fr 6, Fr 7, Fr 8, Fr 42,1, Fr 53, Fr 55, Fr 56, Fr 67,14–15: 'I nourished him with spelt juice, rock fish, and broth made with beans for approximately thirty days. The more his body became moist, the more the symptoms of melancholy subsided, until he was completely cured'. (tr. Pormann); Fr 67,22, Fr 69,2–3, Fr 71.

countering of the quality of dryness: exercise,¹⁰¹ numerous suggestions on diet and drugs,¹⁰² wine,¹⁰³ and bathing.¹⁰⁴

Although most of his discussion is centred on the digestive system and the stomach, it is important to note that Rufus considers the stomach to have a direct relation to the head. As such, complaints in our stomach can have a strong effect on our brain or mind and vice versa, and diseases of the head can often also be treated by vomiting and purging. In *Loc. Aff.*, Galen works out this notion of the stomach affecting the brain in terms of his more technical notion of *sympatheia*, as we shall see below.¹⁰⁵ In Rufus, we find an association with the spleen as well, as an organ that can cause melancholy when it is in a bad state and that shows symptoms of pain in patients suffering from melancholy.¹⁰⁶ These associations will be further systematized by Galen, as we shall see, who reserves a crucial role for the spleen as the organ continually cleansing the body of black bile.

1.3.3 The Physiology of the Melancholic

Rufus considers the melancholic humour to be ‘cold and dry’, as did the Hippocratic *On the Nature of Man*.¹⁰⁷ With regard to the described delusions, it is interesting that they are connected to the qualities that characterize the black bile itself: some patients think they are an earthen vessel or that their skin is dry parchment due to the dryness and coldness of black bile.¹⁰⁸ A recurrent motif is also the patient who thinks that he lacks a head. Rufus relates this symptom to a *pneuma* rising upwards and making the head light, which must be a continuation of the idea that there is something air-like about the black

101 Fr 17,13 and 40,5.

102 Fr 40,8–18, Fr 42,2–6, Fr 45, Fr 46, Fr 51, Fr 54.

103 Fr 40,18, Fr 61, Fr 63, Fr 64, Fr 65; Galen, in *QAM* (IV 779 K) notes that ‘one who drinks wine in moderation’ has characteristics opposite to those of the melancholic, who is *λυπηροτέραν και άτολμοτέραν και άθυμοτέραν*; earlier, in IV 777 K, he mentioned how the daily consumption of wine relieves us of all sorrow and despondency (*λύπης δ’ άπάσης και δυσθυμίας κουφίζει σαφώς οίνος πινόμενος*).

104 Fr 40,7, Fr 61,2–4, Fr 62.

105 Fr 8, Fr 37, Fr 38, Fr 39,1; Fr 40,1–4; in Fr 67,5–7 we find a concrete example of this relationship, Rufus fearing that the patient’s condition will spread from the hypochondriac area to the eyes and the brain; see Holmes (2013) for a seminal discussion of sympathy in Galen.

106 Fr 66.

107 Fr 11, also in Fr 68 it is said that black bile is caused by bad mixture.

108 Fr 11,3–4.

bile, as we also found it in the *Problemata*.¹⁰⁹ Indeed, when Galen refers to the passage in the *Problemata* on the question of why melancholics have excessive desire for sex, which is explained in terms of the airy nature of black bile, he involves Rufus in the discussion as well.¹¹⁰ Besides sex, the melancholics can also have excessive cravings for food and alcohol because their stomach is cold and they desire to warm it.¹¹¹ The theme of excessive desire for bodily pleasures corresponds to Aristotle's characterization of the melancholic in the *Nicomachean Ethics*. It is notable that these examples testify to a strong and direct relation between the qualities of the physical substance black bile and the symptoms of the (mental) illness melancholy.

Rufus describes the physical appearance of the melancholic in considerable detail, relating many features to the physiological constitution of the black bile itself: 'They generally blink their eyes, and have prominent eyes and thick lips because of the thick pneuma. Their skin turns black owing to the [melancholic] humour being poured out. Many of them are hairy because of the great amount of thick superfluities. They generally speak fast, they lisp, and stammer since they cannot control their tongue. For the intensity of movement comes about through the pneuma. Everything which moves intensely decays quickly'.¹¹²

We shall find most of these outward characteristics in Galen as well. Also, the prominence of the eyes, their quick movements and the intensity recall Aristotle's emphasis on the melancholic's capacity for vision and dreaming due to their intense imagination, which they do not rationally control (the lisp-ing is also mentioned in the *Problemata* XI, 38 903b19). Other, more dreadful outward manifestations of excessive black bile that we find in Rufus and that recur in Galen are: ulcers, haemorrhoids and varicose veins as well as black substance in vomit, stools and urine.¹¹³

As we noted, the elemental qualities of hotness and coldness play an important role in Rufus' notion of black bile. In fact, one fragment explains how the humour itself *becomes* black because of a combination of excessive heating

109 Fr 11,12; for the association of black bile with air in Rufus see also F 29,5 'For black bile is accompanied by wind, as all cold things are ...' (tr. Pormann) and the repeated association with flatulence in many of the fragments; cf. Fr 60 'Their desire for sexual intercourse is also a proof that the black bile contains a lot of wind!' (tr. Pormann)

110 Fr 73, which is the passage from Galen's commentary on the *Epidemics* referred to earlier (*Hipp. Epid.* VI, 138,19 f. Wenkebach (xviiB 29 K)); also Fr 58–60, see Pormann's commentary 103 and van der Eijk's essay in the same edition, 165.

111 Fr 11.

112 Fr 11,14–16 (tr. Pormann); cf. Fr 14,6–7.

113 Fr 21,4, also 17,1–3.

and subsequent cooling down. Rufus makes a comparison with pieces of coal that are radiant when they burn but then blacken when they cool down.¹¹⁴ This process of heating and subsequent cooling down changes the colour of the blood from bright to black. Rufus also notes that either of the two qualities can have the same or a similar effect by themselves. He points to 'some external bodies', which can become black from an excess of cold, and states that the humours can be rendered black by extreme heat that dries them out by consuming their moisture, 'just as the sun blackens fruits and human bodies'.¹¹⁵

Rufus relates melancholy to old age in particular, since 'the old are naturally depressed, little inclined to merriment, and moody'.¹¹⁶ He also relates it to spring, because this is the time when the blood is stirred, which means that the black bile does not settle as a sediment but moves throughout the blood.¹¹⁷ We shall see how Galen works out a more systematic association of black bile with autumn, based on the Hippocratic *On the Nature of Man*.

1.3.4 Symptomatology and 'Psychological' Therapy

The 'psychic' state of someone afflicted by melancholy according to Rufus, is unambiguous and as we would expect: excessive fear and (social) anxiety, delusion, despondency, suicidal inclinations.¹¹⁸ Melancholics are also said to have various difficulties with speech,¹¹⁹ and can be prone to excessive eating and alcoholism.¹²⁰ In one fragment, Rufus is cited as saying that 'the beginning of melancholy is indicated by fear, anxiety and suspicion aimed at one particular thing, whilst no disease is present in any other respect'.¹²¹ This seems to take up both the Hippocratic designation of fear and despondency as the main symptoms of melancholy as well as the intense and mono-manic imagination ascribed to the melancholic by Aristotle.¹²²

Interestingly, Rufus also takes up the association of melancholy with excellence or strong intellectual activity, which is, as we have seen, a prominent

114 Fr 11,18 f.

115 Fr 11,21, translation Pormann.

116 Fr 17,8, also Fr 18,4–5, Fr 68,4–5, Fr 71,7.

117 Fr 28–31, also Fr 67,1–3.

118 Fr 11, Fr 13,2, Fr 14, Fr 15,2, Fr 67,16, Fr 68,2, Fr 71,5–6.

119 Fr 11,14–16, also 72,2; cf. Pormann's commentary 86, which provides parallels for both Galen and the *Problemata*.

120 Fr 11.

121 Fr 13, see also Fr 14,4, Fr 15,2, Fr 17,8.

122 Cf. also Fr 35 and Fr 68,6 on dreaming and delusional images; Rufus' symptomatology might also be compared to that of Aretaeus of Cappadocia, who has a strong emphasis on the threat of complete passivity, which compares well to modern-day depression, see *On the Causes and Symptoms of Chronic Disease* 1, 5 ed. Adams and Flashar (1966) 78.

feature of the account of the *Problemata*. He particularly relates it to the intensity of movement that marks the melancholic: 'People of excellent nature are predisposed to melancholy, since excellent natures move quickly and think a lot'.¹²³ As has been observed by Pormann and others, however, Rufus seems to construct the causality the other way around: people of excellent nature tend to become melancholic, as opposed to melancholics being of excellent nature.¹²⁴ This is clearly expressed in Miskawaih's testimony, which states that Rufus said that 'no one who devotes too much effort to thinking about a certain science can avoid ending up with melancholy'.¹²⁵ Toohey has pointed to another difference with the *Problemata*, namely that Rufus' notion of melancholy does not seem bipolar-like (although, as we have seen, we do find echos of this bipolar-like melancholy in Rufus' description of the acquired kind of melancholy in Fr 11, 22–25).¹²⁶ It is one thing to point out these differences, another to recognize the similarity that remains. It is not in any way necessary to associate melancholy with intellectual activity in the first place, and we know that the *Problemata* and Rufus made this association an important part of their views on melancholy, while apparently not doing such a thing for other afflictions. We also know that Rufus knew the *Problemata* xxx,1 and

123 Fr 33 (translation Pormann), also Fr 34.

124 Cf. Pormann's commentary 93–94; Van der Eijk 164–5 and Toohey (2008) 222 f. in the same edition; we find this notion also in Diogenes Laertius' depiction of Chrysippus (SVF III, 237 = Diogenes Laertius VII 127), who supposedly has said that the wise man could lose his virtue because of melancholy (or alcoholism, which is an interesting pairing as well), while Zeno is portrayed as a melancholic type that needed moderate amounts of wine to soften his temper (SVF I 285–7), cf. Tieleman (2003) 163–66 on Chrysippus and Zeno; cf. Klibansky et al (1964) 95: 'Andererseits aber behandeln die Stoiker diese Erkrankung durchgängig als ein negatives Privileg des Weisen. Melancholie als Disposition hat zwar aufgehört, die wesentliche Bedingung der überragenden Begabung zu sein, aber sie ist als Krankheit die wesentliche Gefahr des überragend Begabten geblieben'.

125 Fr 36 (translation Pormann), also in Fr 68, one of the case histories, the example is about somebody that became melancholic due to 'constant contemplation of the geometrical sciences'. In Fr 35, 'violent thoughts and worries' are said to potentially provoke melancholy.

126 Toohey (2008) 222 f., I do not agree with Toohey that the association of melancholy with intellectual activity is 'but a minor element in his two-book text, On Melancholy'. In 8 of the 78 fragments collected by Pormann we find a direct linking of (scientific) thinking and/or excellence to melancholy as either cause or symptom (14,1, 33, 34, 35, 36, 40,19 and 40,37–8, 58,2, 68,3), in other fragments we find the notion that melancholy damages the intellectual capacity (70,2 and 71,1), and then we also have all the associations between stomach and brain, that testify to the notion that melancholy, even if it comes to be as a problem of digestion, damages the brain. Cf. van der Eijk (2008) 163–5 for an overview of similarities between Rufus and Aristotle and the *Problemata*; Bell (2014), particularly 69–70 for the possible relation between self-consciousness and melancholy in Rufus.

that there are many other similarities between Rufus' notion of melancholy and that of the *Problemata*.¹²⁷ The association between melancholy and intelligence or an active intellect, important in both the *Problemata* and Rufus, will also reappear in Galen in a different form. As we shall see below, it will be tied to the specific properties of the substances of yellow and black bile and their interrelation. We see it also in the therapies that Rufus proposes. One of the things he suggests is for the patient to undertake long journeys, as they are not only beneficial for one's mixture and digestion, but also 'distract them from thinking, and amuse them'.¹²⁸ Likewise, we might find in Rufus an early notion of what has come to be known as 'rumination', as Matthew Bell has observed. When confronted with a patient, the doctor should avoid having them believe that they are suffering from melancholy. Rather, he must pretend they merely suffer from bad digestion, so that the patient will refrain from reflecting on their condition and thereby make it worse.¹²⁹ Bell has suggested that this implies that for Rufus there is a relation between self-consciousness and melancholy. Another means of distraction, particularly when one is preoccupied by a love-melancholy of sorts, is to have sex, which can 'bring back intelligence' and calm the melancholic.¹³⁰

There is a strong psycho-somatic reciprocity in Rufus' writing on melancholy, where thinking can cause melancholy and excessive black bile can cause impairments of the rational capacity, where long and distracting journeys can improve our mixture and sex can bring back our intellectual capacity through the release of *pneuma*. To give another example, in one of Rufus' case-histories, we find the following description: 'When it [the melancholic superfluity] finally reached the brain, it had become extremely weak; there, however, it did encounter dry and burnt humours due to the sadness and sleeplessness which befell him. Therefore, the remainder had a yeast-like effect on them

127 Again, see van der Eijk (2008) 163–5 for a brief overview.

128 Fr 40,19; likewise, Fr 67,16: 'The symptoms of melancholy from which he suffered were sadness and fear of death. I therefore ordered amusement and music. After eighty days he was saved'; cf. Celsus *De Medicina* 111, 18,17 f., in which entertainment is recommended as a remedy. Celsus also advises to praise the patient's work and change his mental attitude towards the things that trouble him.

129 Fr 40 and 37. Cf. Bell (2014) 70.

130 Fr 58, Fr 59, Fr 73 (from Galen); see also Aretaeus, *On the Causes and Symptoms of Chronic Disease* 1, 5 ed. Adams, for an anecdote on a person who seemed incurably melancholic, but turned out to be merely suffering because of his love for a girl, as his symptoms immediately abated (and he 'became restored to understanding') as soon as he united with her, 'love being his physician'; cf. also Flashar (1966) 79 on Celsus: 'Mit diesem 'Fall' ist zum ersten Male in der Literatur der Liebeskummer als Form der Melancholie gedeutet'.

[these humours], turned them into black bile, and caused melancholy'.¹³¹ In this case, a patient had a melancholic fluid in his arteries, making him sad and fearful. He underwent venesection and purging several times and Rufus cauterised the area between the ribs. Therefore, the melancholic fluid was greatly reduced, but there was still a small remainder flowing towards the patient's brain, though a very weak and seemingly harmless remainder. Then, however, this small remainder is brought in contact with dry and burnt humours in the brain, that are themselves a consequence of his sadness and sleeplessness, that is to say, of the symptoms that the melancholic fluid caused in the first place. This triggered a reaction that led to melancholy again, after which the patient needed new treatment. This is a clear example of the aforementioned reciprocity, in which there is a kind of circular effect going on: one becomes sad and fearful due to a specific matter in the blood; the sadness and fear cause the humours in the brain to dry and burn; the dried and burned humours make one susceptible to fear and sadness, once again!

In Galen too, as we shall see, this ambiguous psycho-somatic nature of melancholy – already expressed in its very name¹³² – will come to the fore.

1.4 *Conclusion*

Much, if not most, of what Galen writes on melancholy (particularly in *Loc. Aff.*) is at least prefigured in Rufus. Galen seems to inherit from Rufus his main distinction between two different kinds of black bile: one that is like a sediment in the blood and one that is caused by burning. He also seems to take over the distinction between three different kinds of melancholy, namely, hypochondriac, encephalic and general. Rufus strongly emphasizes the association with digestion, which we previously found in Aristotle as well, and also associates it with the spleen.¹³³ The apparent reciprocity between physiological and psychic states will also recur in Galen. The association of melancholy with thinking will recur in a slightly different form. It is more dependent upon a broader schema of the relation between elemental qualities and humours on the one hand and psychic capacities on the other, and it differs from Rufus because the thinking is less particularly associated with scientific thinking. As far as I can tell on the basis of the extant fragments collected by Pormann, there are a few aspects in which Galen changes, systematizes and adds to the Rufian fundament, which certainly must have formed his point of departure. Some of these aspects have to do with Galen using a more systematically developed

¹³¹ Fr 67,20 (tr. Pormann).

¹³² Cf. *MM* II 2, X 82 K, where Galen remarks that the disease melancholy is named from its cause, the black bile.

¹³³ Fr 21,7 f., Fr 28–31.

humoural theory, in which black bile is not only dry and cold, but also belongs to autumn, is ill-tempered, earthy and obstinate. As such, it is opposed to blood and spring, which are considered beneficial, and opposed to yellow bile, which stimulates activity and thinking. This allows Galen to further integrate black bile into a microcosmic schema, in which it is a regular part of us, while it is at the same time opposed to the most useful or beneficial parts of us. As we shall see, in Galen, black bile acquires a regular place among the qualities, elements and time-periods in which the order of the cosmos consists. This also extends to the role of the spleen, which, as it seems for the first time, becomes the organ specifically attributed to us in order to purify our blood from black bile. Galen also seems more successful than Rufus in explaining the cause of melancholy in terms of the darkness of its substance. He achieves this partly by further developing the hypochondriac kind of melancholy on the basis of Diocles and Rufus' work. Through a comparison with the external darkness that we all experience, Galen achieves a normalization of melancholy that we did not find in the extant fragments of Rufus yet. But we may be getting ahead of ourselves now. It is time to analyse the notions of black bile and melancholy in Galen's work, first.

After brief discussions of black bile and melancholy in the Hippocratic Corpus, the Peripatetic tradition and Rufus, we are now sufficiently equipped to look at Galen's writing on black bile and melancholy. Many of the themes and distinctions that we have pointed out before shall recur in our discussion of Galen, whose work with regard to this subject, too, can be seen as a synthesis of the preceding tradition.

2 Galen on Black Bile

2.1 *Introduction*

We have seen, in the brief overview of Galen's main precedents, that black bile had become an ambiguous substance. On the one hand it is a dangerous substance that is primarily associated with serious disease; on the other hand – especially under the influence of the late Hippocratic *On the Nature of Man* – it is also one of the four humours and as such a normal part of our constitution, healthy or otherwise. This is a tension that culminates in Galen's work, in which black bile is essentially both of these things.

It has been observed that the theory of the four humours as it has come down to us via *On the Nature of Man*, was one humoural theory among many and did not have a dominant role until Galen.¹³⁴ Galen argued in his commen-

¹³⁴ Jouanna (2012) 336; Stewart (2016) 22 f.

tary on the treatise and elsewhere that it was the foundation of Hippocratic medicine and he contributed greatly to the ensurance of its legacy through both a further systematization and a consistent depiction of the theory as something widely shared by all previous philosophers and physicians held by him in high regard.¹³⁵ As in many other cases, Galen managed to successfully present his own theories – that often synthesize various previous ones into a more or less original Galenic whole – as the right continuation of previous authorities, ensuring their canonization in centuries to come.¹³⁶ Thus, however many competing humoral theories existed and whatever they consisted of – we will not discuss them here – they all became obscure, while Galen's humoral theory became *the* humoral theory. As we have noted, this particular historical contingency was conditional for the systematic inclusion of black bile into our body. It was likely also conditional for the notion of melancholy as something that is a part of human nature, and as something that is to a certain extent a regular and normal part of our lives as opposed to merely a dangerous disease that arises in exceptional circumstances. The identification of fear and despondency as the main and basic symptoms in the Hippocratic Corpus, taken up by others such as the author of the *Problemata* and Rufus, certainly must have helped in this regard: everybody is fearful and despondent at times. But, despite the existence of melancholy as a particular affection that is not necessarily dependent on a systematic humoral theory, I think it is safe to say that without Galen's canonizing incorporation of these symptoms into an enigmatic black substance that we always carry around, much of the later history of melancholy, including its romanticized forms, becomes much harder to conceive of.

In this chapter, we shall discuss Galen's notion of black bile and his attempted synthesis of the various forms of black bile that we have encountered among his main predecessors. Several aspects of black bile seem to run through Galen's work and they cannot always be distinguished in a straightforward manner. There is the black bile that is one of the four humours, associated like the others with its own season and stage of life. We find it in Galen's more systematic works such as his commentary on *On the Nature of Man* (*HNH*) and his *On the Elements According to Hippocrates* (*Hipp. Elem.*). But there is also the black bile that is a kind of residue of digestion and that is distributed from the liver to the spleen as a side-effect of the production of blood, which we have found, in more rudimentary form, in both the Peripatetic tradition and Rufus. There is a black bile that Galen describes as a kind of 'sediment' of the blood that is only

135 Stewart (2016).

136 Cf. Nutton (2008).

harmful in large quantities, which corresponds to the way Rufus describes one of the two kinds of black bile. But there is also a black bile that is a result of the burning of yellow bile, or a black bile that is completely unmixed. The latter two are deadly even in small amounts. The black bile that results from heating is something that we have also encountered before, both in Rufus and in the *Problemata*. In the latter it could have significantly positive effects. How do all of these black biles relate to each other? Is there anything common about all of them? How can black bile be both so harmful and so common? What role do the qualities of hotness and coldness play in Galen's writings on black bile? What role do the various seasons play? How is black bile related to digestion and the spleen? These are the questions that we shall discuss in the following paragraphs. Galen is, if anything, a great synthesizer of various previous traditions, medical and philosophical, and he knew all of the discussed precedents well. It will turn out that the types of black bile found in Galen, all of which we have by now seen prefigurations of, can be usefully distinguished along the line of the 'normal' and the 'harmful', or what Galen himself sometimes calls *κατὰ φύσιν* and *παρὰ φύσιν*.¹³⁷ Although Galen distinguishes the harmful and normal variants of black bile, they show much common ground as well. As we shall see, both can be designated either as black bile or as a melancholic humour, that is, by the same name. What is perhaps most striking in Galen's treatment of black bile is both the extent to which black bile is a normal substance that is potentially harmful, as well as the extent to which the harmful potentiality of black bile is a normal part of our constitution. This is what makes black bile exceptional compared to the other humours, particularly in its opposition to blood, an opposition which becomes more important in Galen.

After discussing the varieties of black bile, we shall devote a separate paragraph to the spleen, further systematized in Galen as the organ that draws the black bile to itself and cleanses the blood from it, to prevent it from dominating the body. Though Galen apparently deems the production of a pernicious substance such as black bile necessary, he also observes that Nature – in accordance with her providential character – made up for it to some extent by supplying us with an organ that cleanses our body of it. In this manner, the integration into our nature of an essentially harmful substance that does not seem to do us much good by itself, is reconciled with Galen's teleological framework through the synchronic introduction of its own cleansing instrument – the spleen. The association of black bile with the spleen, too, becomes a canonical element of the subsequent tradition. Again, there are precedents, as we have seen in Rufus, but the canonization of the relation between spleen

137 Cf. Stewart (2016) 160–6 for this distinction.

and black bile and between spleen and melancholy, is hard to conceive of without Galen. Finally, after having laid the physiological basis, we shall look into the more or less symbolic associations that black bile evokes, its field of meaning, so to speak, taking our lead from the associations of black bile with a specific season and stage of life, as well as its relation to the other humours and its peculiar qualities of coldness, dryness and thickness. It will become clear that black bile has an exceptional position in Galen's humoral theory as the humour opposed to blood, which is identified as the most important, beneficial and useful humour. It is associated not only with darkness and earth, but also with death. In our analysis, black bile appears as the remnants of a fire that has been quenched, as that which remains after summer ends – the stubborn and static remnants of excessive sun that now hinder the flow of the substance that gives us life by weighing it down. It is, as it were, the physiological substantiation of our finitude, of the mortality that is a continuous part of our life as its limit and opposite, and which requires continuous care so as not to become definite.

2.2 *The Normal and the Harmful 1: the Normal*

Galen devoted a short treatise to the subject of black bile, in which he focuses almost exclusively on the substance itself and its various detrimental effects. A discussion of melancholy is absent here. The work is called *On Black Bile* (περὶ μελαίνης χολῆς; abbreviated after the Latin as *At. Bil.*) and is included in the Kühn edition (V 104–48). A later edition by de Boer appeared in the CMG and there is also a French translation by Barras, Birchler and Morand, as well as an English one by Grant.¹³⁸ The question of the authenticity of this treatise has recently been raised and answered favourably by Jouanna in an insightful article, the main proof for its authenticity being Galen's own reference to it in *Prop. Plac.*¹³⁹

What comes to the fore most prominently in this short treatise is the ambiguity between black bile as a common and necessary part of our constitution, and black bile as a destructive and malignant substance that causes disease and death, the same ambiguity that we have referred to earlier.

At the beginning of *At. Bil.*, Galen singles out his predecessors: Rufus, as one of 'the more recent writers' and, unsurprisingly, Hippocrates himself as well as some of his alleged pupils. He then immediately integrates the subject of his treatise in his general humoral theory, which he developed in *HNH*, by first describing the outward appearance (ιδέα) of each of the four humours

138 Ed. de Boer, CMG V 4,1,1 (1937); Barras, Birchler, Morand (1998); Grant (2000).

139 Jouanna (2009).

with descriptions that are congruent with those of *HNH*. This is an important step, since such a humoural theory was absent in the Peripatetic tradition on melancholy and we find merely a few scarce allusions in the fragments that we have of Rufus.

Blood has an exceptional position in Galen's humoural theory. In *At. Bil.*, he starts with the description of blood, since it is the 'best known to everyone'. It is generally red, but can also appear somewhat more yellowish or black. Its taste is generally sweet while its thickness also varies. In fact, 'whatever pours out of the veins and the arteries', says Galen, 'however it might look', is simply called blood.¹⁴⁰ Further on in the same treatise, however, Galen remarks that 'from the diversity of colour and consistency it is revealed that all the humours are contained within the veins and arteries'.¹⁴¹ That might seem like a contradiction: on the one hand, everything that pours out of the veins and arteries is blood, while on the other hand all the humours are contained in the veins and arteries. However, it simply implies that there are two kinds of blood, or that the word 'blood' can designate two kinds of things: 1. blood in a strict sense, as unmixed with the other humours; 2. blood in a broader sense, as the mixture of four humours of which blood is the most important.

This also corresponds to the picture we find in *HNH*, where Galen more explicitly distinguishes these two kinds of blood. First, when he refutes the notion that man consists of only one humour, he remarks that the ones who claim that blood is the only humour are more difficult to refute than those who choose whichever one of the other humours.¹⁴² The main empirical argument against the view that there is by nature only one humour in the human being and that this humour is blood, is based on the observed results of purgative drugs: if people are given certain drugs, it can be observed that they evacuate phlegm or bile, whatever their age or the season.¹⁴³ That means that these fluids must be contained in the body at all time. However, that does not mean that they have the same status as blood:

διτῶς δὲ τοῦ αἵματος λεγομένου, τοῦ μὲν, ὅπερ ἐν ταῖς φλεβοτομίαις κὰν τοῖς τρώμασι κενούμενον φαίνεται, μετέχοντος, ὡς ἐδείκνυμεν, ἀμφοτέρων τε τῶν χολῶν καὶ τοῦ φλέγματος, ἐτέρου δὲ τοῦ καθαροῦ τε καὶ εἰλικρινοῦς ἀμίκτου τε τῶν ἄλλων χυμῶν ...¹⁴⁴

140 *At. Bil.* v 107–9 K, translations Grant.

141 *At. Bil.* v 119 K, translations Grant.

142 *HNH* 38,5 Mewaldt (xv 70–1 K).

143 *HNH* 38,1 f. Mewaldt (xv 70 K); cf. *Nat. Fac.* II 40–1 K.

144 *HNH* 39,23–6 Mewaldt (xv 73–4 K).

But we talk of two types of blood: one which is manifestly evacuated as a result of phlebotomy and wounds, and which contains a portion, as we have indicated, of both types of bile and of phlegm; while the other is pure, unadulterated, and unmixed with the humours.

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The first type of blood, which is what we commonly know as blood, is only called 'blood' because it is, as Galen remarks, 'predominantly' blood. That is to say, it is a mixture of all four humours in which blood, in the purer sense, predominates.¹⁴⁵ The blood of a living being, however, will never merely consist of this pure form of blood and it is from blood in the mixed sense, states Galen, that the foetus is likely to be formed.¹⁴⁶ That is to say: the other humours are always already mixed in the blood of a human being and their distinction is dependent on the empirical data of the purging. So the solution of the potential contradiction that we find in *At. Bil.* consists of the discovery of a homonymy, but not a mere homonymy. The mixture of all humours is also called blood, after one of the elements of the mixture itself, because blood is the most important humour:

μετὰ τὸ κενωθῆναι τὸν οἰκτεῖον τῷ καθαρτικῷ φαρμάκῳ χυμὸν ἐφεξῆς αὐτῷ πρῶτος μὲν ὁ τῶν ἄλλων εὐαγωγότατος ἔπεται, μετ' ἐκείνον δὲ ὁ τὴν δευτέραν ἐπὶ τούτῳ τάξιν ἔχων, κάπειτα τὸ αἷμα πάντων ὕστατον, ὡς ἂν οἰκειότατος ὦν τῇ φύσει χυμὸς· ἀσφαλὲς γὰρ φάναι περὶ αὐτοῦ τὸ γε τοσοῦτον, ὡς, εἰ καὶ μὴ μόνος ἐστὶν ἢ φύσις τοῦ ἀνθρώπου, ἀλλ' οἰκειότατος γε ἀπάντων τῶν ἄλλων.¹⁴⁷

After evacuating the humour which is most closely affiliated to the purgative drug, next in order there follows first the one humour among the others which is most easily attracted by it, and after that the second after it in this ordering, and then blood last of all, since it is the humour most closely affiliated to the nature (of man). For it is at any rate safe to say

145 *HNH* 40,5–10 Mewaldt (xv 74 K): 'And to the extent that the semen is generated from blood, someone who says that the generation of the foetus comes about from blood might appear to be telling the truth: but not from pure blood, unmixed with any of the other humours, but from what is called 'blood', because it is so predominantly'. (tr. Hankinson)

146 *HNH* 39,26 f. Mewaldt; also 32,20 (xv 59 K), where it is said that all parts are generated from the menstrual fluid, which is blood in the mixed sense, containing the other humours; likewise in 50,13–14 (xv 94 K).

147 *HNH* 41,24 Mewaldt (xv 78 K). Galen also uses the same Hippocratic passage and gives similar comments in *SMT*, xi 616 K; In *Hipp. Elem.* 154,11 f. De Lacy (i 506 K) he shows some appreciation for those predecessors that considered blood to be the only humour, even though he, of course, prefers the theory of the four humours in the end.

about this one, that it is, if not the sole constituent of the nature of man, then at least the most closely affiliated to it of all the others.

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The mixture of the humours derives its name, blood, from its predominant substance, blood in a stricter sense. There are other things in the blood besides blood in a strict sense and there is empirical evidence of those things due to the possibility of evacuation of phlegm and bile with purgative drugs, but these things are clearly not on a par with the blood. They fulfil a less important role than the blood itself.¹⁴⁸

Unsurprisingly, Galen does not always distinguish between these two notions of blood as neatly as in the texts just quoted. Elsewhere in *HNH*, when he enumerates the respective elemental qualities of each of the humours and arrives at those of blood, he remarks that since blood is the most well-tempered, none of the elemental qualities in it predominates greatly relative to the others. A little earlier, however, he simply attributed to blood the elemental qualities of hot and wet (this may be explained in terms of the difference between Galen's interpretation and the Hippocratic text, which does attribute to blood the qualities of hotness and wetness).¹⁴⁹ In fact, Galen says, since blood requires all four qualities in a certain balance, the most well-tempered blood must also contain the other humours.¹⁵⁰ The reasoning in this latter passage is not entirely clear, but it is clear enough that the role of blood is ambiguous in Galen, because it is a humour among others on the one hand, but that which contains the other humours on the other. It is also clear enough that its latter role is explained not merely in empirical terms of a measured quantity, but rather in terms of its exceptional importance and well-tempered nature. There are also other ways in which blood is different from all three other humours: the other three are said not to congeal and they are often described as περιττώματα, residues of the process of digestion, which is actually aimed towards the production of blood. This is something that we need to keep in mind, as it will become relevant for our analysis of black bile, since Galen opposes black bile to blood.¹⁵¹

148 Clearly, there are also differences in quantity: there is less black bile than there is yellow bile and phlegm, for example (*UP* 270,4–6 Helmreich, III 368 K).

149 *HNH* 46,25–47,5 Mewaldt (*xv* 88–9 K); Cf. *HNH* 44,4 Mewaldt (*xv* 83 K), where the same is predicated of spring, making it exceptional among seasons; in *Temp.* 1 524–7 K, Galen provides a more elaborate discussion of this topic.

150 *HNH* 51,5–9 Mewaldt (*xv* 97 K).

151 Cf. Klibansky et al (1990) 51–3: 'Daneben aber brachte die Systematisierung der Vier-Säfte-Lehre die weitere Komplikation mit sich, daß zwei der vier Säfte, das Blut und

Next to be described in *At. Bil.* is phlegm. It is said to have no particular taste of itself but to be able to take on a variety of tastes. Regardless of the particular taste it displays it can be called phlegm as long as 'it is white'.¹⁵² As opposed to blood, it does not congeal, which is, as we have just noted, actually a property that distinguishes all other humours from blood. The description of phlegm too, corresponds to that in *HNH*, where phlegm is also simply described as 'white' and where its variety in taste is emphasized as well.¹⁵³ It is also characterized in terms of the elemental qualities and seasons as being particularly cold and wet and predominant in winter.¹⁵⁴

Yellow bile is described as bitter and, like blood, displays some variety in colour and thickness. It becomes paler in colour and softer in consistency, less thick, to the extent that it contains more moisture. Eventually it could become as white and soft as the yolk of an egg. It is particularly related to the gall bladder, which is the organ that seems to take in the yellow bile after its generation in the digestive process.¹⁵⁵ Again, this seems consistent with what we find in *HNH*, where yellow bile is also described as bitter, and comparable remarks about its variation in colour and thickness can be found as well.¹⁵⁶ Its season is summer, and its elemental qualities are dry and hot.¹⁵⁷ Yellow bile has a peculiar relation to black bile, as we shall see below. It can become black by excessive heating, which must not be considered a rare phenomenon, it seems, given its abundant presence in summer, which also happens to be the season preceding autumn, the season of black bile.

So far, except perhaps for the ambiguous nature of blood, Galen's descriptions of the humours have been fairly straightforward and in line with his other works, not providing us with much interpretative difficulty. When it comes to

die schwarze Galle, eine deutliche Sonderstellung einnehmen, die in der Entstehungsgeschichte des Systems begründet ist ... Was zunächst das Blut angeht, so war es von vornherein gewissermaßen nur durch die Hintertür in das System gelangt, denn es ist nicht nur kein überschüssiger Saft, sondern sogar der unentbehrlichste und edelste Körperbestandteil ... Die schwarze Galle hingegen war schon früh als eine böse Entartung der gelben Galle oder auch des Bluts aufgefaßt werden.

152 *At. Bil.* v 108–9 K.

153 *HNH* 20,17 Mewaldt (xv 35 K) and *HNH* 42,20 Mewaldt (xv 80 K).

154 *HNH* 46,5 f. Mewaldt (xv 87 K).

155 Cf. *At. Bil.* v 147 where it is said that the bladder is the organ holding yellow bile; *Caus. Symp.* 222 K: 'The bladder on the liver (gall bladder) purifies the bitter bile, the spleen the black bile, the kidneys the serum'. (tr. Johnston)

156 *HNH* 20,17 Mewaldt (xv 35 K), 35,30 Mewaldt (xv 66 K; cf. *Nat. Fac.* II 9 (II 135 K), where the egg-yolk comparison also recurs.

157 *HNH* 46,5 f. Mewaldt (xv 87 K).

the black bile itself, however, the matter seems to become somewhat more complicated.

In *HNH* it is simply described as black, sour or sharp (ὀξύ) and as having a thicker consistency than yellow bile.¹⁵⁸ Its season is autumn and its qualities are cold and dry, while it is also said to be ‘earthy’ (γεωδέες).¹⁵⁹ Although it has its specific season in which it predominates and is more abundantly present – as do each of the other humours – it is a regular part of the human constitution in every age and season as well – as are each of the other humours.¹⁶⁰ In Galen’s commentary on the Hippocratic *On the Nature of Man*, each humour has its own combination of elemental qualities and seasons, creating an elegant whole by each providing an equal portion. There is at least a hint of a schematic association with the elements, as well, which seems to be based on the congruent descriptions of elemental qualities. Black bile is said to be earth-like, as we just mentioned. In *PHP* Galen is more explicit about this and completes the entire schema: yellow bile is analogous to fire, and phlegm to water, while blood has an exceptional role here as elsewhere and is said to consist of a balanced mixture of all four elements.¹⁶¹ This understanding of the humours is not restricted to *HNH*. We find it in many Galenic works, also sometimes extended to an analogy with the stages of life.¹⁶² In this schema, the four humours together constitute our nature (although, as we saw, there is an exceptional role for blood). When they are mixed in a balanced manner, we are healthy. Disease is the consequence of a relative imbalance or an isolation of one of the humours. Thus, in the Hippocratic treatise black bile simply appears as one among four and Galen, in his commentary, mostly seems content to leave it this way. There seems to be nothing to suggest that black bile is particularly dangerous or malignant compared to the other humours. Galen even remarks that a complete absence of any one of the humours, including black bile, would cause a human being to die.¹⁶³ Black bile appears as a necessary

158 *HNH* 20,17 Mewaldt (xv 35 K), 42,20 f. (xv 80 K) and 36,4 f. (xv 66 K).

159 *HNH* 46,5 f. Mewaldt (xv 87 K), 50,25 (xv 96 K); cf. *Nat. Fac.* 11, 9, 11 135 K and 139 K; *UP* 232,14 f. Helmreich (111 316 K); *Hipp. Prog.* xviiiB 175,14–176,1 K.

160 *HNH* 38,1 Mewaldt (xv 70 K).

161 *HNH* 50,25 Mewaldt (xv 96 K) where black bile is called earthy; cf. *HNH* 28 Mewaldt (xv 50–1 K); *PHP* viii 502,20 f. De Lacy; see also Flashar (1966) 108–9; Schöner (1964) 86–9 for a nice schematic overview.

162 *PHP* viii 516,11–4 De Lacy; *Adv. Jul.* xviiA 292,8–13; *Hipp. Prog.* xviiiB 282,10–1, the stage of life which matches black bile is ἡ παραμύη, the time after one’s prime (the word also means decay), see also *Temp.* 1 641,4–7 K; Jouanna (2012) 339.

163 *HNH* 40,20 f. Mewaldt (xv 75 K); cf. *Hipp. Elem.* 150,20–152,4 De Lacy; *PHP* 510,29–512,4 De Lacy (Galen quoting from the Hippocratic *On the Nature of Man*); *PHP* 514,32–37 De Lacy.

constituent of our nature that is always present to some extent and without which we could not live.

In *At. Bil.* on the other hand – and this is where the complexity enters – Galen distinguishes between a black bile that is common to everybody, including healthy people, and black bile in a stricter sense, which is extremely detrimental. There is still a notion of a black bile that is always present as a normal part of our constitution – Galen even cites from *On the Nature of Man* and uses the same Hippocratic argument of purgation, which shows that each of the humours is present in us at all times.¹⁶⁴ But, there is also a black bile that is so utterly harmful and destructive that it can be considered as something opposed to life itself, comparable to the Dead Sea.¹⁶⁵ In his conclusion, at the end of the treatise, Galen still maintains that both of them – the normal and the harmful black bile – can be called by the same name, despite these profound differences:

καὶ μέντοι καὶ παρὰ τὴν ὁμωνυμίαν ἑαυτοὺς, οὐ γὰρ ἡμᾶς γε, σοφίζονται, τὸν μελαγχολικὸν χυμὸν, ὃν ἐν τοῖς ὑγιαίνουσι γεννάσθαι φαμεν, ἀκούοντες αἰεὶ κατὰ τῆς μελαίνης λέγεσθαι χολῆς, ἣν ἐν τῷ παρὰ φύσιν ἔχειν γεννάσθαι φαμεν. οὐ γὰρ ἡ αὐτὴ κατὰ γε τοὺς ἀκριβῶς ὑγιαίνοντάς ἐστι μέλαινα χολή, καὶ τινὰς τῶν παρὰ φύσιν ἐχόντων, ἀμφοτέρως δὲ μελαγχολικὸν χυμὸν ὀνομάζειν οὐδὲν κωλύει.¹⁶⁶

And through homonymy they play tricks on themselves, but not on me, with regard to the melancholy humour, which we say is produced in the healthy, since they always understand what is said in relation to the black bile, which we say is produced in those that are in an unnatural state. For it is not the same black bile in those who are perfectly healthy and in some of those who are in an unnatural state, but nothing prevents us from naming both of them melancholy humour.

The solution is, again, as it was in the case of blood, one of homonymy: the detrimental substance that is unnatural (*παρὰ φύσιν*) and the regular humour that is always a part of our nature, can be called by the same name, even though they are so different.¹⁶⁷ In this manner, both the systematic humoral theory

164 *At. Bil.* v 128 K.

165 *At. Bil.* v 111–2 K; cf. *Caus. Symp.* vii 245,15–7 where black bile is compared to the ‘asphalt of the Dead Sea’; *MM* x 973 K, where it is said that ‘no animal, not even mice, would taste it’.

166 *At. Bil.* v 147–8.

167 See also Stewart (2016), particularly 160 ff., who focuses more on the differences in Galen’s notion of black bile in the (polemical) context of different works.

of *On the Nature of Man* and the tradition of black bile as something causing disease – melancholy in particular – can remain in place. We can already see here how this particular synthesis has the potential to normalize melancholy. But let us first look at how Galen further defines these two kinds of black bile in *At. Bil.* It will turn out that in the case of black bile too, as in the case of blood, the homonymy that allows the different types to be called by the same name, is far from a mere homonymy between two things that have nothing else in common.

2.3 *The Normal and the Harmful II: the Normal That Is Potentially Harmful*

When Galen arrives at the description of the outward appearance (ιδέα) of black bile in *At. Bil.*, he first notes that it must be distinguished from dark blood.¹⁶⁸ This is interesting, since we noted before that blood changes its colour and, in particular, can become more yellowish or black. Since blood is a mixture of the four humours in which pure blood predominates, it would make sense for the blood in this broader sense to become darker when black bile predominates.¹⁶⁹ Darkened blood, however, might point to an atrabillious condition or a relatively large amount of black bile in the blood, but is not to be identified with the black bile itself.¹⁷⁰ Also, other black substances that frequently appear in vomit and faeces are to be distinguished from black bile proper, as can be seen not only from their specific powers, but also their observable qualities:

οὔτε γὰρ στρυφνότητος, οὔτε ὀξύτητος μετέχει σαφῶς ταῦτα, τῆς μελαίνης χολῆς κατὰ τε τὴν γεῦσιν ἐμφαινούσης τοῖς ἐμοῦσιν αὐτὴν καὶ κατὰ τὴν ὄσφρησιν, οὐκ ἐκείνοις μόνον, ἀλλὰ καὶ τοῖς ἄλλοις. οὐ μὴν οὐδὲ ζυμοὶ τὴν γῆν, ὡς ἐκείνη.¹⁷¹

They certainly do not have any sourness or sharpness, whilst black bile exhibits these qualities through two senses: taste, for those who vomit it up, and smell, for the same people and those around. But it does not react with the earth to produce effervescence, as black bile does.

tr. GRANT

168 *At. Bil.* v 110–1 K.

169 Cf. *Hipp. Elem.* 144,8–18 De Lacy.

170 *At. Bil.* v 110–1; cf. *Symp. Caus.* vii 245–6 K.

171 *At. Bil.* v 111 K.

Black bile is described here as sour and sharp or acid, descriptions that we also find in *HNH* and other works. Furthermore, it is said to produce some kind of peculiar effect on the earth, described by the verb ζυμόω, translated by Grant as ‘to produce effervescence’, meaning ‘to leaven’ or ‘ferment’.¹⁷² In the Hippocratic *Diseases* II, a similarly odd effect of black bile (or another black substance) on earth is mentioned: there it is said that the earth is raised by black material that is vomited (τὸ ἔμεσμα τὴν γῆν αἴρει).¹⁷³ The verb is also used in the Hippocratic *Regimen in Acute Diseases* LXI, where it is said that those who suffer from black bile are not benefited by the acidity of vinegar – as opposed to those who suffer from bitter bile – because it will make the black bile ferment and rise and multiply (ζυμοῦται καὶ μετεωρίζεται καὶ πολλαπλασιούται).¹⁷⁴ In Plato’s *Timaeus* we find it as well: certain vessels of air that are of earthy nature can cause a kind of boiling and fermenting because of their acidity.¹⁷⁵ Apparently the general idea is that the acidity of the black bile has some kind of corrosive effect on earth, which may also be associated with the acid that can rise from the stomach and be vomited out. We find the same description of the effect of black bile on earth in *Nat. Fac.* as well, including the comparison with vinegar, and in *Loc. Aff.*, in a passage we shall discuss below.

In *At. Bil.*, Galen now also compares black bile to a very sharp vinegar, noting its difference from it in terms of thickness. Black bile is a more dense substance, which causes it to settle in the body, whereas vinegar would pass through. Clearly, we are talking about the detrimental and harmful form of black bile here. But the thickness is, again, a quality that we also encountered in *HNH*. That is to say: besides the blackness and the sourness or acidity, this is another aspect that shows that the normal and the harmful black bile share more than merely a name. Since the black bile, as opposed to vinegar, settles because of its thickness, it can completely consume those parts of the body that it associates with in an unmixed state. The depiction of unmixed black bile that Galen gives now is one of an utterly deadly substance, one that no living creature would go near. In this respect he compares it with the Dead Sea, a water so salty that no living being survives in it.¹⁷⁶ Galen now seems to realize that some further explanation is needed. Is it not curious, that a substance of such description is part of the common constitution of all human beings? This is where he clearly distinguishes between two different kinds of black bile:

172 Cf. *Hipp. Prorrh.* XVI 661,4–7; *Hipp. Aph.* VI XVIIIB 688,1–3; *MM* X 973–4 K.

173 *Diseases* II, 73.

174 *Regimen in Acute Diseases* LXI.

175 *Timaeus* 77b: ‘... τὰ δὲ τῆς γεώδους ὁμοῦ κινουμένης τε καὶ αἰρομένης ζέσιν τε καὶ ζύμωσιν ἐπικλην λεχθῆναι, τὸ δὲ τούτων αἴτιον τῶν παθημάτων ὄξυ προσρηθῆναι.’

176 *At. Bil.* V 111–2 K; cf. *Caus. Symp.* VII 245,15–7.

πολὺ δὲ δήπου τῆσδε τὴν ἐκ τῆς ξανθῆς χολῆς ὑπεροπτηθείσης γινομένην μέλαιναν ὀλεθριωτέραν εἶναι νομιστέον, ὅσῳπερ καὶ ὁ χυμὸς τοῦ χυμοῦ δραστικώτερος, ἢ ξανθὴ χολὴ τῆς οἴον ὑποσταθμῆς τοῦ αἵματος ...¹⁷⁷

You must remember, of course, that black bile which results from an excessive heating of yellow bile is more destructive than the black bile I mentioned before, just as one humour is more drastic in its action compared with another fluid, by which I mean yellow bile compared with a fluid that looks like the sediment of blood.

tr. GRANT

This utterly destructive kind of black bile Galen just described is actually the result of excessively heated yellow bile. This is what Galen seems to designate as black bile in the proper sense. Its destructive power is related to the active power of yellow bile: since it is a kind of degenerated form of yellow bile, one that has become overheated, it becomes malignant; but it becomes powerfully malignant since yellow bile is the most active humour. This is important to note, since the hot aspect in the bipolar-like descriptions of black bile in the *Problemata* and Rufus were related to quick and intense movement, as well as to intellectual activity, as we have seen. The black bile that Galen distinguishes here as the most dangerous one, is a degenerated form of a humour that is pre-eminently active. The yellow bile is defined as particularly active compared to the black bile that Galen ‘mentioned before’, as he says here. This black bile must be the one that appears as black bile, although it is not strictly speaking black bile: the black substance that appears similar to thick dark blood and sometimes appears in vomit and faeces, sometimes affording a sharp and sour sensation.¹⁷⁸ Galen now calls this more common substance a kind of ‘sediment in blood’ and contrasts it to the genuine black bile that is extremely detrimental. Here we have the same distinction that we previously found in Rufus: between a black bile that is like a sediment and becomes harmful only in particular circumstances; and a black bile that is the result of burning and that is harmful *per se*. For most of the rest of the treatise, Galen will continue to discuss the more common version of black bile rather than the harmful result of the overheating of yellow bile. What is this substance and how does it relate to the black bile of *HNH*, the black, sour, thick, dry and cold substance that

177 *At. Bil.* v 112 K.

178 *At. Bil.* v 108 K and 110–1 K; cf. *Hipp. Aph.* xviii 22,3–4 ‘εἰς αὐτὰς ἰλυῶδες τε καὶ μελαγχολικὸν αἶμα’; other parallels below.

forms a normal part of the healthy human constitution and predominates in autumn?

It is different from what Galen calls ‘black bile in the precise sense’ (τῆς ἀκριβοῦς μελαίνης χολῆς), which is always fatal, as he emphasizes.¹⁷⁹ This distinction is common throughout Galen’s work. The black bile that is like the sediment of the blood is often compared by him to the lees of wine. It is a residue and a by-product of the production of something essential, namely blood, or wine in the metaphor, and it is contrasted with what he calls black bile in the precise or proper sense (ἀκριβῆς).¹⁸⁰ If this sediment comes to be in excess, however, it can cause all kinds of serious afflictions. When it is isolated (from the other humours) it can cause a ‘dark tumour’ that can grow into a cancer, since isolated from the others it is ‘very harsh and malignant’.¹⁸¹ So this black bile, even though it is a normal part of our constitution, is, indeed, potentially extremely dangerous. We previously noticed that, in *HNH*, an imbalance of the humours is the cause of disease. What we learn from *At. Bil.* about the black bile that is like the sediment of blood seems to be congruent with that theory. It is notable, however, just how extremely detrimental the black bile can become when it is in excess or isolation. Also, there seem to be no particularly beneficial aspects to this black bile, even though it is considered a normal part of our constitution.¹⁸² The general impression we get of this substance in *At. Bil.* is that of something very dangerous and detrimental that should be managed carefully by experts when it manifests itself, and that seems to have absolutely no beneficial qualities or purpose in itself. This corresponds to the notion of black bile as a potentially dangerous residue that we have found both in the Peripatetic tradition and in Rufus. It is also at least congruent with

179 *At. Bil.* v 116 K: ‘Everyone who excreted genuine black bile died ...’ (tr. Grant); cf. *Hipp. Aph.* vi xviiB 683,17–684,1; cf. Rufus’ fragments 25–6 (ed. Porrmann, 2008).

180 Cf. *Purg. Med. Fac.* xi 335,13–7; *Comp. Med. Loc.* xiii 196,18–197,5: ‘δ’ ἂν σοι τὸ διαχωρούμενον οἶον αἶμα μέλαν εἶναι φανεῖν, θεωροῦντι δὲ ἀκριβῶς οὔτε αἶμα μέλαν ἐστὶν οὔτε θρόμβος, ἀλλ’ οἶον ἰλὺς τις αἵματος παχέος ἐγγὺς τῇ μελαίνῃ χολῇ ...’; *Syn. Puls.* ix 460,9–13 K: ‘οὔσης δὲ καὶ τῆς μελαίνης διττῆς, κατὰ τε τὴν γένεσιν καὶ τὴν δύναμιν, ἐπειδὴ καὶ τῆς ξανθῆς ὑπεροπτηθείσης γίνεται καὶ τοῦ παχέος τε καὶ ἰλυώδους αἵματος, ὅπερ ἀνάλογόν ἐστι τῇ κατὰ τοὺς οἶνους τρυγί’; *Hipp. Prorrh.* xvi 512,10–12 K: ‘διττὴ δ’ ἐστὶν ἡ γένεσις τῆς μελαίνης χολῆς ἥτοι τῆς ξανθῆς ὑπεροπτημένης ἢ τοῦ παχέος αἵματος ὑπεροπτᾶται δὲ διὰ θερμασίαν ἰσχυράν’. also 534,4–6 K: ‘μεμάθηκας γὰρ ἔκ τε τῆς ξανθῆς χολῆς ὑπεροπτηθείσης καὶ τοῦ παχέος αἵματος γενῆσθαι τὴν μελαίναν’. *Hipp. Epid.* vi xviiB 322,1–2 K: ‘ἐμάθετε γὰρ τὴν γένεσιν αὐτῆς εἶναι διττὴν, ἔκ τε τοῦ παχέος αἵματος καὶ τῆς ξανθῆς ὑπεροπτηθείσης’. *Hipp. Aph.* vi xviiiA 91,6–16 K, xviiB 622,4–6 K, xviiB 685,1–6; *Hipp. Prog.* xviiiB 278,3–10 K; *MM* x 974,14–8 K;

181 *At. Bil.* v 117 K; cf. *PHP* viii, 4, 32, 504,24–6 De Lacy.

182 In other works, notably *Nat. Fac.* and *UP*, we do find suggestions that black bile can be useful in certain ways after it has undergone alteration in the spleen, see below.

the humoural theory of *HNH*, since that also does not mention any particular beneficial aspect of black bile, while it does, on the other hand, presents the aforementioned notion of disease as a consequence of imbalance or isolation of any particular humour. Indeed, Galen also cites from the Hippocratic *On the Nature of Man* in his description of the black bile that is like a sediment of the blood. He quotes the passage that states that health is achieved through a balance of the humours, while excess, lack or isolation of one particular humour causes pain and disease. Besides melancholy, excess or isolation of black bile can apparently cause cancer, ulcers, elephantiasis, phrenitis, varicoceles and haemorrhoids.¹⁸³ Clearly, Galen is implying that these diseases are the consequence of a humoural imbalance in terms of an excess or isolation of the black bile that is discussed in *HNH*.

Still, despite all of its potential danger, Galen simply considers this black bile a necessary part of our body that is particularly related to digestion and the transformation of food into blood.¹⁸⁴ Nature does its best to deal with this substance in the human body, in order to preserve life, but that seems to entail only getting rid of it as much as possible. This sediment is a normal part of our constitution as long as it is regularly evacuated.¹⁸⁵ Our body gets rid of black bile through evacuation, sometimes even forcing excess black bile towards the surface of the body in an attempt to get it out, which can cause the skin to thicken and dry. As we saw before, thickness and dryness are qualities peculiar to black bile in the humoural theory of *HNH* as well. Likewise, the doctor's main concern seems to be for evacuation of the black bile, as well as for the development of a diet that produces better humours, which was also the main approach in Rufus' writings.¹⁸⁶ However, it is not possible, according to Galen, to completely get rid of black bile; its production is necessary.¹⁸⁷ What is possible, though, is to make sure that as little as possible of it is produced by regulating diet, since it is through processing food and drink that we obtain black bile in the first place.¹⁸⁸

183 These can be found in *At. Bil.* and paralleled in other works, e.g. *Symp. Caus.* VII 224 K; *Hipp. Elem.* 146,5–7 De Lacy; *Hipp. Epid.* VI XVIIIB 286 K; *Tum. Pr.* VII 719–20; *Alim. Fac.* VI 661,15–662,2; *Hipp. Prorrh.* XVI 795,1–2 K.

184 Galen also refers to *HNH* in *At. Bil.* v 128 K, after his description of the black bile that is cleansed from the blood by the spleen and repeats that Hippocrates has shown that all the four humours are always in the human body (also *At. Bil.* v 135 K, 144–5 K).

185 *At. Bil.* v 115–6 K.

186 E.g. *Alim. Fac.* VI 526, 632 and 661–2 state that lentils and beef respectively increase the amount of black bile in the body; *Bon. Mal. Suc.* VI 798,8–10, those whose blood is more melancholic need foods that are wet and warm in mixture.

187 *At. Bil.* v 124 K.

188 *At. Bil.* v 124 K.

It is interesting that Galen brings up the impossibility of the complete absence of black bile in this manner, and then suggests reducing production of it. There have been predecessors, notably Erasistratus, who, according to Galen, did not consider black bile at all. Galen finds fault with them, obviously, but seems to agree that a complete absence of black bile appears like an appealing idea, given the description he just provided of its detrimental effects. We shall return to this suggestion later. In any case, there are also limits to the extent that the production of black bile can be regulated. Besides diet, people's specific constitution, the season, climate, and, notably, one's mental state, all have an influence on it. Interestingly, people with a hotter and drier mixture (θερμότερα καὶ ξηρότερα ταῖς κράσεσίν) are more prone to produce black bile. Also, production goes up in hotter and drier times of the year. This fits with the connection of black bile to autumn that was made in *On the Nature of Man*, since autumn comes right after summer, the season that is hot and dry and that, thus, increases the amount of black bile, which would make the season immediately following summer the period in which black bile is most abundant. Finally, hotter and drier places also increase the production of black bile, as do dry foods that consist of thick particles.¹⁸⁹ Clearly, the elemental qualities of hotness and dryness, and their predominance, are related to the production and possible excess of black bile in *At. Bil.* This might seem remarkable, since, as has been pointed out by Jouanna, in other Galenic works it is rather the qualities of coldness and dryness that are ascribed to the black bile.¹⁹⁰ However, there is no need to posit inconsistencies here. We simply have to note that the quality of hotness is associated with the *production* of black bile, while that of coldness is used to describe the state of black bile itself. Black bile is a substance that is cold and dry because it was formerly very hot, lost all of its moisture because of that hotness, and then cooled down. It is abundant in autumn because it is a remnant of summer. As we saw before, Rufus compares it with pieces of coal that have cooled down.¹⁹¹ Galen does not attribute the quality of hotness to the black bile itself, but rather attributes the quality of being burned to it, which already involves a receding of the hotness, leaving a remnant that cooled down to some extent or other. This comes to the fore clearly in the following passage from *On the Causes of Symptoms (Caus. Symp.)*:

189 *At. Bil.* v 126 K; cf. *Alim. Fac.* vi 526–8 K.

190 Jouanna (2009) 235 f.

191 Rufus, Fr 11,18 f ed. Pormann; also *Problemata* 954a13–20.

τούναντίον γὰρ ἅπαν ἐξ ὑπεροπτησεώς τε καὶ ζέσεως, οἷον τέφρα τις ἢ μέλαινα χολή συνίσταται ψυχρὰ μὲν, ὅτι γεώδης, θερμότητος δὲ μετέχουσα, καθάπερ ἡ τέφρα τε καὶ τὸ ὄξος.¹⁹²

On the contrary, black bile like ash arises entirely from overheating and boiling. It is cold in that it is earth-like, but partakes of heat just as do ash and vinegar.

tr. JOHNSTON

Like ashes, black bile *comes to be* as a result of the overheating of something that then subsequently cools down.¹⁹³ This is how Galen also defines the black bile in *HNH*, as Jouanna points out as well:

ἐγένετο δ' εἰκότως τοιοῦτος διὰ τὸ προατωπτήσθαι τοὺς χυμοὺς τῷ θέρει. τὸ δ' ὑπόλειμμα τῶν ὀπτηθέντων, ὅταν δηλονότι σβεσθῇ τὸ θερμόν, αὐτίκα γίνεται ψυχρόν τε καὶ ξηρόν, ψυχρόν μὲν διὰ τὴν τοῦ θερμοῦ σβέσιν, ξηρόν δέ, ὅτι κατὰ τὴν ὀπτησιν ἐξεδαπανήθη πᾶν τὸ ὑγρόν ἐξ αὐτοῦ.¹⁹⁴

And it is reasonable that such a humour arises as a result of the cooking of the humours during the summer. The residue of this cooking, when the hot has been thoroughly quenched, then becomes both cold and dry, cold as a result of the quenching of the heat, dry because the process of cooking drives out all of the moisture from it.

tr. HANKINSON

Both of these passages are reminiscent of the metaphor of the coals, and show that the qualities of black bile are not just to be cold and dry by itself, but rather to be cold and dry as the consequence of a previous heating that has now receded. This is brought to the fore even more clearly in a passage from *On Mixtures (Temp.)*:

εἰ γὰρ τις εὐθύς ἐξ ἀρχῆς ἐγένετο τῇ κράσει ψυχρότερός τε καὶ ξηρότερος, οὐ μελαγχολικός ὁ τοιοῦτος, ἀλλὰ φλεγματικός ἐστὶ τοῖς περιττώμασιν. εἰ δ' ἐκ

192 *Caus. Symp.* VII 246,3–6 K.

193 Cf. *Tum. Pr. Nat.* VII 719 for the comparison to ashes of an ulcer caused by black bile.

194 *HNH* 45,25–30 Mewaldt (xv 86 K); cf. *Temp.* I 641 K: 'For melancholic mixtures come about as a result of the burning of the blood; but when this process has just begun, the baking effect is not a complete one'. (tr. Singer and van der Eijk)

μεταπτώσεως ἐγένετο ψυχρὸς καὶ ξηρὸς, ἐξ ἀνάγκης ὁ τοιοῦτος εὐθύς ἤδη καὶ μελαγχολικός ἐστίν, ὅσον εἴ τις ἔμπροσθεν ὑπάρχων θερμὸς καὶ ξηρὸς ἐκ συγκαύσεως τοῦ αἵματος πλείστην ἐγέννησε τὴν μέλαιναν χολήν. οὗτος γὰρ ἐστίν ὁ πρὸς τῷ ξηρὸς εἶναι καὶ ψυχρὸς εὐθύς καὶ μελαγχολικός ὑπάρχων. εἰ δ' ἀπ' ἀρχῆς εἶη ψυχρὸς καὶ ξηρὸς, ἢ μὲν ἕξις τοῦ σώματος τούτῳ λευκὴ καὶ μαλακὴ καὶ ψιλὴ τριχῶν, ἀφλεβὸς δὲ καὶ ἀναρθρὸς καὶ ἰσχνὴ καὶ ἀπτομένοις ψυχρὰ καὶ τὸ τῆς ψυχῆς ἦθος ἄτολμον καὶ δειλὸν καὶ δύσθυμον, οὐ μὴν μελαγχολικά γε τὰ περιττώματα.¹⁹⁵

Someone who became relatively cold and dry in his mixture right from the beginning will not be melancholic, but phlegmatic, in his residues. On the other hand, someone who has become cold and dry through some change will of necessity be automatically also melancholic. This is the case, for example, with a previously hot and dry person, who has produced a very large quantity of black bile from the burning of the blood: such a person combines being dry and cold with, at the very same time, being melancholic. The bodily condition of one who was cold and dry from the beginning will be white, soft, devoid of hair, lacking in veins and in articulation, thin and cold to the touch, while the character of his soul will be lacking in resolve, cowardly, easily dispirited. Yet his residues will not be melancholic.

tr. SINGER AND VAN DER EIJK

The same notion is also found in *The Art of Medicine*, with emphasis on the stage of life rather than the season. There, Galen remarks that when a mixture that is dry and hot changes after the prime of life into one that is dry and cold, it will have become melancholic.¹⁹⁶ This is completely in line with the description of the transition between summer and autumn, and both passages show, in accordance with the descriptions from *HNH* and *Caus. Symp.*, that black bile is not merely dry and cold of itself but rather a remnant of excessive heat that has cooled down.

Jouanna restricts his discussion more to *HNH*, and regards the passage from *HNH* quoted above as establishing a bridge between two different notions of black bile in *Nat. Fac.* and *At. Bil.*, which associate it with coldness and hotness respectively.¹⁹⁷ In this manner, as Jouanna argues, Galen reconciles the theory of black bile as a result of the burning of other humours, particularly yellow

195 *Temp.* I 642–3 K.

196 *Ars Med.* I 345,17–346, K.

197 Jouanna (2009) particularly 252–3.

bile, with the previous Hippocratic theory on black bile that did not consider it as the result of an alteration of another humour. Jouanna follows this distinction, as we find it in Galen, back through Rufus and the Hippocratic corpus.¹⁹⁸ Thus, Galen seems to connect the different kinds of black bile distinguished by Rufus: the sediment-like black bile that is related to digestion becomes associated with the quality of being burnt that was reserved for the other kind of black bile. This makes sense, since digestion is a process that involves heating. Again, by this association Galen normalizes the production of black bile and obscures the difference between normal and dangerous versions of it.¹⁹⁹ While I generally agree with Jouanna's interpretation – even though I would also note that the connective function that he attributes to *HNH* is more broadly attested in Galen's work, as we have seen – there is one aspect of it that I find confusing. This is his distinction between a black bile that is 'innée', innate, and one that is not. In his view, the black bile of the Hippocratic *On the Nature of Man* should be innate, as opposed to the black bile that is a result of the burning of another humour. I find this a somewhat confusing perspective, since all the humours, including blood, are always already the result of a productive process within the body. At the same time, we always have these humours in our body, already from when we are still an embryo, before we are actually born. To give an example: I see no reason why an embryo, from Galen's perspective, could not have the kind of black bile that is the result of burning, if, for example, its mother has this kind in her body. Then, when the baby is born, is this humour innate to it but not to another baby? It does not make sense to me, therefore, to primarily distinguish the different kinds of black biles in Galen as either innate or not innate. Both are produced, even though one is more of an aberration than the other. It seems to me rather that, for Galen, black bile is a necessary part of our constitution in as far as digestion is, as a necessary by-product of it. As such, it can be present in the body either in a way that is according to nature or in a way that is unnatural and causes disease, as becomes clear from *HNH*, *Nat. Fac.* and *At. Bil.* alike. Whether it is present in a normal or a harmful way, can depend on several circumstances: it is harmful when it is present in excess or isolation (i.e. unmixed) in various parts of the body or when it is the result of a severe heating. Likewise, Stewart also distinguishes between what he calls an 'ideal natural black bile', which he also calls 'innate', a 'non-ideal natural black

198 Jouanna (2009) 254–5.

199 See Stewart (2016) 166–75 for a different response to the issue Jouanna raises, which criticizes Jouanna's view of *HNH* fulfilling a kind of bridging function and explains the supposed contradiction in terms of Galen using different notions of black bile to fit the respective polemical aims in his different works.

bile', and an 'altered black bile'.²⁰⁰ The latter is the dangerous black bile that is the remnant of overheating of (other) humours. The distinction between the former two kinds, however, is a distinction that Stewart introduces between the black bile that we find in *HNH*, and the black bile that is described as a sediment of the blood and that is associated with digestion, as we find it in *At. Bil.* and *Nat. Fac.*, among other works. This distinction seems to me to be Stewart's own fabrication and to be without basis in Galen's texts. It seems to rest on the assumption that the black bile of *HNH* should be beneficial, for which I have not found textual warrant.²⁰¹ The only passage that Stewart cites to justify the distinction between these two is actually from *Loc. Aff.* and will be discussed in the next paragraph, in which we shall discuss the harmful variation of black bile that is either the result of overheating, excess or isolation. We shall find that in *Loc. Aff.* too, Galen distinguishes between two kinds of black bile. One is normal (though potentially always harmful) and the other is extremely harmful. The latter is, in fact, the only variation that can be called black bile in a strict sense according to Galen, as we saw before. The former can function as a normal part of our constitution and is potentially harmful, as we have just discussed, when it is present in excessive amount or when it is isolated.

2.4 *The Normal and the Harmful III: the Harmful That Used to Be Normal*

Let us look at the relevant passage from *Loc. Aff.* It is quite long, so I shall cite it in parts. Galen starts with making a distinction between different kinds of black bile or melancholic humour, as he did just before this passage with different kinds of phlegm:

ῶσαύτως δὲ καὶ ὁ μελαγχολικὸς χυμὸς ἐν τῇ συστάσει σαφεῖς ἔχει τὰς διαφορὰς, ὁ μὲν οἶον τρυξ αἵματος, ἐναργῶς φαινόμενος ἰκανῶς παχὺς, ὥσπερ ἡ τοῦ οἴνου τρυξ· ὁ δὲ πολλῶ μὲν τούτου λεπτότερος κατὰ τὴν σύστασιν, ὀξύς δὲ καὶ τοῖς ἐμέσασιν αὐτὸν φαινόμενος καὶ τοῖς ὀσμωμένοις· οὗτος καὶ ξύει τὴν γῆν, ἐξαίρων τε καὶ ζυμῶν καὶ πομφόλυγας ἐγείρων, οἶαι τοῖς ζέουσι ζωμοῖς ἐφίστανται.²⁰²

In the same manner also the melancholic humour has clear differences in its composition, one kind being like the sediment of blood, clearly

200 Stewart (2016) 155–190.

201 In this sense, I find Stewart's distinction between *κατὰ φύσιν* and *παρὰ φύσιν* both more helpful and more true to Galen's text, see Stewart (2016) 160–6.

202 *Loc. Aff.* Van der Eijk and Pormann 266 (VIII 176–77 K).

appearing very thick, just like the lees of wine; the other is much finer in composition than that, and it appears acidic both to those that vomit it as well as to those who smell it; this one also corrodes the earth, raising it up and causing it to effervesce and arousing bubbles, as those that surface in boiling soups.

Galen here distinguishes between two kinds of melancholic humour, a distinction that corresponds to the one we found in *At. Bil.* The first is the one that is like the sediment of blood, the second is a much more acidic and dangerous one. At the beginning of the discussion of black bile in *At. Bil.* he makes the same distinction between the acidity manifesting itself only to the person that vomits or to the bystanders as well.²⁰³ There, Galen distinguishes black bile in the strict sense (τὸν τῆς ἀκριβοῦς μελαίνης χολῆς χυμὸν) from the one that is like the sediment in the blood. Only the acidity of the black bile in the strict sense, the one that is extremely harmful and has a corroding effect on the earth, is not only perceived by the person vomiting it up but also by the bystanders, through smell. Galen now proceeds to further specify the black bile that is like a sediment of the blood, and remarks that this is not black bile in a strict sense, as he also did in *At. Bil.*:

ὄν δ' ἔφην εἰκέναι παχείᾳ τρυγί, τήν τε ζύμωσιν οὐκ ἐργάζεται κατὰ τῆς γῆς ἐκχυθεῖς, πλὴν εἰ μὴ πάνυ σφόδρα τύχοι τότε κατοπτηθεῖς ἐν διακαεῖ πυρετῷ, καὶ ἥκιστα μετέχει ποιότητος ὀξεύας, ἥνικα καὶ καλεῖν αὐτὸν εἴωθα μελαγχολικὸν χυμὸν ἢ μελαγχολικὸν αἷμα, μέλαιναν γὰρ χολὴν οὐδέπω δικαίῳ τὸν τοιοῦτον ὀνομάζειν.²⁰⁴

The one which I said resembles thick sediment, does not produce the fermentation when it is poured out over the earth, unless it happens to have been burnt very intensely during a state of burning fever, and it only has very little share in the quality of acidity. Hence I'm used to calling it melancholic humour or melancholic blood, for I think that is not yet proper to call it black bile.

tr. VAN DER EIJK

Apparently, both of these kinds of black bile possess the quality of acidity to some extent, but the one that is like a sediment of the blood possesses only very little of it, which renders it much less dangerous. However, it can become

²⁰³ *At. Bil.* v 110–1 K.

²⁰⁴ *Loc. Aff.* Van der Eijk and Pormann 266 (v 177 K).

much more acidic when it is excessively heated due to a fever. Here, again, we see that we have to be careful to apply all too neatly developed distinctions on the different kinds of black bile that Galen discusses. The one that is like a thick sediment is a normal part of our constitution, unlike the one that is the result of an overheating of yellow bile, but it can become extremely harmful as well, when combined with fever, for example. Nonetheless, Galen does not consider it black bile in the strict sense and, therefore, as he says, also calls it melancholic humour or melancholic blood. But at the outset of this passage, as we have seen, he called both of these kinds of black bile ‘melancholic humour’. What are we to make of this? Stewart sees Galen making a distinction between three different types of black bile here, one of which is the ‘innate’ black bile that Stewart considers as the only one that is properly speaking black bile – despite the contradiction that would generate with *At. Bil.* and other works, apparently, where it is only the acidic and malignant black bile that is properly speaking black bile – while the other two are the two defined above, which would then both be melancholic humours.²⁰⁵ However, in Stewart’s reading, both of the two ‘melancholic humours’ would then not, properly speaking, be black bile, while it is clear from the text as cited and discussed above that Galen only says of the sediment-like black bile that it is not strictly speaking black bile, implying much rather that the highly acidic version *is* strictly speaking black bile. This also corresponds to the distinction between the two kinds of black bile as we find it in *At. Bil.* and elsewhere.²⁰⁶ Stewart’s reading is not tenable in this light. How, then, are we to make sense of the fact that Galen first calls both of these types ‘melancholic humours’, and then says that only one of them is strictly speaking black bile, while the other one can be called a ‘melancholic humour’? To solve this problem, we can have another look at *At. Bil.*, where Galen makes the same distinction at the very end of the treatise:

205 Stewart (2016) 155–190, Stewart’s threefold distinction is completely based on this passage, as it is the only textual evidence he cites for the distinction between three types by Galen himself.

206 Cf. *Syn. Puls.* IX 460,9–13 K: ‘ούσης δὲ καὶ τῆς μελαίνης διττῆς, κατὰ τε τὴν γένεσιν καὶ τὴν δύναμιν, ἐπειδὴ καὶ τῆς ξανθῆς ὑπεροπτηθείσης γίνεται καὶ τοῦ παχέος τε καὶ ἰλυώδους αἵματος, ὅπερ ἀνάλογόν ἐστι τῆ κατὰ τοὺς οἴνους τρυγί’; *Hipp. Prorrh.* XVI 512,10–12 K: ‘διττῆ δ’ ἐστὶν ἡ γένεσις τῆς μελαίνης χολῆς ἢ τοῦ ξανθῆς ὑπερωπτημένης ἢ τοῦ παχέος αἵματος· ὑπεροπτᾶται δὲ διὰ θερμασίαν ἰσχυράν’. also 534,4–6 K: ‘μεμάθηκας γὰρ ἕκ τε τῆς ξανθῆς χολῆς ὑπεροπτηθείσης καὶ τοῦ παχέος αἵματος γεννάσθαι τὴν μέλαιναν’. *Hipp. Epid.* VI XVIIIB 322,1–2 K: ‘ἐμάθετε γὰρ τὴν γένεσιν αὐτῆς εἶναι διττὴν, ἕκ τε τοῦ παχέος αἵματος καὶ τῆς ξανθῆς ὑπεροπτηθείσης’. Also *Hipp. Aph.* VI XVIIIA 91,6–16 K; *Hipp. Prog.* XVIIIB 278,3–10 K; *MM* X 974,14–8 K; *Diff. Feb.* VII 376,15–6 K; *Plen.* VII 577,12–6 K.

καὶ μέντοι καὶ παρὰ τὴν ὁμωνυμίαν ἑαυτοὺς, οὐ γὰρ ἡμᾶς γε, σοφίζονται, τὸν μελαγχολικὸν χυμὸν, ὃν ἐν τοῖς ὑγιαίνουσι γεννάσθαι φαμεν, ἀκούοντες αἰεὶ κατὰ τῆς μελαίνης λέγεσθαι χολῆς, ἢ ἐν τῷ παρὰ φύσιν ἔχειν γεννάσθαι φαμεν. οὐ γὰρ ἡ αὐτὴ κατὰ γε τοὺς ἀκριβῶς ὑγιαίνοντάς ἐστι μέλαινα χολή, καὶ τινὰς τῶν παρὰ φύσιν ἐχόντων, ἀμφοτέρας δὲ μελαγχολικὸν χυμὸν ὀνομάζειν οὐδὲν κωλύει.²⁰⁷

And through homonymy they play tricks on themselves, but not on me, with regard to the melancholic humour, which we say is produced in the healthy, since they always understand what is said in relation to the black bile, which we say is produced in those that are in an unnatural state. For it is not the same black bile in those who are perfectly healthy and in some of those who are in an unnatural state, but nothing prevents us from naming both of them melancholic humour.

tr. GRANT, modified

Here we find, first of all, the same basic distinction: the melancholic humour is also part of a healthy constitution, whereas black bile is produced in an unnatural state – the former is normal and the latter is harmful. But then, in the very next sentence, Galen simply proceeds to call both of them black bile: ‘it is not the same black bile’ in both of these types. What is more, he continues even to state that nothing prevents him from calling both ‘melancholic humour’! Thus, what we find is that, strictly speaking, the sediment-like kind of black bile should be called a melancholic humour and the highly acidic harmful black bile that is the result of the burning of yellow bile (or sometimes another humour²⁰⁸) should be called black bile proper.²⁰⁹ At the same time, however, both can be called black bile and both can be called melancholic humour according to Galen, and he even says explicitly that there is no need to get hung up on these names. The reason for this, I propose, is that even though it is certainly important to distinguish between the two, especially with regard to therapeutic practice (as we notice in *At. Bil.*), there are also important similarities between the two. We have already noticed above that the normal black

²⁰⁷ *At. Bil.* v 147–8 K.

²⁰⁸ Cf. e.g. *Diff. Feb.* vii 376,9–14 K, for a description of thick blood changing into black bile when heated.

²⁰⁹ Cf. *MM* xiii,16, x 916 K, where we also find a clear distinction between the terms – a thick blood is drawn to the spleen, that has the potential to become black bile and is therefore called a ‘μελαγχολικὸν ἢ μέλαν περίττωμα’, a melancholic or black residue; *Hipp. Aph.* vi xviii 91,12–6 K.

bile, the sediment-like kind, is potentially harmful. In the next sentences from *Loc. Aff.*, following the previous quotation above, this is affirmed:

γεννᾶται δ' ὁ χυμὸς οὗτος ἐνίοις πολὺς, ἢ διὰ τὴν ἐξ ἀρχῆς κράσιν, ἢ δι' ἔθος ἐδεσμάτων εἰς τοιοῦτον χυμὸν ἐν τῇ κατὰ τὰς φλέβας πέψει μεταβαλόντων. ὥσπερ δ' ὁ παχὺς χυμὸς τοῦ φλέγματος, οὕτω καὶ οὗτος παχὺς χυμὸς ὁ μελαγχολικός ἐπιληψίας ποτ' ἐργάζεται κατὰ τὰς ἐκροὰς τῶν ἐν ἐγκεφάλῳ κοιλιῶν ἰσχύμενος, ἢτοι τῆς μέσης, ἢ τῆς ὀπισθεν· ὅτ' ἂν δ' ἐν αὐτῷ πλεονάσῃ τῷ τοῦ ἐγκεφάλου σώματι, μελαγχολίαν ἐργάζεται, καθάπερ ὁ ἕτερος χυμὸς τῆς μελαίνης χολῆς, ὁ καταπτημένης τῆς ξανθῆς χολῆς γενόμενος, τὰς θηριώδεις παραφροσύνας ἀποτελεῖ χωρὶς πυρετοῦ τε καὶ σὺν πυρετῷ, πλεονάζων ἐν τῷ σώματι τοῦ ἐγκεφάλου.²¹⁰

For that humour is generated in some people in large quantity either as a result of their initial mixture or by a habit of eating foods that changes into this during the digestion within the blood vessels. Just like the thick phlegmatic humour, this thick melancholic humour likewise sometimes causes instances of epilepsy, because it is contained in the places where the cavities of the brain, whether the middle or the posterior cavity, have their exit channels. But when it is present in excess in the very body of the brain, it causes melancholy, just as the other kind of humour of black bile, the one that has arisen as a result of the burning of yellow bile, results in violent deliria, both without fever and with fever, when it fills the brain excessively.

tr. VAN DER EIJK, modified

In the first sentence of this quotation we recognize the distinction we found in Rufus previously, but here it is applied to the sediment-like black bile, of which some people, apparently, naturally have a higher quantity, whereas others have increased its quantity through overheating of particular food-substances in the blood vessels.²¹¹ Presumably, in more excessive quantity, it becomes more harmful. It can also become harmful when it obstructs ventricles, or when it abounds in the brain itself. In the latter case, it can even act as the same kind of cause as the harmful, highly acidic black bile that is the result of the burning of yellow bile. Thus, what is striking here, is that while Galen clearly distinguishes these two types of black bile, both are at least potentially harmful and can cause melancholy. The normal, sediment-like form can do so in particular

²¹⁰ *Loc. Aff.* VIII 177–8 K.

²¹¹ This distinction is paralleled in *At. Bil.* v 124–5 K.

circumstances, and the residue of the burning of yellow bile seems to do so without further qualification.

In the following passage from *Nat. Fac.* we find the same distinction between the normal and the harmful kinds of black bile, again phrased as being in accordance with or against nature respectively:

καὶ μοι δοκοῦσιν οἱ πλείστοι τῶν παλαιῶν ἰατρῶν αὐτὸ μὲν τ'κατὰ φύσιν ἔχον τοῦ τοιοῦτου χυμοῦ καὶ διαχωροῦν κάτω καὶ πολλάκις ἐπιπολάζον ἄνω μέλανα καλεῖν χυμόν, οὐ μέλαιναν χολήν, τὸ δ' ἐκ συγκαύσεώς τινος καὶ σηπεδόνος εἰς τὴν ὀξεῖαν μεθιστάμενον ποιότητα μέλαιναν ὀνομάζειν χολήν. ἀλλὰ περὶ μὲν τῶν ὀνομάτων οὐ χρὴ διαφέρεισθαι, τὸ δ' ἀληθές ᾧδ' ἔχον εἶδέναι.²¹²

It seems to me also that most of the ancient physicians call 'melancholic humour' the portion which we have naturally of this humour and which is discharged from the bowel and frequently rises up to the surface as well; but they call 'black bile' that which has been altered into a more acidic quality through a kind of burning and putrefaction. There is no need, however, to dispute about names, but we must realise the facts, which are as follows.

tr. BROCK, modified

Here, Galen projects his distinction between black bile in a strict sense – the harmful acidic one that is the result of a burning of humours – and black bile in a loose sense that is rather a melancholic humour – the one that is a normal consequence of the natural processes of digestion – unto the work of his predecessors, as he does more often.²¹³ Again, he emphasizes that it is not so important to be precise about these names. After this passage he uses the property of causing the earth to effervesce again as a criterion for distinguishing the black bile in a strict sense, which is unnatural, from the melancholic humour, which is natural.

It is noteworthy that, in the passage from *Loc. Aff.*, Galen distinguishes the two by saying that the melancholic humour that is in accordance with nature has *not yet* (οὐδέπω) undergone the burning process that causes it to become highly acid. He repeatedly formulates the difference in this manner:

ὥσπερ γε καὶ τοῦ μέλανος χυμοῦ τὸ μὲν μήπω τὴν οἶον ζέσιν τε καὶ ζύμωσιν τῆς γῆς ἐργαζόμενον κατὰ φύσιν ἐστί, τὸ δ' εἰς τοιαύτην μεθιστάμενον ἰδέαν

²¹² *Nat. Fac.* II, 9 (II 136 K).

²¹³ Cf. Stewart (2016) 29–47.

τε καὶ δύνανται ἤδη παρὰ φύσιν, ὡς ἂν τὴν ἐκ τῆς συγκαύσεως τοῦ παρὰ φύσιν θερμοῦ προσειληφὸς δριμύτητα καὶ οἶον τέφρα τις ἤδη γεγονὸς ᾧδὲ πως καὶ ἡ κεκαυμένη τρυξ τῆς ἀκαύστου διήνεγκε. θερμὸν γὰρ τι χρῆμα αὕτη γ' ἱκανῶς ἐστίν, ὥστε καίειν τε καὶ τήκειν καὶ διαφθείρειν τὴν σάρκα. τῇ δ' ἑτέρα τῇ μήπω κεκαυμένη ...²¹⁴

Similarly with the black humour: that which does not yet produce this cooking and fermentation of the ground, is natural, while that which has been altered towards such an appearance and capacity, is already unnatural, as it has taken on an acidic character from the burning by unnatural heat and has already become transformed into ashes, as it were, in the same manner as lees that have been burned differ from unburned ones. For the former is a warm substance, able to burn, dissolve, and destroy the flesh. The other kind, which has not yet undergone burning ...

tr. BROCK, modified

Here we see that it is the normal, natural black bile (that should strictly be called 'melancholic humour') itself that can become the acidic, detrimental and unnatural black bile.²¹⁵ The two kinds of black bile are closely related: the one can transform into the other. The harmful black bile that is here called unnatural, previously was a natural melancholic humour. It does not need to be black bile that is burned, but it can also be the yellow bile, as Galen adds right after the passage just quoted, and as we have seen before.

It appears that what Galen calls black bile in the strict sense is a degeneration of a humour (mostly yellow bile, but also black bile and blood²¹⁶) that is in itself a normal part of a healthy constitution. At the same time, though, not all the humours are equally a normal part of our constitution. Even the normal black bile is described by Galen as a necessary by-product of digestion that is potentially dangerous and the production of which should be carefully managed and ideally reduced.²¹⁷ Galen may have attempted to reconcile the Hippocratic notion of black bile as one of the four humours that constitute

214 *Nat. Fac.* II 9, II 137 K.

215 Cf. also *Comp. Med. Loc.* XIII 236,15–237,1 K, where Galen says that the black bile comes to be from the sediment of the blood ('τὴν οἶον ἰλὸν τοῦ αἵματος, ἐξ ἧς ἡ μέλαινα γεννάται χολή ...'); *Hipp. Prorrh.* XVI 534,4–6 K: 'μεμάθηκας γὰρ ἔκ τε τῆς ξανθῆς χολῆς ὑπεροπτηθείσης καὶ τοῦ παχέος αἵματος γεννάσθαι τὴν μέλαιναν'.

216 *Temp.* II 6, 83,4 Helmreich (I 641 K) and *Hipp. Prorrh.* XVI 613,9–11 K, e.g., for the latter.

217 Cf. also *Loc. Aff.* V 359 K, where Galen discusses a liver disease that, at first, causes a serious and bloody discharge, then a thick and melancholic blood, and finally black bile itself. There is clearly a gradual build-up there, not an essential difference; cf. *MM* X 916,16 f. K.

our nature with the Aristotelian notion of black bile as a residue, resulting in a theory of black bile that is a necessary by-product of our digestive system and that is, as such, a normal part of our constitution as long as it is properly managed. For this management, we are equipped by nature with an organ to dispose of black bile: the spleen. In the next paragraph, we shall discuss the role of the spleen, which shall shed more light on the role of black bile in the human body in Galen.

2.5 *Spleen*

As Galen seems to suggest in *At. Bil.*, it might perhaps have been better if there were no need for us to produce black bile, but there is.²¹⁸ Given our nature as mortal beings subject to continuous change, it is necessary for us to consume food and drink, which we need to digest and transform into blood, a by-product of which process is black bile. It is not uncommon for Galen to dwell on this necessity. In his commentary on the *Timaeus*, he notes that the gods made plants as nourishment for us since we would otherwise, given our elemental constitution, disperse our substance without sufficient restoration being possible.²¹⁹ That is to say, the need for digestion, as such, is the direct result of an initially imperfect balance in our body. This is important to realize in our evaluation of black bile and the question of its usefulness. Perhaps black bile can to a certain extent be useful to thicken blood that would otherwise be too thin. It is, after all, the thickest of the humours. Some of it, upon thorough alteration by the spleen, can be useful as a nutriment for the spleen itself. Some of it, again upon alteration by the spleen, is disposed in the stomach, and can be beneficial to the stomach by tightening it and drawing it together so that it holds the food closer, which is good for digestion.²²⁰ Other than these functions, that already depend on the alteration by the spleen, I see no positive function of the stuff in Galen. In any case, the proper thickness of blood could have presumably been effected in another manner than adding a dark substance which one then needs to get rid of as much as possible, and which has horrible side-effects in various circumstances. The nourishment for the spleen itself is only necessary because the spleen is necessary, which is in turn only

218 *At. Bil.* v 124 K.

219 Schröder Fr II – 76e7–77c5; cf. *Hipp. Elem.* 118,16 f. De Lacy (I 473–4 K), where he says that the substances of all things that come to be and pass away undergo two kinds of changes, namely alteration and depletion, which require ‘a double correction, one that curbs excess in the qualities, the other that refills the place of that which was lost’ (tr. De Lacy)

220 These functions are described in *UP* I 233 and I 264–5 Helmreich respectively (III 317 and 361–2 K respectively); cf. *UP* 273,15–20 (III 373 K); *Hipp. Aph.* VI XVIIIB 681,15 f. K; *MM* X 920 K.

necessary for the breaking down of black bile in the first place. How, then, can the presence of black bile in the human constitution be reconciled with Galen's teleological framework, in which nature, that wise artisan, excels in making finely attuned products such as ourselves?

The answer has already been given: nature also gave us the spleen so that we can get rid of the black bile, instead of letting that pernicious substance wander around in our bodies:

ἡξάμην οὖν κἀνταύθ' ἐρωτήσαι δύνασθαι τὸν Ἐρασίστρατον, εἰ μὴδὲν ὄργανον ἢ τεχνικὴ φύσις ἐδημιούργησε καθαρτικὸν τοῦ τοιοῦτου χυμοῦ, ἀλλὰ τῶν μὲν οὖρων ἄρα τῆς διακρίσεώς ἐστιν ὄργανα δύο καὶ τῆς ξανθῆς χολῆς ἕτερον οὐ σμικρόν, ὁ δὲ τούτων κακοηθέστερος χυμὸς ἀλάται διὰ παντὸς ἐν ταῖς φλεψὶν ἀναμειγμένος τῷ αἵματι.²²¹

At this point, also, I would gladly have been able to ask Erasistratus whether his artistic nature has not constructed any organ for clearing away a humour such as this. For whilst there are two organs for the excretion of urine, and another of considerable size for that of yellow bile, does the humour which is more pernicious than these wander about persistently in the veins mingled with the blood?

tr. BROCK

Notice that Galen calls black bile a more pernicious humour than the others, while the subject is simply the normal black bile that is routinely separated out by the liver and then distributed to the spleen, as opposed to the highly acidic black bile that is the result of excessive burning and that is fatal. This pernicious substance comes to be as a kind of by-product or remnant of the normal digestive process of the liver, which transforms food into blood, and is then processed by the spleen. The black bile undergoes a long process of alteration in the spleen, which is powered by a flow of innate heat from the heart. In this process, some of it is changed into something else, namely a kind of thin, dark blood that can serve as nutriment for the spleen itself. The rest of it is discharged into the stomach, where it is normally not harmful, and is, again, even beneficial for digestion by virtue of its capacity for drawing the stomach together.

221 *Nat. Fac.* II 9, II 131 K; cf. *At. Bil.* v 136 K: 'Thus the system which formed animals did not neglect to form an organ which attracted the waste which belongs to black bile. But you cannot invent another part of the body which is capable of attracting this humour and ignore the spleen'. (tr. Grant)

If the spleen functions properly, the dangers of black bile are averted: most of the black bile is altered and subsequently separated off, and it seems that perhaps, indeed, a small quantity, which also needs to be most moderate in quality, can be useful to give the blood sufficient thickness:

τῶν δ' εἰρημένων χυμῶν ἐστὶ τις χρεια τῇ φύσει καὶ τοῦ παχέος καὶ τοῦ λεπτοῦ καὶ καθαίρεται πρὸς τε τοῦ σπληνὸς καὶ τῆς ἐπὶ τῷ ἥπατι κύστεως τὸ αἷμα καὶ ἀποτίθεται τοσοῦτον τε καὶ τοιοῦτον ἑκατέρου μέρος, ὅσον καὶ οἶον, εἴπερ εἰς ὄλον ἠνέχθη τοῦ ζώου τὸ σῶμα, βλάβηην ἂν τιν' εἰργάσατο. τὸ γὰρ ἰκανῶς παχὺ καὶ γεῶδες καὶ τελέως διαπεφευγὸς τὴν ἐν τῷ ἥπατι μεταβολὴν ὁ σπλήν εἰς ἑαυτὸν ἔλκει· τὸ δ' ἄλλο τὸ μετρίως παχὺ σὺν τῷ κατειργάσθαι πάντη φέρεται. δεῖται γὰρ ἐν πολλοῖς τοῦ ζώου μορίοις παχύτητός τινος τὸ αἷμα καθάπερ οἶμα καὶ τῶν ἐμφερομένων ἰνῶν.²²²

There is, however, a natural use for the humours first mentioned, both thick and thin; the blood is purified both by the spleen and by the bladder beside the liver, and a part of each of the two humours is put away, of such quantity and quality that, if it were carried all over the body, it would do a certain amount of harm. For that which is decidedly thick and earthy in nature, and has entirely escaped alteration in the liver, is drawn by the spleen into itself; the other part which is only moderately thick, after being elaborated [in the liver], is carried all over the body. For the blood in many parts of the body has need of a certain amount of thickening, as also, I take it, of the fibres which it contains.

tr. BROCK

This passage seems to imply that we can use a small amount of the more moderate parts of the black bile, in order to provide certain parts of the body with the proper degree of solidity.²²³ It seems that the black bile, though pernicious in nature, can also be useful as long as it is adequately managed by the spleen. That is to say, as long as the bulk of it is separated off and evacuated, and the mildest bits are used for a moderate thickening of the blood.

The spleen has an especially apt composition for drawing black bile into itself, as becomes clear from *UP*, and as we would expect of the wise artisan that Galen believes nature to be.²²⁴ The spleen is particularly porous and has

²²² *Nat. Fac.* II 9, 138–9 K.

²²³ Cf. *Sem.* 106,1–7 (IV 554 K), where Galen remarks that different body-parts require a different degree of thickness of the blood so that some need more black bile in it.

²²⁴ *UP* I 234 ff. and 273 Helmreich (III 319 f. and 373 K).

a loose texture, like a sponge, so that it can attract and take into itself the thickness of the black bile. The part that does this is called the *parenchyma* (παρέγχυμα), a name that Galen seems to have taken over from Erasistratus. It is full of large arteries that break up and alter the thick melancholic humour by virtue of their incessant motion (which is opposed to the static nature of the black bile itself, as we shall see) and a strong innate heat that comes down from the heart.²²⁵ Some of these compositional characteristics are also found in Plato's description of the spleen in the *Timaeus*. There, Timaeus describes the spleen as an organ of loose texture constructed out of hollow and bloodless material, which takes into itself the impurities and cleanses them, while, in turn, it also needs to be cleansed itself, since it will otherwise grow out of proportion.²²⁶ The description is quite similar to Galen's in terms of general function and constitution, but in Plato the kind of stuff that is attracted by the spleen is less specific and is certainly not defined as the dark bilious residue of digestion. But, as we have noticed, the spleen is associated with black bile and melancholy in Rufus. Galen knew both Rufus and Plato, of course, and it might have been logical for him to combine both of these descriptions. Its sponge-like nature could cause the spleen to grow when it takes in much residue, both in Plato and Galen, which in turn can again be counteracted, according to Galen, by a so-called 'thinning diet'. This diet is supposed to help against enlargement of the spleen and hardening of the liver, that is to say, it is supposed to reduce the production of black bile in the body.²²⁷ Diet logically plays an important role in the production of black bile, since it is through processing food that we produce the stuff in the first place – this is a theme that we have also found in Rufus before. Thus, Galen also distinguishes between excess of black bile that is the result of weakness of the capacity of the spleen (see below) and excess that is the result of an abnormal diet.²²⁸ In normal circumstances, the spleen deals with the consequences of the necessary intake of food that produces black bile. But this normal situation is relatively precarious: when the spleen does not function well, or when our diet is such that we put too much burden on it, there will be an excess of the pernicious substance. With regard to the composition of the spleen itself, we also find a similar notion of the basic composition of the spleen in the Hippocratic *Ancient Medicine*, where the structure of the spleen is described as spongy (σπογγοειδέα) and porous (ἀραιά), which

225 *UP* I 232–3 Helmreich (III 316–7 K).

226 *Timaeus* 72c–d.

227 Ed. Singer (1997) 305.

228 *Symp. Caus.* VII 223 K.

makes it suitable for drawing in fluids.²²⁹ With regard to other possible precedents and antagonists for Galen's depiction of the role of the spleen, Stewart has provided an extensive and useful overview.²³⁰

As we noticed, thankfully, nature in all her wisdom has equipped the spleen with the proper constitution for neutralizing the dangerous potential of black bile, given the fact that she could not have entirely prevented its production. As soon as the spleen does not function properly, however, there is disaster in the making:

ἐπει δὴ τὴν ἐνέργειαν ἔχει φύσει, τὸ μελαγχολικὸν ἐκ τοῦ ἥπατος ἔλκειν αἷμα εἰς ἑαυτὸν, τούτῳ γὰρ ἐδείχθη τρεφόμενος, τῆς οὖν ἐλκτικῆς αὐτοῦ δυνάμεως ἀτόνου γενομένης, ἀκάθαρτον εἰς ὅλον τὸ σῶμα φέρεται τὸ ἐξ ἥπατος αἷμα, καὶ κατὰ τοῦτο μελάντερον αὐτοῖς γίνεται τὸ χρῶμα.²³¹

Since [the spleen] indeed by nature has the function to draw the melancholic blood from the liver to itself – for it has been shown that it is nourished by that melancholic blood – the blood from the liver is borne through the entire body uncleansed when this attractive power has come to be weak, and for that reason the colour of those people becomes darker.

If the spleen fails, the blood maintains the level of black bile that it had after its production by the liver, and carries this black bile through the entire body, causing the whole body to become darker.²³² The process of digestion produces a substance that subsequently needs to be neutralized because its darkness will otherwise dominate the entire body. This neutralization is essentially the function of the spleen.²³³ Stewart interprets the quoted passage in a different manner and translates the part after the first comma as 'blood draws the melancholic humour from the liver to itself, for it was shown that it receives its nourishment by this humour'.²³⁴ The idea that blood (rather than the spleen) draws the black bile to itself and is nourished by it seems to fit Stewart's notion

229 Cf. *Nat. Fac.* II 9, II 132 K, where Galen names Hippocrates and Plato as having said that the spleen cleans the blood.

230 Stewart (2016) 199 f.

231 *Loc. Aff.* VIII 377–8 K.

232 Cf. *Hipp. Elem.* 144,9–12 De Lacy; *San. Tu.* VI 254,12–14; *San. Tu.* IV,4 (VI 254 K): '... while a change to a greater darkness shows black bile to be in excess ...' (tr. Johnston); also *Plen.* VII 574,1–8 K and *Comp. Med. Loc.* XII 1003,14–1004,1 K for descriptions of all humours changing the body to their respective colours.

233 Cf. the description in *UP* I 232,14 f. Helmreich (III 316 K).

234 Stewart (2016) 191–2.

of an essentially beneficial kind of black bile, as one of the three types he distinguishes. As an interpretation of this text it does not seem tenable, though. First of all, the blood itself is also produced in the liver and is actually containing the black bile already. Second, the context here is clearly a description of the natural function of the spleen, for which we also have many parallels, some of which we discuss in this paragraph. Finally, there are other places in which Galen unambiguously states that it is the spleen itself that is nourished by the black bile (that is to say, after the black bile has undergone a certain transformation through being processed by the spleen).²³⁵

In *At. Bil.*, Galen also stated that the whole body becomes darker when the spleen is diseased. According to Galen, the greatest doctors and philosophers have therefore held that the liver is cleansed by the spleen, drawing into itself that residual part of the blood that is comparable to the lees of wine.²³⁶ Interestingly, in these passages Galen presents us with an empirical basis for his conception of the function of the spleen, namely, that we become darker all over our body when the spleen is not functioning properly. The darkness of the black bile then becomes predominant and also manifests itself on the outside. In *Nat. Fac.*, too, the spleen is said to draw the melancholic humour to itself when it is properly functioning; when it is weak, the blood will become thicker and darker because it has not been cleansed of black bile well enough, which again causes the whole body to take on a darker colour.²³⁷ In this particular passage, both yellow and black bile are depicted as residues (περιττώματα). They are natural results of the alteration that our innate heat effects on the foodstuff that we consume, and need to subsequently be broken down by the gall bladder and spleen respectively:

οἶνον δὴ μοι νόει γλεύκινον οὐ πρὸ πολλοῦ τῶν σταφυλῶν ἐκτεθλιμμένον ζέοντά τε καὶ ἀλλοιούμενον ὑπὸ τῆς ἐν αὐτῷ θερμασίας· ἔπειτα κατὰ τὴν αὐτοῦ μεταβολὴν δύο γεννώμενα περιττώματα τὸ μὲν κουφότερόν τε καὶ ἀερωδέστερον, τὸ δὲ βαρύτερόν τε καὶ γεωδέστερον, ὧν τὸ μὲν ἄνθος, οἶμαι, τὸ δὲ τρύγα καλοῦσι. τούτων τῷ μὲν ἑτέρῳ τὴν ξανθὴν χολήν, τῷ δ' ἑτέρῳ τὴν μέλαιναν εἰκάζων οὐκ ἂν ἀμάρτοις ...²³⁸

235 E.g. *UP* I 233,6–7 Helmreich (III 317 K); *MM* XIII,17 (X 920 K).

236 *At. Bil.* V 127 K.

237 *Nat. Fac.* II 9 (II 133 K).

238 *Nat. Fac.* II 9 (II 135 K); cf. *Foet. Form.* IV 686 K; *Symp. Caus.* VII 222 K, where Galen distinguishes three περιττώματα, namely a 'bitter' bile (πικρόχολος) that is purified by the gall bladder, a black bile cleansed by the spleen and one that is watery (ὀρρώδης) that is cleansed by the kidneys.

Imagine, then, some new wine which has been not long ago pressed from the grape, and which is fermenting and undergoing alteration through the agency of its contained heat. Imagine next two residual substances produced during this process of alteration, the one tending to be light and air-like and the other to be heavy and more of the nature of earth; the one, as I understand, they call the flower and the other the lees. Now you may correctly compare yellow bile to the first of these, and black bile to the latter ...

tr. BROCK

It is a tiresome job, that of being a mortal being. First of all, one has to continually consume food in order to survive – for a short while, that is. Second of all, the consumption of food requires all kinds of secondary processes, which deal with the necessary by-products of the alteration of food into nourishing blood, and which in turn require their specific organs and processes, with which again all kinds of things could go wrong, leading to a fatal disease or disorder!

Galen, in this passage, distinguishes two of these necessary by-products, each with their own distinguishing characteristics. The comparison of black bile with the lees of wine is familiar from *At. Bil.* Here too, its production is clearly depicted as a by-product of the digestive system similar to those by-products produced with fermentation. These metaphors or analogies that Galen repeatedly gives, that of the lees of wine, but also that of the watery part that runs out of olives when they are pressed, make it clear that black bile is understood as a by-product of a process that is aimed at making something different. What is essential in these processes, is the oil, the wine or the blood. These simply happen to be hard to get. First, the watery, yeasty, slimy residue needs to be evacuated from these useful substances. Indeed, as we saw, the providence of the demiurge helps us out here:

οὐκ οὖν ἂν ἡμέλησεν ὁ δημιουργὸς τῶν τοιούτων ζῶων ἐκκαθαίρειν τοῦ αἵματος, ὅσον ἰλύς τις αὐτοῦ καὶ τρύξις ἐστὶ, καθάπερ οὐδὲ τὸ πικρόχολόν τε καὶ ὀρρώδες περίττωμα.²³⁹

The crafter of these animals, just as it did not neglect to cleanse out of the blood all the sediment and dreg, just so it did with its bilious and serous residue.

239 *At. Bil.* v 135 K; cf. *PHP* VI, 386,12–4 De Lacy (v 536 K): ‘For nature, treating the production of the nutritive fluid as completed and as having its proper form, provided organs for removing the wastes: kidneys, spleen, and gall-bladder’. (tr. De Lacy)

This process, to get rid of the residues caused by the digestive process, already starts from the very inception of the human being. Even when we are still a foetus, not yet in possession of our own functional system of evacuation in the form of a fully operational spleen, nature is already getting rid of the bilious residue of the blood for us:

ἐν γὰρ τῇ κύσει τὸ χρηστότατον ἐλκούσης αἷμα τῆς διαπλαττούσης καὶ ἀξάνουσης τὸ κύημα φύσεως, ὑπολείπεται τὸ μοχθηρότατον ἐν ταῖς φλεψίν, ὃ μετὰ τὴν ἀποκύησιν ἀποκρίνεται, καθάπερ ἐν ἐκάστῳ μηνί τὸ περιττόν τε καὶ ἄχρηστον, οὐ κατὰ τὸ ποσὸν μόνον, ἀλλὰ καὶ κατὰ τὸ ποιόν· ὅπερ ὡς τὸ πολὺ μελάντερόν ἐστι τοῦ κατὰ φύσιν ἔχοντος αἵματος.²⁴⁰

The nature that shapes and augments the embryo during pregnancy draws the most useful blood and leaves behind in the veins the worst blood, which is secreted after birth like each month the superfluous and obsolete blood, not only with respect to quantity but also with respect to quality; this blood indeed is much darker than the blood we naturally have.

Even while still in the womb, black bile is separated out of the blood that is used to shape the foetus, and left behind in the body of the mother, who takes care of its evacuation. Before we are born, our mothers deal with the consequences of our need for nourishment. This indicates that there is no moment for a human being in which black bile is not produced as a by-product or residue of the processes that ensure its survival. And this by-product is always dangerous. As Galen remarks in *UP*, nature made sure that the organs involved in digestion have small nerves that perceive causes of pain, so that these can be disposed of. He then says that if these organs were not able to perceive in such a way, ‘they would all, I think, be easily ulcerated, eaten away, and putrefied by the daily supply of residues flowing into them’, since even now, with this capacity in function and the organs equipped to get rid of acrid and pungent residues straight away, they are still ‘ulcerated, abraded, eroded and putrefied by pure bile, either yellow or black’.²⁴¹ It is a finely balanced organism, our body, and in its very own depths continuously lurk detrimental substances out to destroy it.

240 *At. Bil.* v 137–8. Cf. *HNH* 32,20 (xv 59 K) and 50,10–16 Mewaldt (xv 94 K); *PHP* 510,29–512,4 De Lacy (v 686–7 K), where Galen approvingly cites from the Hippocratic *On the Nature of Man* a passage that states that man was born with all four of the humours.

241 *UP* 274,14–279,5 Helmreich (translations May).

Galen mentions yellow and black bile together here, as dangerous residues. In *Nat. Fac.*, as we have seen, the yellow bile is also defined as another residue besides the black bile, but analogous to what is called the 'flower' in wine-production. The two residues are described in opposite terms. The yellow bile is light and air-like. That is to say, of such quality that it would tend upward towards the heavens. The black bile is, as usual, described rather as heavy and earth-like, that is to say, of such nature that it would tend downward towards the earth. Thus, in the production of these residues, the digestive system displays a kind of vertical cosmological schema, a reproduction of the entire elemental gamut, to which we shall return in the next paragraph. For now, let us also recall that blood, the production of which is the essential aim of the digestive system, has an exceptional position among the humours and is considered to be 'well-mixed' or a mixture of all the humours, that is to say: a mean.²⁴² In fact, in one passage in *Nat. Fac.*, Galen defines the other humours as the result of a disproportionate amount of innate heat in the veins:

ἀποδέδεικται γὰρ ἐκείνους τοῖς ἀνδράσιν ἀλλοιουμένης τῆς τροφῆς ἐν ταῖς φλεψὶν ὑπὸ τῆς ἐμφύτου θερμασίας αἷμα μὲν ὑπὸ τῆς συμμετρίας τῆς κατ' αὐτήν, οἱ δ' ἄλλοι χυμοὶ διὰ τὰς ἀμετρίας γιγνόμενοι ...²⁴³

It has been demonstrated by these men that when the nutriment in the veins is altered by the innate heat in the right proportion, blood comes to be, while the other humours come to be because of disproportion.

Here, the humours as such seem to be the result of something gone wrong. This might seem paradoxical, given that Galen also repeatedly emphasizes that we contain all humours at all times. However, Galen expresses this notion in other works as well, and it may simply imply that *there is always something going wrong*, which does not seem implausible to me at all.²⁴⁴ On the contrary, it seems likely that the amount or intensity of innate heat is *normally* not perfect. The right amount would vary according to a myriad of factors, such as the type of food that is digested, one's individual constitution, the season, one's share of exercise, one's mental state, the climate etc. Would it always be completely proportionate, this passage seems to suggest, then we would

242 *HNH* 46,31–47,3 Mewaldt (xv 88 K), more on this below.

243 *Nat. Fac.* II 8 (II 117 K), Galen agrees with 'these men', as is clear from the context.

244 Cf. *San. Tu.* IV, 4 (VI 255–7 K), where the three other humours are explained as a kind of deviations from the mean of concoction, the result of which is blood; cf. Klibansky et al (1964) 50: 'Die völlige Gesundheit war ein Ideal, dem man sich annähern, das man jedoch niemals tatsächlich erreichen konnte'. See also their note 27.

produce only blood and not the other humours.²⁴⁵ There is some precedent for this notion of the humours in Aristotle, as we have seen, but also in Plato's *Timaeus*. There is a passage in the *Timaeus* – again, which Galen knew intimately – in which Timaeus speaks of a blood that has ‘a multitude of colors and bitter aspects’, and that will contain ‘bile and serum and phlegm of every sort’. This is a specific kind of blood in the story of Timaeus: it has received waste from flesh that is in a bad shape. Its description, however, might be close to Galen's notion of blood as a mixture of the humours (it has a multitude of colors and aspects). The description in the *Timaeus* of these other humours is extremely negative, they are described as ‘παλιναίρετα’, ‘back-products’ and ‘διεφθαρμένα’, ‘agents of destruction’, which do not supply the body with any nourishment. They are ‘hostile to one another’ and ‘wage a destructive and devastating war’ against the parts of the body that are properly functioning.²⁴⁶ Elsewhere, Galen approvingly quotes the passage from the *Timaeus* in which Timaeus differentiates between two kinds of serum (ἰχώρ), one being the gentle, watery kind of blood (ὁ μὲν αἵματος ὀρρός πρᾶος), the other being the sharp and malignant kind of black bile (ὁ δὲ μελαίνης χολῆς ὀξείας τε ἄγριος).²⁴⁷ Galen, of course, systematizes Plato's remarks somewhat to fit his humoral theory: what Plato said here, is that black bile is the most harsh (χαλεπώτατος) of the humours, while blood is the most suitable or good (ἐπιεκέστατος). Galen himself never describes the three other humours in such negative terms in such a general way as in the *Timaeus*, but this particular passage fits very well with his opposition between blood and black bile, his notion of a pure and a mixed blood, and with the exceptionally beneficial nature of blood compared to the other humours. In fact, he also sets out the distinction between these two ways in which the word blood is used in his explanation of the passage from the *Timaeus*: one is separate from the other humours and the other is mixed with it.²⁴⁸ Certainly, passages such as the one from *Nat. Fac.* quoted above, do seem to suggest that according to Galen these other humours are produced because it just cannot be helped, rather than because they are so beneficial in themselves. Better beings than ourselves, such as the stars, do not have our humours since they do not need to continuously nourish their constitution in a way that

245 Cf. *PHP* VIII, 504,1–2 De Lacy (v 677 K): ‘The balanced mixture of all four elements generates blood in the precise sense’.

246 *Timaeus* 82e–83a, translations Zeyl.

247 *Timaeus* 83c, Galen quotes and discusses it in *Hipp. Epid. VI* XVIIA 983,6 f. K; he also quotes and discusses the broader passage in *Adv. Jul.* VIIIA 260,7 f. K.

248 *Hipp. Epid. VI* XVIIA 984,5–8 K: ‘ἀλλ’ ἐπειδὴ διττῶς τὸ αἷμα λέγομεν, ἐνίοτε μὲν ἀντιδιαιρούμενον πρὸς τοὺς ἄρτι λελεγμένους χυμούς, ἐνίοτε δὲ κατ’ ἐπικράτειαν ὄλον τὸν ἐν τοῖς ἀγγείοις χυμόν’.

causes by-products. It might well be, in our case, that these humours serve a function within the (digestive) system of our bodies, but that is only already assuming the fundamental imperfection (the continuous need for nourishment) that made their generation necessary in the first place.

But is this idea of something going wrong all the time with our body, as such, not terribly incongruent with Galen's general teleological framework in which nature produces well-designed beings? Let us have a look at the following passage from *UP*, Galen's teleological work *par excellence*:

μάλιστα μὲν γάρ, εἴπερ οἶόν τ' ἦν, ἄνευ παντὸς κακοῦ κατασκευάστ' ἂν ἅπαντα ταῦτα· νυνὶ δέ, οὐ γὰρ ἐνδέχεται τῆς ὕλης φυγεῖν τὴν μοχθηρίαν οὐδεμιᾶ τῶν τεχνῶν οὐδ' ἀδαμάντινόν τε καὶ πάμπαν ἀπαθὲς ἐργάσασθαι τὸ δημιουργημα, καταλείπεται κοσμεῖν αὐτὸ τὸν ἐνδεχόμενον κόσμον. ἐνδέχεται δ' ἄλλον ἄλλη τῶν ὑλῶν· οὐ γὰρ ἐκ τῆς αὐτῆς δῆπουθεν οὐσίας τὰ τ' ἄστρα γέγονε καὶ ἡμεῖς.²⁴⁹

Surely if it had been possible, she [nature] would have arranged all these matters with no drawbacks at all, but as it is, since it is impossible with all her arts to avoid the inadequacies of her material and to make her creations of adamant, entirely invulnerable, it remains for her to arrange them as best as she can. Different materials admit of different arrangements; for certainly we are not made of the same substance as the stars.

tr. MAY

Indeed, immediately following this passage, Galen elaborates upon some of these drawbacks. He proceeds to discuss the use, necessity, and manners of alteration and evacuation of the various humours (except for blood, since it is not a *περίττωμα*). The humours are there because we are not like the stars. This notion of not being like the stars is far from uncommon in Galen, and we shall return to it in the next section. For now, let us focus again on the spleen. Once the melancholic blood has been drawn to the spleen, the potential

249 *UP* I 260,5–13 Helmreich (II 355 K). Cf. Hankinson (2008) 228; see also *UP* I 174–5 Helmreich: 'Then do not wonder so greatly at the beautiful arrangement of the sun, moon, and the whole chorus of stars, and do not be so struck with amazement at the size of them, their beauty, ceaseless motion, and ordered revolutions that things here on earth will seem trivial and disorganized in comparison; for here too you will find displayed the same wisdom, power, and foresight. Consider well the material of which a thing is made, and cherish no idle hope that you could put together from the catamenia and semen an animal that would be deathless, exempt from pain, endowed with never-ending motion, and as radiantly beautiful as the sun'. (tr. May)

danger of black bile is not yet resolved. After all, were this the end of it, most of the black bile would just pile up in the spleen itself, presumably leading to a giant cancer and other unspeakable horrors. As we have mentioned above, some of it is altered into nutriment for the spleen itself. The rest is disposed of in the stomach after which it has to be discharged, partly through the vomiting that accompanies nausea and partly through the stools.²⁵⁰ This process of discharge is the *normal* course of events, it is not merely a description for those that are already affected by an excess of black bile. There needs to be a continuous evacuation of the stuff. Presumably, this entails that our stools normally contain black bile that has been drawn from the blood by the spleen, and has then been evacuated to the stomach after a process of alteration.²⁵¹ When these evacuations are not properly performed and the black bile piles up, melancholy is the result:

καὶ χωρὶς δὲ τῆς τοιαύτης κενώσεως, ἀθυμίας τε καὶ δυσθυμίας μελαγχολικὰς ἐργάζεται ...²⁵²

And without this evacuation, despondency and melancholic depression arise.

Melancholy can be a direct result of the inability to neutralize the potentially dangerous side-effects of normal digestive processes due to a weakness of the spleen. That is to say: if it were not for the continuous cleansing activity of our spleen, *ceteris paribus*, we would be naturally in a state of melancholy. In other words, *the spleen is making up for the tragic fact that we are not like the stars*.

Before we turn to discuss Galen's analysis of the condition of melancholy itself, we shall have a final look into the dark substance of its cause, now with less focus on its physiological reality, and more attention for the specific associations it evokes, for what we could call its spectrum of meaning.

2.6 *The End of Summer*

The season of black bile, the time when it is most predominant, is autumn. Its abundance is prepared in the period before that, in summer, when the days are longest and the sun shines most vigorously, drying and heating everything

²⁵⁰ *Loc. Aff.* VIII 378,5–9 K.

²⁵¹ Cf. *MM* XIII,17, X 921 K, where Galen mentions that the purging of superfluities from the spleen happens 'via the stomach alone', which corresponds to the two normal processes of purgation through stools and vomiting in the case of nausea.

²⁵² *Loc. Aff.* VIII 378 K.

beneath it. In the summer, blood is still strong in the body, since it is the season following spring, but the bile increases:

τοῦ δὲ θέρος τὸ τε αἷμα ἰσχύει ἔτι καὶ ἡ χολὴ αἰερεται ἐν τῷ σώματι καὶ παρατείνεται ἐς τὸ φθινόπωρον. ἐν δὲ τῷ φθινοπώρῳ τὸ μὲν αἷμα ὀλίγον γίνεται· ἐναντίον γὰρ αὐτῷ ὁ φθινόπωρον τῆ φύσει ἐστίν. ἡ δὲ χολὴ ἢ θερινὴ κατέχει τὸ σῶμα καὶ τὸ φθινόπωρον.²⁵³

In summer blood is still strong, and bile increases in the body and lasts until autumn. In the autumn, the blood becomes small in quantity, since autumn is opposite to it by nature. The bile of summer also dominates the body in the autumn.

tr. HANKINSON

The bile remains in autumn, after the heat recedes. As autumn approaches, the amount of blood decreases. The moisture has been driven out because of the heat, and what remains is the abundance of a substance that is dry and has now become cold:

ἐγένετο δ' εἰκότως τοιοῦτος διὰ τὸ προκατωπτῆσθαι τοὺς χυμοὺς τῷ θέρει. τὸ δ' ὑπόλειμμα τῶν ὀπτηθέντων, ὅταν δηλονότι σβεσθῇ τὸ θερμόν, αὐτίκα γίνεται ψυχρόν τε καὶ ξηρόν, ψυχρόν μὲν διὰ τὴν τοῦ θερμοῦ σβέσιν, ξηρόν δέ, ὅτι κατὰ τὴν ὀπτησιν ἐξεδαπανήθη πᾶν τὸ ὑγρόν ἐξ αὐτοῦ.²⁵⁴

And it is reasonable that such a humour arises as a result of the cooking of the humours during the summer. The residue of this cooking, when the hot has been thoroughly quenched, then becomes cold and dry, cold as a result of the quenching of the heat, dry because the process of cooking has driven out all of the moisture from it.

tr. HANKINSON, slightly modified

What we have in autumn, is a kind of remainder of summer, the bile that persists after the sun has departed. In fact, autumn is literally described as the end of summer in ancient Greek: it is composed of a combination of the verb φθίω, 'to perish, decline, decay, die' and the word ὀπώρα, 'summer' (for which θέρος is more common) or 'the latter part of summer' and also 'fruit'. The combination of these two words designate autumn as a kind of death of summer, or the time

²⁵³ HNH 44,25 Mewaldt (xv 84 K) – Galen quotes this from the Hippocratic text.

²⁵⁴ HNH 45,27–30 Mewaldt (xv 86 K).

when the fruits of summer decay. One might recall Rufus' words here, saying that excess of heat 'renders the humours black, just as the sun blackens fruits and human bodies'.²⁵⁵ The notion of excessive heating is already developed in Rufus, but he mostly relates melancholy to spring, rather than the period after summer, which might make more sense in this context of overheating and then cooling down.²⁵⁶ Galen's rendering of yellow bile being dominant in summer, while black bile already increases then and becomes dominant after summer, seems to have a parallel in the schema presented in a text from the *Medical Excerpts* by Paul of Aegina, that is there presented as a letter from Diocles (whose work Galen was familiar with) to a king Antigonus. The authenticity of this text is subject to debate, so we cannot be sure if it hails from Diocles himself.²⁵⁷ In this letter, it is noted that after the rising of the Pleiads, which would be around the end of April or early May, yellow bile increases until the summer solstice. The summer solstice, in turn, would have been around the 22nd or 23rd of June, and it is said that after this period the black bile starts to increase until the autumn equinox, which would be around the end of September.²⁵⁸ This corresponds well to the notion that black bile is produced in the latter part of summer so that it is predominant in autumn.

Walter Müri has noted that there is a parallel between the development of black bile as a separate substance – that is to say, the division of 'bile' into a yellow and black bile – and an expansion of the number of seasons from three to four – that is to say, the division of summer into summer and autumn. Somewhere in the 6th century, autumn (φθινόπωρον) was added to the already existent χειμών, winter, ἔαρ, spring and θέρος, summer, as the latter part or end of summer.²⁵⁹ This is an interesting parallel indeed, especially considering that yellow and black bile remain so closely related in Galen, and considering that Galen repeatedly remarks that the Greeks, when they speak of χολή, 'bile', simply, refer to the yellow bile, whereas if they want to indicate the black bile, the word for bile needs to be further specified with the additional μέλαινα, 'black'.²⁶⁰ That is to say, just as there previously was only a summer and there is now a summer and an end or decay of summer, there previously was only

255 *On Melancholy* Fr 11,21 Pormann (2008), see also Fr 75,3.

256 In the Hippocratic *Aphorisms*, quoted by Galen in *PHP* VIII 516,24–5 De Lacy, melancholy is also said to abound in spring, although it is again said to abound in autumn as well.

257 Cf. for text, translation and commentary of the text, van der Eijk (2001) fr 183A, specifically lines 107 ff.

258 *Ibidem*, also for the dating of these periods.

259 Müri (1953) 28.

260 *SMT* XII 275,13–8 K; *HVA* XV 637,8–10 K; *Hipp. Epid.* VI XVIIIB 271,6–7 K; *Hipp. Aph.* XVIII A 132,12–5 K; *HNH* 40,10–5 Mewaldt (XV 75 K).

bile, while there now is also a degenerated bile that is a remnant of an excess of heat.

One notices that there is something negative or privative about the description of autumn: it is primarily understood as a negation of what precedes it.²⁶¹ The description of its coming to be is remarkably similar to the production of black bile itself, which comes to be when, during digestion, there is too much innate heat so that instead of blood, black bile is produced. Likewise, in summer, there is excessive heat so that the amount of blood diminishes and that of black bile increases. Clearly, since fruits and summers are generally good things, this description implies a negative characterization of autumn, just as Galen sees the production of black bile as a deviation from the production of blood. The mere fact that this production is common, does not make it less of a deviation in this sense.

Another thing to note in this regard is that the qualities of black bile and of autumn are coldness and dryness. These are – in this specific combination – the qualities of death as well, since that is what we become when we die, or better: it is what the *remainder* of us becomes, after the life has flowed from our bodies. This is, in fact, a point that is noted by Galen in the context of a presentation of the position of followers of Athenaeus. They apparently claim that one of the four pairings of elemental qualities, hot and wet, is superior to the others, does not cause any illness, and is as such the best mixture and the mixture of life.²⁶² They conclude this on the basis of the characteristics of death, which are the exact opposite:

καὶ μὲν δὴ καὶ τὸν θάνατόν φασι εἰς ξηρότητα καὶ ψύξιν ἄγειν τὰ τῶν ζώων σώματα. καλεῖσθαι γοῦν ἀλίβαντας τοὺς νεκροὺς ὡς ἂν οὐκέτι λιβάδα καὶ ὑγρότητα κεκτημένους οὐδεμίαν, ἔξατμισθέντας θ' ἅμα διὰ τὴν ἀποχώρησιν τοῦ θερμοῦ καὶ παγέντας ὑπὸ τῆς ψύξεως.²⁶³

Furthermore, they state that death leads to dryness and cooling in animal bodies; and indeed, [they argue], dead bodies are referred to as corpses (*alibas*), on the grounds that they no longer possess any moisture (*libas*) and wetness, having at once lost their vapours because of the departure of the hot, and having been solidified by the cooling.

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261 The exact same point applies to the stage of life which is associated with the black bile: ἡ παρακμή, literally the time past the prime, also indicating a time of decay (cf. *Hipp. Prog.* XVIII B 282,10–1, *Temp.* I 641,4–7 K).

262 *Temp.* I 522–3 K.

263 *Temp.* I 522,15–523,2 K.

If death is characterized by the qualities of dryness and coldness, then life must be characterized by their opposites, wetness and hotness. Thus, spring is well-tempered, because it ‘consists in nothing other than the domination of these two qualities’, as Galen presents the position of these followers of Athenaeus. Galen himself takes issue with this argument, since spring, according to him, is not characterized by a predominance of hot and wet in the same way in which winter, for example, is characterized by wet and cold. Rather, spring does not possess any of its qualities in a disproportionate sense – this, according to Galen, is what it means to be well-balanced. Galen defines spring rather as a precise middle with regard to all extremes.²⁶⁴ He approvingly quotes from the Hippocratic *Aphorisms* the saying that ‘Spring is most healthy and least fatal’. But whereas he takes issue with the way spring is characterized by the followers of Athenaeus in terms of the predominance of wetness and hotness, he does not take any issue with their opposition of spring and autumn and their accompanying associations of life and death or health and disease respectively. In fact, he notes a particular problem with autumn – it is most conducive to illness, due to its irregularity of mixture:

καὶ τοῦτο γ' ἐστὶ τὸ μάλιστα νοσῶδες ἐργαζόμενον τὸ φθινόπωρον, ἢ ἀνωμαλία τῆς κράσεως. οὐκ ὀρθῶς οὖν εἴρηται ψυχρὸν καὶ ξηρὸν, οὐ γὰρ ἐστὶ ψυχρὸν αὐτὸ καθ' αὐτὸ θεωρούμενον, ὡσπερ ὁ χειμῶν, ἀλλὰ τῷ θέρει παραβαλλόμενον ἐκείνου ψυχρότερον. οὐ μὴν οὐδ' ὀμαλῶς εὐκρατον, ὡς τὸ ἔαρ, ἀλλ' ἐν τούτῳ δὴ καὶ μάλιστα διενήνοχεν ἐκείνης τῆς ὥρας, ὅτι τὴν εὐκρασίαν τε καὶ τὴν ὀμαλότητα διὰ παντὸς ἴσην οὐ κέκτηται.²⁶⁵

And it is this that makes autumn so particularly conducive to sickness: the unevenness of the mixture. It is not, therefore, correctly called cold and dry; for it is not cold when one considers it in itself, like winter, but only colder when compared with summer. Nor, on the other hand, is it evenly well-mixed, like spring, its chief difference from that season being that it does not possess an equal good-mixture and evenness throughout.

tr. SINGER AND VAN DER EIJK

Again, we find autumn defined in opposition to spring, in clearly negative terms. Whereas spring is well-tempered and evenly balanced, autumn is defined by the absence of these very qualities. Also, it is again defined negatively in terms of its precedent, summer: it is not cold in itself but only compared to summer.

²⁶⁴ *Temp.* I 524–7 K, in 526,16–17: ‘φανείται τὸ ἔαρ ἀκριβῶς μέσον ἀπασῶν τῶν ὑπερβολῶν’.

²⁶⁵ *Temp.* I 527,13–528,5 K.

This opposition between spring and autumn is the same opposition as the one between blood and black bile, both pairs are opposed because of their respective mixture.²⁶⁶

We noticed earlier that the amount of blood decreases as the amount of bile increases, and that the amount of blood is least in autumn, since ‘autumn is opposite to it by nature’. This was a text that Galen quoted from the Hippocratic *On the Nature of Man* itself. In his commentary on the Hippocratic text, Galen adds the following:

κατὰ μὲν τὴν πρὸ ταύτης ῥῆσιν εἴρηται ἐν τῷ φθινοπώρῳ τὸ μὲν αἷμα ὀλίγον γίνεσθαι· ἐναντίον γὰρ αὐτοῦ τὸ φθινόπωρον τῇ φύσει ἐστίν. ἡμεῖς δὲ, ὅπως ἐναντίον ἐστίν, ἐδιδάξαμεν· εἶπερ γὰρ τὸ μὲν αἷμα θερμὸν καὶ ὑγρὸν ἐστὶν ὁμοίως τῷ ἡρὶ, τὸ δὲ φθινόπωρον, ὡς αὐτὸς ἔφη, ξηρὸν τέ ἐστι καὶ ψύχειν ἤδη ἄρχεται τὸν ἄνθρωπον, εἰκότως ἐναντίον τέ ἐστὶ τὸ φθινόπωρον τῷ ἡρὶ καὶ τὸν χυμὸν ἔχει τὸν ἐναντίον τῷ αἵματι πλεονάζοντα, τὸν ξηρὸν καὶ ψυχρὸν.²⁶⁷

In the preceding passage he said that ‘In the autumn, the blood becomes small in quantity, since autumn is opposite to it by nature’; and we will explain in what way it is opposite. For if indeed blood is hot and wet in the same way as spring, then autumn, as he said, is dry, ‘and man already begins to cool down’, and it is reasonable both that autumn is opposite to spring, and involves an excess of the humour opposite to blood, namely one that is dry and cold.

tr. HANKINSON, slightly modified

Autumn is opposite to spring and black bile is opposite to blood, by virtue of their respective pairs of elemental qualities being opposites. We noticed earlier, however, that blood has quite an exceptional status among the humours. We saw how Galen considers blood, if not the ‘sole constituent’ of human nature, then at least ‘most closely affiliated to it’ (οἰκειότητας).²⁶⁸ We also noticed how blood is produced when the ideal amount of innate heat is used in the process of digestion, whereas the other humours are produced as by-products when the amount is too great or too small.²⁶⁹ Indeed, blood and spring are attributed by Galen the same exceptional status:

266 Cf. also *PHP* 514,16–31 De Lacy.

267 *HNH* 45,15 Mewaldt (xv 86 K).

268 *HNH* 44,24 Mewaldt (xv 78 K); cf. *SMT* 617,1–8 K (blood is ‘ὁ τοῖς ἀνθρώποις οἰκειότητας χυμὸς’); *Hipp. Epid. III XVIIA* 534,13–535,1 K, Galen ascribes to Hippocrates the view that blood is ἀδηκτότατον καὶ μάλιστα οἰκεῖον ἡμῖν, least biting and most natural to us.

269 *Nat. Fac.* II 8 (II 117 K) and *San. Tu.* IV 4 (VI 255–7 K).

ἔστι μὲν οὖν τις οὐ σμικρὰ ζήτησις καὶ περὶ τῆς τοῦ ἥρος κράσεως, ὅπως λέγεται θερμὸν καὶ ὑγρὸν, ἣν διήλθον ἐπιδεικνύς ἄμεινον εἶναι λέγειν εὐκρατον αὐτό· καὶ δῆλον ὅτι καὶ τὸ αἷμα κατὰ τὸν αὐτὸν λόγον οὐ θερμὸν καὶ ὑγρὸν, ἀλλ' εὐκρατον.²⁷⁰

Yet the investigation concerning the mixture of spring – in what way it is hot and wet – is no trivial one, which I have already covered when I indicated that it is better to call it ‘well-tempered’. And clearly by the same argument, blood too will not be really hot and wet, but well-tempered.

tr. HANKINSON

Instead of having a pair of qualities that predominate, like in each of the other humours and seasons, blood and spring are rather described as ‘well-tempered’. In another passage in *HNH*, Galen makes a comparison between spring and autumn in which he calls spring ‘the best of seasons’ and ‘the only one properly natural, as opposed to the one contrary to nature’.²⁷¹ How odd, that one of the four seasons, which do seem to form a balanced natural order together, is said to be contrary to nature. What does it mean for the black bile itself, that blood and spring are the humour and season that black bile and its season are opposed to? Blood and spring are both defined as exceptionally beneficial, useful, healthy, moderate and close to our nature. If black bile and autumn are opposed to them, their characteristics must, to some extent at least, be opposed to those as well.²⁷² Galen’s commentary on the Hippocratic *On the Nature of Man* is one of the main texts in which we find this opposition between black bile and autumn on the one hand, and blood and spring on the other. This means that in Galen’s most systematic continuation of Hippocratic humoral theory, black bile is not simply one humour among others. It is the worst of the humours, whereas blood is the best. Moreover, it appears to even be contrary to nature somehow, while at the same time being a part of it. Could it be, that black bile is both part of our nature and simultaneously contrary to it?

As we have noticed, black bile is often described by Galen as the sediment of the blood, as the nasty by-product that one needs to get rid of, like with the lees of wine or the watery part of olives: we are just stuck with those and have

²⁷⁰ *HNH* 46,31–47,3 Mewaldt (xv 88 K).

²⁷¹ *HNH* 44,9 ff. Mewaldt (xv 83 K), translation Hankinson.

²⁷² Cf. Klibansky et al. (1990) 51–3 on the opposition of blood and black bile and their exceptional position in the fourfold humoral theory.

to remove them if we want those fine products of wine and olive oil. In the following passage these two opposites are also clearly brought together:

τῶν δὲ χυμῶν ὁ μὲν χρηστότατός τε καὶ οἰκειότατός ἐστι τὸ αἷμα. τούτου δ' οἶον ὑπόστασις τις καὶ ἰλὺς ἢ μέλαινα χολή· ταῦτ' ἄρα καὶ ψυχροτέρα τ' ἐστὶ καὶ παχυτέρα τοῦ αἵματος.²⁷³

Of humours, the most useful and natural is blood. Black bile is a kind of sediment or dreg of this; it is thus colder and thicker than blood.

tr. SINGER, modified

Again, blood is the most useful of the humours and the one that is most congenial to us, while black bile is merely a dreg that is carried along by the blood and that needs to be evacuated from it.²⁷⁴ As we have seen above, yellow bile can also be understood as a by-product of the production of blood, and was involved in the same wine-metaphor as black bile. Black bile has much in common with yellow bile and can even be seen as an altered continuation of the same substance, as became clear in the context of the discussion of the seasons and their respective humours, as well as in the context of the dangerous black bile that is a burned yellow bile. However, black bile is in some ways opposed to yellow bile as well. Let us have another look at the passage from *Nat. Fac.* we quoted earlier:

οἶνον δὴ μοι νόει γλεύκινον οὐ πρὸ πολλοῦ τῶν σταφυλῶν ἐκτεθλιμμένον ζέοντά τε καὶ ἀλλοιούμενον ὑπὸ τῆς ἐν αὐτῷ θερμασίας· ἔπειτα κατὰ τὴν αὐτοῦ μεταβολὴν δύο γεννώμενα περιττώματα τὸ μὲν κουφότερόν τε καὶ ἀρωδέστερον, τὸ δὲ βαρύτερόν τε καὶ γεωδέστερον, ὧν τὸ μὲν ἄνθος, οἶμαι, τὸ δὲ τρύγα καλοῦσι. τούτων τῷ μὲν ἑτέρῳ τὴν ξανθὴν χολήν, τῷ δ' ἑτέρῳ τὴν μέλαιναν εἰκάζων οὐκ ἂν ἀμάρτοις ...²⁷⁵

273 *Temp.* I 603,8–11 K; cf. *Comp. Med. Gen.* XIII 667,15–8 K, where a red and useful blood is contrasted to a black and melancholic blood (οὔτε ἐρυθρὸν οὔτε χρηστὸν αἷμα περιέχειν, ἀλλὰ μελάντερον καὶ μελαγχολικώτερον).

274 As we have seen before, the term for dreg, ἰλὺς, is also used by Galen in *At. Bil.* to describe black bile; in *MM*, the adjectives ἰλυώδες and μελαγχολικόν are used together to describe the part of the blood that is cleansed by the spleen, *MM* XIII,17 (x 920 K).

275 *Nat. Fac.* II 9 (II 135 K); cf. *Foet. Form.* IV 686 K; *Symp. Caus.* VII 222 K, where Galen distinguishes three περιττώματα, namely a 'bitter' bile (πικρόχολος) that is purified by the gall bladder, a black bile cleansed by the spleen and one that is watery (ὀρρώδης) that is cleansed by the kidneys.

Imagine, then, some new wine which has been not long ago pressed from the grape, and which is fermenting and undergoing alteration through the agency of its contained heat. Imagine next two residual substances produced during this process of alteration, the one tending to be light and air-like and the other to be heavy and more of the nature of earth; the one, as I understand, they call the flower and the other the lees. Now you may correctly compare yellow bile to the first of these, and black bile to the latter ...

tr. BROCK

The descriptions of these residual substances are opposed to each other: yellow bile tends to be light and air-like, whereas black bile is heavy and earthy. Here we have the traditional opposition between heaven and earth associated with the two biles, understood as the two by-products of digestion. What would be the role of the wine itself in this analogy? Obviously, the wine is the essential product, it is what the entire process is about. In the process of digestion, this is the blood. Blood, as we saw, is defined as the well-mixed mean and that which is closest to our nature. Blood holds a perfect middle position between the extremes. In this respect it is interesting to note that Galen on several occasions names wine as a remedy to melancholy. In *QAM*, he states that the daily consumption of wine relieves us of all sorrow and despondency (λύπης δ' ἀπάσης καὶ δυσθυμίας κουφίζει σαφῶς οἶνος πινόμενος).²⁷⁶ Indeed, Galen says this in a context in which he has just given melancholy as an example of the body (i.e. the brain particularly) causing damage to the rational capacities, and he also proceeds to present Zeno of Citium as an example of the beneficial effects of daily wine-drinking (alluding to his reportedly melancholic behaviour when sober).²⁷⁷ It seems there is more to the metaphor than black bile and yellow bile being comparable to the two by-products of the lees and the flower. The essential product, the wine itself, also has the tendency to produce affections in us that are opposed to the ones that black bile produces. Indeed, in another passage, Galen compares the end-product, the wine, to useful blood.²⁷⁸ Clearly,

276 Galen, in *QAM* IV 777 K, cf. 779 K, where he notes that 'one who drinks wine in moderation' has characteristics opposite to those of the melancholic, who is *λυπηροτέραν καὶ ἀτολμοτέραν καὶ ἀθυμοτέραν*.

277 See *infra*, note 124.

278 Cf. also *UP* 197,18–198,10 Helmreich (III 270 K): 'Let us, then, compare the chyle to wine just pressed from the grapes and poured into casks, and still working, settling, fermenting, and bubbling with innate heat. The heavy, earthy part of its residues, which I think is called the dregs, is sinking to the bottom of the vessels and the other, light, airy part floats. This latter part is called the flower and forms on the top of light wines in particular,

there is a double opposition here, between black bile and blood on the one hand, and between black bile and yellow bile on the other.

Blood, as the mean between those extremes, suits us. Human beings, in the Greek philosophical tradition, are defined as being in between heaven and earth: we are intelligent, like the heavenly bodies, but we do not have a substance as pure as those bodies, since we also consist of water and earth.²⁷⁹ Black bile is the earthy humour, the sediment in the blood, the heavy humour that weighs us down and binds us to the earth – it literally makes us depressed when it predominates. Yellow bile, on the other hand, is associated with the heavenly bodies, it is described as fiery and light, naturally tending in the opposite direction of the black bile, it is dry and hot like the stars.²⁸⁰ Galen also states that it causes intelligence, in a passage in *HNH* that refers to *QAM*, where intelligence was said to be caused by dryness, the quality that the stars possess to the extreme.²⁸¹

whereas the dregs are more abundant in heavy wines. In making this comparison, think of the chyle sent up from the stomach to the liver as bubbling and fermenting like new wine from the heat of the viscus and beginning to change into useful blood; consider too that in this effervescence the thick, muddy residue is being carried downward and the fine, thin residue is coming like foam to the top and floating on the surface of the blood'. (tr. May)

- 279 We find this general idea in Plato's *Timaeus*, of course, but also in Galen, see *UP* II 446–7 Helmreich (IV 359 K): 'It is reasonable to suppose that the intelligence dwelling in them [the sun, the moon and the stars] is as much better and more perfect than that in earthly bodies as their bodily substance is the purer. For when in mud and slime, in marshes, and in rotting plants and fruits animals are engendered which yet bear a marvelous indication of the intelligence constructing them, what must we think of the bodies above?' (tr. May)
- 280 Cf. *Hipp. Elem.* 154,5–6 De Lacy, where yellow bile is called the 'hottest and thinnest' (θερμότεατος τε και λεπτότατος); *Dig. Insomn.* VI 832 K, where yellow bile is the cause of someone seeing fire in their dreams, black bile of someone seeing mist, smoke and a deep darkness; *Trem. Palp.* VII 633,11–14 K, where Galen remarks that rigor can cause both quartan and tertian fevers, even though these arise from humours that are 'opposite in power to each other' (ὕπὸ χυμῶν ἐναντίων τῆ δυνάμει συνισταμένοις) and adds by way of explanation: 'for the melancholic humour is cold, but the yellow bile is hot'; *PHP* 502,21–22 De Lacy, where yellow bile is said to be analogous to fire, black bile to earth; *Hipp. Aph.* XVIIIB 667,–6 K, where black bile is said to move downwards, yellow bile upwards, due to their respective constitutions (black bile being thick, ἄδρός, yellow bile being light, κοῦφος).
- 281 *HNH* 51,9–18 Mewaldt (XV 97 K), cited and discussed below; *QAM* 780–82 and 786 K; see infra, Case-Study II, p. 156 and Case-Study III, p. 209; in the same vein (linguistic capacities being related to intelligence), black bile causes one to become more silent, yellow bile (as the cause of phrenitis) to become more talkative, cf. *Hipp. Epid.* III XVIIIA 789,13–14 K, where Galen explains the change from not speaking (σιγῶσα) to excessive speaking (λόγοι πολλοί) in terms of the difference between a melancholic and phrenitic condition respectively; *Hipp. Epid.* III XVIIIA 785,5–786 K, where Galen explains the silence and gloominess of a patient in terms of her having a more atrabilious blood.

Black bile is also dry, of course, but its dryness is nothing but a remainder of the heat of summer, as we have seen. It is there when the fire dies out. I think there is no doubt that we here have a link to the traditional relation between thinking and melancholy that we found in Rufus and the Peripatetic tradition as well. Intelligence is at its peak during summer since it is caused by yellow bile, which predominates in summer. But after this peak of activity of the intellect, a low point follows: the heat that inspired intelligence cools and a dark substance that is the cause of melancholy perseveres. Indeed, one might think here of the bipolar-like descriptions of melancholy from the *Problemata*. The only essential difference is that the cooling and heating of black bile is now further divided over two substances, the dry and hot yellow bile that increases intellectual activity, and the dry and cold black bile that increases sadness. But it might perhaps be more useful to have a somewhat broader association: what is depicted with these different substances is not so much a recurrent bipolar-like disorder that befalls exceptional people, but rather simply the fact that we, as human beings, are beings that relate ourselves in fundamental ways to both heaven and earth. Naturally, both of these extremes would have a place in our physical constitution, naturally we would swing from one to the other regularly, and naturally we would be most at ease when we rather produce that which essentially fits us and is closest to our nature: the mean, i.e. blood. With the transition from summer to autumn, from yellow bile to black bile, our substances change from something that is more similar to the heavenly bodies to something that is more similar to earth, as if portraying the course of a falling star which loses its heat as it descends. As we have seen, Galen considers black bile as one of the 'drawbacks' of the fact that nature needs to work with a matter that makes it impossible to make us like the stars, which are predominantly dry and hot. Likewise, we have argued how Aristotle attributed to the melancholic's constitution a particular sensitivity for the fact that we are not divine but composite beings. Both in Aristotle and in Galen the heavenly bodies serve as the embodiment of the divine *par excellence*, and in Galen black bile is the substance that is most opposed to the stars. In fact, it has the qualities of a star that has fallen to earth: it used to be hot, and therefore it is dry, but then it cooled down and therefore it blackened and now resembles thick earth. Galen links the very presence of residues such as black bile in our body to a necessary constraint presented to creative nature by matter. The fact of this matter implied certain drawbacks: it made it so that divine nature could not make us like the stars, as he remarks.²⁸² That is to say, the fact that we are not capable of a divine life and are in a state of pain qua living beings – again, an idea that we

282 UP I 260,5–13 Helmreich (III 355 K).

previously found in Aristotle in the context of his discussion of melancholy – could be related in Galen to the fact that our matter determines that we cannot not be like the heavenly bodies. Indeed, this is what Galen says in *UP*:

μη τοίνυν, ὅτι καλῶς ἡλιός τε καὶ σελήνη καὶ τῶν ἄλλων ἄστρων ὁ χορὸς ἅπας διατέτακται, θαυμάσης, μηδ' ἐκπλήξῃ σε τὸ μέγεθος αὐτῶν ἢ τὸ κάλλος ἢ τὸ τῆς κινήσεως ἀκατάπαυστον ἢ ἢ τῶν περιόδων τάξις, ὥστε τὰ τῆδε παραβάλλοντα σμικρὰ δοκεῖν εἶναι καὶ ἀκόσμητα· καὶ γὰρ σοφίαν καὶ δύναμιν καὶ πρόνοιαν ὁμοίαν εὐρήσεις ἐνταυθοῖ. σκόπει γάρ μοι τὴν ὕλην, ἐξ ἧς ἕκαστον ἐγένετο, καὶ μὴ μάτην ἐλπίσης ἐκ καταμηνίου καὶ σπέρματος ἀθάνατον δύνασθαι συστήναι ζῶον ἢ ἀπαθές ἢ ἀεικίνητον ἢ λαμρὸν οὕτω καὶ καλόν, ὡς ἡλιον.²⁸³

Then do not wonder so greatly at the beautiful arrangement of the sun, moon, and the whole chorus of stars, and do not be so struck with amazement at the size of them, their beauty, ceaseless motion, and ordered revolutions that things here on earth will seem trivial and disorganized in comparison; for here too you will find displayed the same wisdom, power, and foresight. Consider well the material of which a thing is made, and cherish no idle hope that you could put together from the catamenia and semen an animal that would be deathless, exempt from pain, endowed with never-ending motion, and as radiantly beautiful as the sun.

tr. MAY

Here, the limitations of the human being compared to the heavenly bodies are explained in terms of the stuff we are made of: blood and semen. From these materials nature can only create a being in need of nourishment, which suffers pain and death, a being which lacks the light of the heavenly bodies and their unceasing motion. Black bile is one of the necessary residues of this nourishment, and seems to embody this fact of human life with its particular characteristics. It is the most heavy and earthlike humour, the one most opposed to the heavens; it is the darkest substance, lacking the light of the heavenly bodies more than anything else; it is the substance associated with death and mortality because of its qualities of coldness and dryness; and it is the most obstinate and immovable of the humours (as we shall see below).²⁸⁴

283 *UP* I 174,19–175,7 Helmreich (III 238 K).

284 Cf. *UP* I 175,26–176,9 Helmreich (III 239–40 K), shortly after the passage just quoted, where Galen puts particular emphasis on the earthy nature of the human being as cause of its shortcomings compared to the heavenly bodies: 'Bear it in mind and reflect whether your

Both in Aristotle and Galen man is understood as a being that is essentially imperfect in contrast to the divine, which, in turn, is embodied by the stars. Moreover, this imperfection is associated with the addition of 'another element', which the melancholics and the black bile seem to have a special relationship with, and which is rather opposed to the substance of the divine embodied in the heavenly bodies.²⁸⁵ Since we are not entirely divine, not of a star-like substance only, we suffer from the tension of being suspended between heaven and earth.

The transition from yellow bile to black bile, at the end of summer, embodies the course of this suspension, and gives its vertical hierarchy a place in the natural and regular passing of time. Therefore, this is also the time when blood, as the ideal mean, needs to be most absent. This transition from the predominance of a more heavenly substance to the predominance of the earthy black bile, happens in the time after which blood was predominant, and derails when blood recedes more and more. Then we come down, as it were, from resembling the substance of the stars closest when yellow bile is

substance is celestial light or slime of the earth, if you will permit to give such a name to the mother's blood flowing into the uterus. Then, just as you would never demand an ivory statue of Phidias if you had given him clay, so in the same way, when blood is the material you give, you would never obtain the bright and beautiful body of the sun or moon, for they are divine and celestial and we are mere figures of clay, but in both cases the art of the Creator is equally great'. (tr. May)

285 Cf. for Aristotle *Met* Θ 1050b23–9: 'Hence the sun and stars and the whole visible heaven are always active ... Nor do the heavenly bodies tire in their activity; for motion does not imply for them, as it does for perishable beings, the potentiality for the opposite, which makes the continuity of the motion painful. The cause of this is that the substance is matter and potentiality, not actuality'. (tr. Tredennick, slightly modified); for Galen also *UP* I 260,5–13 Helmreich 'Surely if it had been possible, she would have arranged all these matters with no drawbacks at all, but as it is, since it is impossible with all her arts to avoid the inadequacies of her material and to make her creations of adamant, entirely invulnerable, it remains for her to arrange them as best as she can. Different materials admit of different arrangements; for certainly we are not made of the same substance as the stars'. (tr. May), cf. with *UP* II 446–7 Helmreich (IV 359 K): 'It is reasonable to suppose that the intelligence dwelling in them [the sun, the moon and the stars] is as much better and more perfect than that in earthly bodies as their bodily substance is the purer. For when in mud and slime, in marshes, and in rotting plants and fruits animals are engendered which yet bear a marvelous indication of the intelligence constructing them, what must we think of the bodies above?' (tr. May) Traditionally, this is not an unusual interpretation of the role of black bile and melancholy, as we find it, for example, in Burton's great *Anatomy of Melancholy* (143): 'Melancholy in this sense is the character of mortality. We are not here as those angels, celestial powers and bodies, sun and moon, to finish our course without all offence, with such constancy, to continue for so many ages ...'. See also Pigeaud (1981) 125.

most predominant, being dry and hot, fiery and having our intellect at its peak, until we have reached the bottom of dark, cold, thick earth, risking sadness and despondency. According to the same analogy, black bile is dominant in the time of life after our prime (ἡ παρακμή), again a period which is literally defined negatively with regard to the preceding period, which is also the best period.²⁸⁶ Black bile is the residue of our ceaseless but natural attempts to approach the heavens, to soar up high towards the sun, since it is that part of the bile that persists after the fire that renders us intelligent periodically quenches. In this manner, the change of the seasons expresses in time a paradox (that of the suspension between heaven and earth) that is inherent to our constitution. Indeed, persistence is one of the major associations with black bile in Galen. This correlates to the thick, sediment-like nature of its substance, as well as to its association with earth. But it also manifests itself in other ways, as we can see from some of the following quotations:

ἀρότερον μὲν γὰρ διητημένου φλεγματοδέστερος ἀθροίζεται χυμός, ἐν πόνοις δὲ πλείοσιν ἤτοιπακρόχολος ἢ μελαγχολικός, ἐν θέρει μὲν πικρόχολος, ἐν φθινοπώῳ δὲ μελαγχολικός. ἀλλὰ καὶ τῶν πόνων τὸ μῆκος ἐπισκεπτέον· ὅσῳ γὰρ ἂν ᾧσι πολυχρονιώτεροι, τοσῶδε μᾶλλον ἐπὶ τὸ μελαγχολικὸν ἐκτρέπονται.²⁸⁷

When a person's life is quite idle, a more phlegmatic humor collects. In greater exertions, it is either picrocholic or melancholic – in summer, picrocholic and in autumn, melancholic. But one must also consider the length of the labours, for the longer they are in duration, the more the tendency is toward the melancholic.

tr. JOHNSTON

The longer the length of labours, the more melancholic one becomes. Now, one might say: well, that is because endless labour is bound to make one sad, but I think the issue here is not so much about a relation between labour and a psychological state that is melancholic, but rather between lengthiness or perseverance and black bile. Black bile is ponderous and heavy, it stays the same for a long time, static and unmoved. We can see this also in the description

286 *Hipp. Prog.* xviiiB 282,10–1 K, the stage of life which matches black bile is ἡ παρακμή, the time after one's prime (the word also means decay); *Temp.* 641,4–8 K: 'We should not, then, think, just because someone is quite hairy, that he is automatically melancholic. This does not hold if he is still in the prime; it does hold if he is at the stage after the prime; and again, it does not hold in old age'. (tr. Singer and van der Eijk); *Diff. Feb.* vii 335,10–15 K.

287 *San. Tu.* vi 249–50 K.

of so-called quartan fevers that Galen quotes in his commentary on the Hippocratic *On the Nature of Man* (though Galen himself seems to not quite agree with it). These fevers last longest of all kinds, which is explained in terms of its subject having relatively less yellow and more black bile:

προσγίνεται δὲ αὐτοῖσιν ἀσὸ μελαίνης χολῆς τὸ περισσὸν τοῦτο καὶ δυσapάλλακτον· μέλαινα γὰρ χολή τῶν ἐν τῷ σώματι ἐνεόντων χυμῶν γλισχροτάτον καὶ τὰς ἔδρας χρονιωπάτας ποιεῖ. γνώση δὲ τῷδε, ὅτι οἱ τεταρταῖοι πυρετοὶ μετέχουσι τοῦ μελαγχολικοῦ.²⁸⁸

This excessiveness and tenacity in them derives from black bile. For black bile is the most viscous of the humours of the body, and the one which remains unmoved for the longest time. You will understand from the following that quartan fevers have a share of the melancholic.

tr. HANKINSON

Black bile remains unmoved longest. Likewise, in *Hipp. Elem.*, Galen says that black bile is *δυσκίνητος*, ‘difficult to move’, ‘obstinate’.²⁸⁹ The physical properties of the black bile itself are also translated into the psychological domain, where black bile is said to cause a kind of firmness or constancy of soul:

ἔστι δὲ καὶ ἕτερος τις λόγος φυσικὸς οὐ σμικρὰν ἔχων πιθανότητα, καθ’ ὃν εἰς ἡθῶν ἐπιτηδείων γένεσιν οἱ τέσσαρες ἀποδείκνυνται χυμοὶ χρήσιμοι. προαποδείξαι δὲ χρὴ πάλιν ἐν αὐτῷ ταῖς τοῦ σώματος κράσεσιν ἐπόμενα τὰ τῆς ψυχῆς ἦθη, περὶ οὗ καὶ ἡμῖν ἐτέρωθι γέγραπται. τούτου τοίνυν ὑποειμένου τὸ μὲν ὀξύ καὶ συνετὸν ἐν τῇ ψυχῇ διὰ τὸν χολώδη χυμὸν ἔσται, τὸ δ’ ἔδραϊον καὶ βέβαιον διὰ τὸν μελγχολικόν, τὸ δ’ ἀπλοῦν καὶ ἡλιθιώτερον διὰ τὸ αἷμα· τοῦ δὲ φλέγματος ἡ φύσις εἰς μὲν ἡθοποιῖαν ἄχρηστος, ἀναγκαίαν δὲ φαίνεται τὴν γένεσιν ἔχον ἐν τῇ πρώτῃ μεταβολῇ τῶν σιτίων.²⁹⁰

There is also another physical account which has no little plausibility, according to which the four humours are proved to be effective in the generation of the states of character which are appropriate to them. In

288 HNH 85,5–14 Mewaldt (xv 167 K); cf. *Caus. Symp.* vii 190 K; *PHP* 520,20–1 De Lacy; *Cris.* ix 659,7–13 K; *Hipp. Epid.* i xviiA 115,2–4 K; we also find the association of excessive black bile with quartan fever later in Oribasius, see Fr 74 in Pormann’s edition of Rufus (2008) and Al-Rāzī seems to ascribe it to Rufus as well (Fr 75, Pormann).

289 *Hipp. Elem.* 154,9 De Lacy (I 506 K); in *Cris.* ix 693,10 K, Galen qualifies the blood of the melancholic as *σκιρῶδεις*, ‘of hard nature’, ‘obstinate’.

290 HNH 51,9–18 Mewaldt (xv 97 K).

it we first need to establish that the states of character of the soul are consequent upon the mixtures of the body, about which we have written elsewhere. On this basis sharpness and intelligence in the soul will exist as a result of the bilious humour, steadfastness and firmness as a result of the melancholic, simplicity and artlessness as a result of the blood. The nature of phlegm is ineffective with regard to the prediction of character, having as it evidently does its necessary generation in the first alteration of the food.

tr. HANKINSON, slightly modified

Galen describes each of the humours as the cause of certain psychic states, except for phlegm. The words he chooses to describe the states caused by black bile show an interesting resemblance with its physical associations. They both suggest a kind of stability, as of something that stays the same, which fits with the thick and earthy nature of black bile. The word ἔδραϊος mostly means something like 'sitting' or 'sedentary'. It is also used for the horse-back on which a rider sits and can mean 'steady' or 'steadfast' as well. Finally, it is related to the word ἔδος, 'seat' or 'abode', which is the regular epithet of Earth in Hesiod's *Theogony* (ἔδος ἀσφαλὲς αἰεὶ).²⁹¹ Likewise, βέβαιος means 'firm' or 'steady'. We also find both words together in Galen's commentary on the *Epidemics*, as adjectives with ὕπνος to describe a very deep sleep.²⁹² The description fits well with the notion that black bile is the part of bile that stays throughout summer and autumn, remaining after the hotness recedes, and with the notion that black bile is most difficult to purge. Yellow bile is said to be the cause of intelligence here, and of a 'sharpness' in the soul, which fits its light, thin, dry, hot and fiery nature that is more akin to the heavenly bodies, which are supremely intelligent. The description of blood is more remarkable, as it seems rather negatively to come down to simplicity or even a kind of foolishness of the soul.²⁹³ I have not found any parallels for it in Galen, nor elsewhere in earlier authors. It seems likely that this description is based on the predominant wetness that is characteristic of blood. In *QAM* (to which the above passage quoted from *HNH* refers), Galen is not as specific on the humours as he is in other works and is more focused on the role of the elemental qualities, but he does present wetness as the cause for a lack of intelligence, while dryness is

291 *Theogony* 117, 128 ed. Most.

292 *Hipp. Epid.* VI XVIIIB 175,3 K.

293 Hankinson, in a note to his translation also remarks that he is inclined to think a less negative characterization is intended by Galen.

presented as the cause for intellect.²⁹⁴ Blood is one of the two wet humours. Moreover, since phlegm is left out of the picture in the passage cited from *HNH*, blood is the only wet humour in this schema, which would make it suitable to fulfil a role opposite to that of dry yellow bile as the cause of intelligence, black bile being the persisting residue of this yellow bile.

With this passage from *HNH*, however, we are already discussing the psychological rather than the physiological domain, which we might take as a testimony of how closely the two are interrelated when it comes to Galen's humoral theory in general and to black bile and melancholy in particular. But before we discuss this psycho-somatic interrelation further, we shall discuss melancholy separately, to some extent, in the same way we discussed the black bile separately, and we shall briefly summarize our findings on black bile in Galen.

2.7 *Conclusion on Black Bile*

The ambiguity between black bile as an exceptional and unnatural substance that causes disease, and black bile as a regular part of our constitution, is not so much solved in Galen's work, as it is fully retained and embraced. Galen makes a rather consistent distinction between these two kinds of black bile. However, at the same time, as we have seen, the two have much in common, are often difficult to distinguish, and the one can alter into the other. So much so, that there is, according to Galen, no need to apply different names to them. We have seen how, in Galen's work, this enigmatic and many-headed black bile, which was previously mostly seen as a useless residue or as something which, as an altered form of a normal substance, caused disease, has now become firmly integrated into a fourfold schema of humours, elemental qualities, elements, seasons and phases of life. Within that schema, black bile has a place of its own, which makes it a part of our nature and the grander order of things, while it remains, at the same time, a substance that forms a continuous threat to that very order itself. The necessity of this threat is generated by another necessity: that of the restrictions that matter imposes on the creative capacity of nature. Given the qualities of this matter, we cannot be like the stars and need continuous nourishment in order for our ephemeral existence to continue. Black bile is the worst and most dangerous by-product of the process of digestion, which is aimed towards the production of a beneficial mean: blood. Not only is black bile opposed to our most well-tempered and beneficial substance, it is also opposed to yellow bile. Yellow bile is related to summer, fire, the heavens, an upward movement, activity and intelligence. Black bile is related to the end

294 *QAM* 780–82 and 786 K; see *infra*, Case-Study III paragraphs 3 and 4.

of summer, an extinguished fire, the earth, a heavy downwards movement, and static and obstinate passivity. In its opposition to blood, black bile is opposed to life, in its opposition to yellow bile, it is opposed to the stars and the divine.

It is necessary for us to produce such a substance, given what we are. We are not only living and not only divine after all, we are also mortal and of the earth. Therefore, we cannot be without the substance of black bile, but we also need our spleen to continuously neutralize it, so that it will not take us over and weigh us down. In Galen, black bile is both opposed to our nature, as well as a necessary part of it. As such, it fits the general tendency in Greek philosophy to define the human being in terms of something that it is not completely, but only partly. The rational capacity for the perception of the eternal is what defines us most, and it is what we should actualize in order to fulfil our nature – in Galen just as well as in Plato²⁹⁵ – but this capacity is limited in two senses that are interrelated and of which black bile becomes the physiological paradigm in Galen: our mortality and our matter. With black bile, we mortal beings carry our own negation with us, as if the remnant of our own life is always already inside us. I think, from the perspective of the role black bile plays in Galen's cosmology, Burton was right to say melancholy is an expression of the sense of our mortality, and Diderot was right to say it is a sense of our own imperfections.²⁹⁶ But the association of mortality with earth and darkness is primordial, and was there before black bile became a regular part of our constitution in Galen's writings. From this perspective, I think Kudlien's suggestions still make sense, and Galen's definitive incorporation of black bile into our nature builds on a range of implicit associations with darkness, night, death, earth etc.²⁹⁷ Given the typically ancient Greek notion of man as a being suspended between earth and heaven, aspiring to the latter but tragically bound to the former, there should also be a dark, obstinate and detrimental substance inside our very bodies, a substance opposed to the vital juices that maintain us, mixed together with them. There should be something in us that is more threatening and destructive than blood, that useful and nourishing substance, and that weighs down the part of us that is fiery and tends upwards to the stars, the yellow bile. With this incorporation of black bile into the cosmological order of things and into our very body – the two form

295 Cf. e.g. *Temp.* I 565 K: 'It is appropriate for a human being to be as intelligent as possible'. (tr. Singer and van der Eijk, modified)

296 Burton (1621), 142: 'Melancholy in this sense is the character of mortality. We are not here as those angels, celestial powers and bodies, sun and moon, to finish our course without all offence, with such constancy, to continue for so many ages ...'; Diderot (1751–2) vol. XXI, 415: 'Mélancolie: C'est le sentiment habituel de notre imperfection'.

297 Kudlien (1967, 1973).

a continuum after all in Galen²⁹⁸ – the dangerous potency of black bile, and notably therefore also of melancholy itself, is *normalized* to a certain extent, incorporated into our nature despite its unnatural potency. We shall pursue this theme of normalization of black bile and melancholy in the next chapter, in which we shall focus on melancholy in Galen.

3 Galen on Melancholy

While the subject of melancholy itself is largely absent from Galen's treatise on black bile, *At. Bil.*, he devoted a few chapters to it in his *Loc. Aff.* In these chapters he discusses the three different types of melancholy and their respective causes, symptoms and treatment.²⁹⁹ The context in which he takes up the subject, is that of a discussion of the affections of the brain, and their distinction into affections that have their cause in the brain itself, and those that have their cause elsewhere but co-affect the brain:

νυνὶ δ' ὅπως ἂν τις χωρίσειε τὰ κατὰ πρωτοπάθειαν αὐτῷ συμβεβηκότα τῶν κατὰ συμπάθειαν, ἐπισκεπτέον· ἴδιόν τε γὰρ τοῦτο τῆς προκειμένης πραγματείας, ἢ τε χρεῖα πρόδηλος εἶ γε πρῶτον ἀπάντων ἐστὶν ὡς πρὸς τὰς ἰάσεις ἐπίστασθαι, τίνι χρῆ μωρίῳ προσφέρειν τὰ βοηθήματα.³⁰⁰

We now have to examine how one can distinguish the things that befall the brain because of a primary affection from those caused by co-affection. This is the specific topic of the present treatise, which is evidently useful, since if indeed it is primary to all things to know about the therapies, it is necessary to know to which part to apply the remedies.

This distinction runs throughout the work and will return in Galen's partition of the various kinds of melancholy as well.³⁰¹ From book III, 6 onwards, Galen proceeds to discuss various affections of the brain in terms of the specific mixtures of elemental qualities that cause them. What this comes down to, is an analysis of the leading capacities of the rational soul, seated in the brain, in terms of relative wetness, dryness, coolness and hotness. For example,

298 Cf. Holmes (2013) 163–4.

299 Chapters 9 and 10 of book III.

300 *Loc. Aff.* VIII 129 K, cf. VIII 160 K, where Galen refers back to this passage, shortly before the chapters on melancholy.

301 See also *Loc. Aff.* 30–1 K. Cf. Holmes (2013) for a seminal discussion of the notion of sympathy in Galen.

conditions of excessive drowsiness and sleepiness, such as lethargy, are caused by excessive coldness.³⁰² On the other hand, ‘the warm and biliary diseases’ are said to cause a lack of sleep, delirium and phrenitis. In general, dryness and heat cause (over-)activity, whereas coldness and wetness cause inactivity of the soul.³⁰³ In this context, Galen also discusses memory-loss, which is always caused by an excessive coldness, accompanied by either a predominant dryness or a predominant wetness, or a mean with regard to those two. Galen proceeds to give a few examples:

ἐγὼ γοῦν οἶδά τινα καὶ τὴν μνήμην μὲν ὀλίγου δεῖν ἀπολέσαντα, καὶ τὸν λογισμὸν δὲ βλαβέντα, διὰ φιλοπονίαν τε καὶ ἀγρυπνίαν ἐπὶ μαθήμασιν· ἕτερον δ’ ἀμπελουργὸν, ἐπὶ τοῖς κατὰ τὴν ἀμπελουργίαν πόνοις, καὶ διαίτη λεπτῇ, ταῦτά τούτῳ παθόντα· καὶ προφανῶς ἐκάτερος αὐτῶν ὑπὸ μὲν τῶν ξηραίνόντων τε καὶ θερμαίνόντων ἐβλάπτετο πάντων, ὑπὸ δὲ τῶν ὑγραινόντων ἅμα τῷ θερμαίνειν ὠφελεῖτο.³⁰⁴

I also knew a person whose memory was nearly lost and whose reasoning power was damaged because of his industriousness and sleeplessness due to his studies. Another person, a vinedresser, because of the labours involved with wine-dressing and because of his light diet, was affected in the same way as him. Both of them clearly were damaged by all things that dried and heated, but benefited from all things that moistened together with warming.

I think here we have two examples of a condition in which the brain is heated and dried, as a result of which black bile is produced, that are by now familiar: the overactivity of the intellect caused by excessive thinking, which we know from Rufus, and the excessive labor that Galen identified as a cause of melancholy elsewhere (in this case perhaps particularly related not so much to the duration, but rather the circumstances of being out in the open field when it is hot and dry, and having an unsuitable diet for it). For these cases, obviously, drying and heating will not help, they are rather the cause of the affections. Moistening helps, as does warming. Why would warming help, given that the

302 *Loc. Aff.* VIII 161–2 K.

303 See also *Loc. Aff.* VIII 131 K: ‘Heat produces the activity which causes sleeplessness and delirium without fever. But the affections of somnolence, coma and unconsciousness are all an affect of cold ... Substances which are cold cause numbness and loss of consciousness; warm drugs, in turn, cause a loss of sleep and increase of bodily movements.’ (tr. Siegel)

304 *Loc. Aff.* VIII 165–6 K.

cause was excessive heat? It must be the case that by the time the affections have set in, that is to say, when the rational capacities get damaged, the mixture has cooled. Therefore, the mixture is cold and dry – as is black bile – and must be moistened and warmed, not coincidentally the two basic therapeutic strategies to cope with melancholy that Rufus proposes with regard to changing the mixture, and that Galen also refers to at the end of his treatment of melancholy in *Loc. Aff.*³⁰⁵ And indeed, in the sentences immediately following the passage quoted above, Galen makes the transition to familiar affections of the brain, including melancholy:

γίνονται μὲν οὖν καὶ μετὰ πυρετοῦ βλάβαι τῶν ἡγεμονικῶν ἐνεργειῶν, ὡς ἐπὶ φρενίτιδος τε καὶ ληθάργου· γίνονται δὲ καὶ χωρὶς πυρετοῦ καθάπερ ἐπὶ μανίας τε καὶ μελαγχολίας· ὡσπέρ γε καὶ κατὰ συμπάθειάν τε καὶ πρωτοπάθειαν ἐγκεφάλου.³⁰⁶

It also happens that the leading functions of the soul are damaged in fever, as during phrenitis and lethargos. This also occurs without fever, as in mania and melancholy; also by sympathy and by a primary affection of the brain.

tr. SIEGEL

Melancholy can have its cause in the brain itself or co-affect the brain while it has its origin somewhere else. In general, Galen sees the hypochondriac melancholy as having its primary cause in the organs concerned with digestion, co-affecting the brain. Throughout *Loc. Aff.*, he uses the case of the rising of dark vapours from the stomach to the eyes and the brain, clouding them, as a paradigm-case of co-affection.³⁰⁷ When the cause is in the brain itself, Galen

305 *Loc. Aff.* 286 Van der Eijk and Pormann: 'I refer to friends who saw me treating such melancholy by means of baths and a moist, juicy diet, without any other remedy, when the harmful humour had not yet become difficult to remove as a result of lapse of time'. See *infra*, p. 256–7 for Rufus.

306 *Loc. Aff.* VIII 166 K.

307 *Loc. Aff.* VIII 44,13 f., 52,4 f., 137,12 f., 178 K; melancholy as one of the paradigms for the brain being co-affected by the stomach also recurs in *Caus. Symp.* VII 128 K, 137 K and *Const. Art. Med.* I 282–3 K; cf. Holmes (2013), who describes how Galen's notion of sympathy in *Loc. Aff.* revolves around the connection of gut and brain, 168: 'It is probably no accident that in his opening remarks on sympathy in *On the Affected Parts*, Galen uses the example of noxious vapors or humors rising up from the stomach cavity to the brain. In his more detailed discussions, too, affections frequently migrate to the brain from the stomach or its mouth'.

speaks of a primary affection (πρωτοπάθεια), rather than a co-affection (συμπάθεια). The former can happen in two ways:

οί γοῦν κατ' αὐτὴν τὴν οὐσίαν τοῦ ἐγκεφάλου πλεονάσαντες παχείς χυμοὶ ποτὲ μὲν ὡς ὀργανικῶ μορίῳ λυμαίνονται, ποτὲ δὲ ὡς ὁμοιομερεῖ· κατὰ μὲν τὰς ἐμφράξεις τῶν πόρων ὡς ὀργανικῶ μορίῳ, κατὰ δὲ τὰς ἀλλοιώσεις τῆς κράσεως ὡς ὁμοιομερεῖ.³⁰⁸

For instance, thick humours that are present in excessive quantity in the very substance of the brain sometimes cause damage to it as an organic part, sometimes as to a homoeomerous part: in the form of obstruction of the blood vessels as to an organic part, in the form of qualitative change of the mixture as to a homoeomerous part.

tr. VAN DER EIJK, slightly modified

Corresponding to the general distinction Galen makes between homoemerous and organic parts of the body, there are also two general kinds of causes for melancholy arising from the brain itself. I am not sure what exactly the differences in symptoms would be for these two, if there are any. However, Galen does add that when the organic part is damaged by black bile, this affects 'the body of the brain' (ἐπὶ τὸ σῶμα τοῦ ἐγκεφάλου), whereas in the case of black bile damaging the homoeomerous part of the brain, it is rather *the mind* that is affected (ἐπὶ τὴν διάνοιαν). This seems to suggest that the latter disturbs the rational capacities more directly or to a stronger extent; one might think of more intense delusions or despondency perhaps.³⁰⁹ Indeed, the case of generation of black bile in the brain itself, is further specified by Galen as having its cause in an abundance of local heat, which burns either the yellow bile or the thicker and darker blood, causing it to become black bile. We have seen previously that Galen considers the black bile that is the result of burning as the most dangerous kind, that always leads to severe damage of the rational capacities.³¹⁰ Thus, it seems that the case of the burning of yellow bile or blood

308 *Loc. Aff.* 270 Van der Eijk and Pormann (VIII 180 K).

309 Cf. *Loc. Aff.* VIII 161 K, where Galen remarks that the homoeomerous parts primarily act (πρώτως ἐνεργεῖ), i.e. in this context: primarily perform the rational functions (see *infra*, CS I section 1, 25–34).

310 *Loc. Aff.* 272 Van der Eijk and Pormann (VIII 182 K), but here I disagree with van der Eijk's translation, who translates 'γεννᾶται δ' ὑπὸ θερμασίας πολλῆς ἐγγωρίου, κατοπτώσης ἤτοι τὴν ξανθὴν χολήν, ἢ τὸ παχύτερον τε καὶ μελάντερον αἷμα' with 'It is generated by an abundance of local heat, which burns it [the blood] either into yellow bile or into thicker and darker blood'. I do not see why we would have to add an extra object (the blood), that is burned

in the brain itself is the most dangerous kind of melancholy, directly affecting the mind itself.³¹¹ The affection of the body of the brain in turn, seems to be further specified by Galen as caused by the melancholic humour flowing in from elsewhere.³¹² It seems that because of its relative thickness, when it flows into the brain, it affects the brain itself (which is why, presumably, it is a form of primary affection) by obstructing its blood vessels.

Besides this melancholy that is the consequence of a primary affection of the brain and the hypochondriac kind, Galen distinguishes a third kind of melancholy:

οὕτως ἐγχωρεῖ καὶ τὸν ἐγκέφαλον ἐνίοτε μὲν, ἅπαντος τοῦ κατὰ τὰς φλέβας αἵματος μελαγχολικοῦ γενομένου, τῷ κοινῷ λόγῳ τῆς βλάβης καὶ αὐτὸν βλαβῆναι.³¹³

In the same way sometimes, when all the blood in the blood vessels has become melancholic, the brain, too, can be damaged for the same reason as the rest of the body.

tr. VAN DER EIJK

Galen does not specify clearly whether he understands this kind of affection of the brain as a primary or sympathetic affection, but it seems to make more sense to regard it as sympathetic. After all, it seems that this melancholy arises when too much black bile is produced in general. This would require either a high production in the organs involved with digestion (either due to a natural constitution or due to a specific diet) or a high amount of alteration of other humours into black bile in the blood vessels. The latter can be caused by excessive heat. There are obviously important differences with regard to treatment: if the blood in the entire body is melancholic, changes in diet are essential and bloodletting can be an efficient treatment. Thus, when a patient suffering from melancholy appears and one needs to determine whether it is a primary affection of their brain or whether it is caused by a generally high amount of the melancholic humour in all blood vessels, Galen advises first to

'into' something, when we can also translate 'which burns either the yellow bile or the thicker and darker blood', which makes more sense given the other Galenic passages on the burning of yellow bile or blood as a cause for the generation of (dangerous) black bile and melancholy; cf. also *Loc. Aff.* VIII 193 K, the last sentences of the chapter.

311 In *Hipp. Prorrh.* XVI 544–5 and 553–4 K, Galen explains the ecstatic forms of melancholy also in terms of the burning of yellow bile.

312 *Loc. Aff.* 272 Van der Eijk and Pormann (VIII 182 K).

313 *Loc. Aff.* 272 Van der Eijk and Pormann (VIII 181 K).

check the patient's diet, to see whether they might have been consuming stuff that generates a more melancholic blood.³¹⁴ Also, one can see from observing the features of the patient whether he or she is likely to naturally generate a relatively greater or lesser amount of black bile, which indicates that Galen also thinks there is a naturally melancholic type of person who is recognizable by his or her bodily features.³¹⁵ In the former case, in which the diet is the cause, it might be more likely that the melancholy is caused by the amount of melancholic humour in all blood vessels (after all, in this case the problem must lie with the blood-production which results from the digestive system). In the latter, it might be more likely that something is up with the brain itself. That is to say, the melancholy might be 'hardwired' in the specific constitution of the patient's brain, rather than the result of specific alterations through diet or circumstances. People who are 'soft, pale and fat' have least of the melancholic humour, whereas people who are 'lean and darker and hirsute with protruding veins' are more likely to have much of it.³¹⁶ These characteristics correspond largely to those given by Rufus (particularly the hairiness), and make sense from the perspective of the effects of black bile. There are often problems with digestion or an aversion to food as such, which makes it likely that those that produce much of it are thin. Moreover, the colour of black bile makes the skin darker and its thick nature makes the veins swell. But patients with fair complexion may appear as well, in which case it is likely that there is a 'psychological' cause:

ἐφεξῆς δ' αὐτῶν οἱ ξανθοὶ, καὶ μάλιστα θ' ὅταν ἐν ἀγρυπνίαις καὶ πόνοις πλείοσι καὶ φροντίσι καὶ λεπτῇ διαίτῃ προοδηγητῆμενοι τύχωσιν.³¹⁷

Next to them are those who are of a fair complexion, especially when they suffer from sleeplessness and much labours and thinking, and when they happen to have had a very light regimen before.

This translation is a modified version of that of van der Eijk, who has 'Next to them are those who are of a fair complexion, especially when they suffer from sleeplessness, profound tiredness and worries, and when they happen to have had a very light regimen'. οἱ ξανθοὶ must refer, for Galen, to people who have a

314 *Loc. Aff.* 274 Van der Eijk and Pormann (VIII 182–4 K).

315 *Loc. Aff.* VIII 182,14–5 K, where Galen speaks of the kind of state of the body (καὶ ἀξιῶ σε πρῶτον μὲν ἐπισκέψασθαι τὴν τοῦ σώματος ἕξιν ὅποια τίς ἐστίν).

316 Translation van der Eijk (273).

317 *Loc. Aff.* VIII 183,3–5.

relatively great amount of yellow bile. This corresponds to the sleeplessness, since yellow bile is considered by Galen to cause this, due to its heat. Tiredness would not add anything to the symptom of sleeplessness, being already implied with it. The labours on the other hand, are a recurring theme in this context, as is the relation of melancholy with yellow bile and thinking as something that precedes it. The word φροντίς has a broader range of meaning than merely ‘worries’ and is better translated, in my view, with ‘thinking’. ‘Thinking’ can both include worries and other thought-processes that are able to heat the brain, such as the aforementioned ‘studies’.³¹⁸ Both labours and thinking would have the potential to increase the heat in the brain, and thereby cause the yellow bile and blood to get burned, especially when they are pursued so excessively that one does not get a rest and is deprived of sleep. This potential would be enhanced when the patient is someone in whom yellow bile already predominates, which is indicated by the colour of the patient’s skin, designated as ξανθός.³¹⁹ The lightness of the regimen indicates that the other possible cause, namely increased production of black bile because of some digestive problem or bad diet, is likely to be eliminated. As Galen remarks, if the patient has had a diet that produces good humours, ‘you should examine his exercises and his pain, his sleeplessness and his thought’ (ἐπισκέπτεσθαι περί τε τῶν γυμνασίων αὐτοῦ καὶ λύπης καὶ ἀγρυπνίας καὶ φροντίδος).³²⁰ In the case of such a patient, it is likely that the melancholy is caused by a primary affection of the brain due to excessive heat, rather than by the digestive organs through co-affection of the brain. Too much time spent out in the open field

318 See *Loc. Aff.* VIII 165–6 K quoted above (ἀγρυπνίαν ἐπὶ μαθήμασιν). In *MM* X, in the discussion of fevers, we frequently find a list similar to the one that recurs in *Loc. Aff.*, but then as causes of fever, generally including also λύπη, ἀγρυπνία and φροντίς; in one of those passages (667 K) Galen leaves out φροντίς but includes ‘intense concentration’ (σύντονος σκέψις) as a cause of fever. I think this also indicates that what the φροντίς is supposed to refer to and what is presented by Galen as a potential cause of fever and melancholy, is something broader than ‘anxiety’ or ‘worries’, something more like an over-utilization of thought in general (as the ‘studies’ also testify), which leads to an overheating of the brain (in both cases baths and wine are among the most frequently mentioned remedies, i.e. remedies that counteract the excessive dryness of the patient, which is the result of the previous heating).

319 It is certain that with οἱ ξανθοὶ Galen has in mind people in which yellow bile predominates, as he previously commented on people with a relatively dark or reddish constitution, which are the people in which black bile or blood respectively predominates, cf. *San. Tu.* VI 254,9–14 K, where we find the same descriptions.

320 Here we find λύπη in the place of πόνος, as we do in another passage at the end of the chapter (VIII 193 K), with the other two causes (φροντίς and ἀγρυπνία) remaining the same throughout.

working in the sun, or too much activity of the brain without proper resting, rather than bad diet.

In other cases, the melancholy can also be caused by co-affection. Then, the primary cause lies outside the brain itself, more particularly: in the digestive organs. This is how Galen develops the hypochondriac type of melancholy, basing himself on the account of Diocles of Carystus, a physician from the fourth century BC, who apparently enjoyed a great reputation in ancient times, and was even known as ‘the younger Hippocrates’.³²¹ Diocles established the affection that Galen labels as the hypochondriac kind of melancholy as an affection that occurs in the belly due to problems with digestion, particularly due to an excess of heat in the blood vessels receiving the food from the stomach. What we know about Diocles’ notion of melancholy, however, is mostly based on what we have through Galen. It seems at least very likely that his strong association of melancholy with digestion, and possibly also with disturbances of the psychic faculty when it gathers around the heart, has been a major influence on the Peripatetics. However, if we follow Galen’s representation of Diocles (which might be dubitable), his analysis remains centred around problems with the stomach region, not taking the ‘psychic’ symptomatology of melancholy into account.³²² As Galen remarks:

ταῦτα μὲν οὖν ὁ Διοκλῆς ἔγραψε, παραλιπῶν ἐν τῷ καταλόγῳ τῶν συμπτωμάτων τὰ κυριώτατα τῆς ὅλης συνδρομῆς, ὅσα τὴν τε μελαγχολίαν χαρακτηρίζει καὶ τὸ φυσῶδες καὶ ὑποχονδριακὸν πάθος· καὶ μοι δοκεῖ, διότι ταῦτα ἐκ τῆς προσηγορίας τοῦ νοσήματος ἐνδεικτικῶς ἐδηλοῦτο, παραλελειπέναι, μεμαθηκότων γ’ ἡμῶν ὑφ’ Ἱπποράτους, ἣν φόβος καὶ δυσθυμίη πολλὸν χρόνον ἔχοντα διατελέη, μελαγχολικὸν τὸ τοιοῦτο’.³²³

This is what Diocles wrote, but in his list of symptoms he omitted the most important symptoms of this whole syndrome, which are characteristic of melancholy and of the flatulent and hypochondriac affection. Indeed I think that he has omitted them because they were made clear by indication from the name of the disease; at least we have learned from Hippocrates that ‘if there is fear and depression which lasts for a long time, such a thing is melancholic’.

tr. VAN DER EIJK

321 Cf. van der Eijk (2001) vi for an introduction; see also Flashar (1966) 50 f.

322 For further discussion of Diocles see van der Eijk’s commentary (2001) on fragment 109 particularly; Flashar (1966) 50 f.

323 *Loc. Aff.* Van der Eijk and Pormann 280 (VIII 187–8 K).

Galen criticizes Diocles for having left out the two basic symptoms that were already described in the Hippocratic Corpus: fear and sadness.³²⁴ He suggests that Diocles failed to involve these basic symptoms in his discussion because he was unable to connect the cause in the stomach with damage to rational capacities. Galen, therefore, proceeds to add to Diocles' account a more elaborate description of how the hypochondriac melancholy damages the brain through co-affection:

ἔοικε μὲν γὰρ εἶναι τις ἐν αὐτῇ φλεγμονή, τὸ δ' ἐν τῷ φλεγμαίνοντι μορίῳ περιεχόμενον αἷμα παχύτερον τε καὶ μελαγχολικώτερον ὑπάρχειν. ὥσπερ οὖν ἐπὶ τοὺς ὀφθαλμοὺς ἀναφερομένης ἐκ τῆς γαστρὸς αἰθαλώδους τινὸς ἢ καπνώδους ἀναθυμιάσεως, ἢ ἄλλως ἀτμῶν τινων παχέων, ὅμοια τοῖς ὑποχθεομένων γίνεται συμπτώματα, κατὰ τὸν αὐτὸν λόγον καὶ νῦν ἐπὶ τὸν ἐγκέφαλον ἀναφερομένης τῆς μελαγχολικῆς ἀναθυμιάσεως, τὰ μελαγχολικὰ γενήσεται περὶ τὴν διάνοιαν συμπτώματα.³²⁵

It seems that there is a kind of inflammation present in the stomach, and the blood contained in the inflamed part is rather thick and melancholic. When a sooty or smoky vapour, or more generally thick vapours, rise from the stomach to the eyes, they give rise to symptoms similar to cataracts. Likewise here, too, and for the same reason, when a melancholic evaporation rises upwards to the brain, like some kind of sooty or smoky vapour, the melancholic symptoms affect the thinking faculty.

tr. VAN DER EIJK

As Rufus already did before, Galen assumes a direct link between the stomach and the brain, explaining how problems with digestion can affect our rational capacities. What effects the link is a dark smoke, which clouds the brain and the eyes. Elsewhere in *Loc. Aff.*, Galen compares the brain to the sun: as the sun shines its light upon all beings beneath it, so the brain emanates psychic pneuma upon the body beneath it.³²⁶ The sun, however, does not merely shine light: its warmth is nourishing and a condition for life to flourish. It is also described by Galen as pre-eminently intelligent and sending down its intelligence through the air.³²⁷ I think that in this case, too, the *Republic* of Plato,

324 Cf. *Loc. Aff.* VIII 342 and 378 K; *Symp. Caus.* VII 203 K.

325 *Loc. Aff.* Van der Eijk and Pormann 282 (VIII 189 K).

326 *Loc. Aff.* VIII 66–7 K; cf. Holmes (2013) 167.

327 *UP* II 446–7 Helmreich (IV 359 K).

where the sun forms an analogy with the Good, is in the background.³²⁸ The dark vapours that cloud this sun, the radiant centre of intelligence, are caused by black bile, the earthy humour. Galen here explains the psychological state of melancholy in terms of the qualities of the black bile, particularly its darkness. The dark vapours migrate upwards, from the lower part of our body that is involved with digestion, the primary locus of our mortality and the place where our continuous need for nourishment primarily manifests itself. This hypochondriac melancholy is a case of our most ephemeral aspect affecting our most divine aspect by darkening it. Apparently, Galen also proposes that these dark vapours cause the excessive fear of melancholics (in the case of the hypochondriac kind), which manifests itself in various imaginations. One of those imaginations is reminiscent of the earthen vessel Rufus mentioned: some think they are a piece of pottery and avoid people approaching them for fear of being broken. Clearly, this imagination is related to the symptom of social anxiety as well as to the earthy nature of black bile. Again, this is a case in which the elemental qualities of the substance of black bile serve to explain the psychological state of melancholy. Another patient would imitate a cock, flapping his arms and imitating its sounds. We may interpret this as an attempt to ward off the inner darkness, since cocks, as heralds of the day, are strongly related to the light of the sun. However, there may also be other archetypical associations or a relation to the cock offered to Asclepius for healing. It seems clear, though, that the imaginations Galen sums up are not random and have a connection with the substance that causes them. Indeed, yet another patient believes that Atlas would grow tired of holding the heavens and would let himself and all people along with him be crushed by dropping them.³²⁹ The heavens coming down upon the earth is a wonderful and interesting image for an ancient melancholic to have. It fits well with the cosmological place of black bile as the humour associated with earth and death, as well as with its opposition to yellow bile as the humour associated with fire and the heavens. Since Atlas is a symbol of order, as his single duty and meaning is to keep earth and heaven in their rightful place, the idea of him becoming weary and abandoning his duty means a collapse of the order of things as such. This apocalyptic image shows an interesting resemblance to (and in fact does not seem to me much different

328 In another sense, the *Republic* is in the background as well, cf. Holmes (2013) 171: 'Of course, a scenario where the desiring part gains the upper hand over the rational soul is precisely the definition of psychic disease in Plato's *Republic* ... Galen's very anatomical precision in locating the brain as the 'ruling part' of the self means that when things go wrong, it is more firmly subordinated to the forces of the physiological body, especially the digestive body'.

329 Cf. *Hipp. Epid. I* XVIIIA 213,12–214,2 K.

in nature from) the image depicted in Lars von Trier's *Melancholia*, in which it is another planet ('Melancholia') that hits and destroys the earth. In the movie, the apocalyptic collision functions as a kind of grandiose cinematic enactment of the ultimate fantasy of its depressed protagonist, Justine, much in the same way as one could imagine a reverie of total collapse depicted by Atlas dropping the heavens in the mind of an ancient Greek melancholic.

After the description of the various imaginations, Galen proceeds to describe some general symptoms of melancholics, which seem to apply to all three of the kinds that he had previously distinguished.³³⁰ He repeats the main symptoms of fear and despondency, saying that it was correct that Hippocrates reduced the symptomatology to these two. He also mentions that melancholics 'find fault with life and hate people' (μέμφεσθαι τῇ ζωῇ καὶ μισεῖν τοὺς ἀνθρώπους), some of them wanting to die.³³¹ These symptoms also correspond to both previous and later tradition as main symptoms of melancholy. Finding fault with life also fits well with the opposition of black bile to blood, the most useful and beneficial of the humours that is closest to our nature, as well as with the association of black bile with death. This is another way in which the qualities of the respective substances correlate with the psychological state. Indeed, Galen never ceases to explain the symptoms of melancholy in terms of the properties of the black bile:

ἐπί γέ τοι τῇ τοιαύτῃ δυσθυμίᾳ μισοῦσιν πάντας, οὓς ἂν βλέπωσιν, καὶ σκυθρωποὶ διὰ παντός εἰσι, δειμαίνοντες, ὥσπερ ἐν σκότῳ βαθεῖ τὰ τε παιδιά φοβεῖται καὶ τῷ τελείων οἱ ἀπαιδευτοί. καθάπερ γὰρ καὶ τὸ ἔξωθεν σκότος εἰς φόβον ἄγει σχεδὸν ἅπαντας ἀνθρώπους, πλὴν τῶν ἤτοι πάνυ φύσει τολμηρῶν, ἢ πεπαιδευμένων, οὕτως καὶ τῆς μελαίνης χολῆς τὸ χρῶμα παραπλησίως σκότῳ τὸν φρονοῦντα τόπον ἐπισκιάζον ἐργάζεται τοὺς φόβους.³³²

In the case of such despondency, they hate all people they see, they are shy and afraid, just as children and uneducated adults are afraid in the dark. For just as darkness outside causes fear in all people, except in those who are excessively audacious or well educated, likewise the colour of

330 I think I do not agree with Flashar (1966) 105, that Galen depicts the three kinds as 'drei Stadien im Ablauf ein und desselben Krankheitsbildes', since Galen maintains the distinction between the melancholy that has its origin in the brain itself and one that can co-affect the brain until the end of the chapter.

331 Cf. *Loc. Aff.* VIII 342,8–10 K: '... ὅπως δυσθύμους καὶ δυσέλπιδας καὶ σκυθρωποὺς ἀπεργάζεται, καὶ τὸ σύμπαν φάναι μῆδὲν ἀπολειπομένους τῶν μελαγχολικῶν'; in *Hipp. Aph.* XVIII 143,1–5 K, Galen states that all Greeks agree that these are the main symptoms.

332 *Loc. Aff.* 284 Van der Eijk and Pormann (III 190–1 K).

the black bile very similarly casts a shadow over the place where thinking is located, and produces fears.

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After this passage, Galen directly adds a reference to *QAM* for proof that the mixtures of the body alter the activities and affections of the soul. This indicates that we ought to take this passage quite literally: it is the qualities of the black bile itself, more particularly its darkness, that cause the fear of the melancholic. This passage is in fact highly interesting for several reasons. First of all, the darkness of black bile and melancholy is considered as analogous to the external darkness of night. This should not surprise us, given that black bile is the opposite of the heavenly bodies, which provide light, and given that it is the humour associated with earth and death. However, Galen also adds that everybody is afraid of this dark, except for people who are either exceptionally audacious by nature or people who are 'well-educated' (πεπαιδευμένων). This means that the melancholic's fear is now compared to the fear that most people have when they are in the dark. Importantly, this amounts to a certain normalization of melancholy, because it makes the melancholic's inner experience accessible to some extent: we can all relate to it, since we have all been afraid of the dark at some point. Only those who are exceptionally courageous are naturally exempted from this experience, the others will have to apparently become educated in order to overcome their fear of darkness. Why would Galen have this emphasis on education here all of a sudden? I think that this must be an implicit reference to Plato's cave metaphor, which might have already entered the mind of those readers versed in Plato through Galen's repeated use of nouns and verbs referring to shadows in this passage. Galen, of course, knew Plato's work intimately and the *Republic* was certainly among the dialogues he worked on.³³³ In the *Republic*, the ascent from the shadowy, dark cave towards the world of light serves as a metaphor for an educative programme that consists in a turning of the soul from the world of becoming towards the Good. Education (παιδεία) is defined as this very turning. Does Galen, then, suggest with his metaphor of outside and inside darkness that

333 Cf. *Lib. Prop.* XIII (XIX 47,18 K), where Galen states that he wrote 'eight volumes of summary of Plato's dialogues'. Cf. Arnzen (2012) 194 for references in the Arabic tradition that prove that the *Republic* was among those. The one summary that we still have (in Arabic), that of the *Timaeus*, shows that 'summary' might be a bit of an undertranslation of σύνοψις in this context, as the text is rather somewhere between a mere summary and a commentary, with interpretative or even suggestive readings that are strongly motivated by Galen's own framework. See also Das and Koetschet (forthcoming) on Galen's synopsis of the *Timaeus*; and infra, Case-Study III paragraph 2.

there is a possibility for the melancholics to free themselves of their inner shadows through education? – in the same way as we can overcome our fear of the darkness of night by learning that there is no monster lurking under the bed? This might be a tempting reading, but it is perhaps too far-fetched, as we would otherwise expect to see something of this possibility in Galen's discussion of possible therapies for melancholy, which we do not. A slightly more careful reading may be, perhaps, that in the same manner as educated people are not afraid of the outside darkness, since they know there is nothing fearsome in the darkness as such, melancholics would be in a better position to cope with their fear and sadness when they know their own affliction and its causes. This is an idea that lies at the very heart of many forms of therapy. On the other hand, Galen clearly gives a physiological explanation of melancholy here: it is because of the darkness of the black bile that the melancholic experiences fear. Thus, it would seem that any kind of alleviation of the fear would have to involve taking away some of that actual inner darkness, i.e. some of the black bile. It is noteworthy that Galen suggests that the cause for melancholy is in the end physiological: it is *because* of the darkness of the substance that is black bile, that fear and sadness necessarily overcome those in whom it becomes predominant. Elsewhere, Galen claims that he does not know *why* we are brought into a state of melancholy when black bile builds up in the brain, but here he seems to hint at an answer at least.³³⁴

We find the same analogy between the internal darkness of melancholy and the external darkness of night in *On the Causes of Symptoms*. In chapter II.5, Galen also remarks that, although the particular imaginations of the melancholic differ per individual, they share the fear and despondency in common.³³⁵ He then says that it is not surprising that fear, depression, and a presentiment of death manifest themselves when black bile takes a hold of the principle of the rational soul:

ὀρώμεν γὰρ καὶ τῶν ἔξωθεν τοῦ σώματος οὐδὲν οὕτως ἡμῖν φοβερὸν, ὡς τὸ σκότος. ὅταν οὖν οἶον σκότος τι περιχυθῆ τῷ λογιστικῷ μορίῳ τῆς ψυχῆς, ἀναγκαῖον αἰεὶ φοβεῖσθαι τὸν ἄνθρωπον, ὡς ἂν αἰεὶ τὴν αἰτίαν τοῦ φόβου συμπεριφέροντα τῷ σώματι· ὅπερ γὰρ ἡμῖν ἔξωθεν γίνεται κατὰ χρόνον τινὰ, βαθυτάτου σκότους καταλαβόντος τὸν περιξ ἄερα, τοῦτο τοῖς μελαγχολώσιν ἐνδοθέν τε καὶ αὐτοῦ τοῦ σώματος ὀρμάται, καταλαβούσης τὸν ἐγκέφαλον ἤτοι τῆς μελαίνης χολῆς

334 QAM IV 777,2 K, the context is particularly about the relation between the rational soul and the brain.

335 *Symp. Caus.* VII 202–3 K, here Galen also cites the Hippocratic *Aphorisms* VI,23, as he did in *Loc. Aff.*

αὐτῆς, ἢ τινος ἀναθυμιάσεως ἀτμοῦ μελαγχολικοῦ, καθάπερ ἐν τῷ νοσήματι τῷ φουσώδει τε καὶ ὑποχονδριακῷ προσαγορευομένῳ.³³⁶

For we see also that of the things outside the body nothing is so frightening to us as the darkness. So whenever such a darkness envelops the rational part of the soul, it is necessary that the human being is always afraid, as he would always carry around within his body the cause of his fear. For the exact same thing that happens to us from outside during a particular moment, when the deepest darkness has taken hold of the surrounding air, this happens from the inside with those who are melancholic and it has its point of departure from their very own body, since either the black bile itself takes hold of the brain or some rising melancholic vapour does so, as in the case of the disease that is called flatulent or hypochondriac.³³⁷

Again, it is worth noting how relatable the experience of the melancholic is: just think of a moment when the deepest darkness of night made you afraid, and now simply think of continuously having this experience of fear. From this perspective, we could speculate more on how Galen sees the experience of the melancholic. What do we see when we fearfully look into the depths of night? In a sense we could say that we see nothing, or perhaps rather that we experience the absence of the possibility of seeing and thereby of recognizing and attributing meaning to the things seen. This unfamiliarity has the potential for as many horrors as our imagination allows. But in the end, I would say, the horror is mostly in the unspecified darkness itself, rather than in any of the specific potential dangers it might be hiding. Here, the duration of this experience becomes particularly important: if one is temporarily enveloped by nocturnal darkness as a child, for example, one can run home towards the light and the familiar. In the worst case, one knows at least that the darkness is temporary and something one can get away from. In the case of the melancholic, however, there is no escaping this darkness, because the darkness is in one's very own body and will be taken along wherever one goes. We may infer that, after some time, the melancholic arrives at a poignant sense of the fact that he sees nothing but darkness, resulting in the impossibility to make sense of things and the terrifying awareness that he is, for an undetermined amount of time, unable to make sense of things for a reason unknown. In this

336 *Symp. Caus.* VII 203,11–204,4 K; this passage is paraphrased in Aëtius' *De Melancholia* VI 56 K f.

337 This translation stems from that of Johnston but is heavily modified.

respect, it is noteworthy that Galen says that it is *necessary* that someone who carries this darkness around in themselves is *always* afraid. Regardless of other circumstances, the person in such a state will be afraid. Since there is no specific object for this fear, nothing in specific that one is fearful *of*, it is just the darkness in the brain itself that is the cause. To some extent, this is equally true in the metaphor, which is therefore quite apt: when confronted with the darkness of night, one can become afraid without having a particular image or notion of *what* it is that one is afraid of. What distinguishes the melancholic fear and despondency from a non-pathological fear and despondency is the lack of a proper cause:

δυσθυμοῦσι γὰρ ἅπαντες ἀλόγως, οὐδ' ἦν ἐρωτήσης, ἔχοντες εἰπεῖν ἐφ' ὅτῳ λυποῦνται, δεδίασί τε ἐξ αὐτῶν οὐκ ὀλίγοι θάνατόν τε καὶ ἕτερα ἅτινα μηδενὸς ἄξια δείματος ...³³⁸

For they are all despondent without reason, nor, were you to ask, would they be able to say because of what they are sad, and many of them fear death and some other thing that is not worthy of fear.

tr. JOHNSTON, modified

The despondency and sadness of the melancholics is ἀλόγως. That is to say, not merely 'absurd' or 'unreasonable' and therefore to be derided, but without ground or reason altogether. They would not be able to tell you *why* they are so sad. With regard to the fear, as we have seen, the imagination plays its part. It channels the fear, which is always there because the black bile clouds the brain with its darkness, towards some definite object, preferably the abstract object of the end of life as such. The imaginative presence of the end of life as such seems to be a most logical consequence of an excess of black bile, considering the characteristics of the substance itself. But the idea that there is no reason or cause for the fear and sadness also points beyond any particular imagination to the presence of something that is simply darkness. The idea of a fear or sadness without cause becomes an important part of the symptomatology of melancholy in the later tradition, with Freud still using it as the defining characteristic that distinguishes melancholy from mourning in his famous 1917 essay *Trauer und Melancholie*. The basic idea is simple: affections such as fear, sadness and despondency are familiar to us all and are not pathological, as long as we can give an account of them. If I am sad because a loved one has just passed, or if I feel fear because I am about to go to war,

³³⁸ *Symp. Caus.* VII 203,4–7 K.

no one will diagnose me as ill because of that. But if I display the same symptoms while no one has died or while there is no war to be afraid of, something is off and my sadness and fear can now be considered pathological. This is the case with the melancholics, who are simply sad and fearful, without themselves even knowing why. There is a trace of this notion of the lack of cause as a defining characteristic of the melancholic also in one of Rufus' fragments: 'A sign of incipient melancholy is the craving to want to be alone and stay away from all other people, without any visible need or cause for it, of the kind that the healthy can sometimes have, because they love research or want to keep undisclosed what must remain secret'.³³⁹ Here, too, the difference between the melancholic and someone that displays relatively normal behaviour – incidentally again partly exemplified by someone that 'loves research' – is considered to lay in the lack of cause or reason. The researcher and the one bearing secrets have reasons to shun company, which is why it is not so worrying that they do so.³⁴⁰

There is another passage in which this lack of reason comes to the fore, in book VI of *Loc. Aff.*, in the context of afflictions that are the result of abstinence from sex. Galen mentions people who become 'heavy in the head, nauseated and feverish' (βαρυνομένων τὴν κεφαλὴν, ἀσωδῶν τε καὶ πυρετωδῶν γιγνομένων), and who suffer from 'poor appetite and bad digestion' (χείρον ὀρεγομένων καὶ ἦττον πεπτόντων) when they do not have sex on a regular basis. Then, he draws a comparison with melancholics:

τοιαύτης γοῦν ἐνίους ὄντας φύσεως, εἴτ' ἐγκρατεῖς ἀφροδισίων χρήσεως ὑπ' αἰσχύνης γενομένου, ναρκώδεις τε καὶ δυσκινήτους ἔγνωμεν ἀποτελεσθέντας· ἐνίους δὲ καὶ σκυθρωπούς ἀλόγως καὶ δυσέλπιδας, ὁμοίως τοῖς μελαγχολικοῖς, ὀρεχθῆναί τε καὶ πέψαι χείρους.³⁴¹

339 Fr 14,1 (tr. Pormann); cf. Celsus *De Medicina* III, 18, 22: 'Interest etiam, ipse sine causa subinde rideat, an maestus demissusque sit ...'

340 This is also what the story of the exchange between Democritus and Hippocrates in the Pseudo-Hippocratic Letters (10–17, ed. Smith 1990) shows. The Abderites took Democritus to have gone mad and called in Hippocrates, because they did not understand the true reason for his isolation and the other melancholic symptoms he manifested. Upon learning from Democritus that he is actually researching the bile itself, Hippocrates declares him sane and adds that it is rather his fellow Abderites whose judgement is clouded. Cf. Pigeaud (1981) 452 f.

341 *Loc. Aff.* VIII 418 K.; in *Hipp. Prorrh.* XVI 613,6–7 K, Galen gives σκυθρωπότης, the same word here translated as 'gloomy', as the indication that someone is becoming more melancholic.

I knew some persons of similar nature, who consequently controlled their need for sex out of shame, and ended up becoming sluggish and inactive. Some others became gloomy and despondent without reason, like melancholics, becoming worse with regard to appetite and digestion.

The symptoms of the people from the former category, sluggishness and inactivity (or, 'being hard to move', *δυσκίνητος*), also fit the melancholic symptomatology. The connection with melancholic symptoms and an excessive need for sex was already made in the Peripatetic tradition, as we have seen, and also by Rufus, who advised sex as a remedy for melancholy. Loss of appetite or aversion to food as well as bad digestion are also standard symptoms we found in Aristotle and Rufus. But the focus of the comparison with the melancholics in this passage from Galen is on the sadness and the despondency without reason. Likewise, in his work *Fulness*, Galen singles out the gloominess and sadness without cause as the defining characteristic of those in whom black bile predominates, whereas those in whom bile in general predominates rather display the symptom of sleeplessness.³⁴²

With the black bile itself, however, as we saw from the metaphor of internal and external darkness, this cause has to some extent been given. There is still no particular *reason* for the fear or the sadness, but it does have a manifest physiological cause. Moreover, the substance causing the fear and sadness is in itself something that naturally belongs to us as a part of our constitution. In this manner, the incorporation of black bile into our nature, allows for a physiological account of something that essentially resists being explained in terms of a reasonable account.

On the other hand, the causation seems to also work the other way around. Similar to what we previously noted in Rufus, Galen also indicates that melancholy can be caused or aggravated by its own symptoms. At the very end of his discussion of melancholy in *Loc. Aff.*, he repeats that the melancholy of the brain can follow upon or come to be because of (*ἐπιγίνεται*) a hot condition in the head, but can also follow upon or come to be because of (*ἐπιγίνεται*) 'thinking' or 'worries' (*φροντίσι*) as well as 'grief combined with sleeplessness' (*λύπαις μετ' ἀγρυπνιῶν*).³⁴³ So, is the idea, then, that both 'physiological' and 'psychic' phenomena can cause melancholy?

342 *Plen.* VII 576,10–13 K: 'ταῦτ' ἄρα καὶ οἱ χολῶντες ἀγρυπνοὶ πάντες ἐφ' ἑκατέρῃ τῇ χολῇ σύνεστι δὲ ἐξαίρετον ἐπὶ τῆς μελαίνης τὸ σκυθρωπὸν τε καὶ δύσθυμον ἄνευ λόγου'.

343 *Loc. Aff.* VIII 193 K.

Perhaps the idea is rather the same as in the passage from Rufus we discussed earlier:³⁴⁴ the physiological state of the brain causes excessive thinking or worrying, as well as trouble with sleeping and sadness. This in turn causes a condition that makes the brain more liable to melancholy. The language Galen uses here, ἐπιγίγνεται, may have a similar meaning as the ἔπομαι we find in *QAM*, indicating that a particular symptom or affection necessarily follows from something. In *QAM*, Galen names melancholy as one of the examples of a case in which ‘the soul is overpowered by the ills of the body’,³⁴⁵ which puts the causal power completely with bodily factors rather than psychic ones. Here we need to also keep in mind, I think, that Galen repeatedly refers to *QAM* in the context of his discussion of melancholy in *Loc. Aff.*³⁴⁶ If we would like to conclude this question of the psycho-somatic nature of melancholy in one particular direction, we would merely need to realize that one cannot be thinking or waking – let alone excessively – or for that matter undertake any other kind of activity, without there being a correlating (or perhaps even more primary) alteration in our physiological constitution, i.e. our mixture. In this manner, we are able to understand how Galen could say that grief or thinking has the potential to cause melancholy, while he could, at the same time, maintain that melancholy has its cause in a change of mixture. Moreover, if we pay attention to the way Galen explains the fear and sadness of the melancholic, namely in terms of the actual qualities of the black bile, we notice that, at least in this case, Galen attempts a physiological explanation of a complex mental phenomenon. Apparently, the grief, the thinking, and the labours Galen mentions as possible causes of a patient’s melancholy, should not be understood in terms of their content. It is not because the patient has ‘bad thoughts’ or has been working a shitty job, that he is now melancholic, for these would clearly be *reasons* to be sad. Rather, it is because of an excess of thinking or working that in some homoeomerous bodies in his brain the predominance of humours has shifted from yellow bile and blood to black bile. This alteration causes a darkness in his mind, which causes him to be sad and fearful without there being an actual reason for it. Following this line of explanation, it seems that education cannot not really be the solution. Rather, one needs to trace the physiological development of a patient, partly through analysis of his activities – some of which particularly have a tendency to produce black bile – and consequently give advice on diet and activities of such a kind that alter the patient’s mixture for the better, i.e. that reduce the amount of black bile.

344 See *infra*, 261–2.

345 *QAM* IV 788,11–3 K.

346 *Loc. Aff.* VIII 181 and 191 K.

Galen's therapeutical advice for dealing with melancholics seems to entirely follow this direction.

But what is most important, perhaps, is that with his strong emphasis on melancholy's physiological manifestation, Galen drew the external darkness of night into our own body. This allows not so much for an understanding of the cause of melancholy, as rather for an incorporation of our lack of understanding for it. In this way, we can understand melancholy as being caused simply by the limitations that necessarily accompany our being and its fulfilment. It is the incorporation of a residue, of something that we do not understand, something that we cannot see, but that is nonetheless necessary. Here, however, gradation is essential. It is all well and fine to have some black bile inside of us, and Galen himself does like to remind us that we cannot be of the substance of the stars – we have to remember that we are made of earth as well. But when the black bile predominates and takes over, when one becomes melancholic, the healthy perspective on our limitations, on our mortality and imperfection, changes to a perspective of darkness, of mere negation itself. What we see when we are melancholic is the darkness that is the negation of everything we are. After all, it is the darkness of the black bile itself that is clouding our view, and we have seen how this substance is opposed to life and opposed to the divine. As long as it is carefully managed and there is a proper mixture with the other humours, seems to be the idea, we can surely be melancholically aware of our mortality and imperfections, while in the meantime we can admire the stars and enjoy life. No wonder there must be a balance between the humours!

Conclusion on Black Bile and Melancholy

Some of the ambiguity which belongs to the substance of black bile in Galen, we find also in his notion of melancholy. Black bile is a normal part of our constitution, but is potentially dangerous and fatal in some of the forms it can assume. Likewise, the symptoms of melancholy can vary from suicidal desire to a sadness or grief that can be counteracted by the daily consumption of moderate amounts of wine. Furthermore, the experience of the melancholic is comparable to the experience ordinary people can have when confronted with external darkness. It is different mainly in duration, since the melancholic continuously carries the darkness in his own brain. The empirical ambiguity of black bile is also paralleled in melancholy: the cause of fear or sadness is unclear, because there is no object to which the fear and sadness relate, there

is just the darkness itself. Both black bile and melancholy have a privative or negative quality about them, as we have seen, that supervenes on primordial notions of darkness, night, death, and earth as opposed to the heavens. These associations are reflected in the qualities of black bile: it is dry, cold, quenched, earthy, heavy, difficult to move, and dark. These qualities of black bile, particularly its darkness, are used by Galen to account for the sadness and fear of melancholics, which do not have any reason but are simply caused by the predominance of the physical substance of the black bile itself. This shows that Galen attempts to account for a complex phenomenon such as melancholy in terms of the specific qualities of the bodily substance that is its cause. Thereby, we find that Galen's notion of the nature of man as he elaborates it in *QAM* and *HNH* does not merely remain a speculative or abstract notion, but finds practical application in his treatment of a specific affliction within his work. Vice versa, we could also say that this particular notion of the nature of man is based upon Galen's more empirical work with a particular affliction of the mind such as melancholy.

The fact that the main symptoms of melancholy are symptoms that ordinary people also display to some extent or in certain situations, allows for a certain normalization of melancholy.³⁴⁷ The black bile turned out to be normal, as long as we habitually dispose of it, though it always maintains a potential for harm. Perhaps, we could say that, in light of Galen's integration of black bile into the nature of man and the cosmological order, and in light of his increased normalization of melancholy, the same could be said about melancholy as well: it is normal, as long as we habitually dispose of it.

347 Klibansky et al (1964) consider this the reason why a melancholic type could be established, 54: 'Gerade die Ambiguität psychischer Symptome machte nämlich die Grenzen zwischen Krankheit und Normalität unscharf und erzwang die Anerkennung eines Habitus, der melancholisch war, ohne daß sein Träger in jedem Augenblick als wirklich Kranker angesprochen werden konnte'.