

Concepts and Treatments of Phrenitis in Ancient Medicine

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*I can calculate the motion of heavenly bodies,
but not the madness of people.*

– Sir Isaac Newton

Abstract

The goal of this dissertation is to investigate ancient medical concepts of phrenitis, a disease associated with high fevers and loss of reason. In particular, my dissertation examines the concepts of, and treatments for phrenitis that were put forth by the Pneumatist Aretaeus of Cappadocia (1st century AD), Galen (2nd century AD), and the Methodist Caelius Aurelianus (5th century AD). These physicians are relatively contemporary in their opinions (insofar as Caelius represents the opinions of the 1st/2nd century AD Methodist author Soranus), and represent three different theoretical frameworks and approaches to disease. In order to provide a relevant background to the opinions of these physicians, this dissertation includes a review of concepts of phrenitis presented in a number of earlier works, including the Hippocratic Corpus, and the extant fragments of the 4th century BC physicians Diocles and Praxagoras. Together, these works constituted a tradition with which Aretaeus and Galen closely associated themselves, and against which Caelius aggressively polemicised.

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Introduction

This thesis examines ancient concepts of phrenitis, which was believed to be a disease associated with high fevers and madness, or loss of reason. Together with mania and melancholia¹, phrenitis is considered one of three diseases that were thought to cause madness in the ancient world. It is probable that phrenitis is the oldest of these diseases: descriptions of phrenitis as a specific, clinical concept of disease can be found in the texts of the Hippocratic Corpus, and seem to have been passed down to these authors by earlier physicians.² The name phrenitis appears to be derived from a combination of the suffix ‘-itis’, denoting disease or affection, and *phrēn*, a part of the body that, from Homeric times, was thought to be responsible for reasoning and intelligent thought.³ Although the *phrēn* gradually lost its association with intelligence, becoming known only as the diaphragm, the term phrenitis remained; references to phrenitis as a disease of the rational powers appear in medical literature until the 19th century, when it became subsumed under such mental disorders as ‘delirium’, ‘clouding’, or ‘confusion’.⁴

Before embarking on this study, it should be noted that the phrase ‘mental illness’ is problematic for historians of ancient medicine. Use of this term to describe a disease, or group of diseases, generally implies that there is a difference between

¹ In using the term ‘melancholia’, I am referring to the Graeco-Roman concept of this disease, not the modern concept commonly described as ‘melancholy’. Flashar, 1966 gives a comprehensive discussion of melancholia in ancient medicine.

² This will be discussed in the chapter on Hippocrates.

³ In Homer, the *phrēn* was often closely associated with the *prapides*, a psychic entity situated somewhere in the chest. For a discussion of the *phrēn* in Homeric thought, see Sullivan, 1995: 17, note 10, and Sullivan, 1988.

⁴ Sakai, 1991: 193. Sakai mentions that in the third edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III-R), ‘delirium’ is classified as one of the ‘Organic Mental Syndromes’. In the most recent edition of this text, DSM-IV-TR, this term is no longer used “because it incorrectly implies that ‘nonorganic’ mental disorders do not have a biological basis.” These disorders have now been subdivided into three categories: 1) Delirium, Dementia, and Amnesic and Other Cognitive Disorders; 2) Mental Disorders Due to a General Medical Condition; and 3) Substance-Related Disorders. Certain aspects of the diagnostic features of delirium are reminiscent of the kinds of symptoms reported in ancient accounts of phrenitis. (DSM-IV-TR: 136-137.)

diseases that affect the psychological powers of the mind, and those that affect only the physical parts of the body. In ancient medicine, however, this separation does not generally exist. Diseases of the ‘mind’ are seen simply as physical diseases of the body, in which the resulting madness – or damage to the rational powers – is just one of several possible symptoms. As for the ‘mind’ itself, it must be noted that in ancient medicine the rational powers are associated with a variety of different parts, and sometimes processes, within the body. Thus, while the phrase ‘mental illness’ is not an incorrect means of describing diseases such as mania, melancholia, and phrenitis, it is important to remember that the ‘mental’ aspect of these diseases may vary considerably from one author’s concept to the next. This is particularly important when tracing a history of one of these diseases, since the varying opinions about the nature and location of the mind are not necessarily related to each physician’s particular era, or even to the prevailing attitudes towards medical theory in their time.

Much of our information for the study of ancient mental illness comes from medical literature.⁵ Depending on the author in question, these works range from a few surviving fragments and/or testimonial references about an author’s work and ideas, to complete texts, or even collections of texts. Regardless of the amount of extant material, however, there are aspects of these works which limit our understanding of ancient mental illness. To begin with, it is important to note that the

⁵ While examples and discussions of madness are also found in non-medical literature, for example, in tragedy, history, and even philosophy, these works tend not to focus on the more disease-oriented aspects of the condition. In these sources, madness is often viewed as being of divine origin, sent either as punishment for a blasphemous action, or as a gift, in the form of philosophical or literary inspiration. Madness is a common theme in 5th century Greek tragedies; Orestes (Euripides, *Orestes*), Heracles (Euripides, *Heracles*), and Ajax (Sophocles, *Ajax*) are just a few of the many characters who are driven mad by the gods. In works that do refer to madness as a medical condition, such as Plato’s *Phaedrus*, and *Problemata* 30.1 by (Ps.?)Aristotle, the references are usually either made only in passing (Plato, *Phaedrus*. 265a, 9–11.), or they lack the refined differentiation of disease we find in the medical texts. In *Problemata* 30.1, for example, (Ps.?)Aristotle attempts to link the madness of Ajax, Bellerophon, and Hercules to their melancholic constitutions; in doing so, however, he ignores the differences in the symptoms displayed by each man, and reduces each of their conditions to the same melancholic state (Arist. *Problemata*. 30.1, 953a). For scholarly reviews of madness in ancient literature see: Dodds, 1964; Padel, 1992 and 1995; and Simon, 1978.

overall goal of a medical text has a significant impact on how we understand the material it contains. It is generally understood that ancient physicians held a variety of different theoretical backgrounds, which strongly influenced their understanding of particular diseases. In addition to using their medical writings as a means of explaining their own ideas, physicians also use their texts as a way of proving the superiority of their own theories over those of other physicians. In many cases, medical literature is also meant to be didactic, designed to educate the reader on the correct means of practicing medicine. The personal bias contained in the works is sometimes very obvious, as in Caelius Aurelianus' biting commentary on his opponents' ideas; or, it may be more subtle, as in the form of Galen's craftily constructed phrases about 'the ancients', which lend authenticity to his works by emphasizing the close connections between Galen's own opinions and those of his illustrious predecessors.

One of the hindrances to our understanding of ancient concepts of mental illness stems from ways in which authors describe disease. Whether intentional or not, any discussion of a disease is filtered through the eyes and words of the author. In descriptions of ill patients, for example, we learn only that information which the author believes it is necessary to record. This information is heavily influenced by the author's overall medical background, as well as any preconceived ideas that he might have about a particular disease; without prior knowledge of these details, however, it is not possible to understand the significance of the author's account. The authors' descriptions of patients' symptoms and behaviours are influenced by the overall purpose of their texts and the agenda of that author in composing the work in a particular style. In the Hippocratic Corpus, for example, *Diseases 1* and *2* present discussions of disease in a schematized form: first the name of the disease is provided,

then a description of the primary disturbance that brings about the illness, then a list of its symptoms, and its likely prognoses.⁶ While the author may have had experience with a large number of cases of this disease, the format of such a text requires that he ignore specific details of individual cases and present only a generalized pattern for each disease. By contrast, the case histories in the *Epidemics* focus on the symptoms of individual case histories, usually with little or no indication as to the distinctiveness of these signs in the context of the overall pattern of disease. Limitations of this sort occur in all forms of medical works, in varying levels of subtlety.

The author's choice of vocabulary can also affect our understanding of his account of the disease, owing to the limitations involved in translation and comprehension of the ancient texts. This is especially problematic in descriptions of delirium or delusion, where the precise subtleties of the Greek and Latin terminology often cannot be translated – or even fully understood – by modern readers. Even in those instances where the original language does not present translation-related problems, we may never be entirely able to comprehend the exact pathological reality that each author is trying to describe. While several authors may use the same terminology to discuss a particular aspect of a disease, each author's personal understanding of what that term refers to may be completely different. This applies both on the small scale, in terms of specific symptoms or characteristics, and on the large scale, in regards to the very name of a disease. The terminology used for mental illnesses is a good example of this problem: while the term 'phrenitis' appears in medical literature from antiquity through to the 19th century, the actual concept of disease that the term refers to changes considerably from one end of the spectrum to the other. It is therefore

⁶ This pattern is discussed in more detail in Potter, 1988: 40-43.

important to examine each author's concept of a disease in its entirety, in order to gain a better understanding of the overall meaning of their medical terminology.

When examining ancient concepts of disease, there is a natural tendency to try and draw parallels between the ancient descriptions and possible modern equivalents. This is very common in psychological studies of phrenitis, and is also evident in the works of certain Classical scholars. Phrenitis, for example, has often been associated with malaria, typhoid fever, meningitis, and encephalitis, as well as the more general forms of mental disease that are now classified under the heading 'delirium'.⁷ The difficulty of such retrospective diagnoses lies in the fact that our knowledge of any disease is limited by the very works which discuss them. From a modern point of view, the aspects of a disease that an author has chosen to report may have little or no relevance to the overall diagnosis of a disease – in many cases, the information provided may be sufficient to indicate a general group of diseases, but not detailed enough to narrow it down to one specific illness. The changing concepts of a disease also hinder retrospective diagnosis: while it may be possible to compare one author's explanation of a disease with a modern equivalent, this comparison may not be applicable to a second author's explanation of the 'same' disease. This is particularly significant in ancient mental illnesses, where the suggested locations of the disease and the mind could change drastically from one author to another. It does not seem right, for example, to associate phrenitis with certain forms of brain fever when many early accounts of the disease place this illness – and the rational powers that it compromises – in various parts of the chest. Any attempt to make this comparison requires the imposition of modern ideas of the mind upon these ancient accounts. When studying ancient diseases, it is much better to approach each author's account

⁷ Drabkin, 1955: 266; Byl and Szafran, 1996: 99; and DSM-IV-TR: 136-137.

of the disease individually, establishing their beliefs about symptoms, causes, and therapies, and placing these in the context of that author's views on disease and medicine as a whole. Only after these aspects have been established is it possible to begin making comparisons between different authors' accounts of each disease.

This dissertation fills a gap in the existing literature on ancient mental diseases. At present, monographs exist on both mania and melancholia, the two other diseases that ancient physicians commonly associated with madness.⁸ In contrast, scholarship on phrenitis is limited to a few short studies, which approach the disease from both classical and medical points of view. A 1996 study by Simon Byl and Willy Szafran, for example, reviews the concept of phrenitis in the Hippocratic Corpus. The aim of this study is to create a basic picture of 'Hippocratic phrenitis', which can then be used to look for equivalent diseases in modern psychiatric concepts of mental illness.⁹ After establishing a list of diseases that earlier scholars have linked with phrenitis, Byl and Szafran provide a number of examples from the Corpus which establish delirium and fever as the primary symptoms of the disease. They then list a handful of other symptoms associated with phrenitis, placing them in order of the frequency with which they appear in the Corpus. A few causal explanations are provided, followed by a selection of remedies said to have been used as treatment for the disease, and a number of passages discussing the connection between a person's age and the prevalence of phrenitis. The authors complete their study by explaining that

⁸ On mania, see Pigeaud, 1987; on melancholia, see Flashar, 1966.

⁹ Byl and Szafran, 1996. The goal of this paper is explained on page 98: "Nous nous proposons dès lors d'établir le dossier complet de la 'phrenitis' hippocratique et de déterminer ensuite s'il est possible d'identifier la nature de cette affection."

'Hippocratic phrenitis' has very close parallels to a category of modern diseases known as 'organic mental syndromes'.¹⁰

This study is problematic for several reasons. To begin with, the desire to use ancient accounts of disease to make retrospective diagnoses is a difficult undertaking and, from the point of view of many historians of medicine, not an ideal approach to the study of ancient disease. Byl and Szafran acknowledge some of the problems inherent in this process, yet do not hesitate to find a modern parallel for phrenitis. Secondly, in referring to the Hippocratic material itself, these authors neglect to remind us that the Hippocratic authors do not share a unified concept of medicine, or even of individual diseases. When listing symptoms in order of the frequency with which they are mentioned in the Corpus, little consideration is given to the different contexts in which these symptoms are described, or to the relevance of these symptoms to Hippocratic concepts of phrenitis as a whole. A similar situation occurs with causes and treatments – Byl and Szafran reference a handful of examples of causes and therapies, but refrain from making any explanatory comments about the importance of these details to the overall picture of their 'Hippocratic phrenitis'. A further problem with this study, which will be discussed in more detail in the chapter on the Hippocratic Corpus, is that Byl and Szafran fail to clarify which Hippocratic passages have been included in their study. When discussing symptoms, for example, it would be useful to know exactly which passages they have used to tabulate the frequency of each symptom. Judging by the passages that are referenced in the footnotes, several of their examples are drawn from passages that appear to have been connected to phrenitis only by later authors; inclusion of these potentially non-

¹⁰ Byl and Szafran, 1996: 103. The authors cite the entry for 'organic mental syndromes' that is given in DSM-III-R. As mentioned above, this categorization is now viewed as outdated.

phrenitic descriptions alters the overall calculation of frequency, and the resultant conclusions.

In 1987, Monica Centanni prepared a review of phrenitis and epilepsy in the Galenic corpus.¹¹ This article summarizes Galen's concept of phrenitis by highlighting passages referring to the definition, symptomology, aetiology, and therapy of the disease; many of these passages are drawn from Galen's commentaries on the Hippocratic texts.¹² While this article provides a useful collection of material about phrenitis, Centanni provides only limited analysis of the material, and does not seek to form it into a unified concept of phrenitis.

Jackie Pigeaud offers two studies of phrenitis. His 1998 review, 'La phrenitis dans l'œuvre de Caelius Aurélien',¹³ provides a good introduction to Caelius Aurelianus' approach to phrenitis. The emphasis of this article is not on Caelius' description of phrenitis itself, but rather on Caelius' manner of explaining it. Several key aspects of Caelius' view of phrenitis are brought to our attention, but are not discussed in great depth: this is not the intention of the article. Pigeaud also discusses phrenitis in his longer work, *La maladie de l'âme*, which was originally published in 1981.¹⁴ Pigeaud does not believe that phrenitis is a disease of the soul, but points out that the nature of the disease invites discussion of the relationship between the soul and the body.¹⁵ His review of phrenitis highlights some key features of the disease concept, such as the main symptoms and the location of the illness in the body, but is largely restricted to a presentation of various authors' views on the subject. As such, this chapter provides a useful starting point for the study of phrenitis, but does not

¹¹ Centanni, 1987.

¹² Centanni, 1987: 54-63.

¹³ Pigeaud, 1998.

¹⁴ Pigeaud, 2006. The section on phrenitis is found in Part 2, pages 70-100.

¹⁵ Pigeaud, 2006: 70: "La phrenitis n'est pas en aucune façon une maladie de l'âme, mais à l'intérieur du concept se pose la question du siège et de la relation de l'âme et du corps."

provide a complete concept of the disease, as it was understood by any particular author.

A more recent, yet very short article on phrenitis was published in *The Lancet* in 2000.¹⁶ Here, Bill Bynum offers a brief discussion of phrenitis as described in the Hippocratic Corpus, followed by a few references to 19th century concepts of this illness; this article is not intended to be a detailed scholarly discussion of phrenitis.

There are also a number of studies which examine phrenitis from a psychological point of view. A particularly good discussion of phrenitis is offered by Akio Sakai, in his study 'Phrenitis: inflammation of the mind and the body'.¹⁷ Here, Sakai reviews descriptions of phrenitis from ancient and medieval sources, and concludes that phrenitis "can be regarded as a term that described a disease (or a syndrome) and which was applied to acute disorders reflecting both somatic *and* psychic manifestations."¹⁸ While Sakai effectively refers to the debate about the seat of the soul and the connection of that seat to the location of phrenitis in the body, he does not take proper account of the different medical opinions that underlie, and strongly influence each author's concept of phrenitis. Overall, this article provides an interesting discussion of certain aspects of phrenitis, but does not attempt to establish a clear concept of the disease.

A less effective overview of phrenitis is found in a study of mental illnesses in Aretaeus by Sotiris Kotsopoulos.¹⁹ The discussion of phrenitis offered in this article is little more than a summary of Aretaeus' treatments for the disease; the author's approach to Aretaeus' work is evident in the presumptive statement that "phrenitis is

¹⁶ Bynum, 2000.

¹⁷ Sakai, 1991.

¹⁸ Sakai, 1991: 203.

¹⁹ Kotsopoulos, 1986.

obviously modern delirium which is associated with infectious diseases.”²⁰ Other aspects of this article are also problematic, the most notable of which is Kotsopoulos’ statement that “the clinical entity of phrenitis and its management did not change much till the time of Paulus Aegineta who lived in the 7th century AD and was the last of the ancient medical writers.”²¹

Further comments about phrenitis can also be found in the commentaries of relevant texts, by authors such as Jacques Jouanna, and Paul Potter.²² These discussions will be examined in more detail throughout this dissertation, in the context of the various texts with which they are associated.

This dissertation focuses on perceptions and concepts of phrenitis as they were put forth by Aretaeus of Cappadocia, a Pneumatist; Galen; and Caelius Aurelianus, a Methodist. While these authors represent only a handful of the many authors who discuss this disease, the opinions of these authors make for a compelling comparison of the varying approaches to phrenitis in the ancient world. These authors represent three different, yet roughly contemporary theoretical backgrounds, which date from the 1st/2nd century AD. While Caelius Aurelianus was himself active in the 5th century AD, his work *Acute and Chronic Affections* draws heavily on the opinions of Soranus, a Methodist from the 1st/2nd century AD. This is especially true of Book 1, which is entirely devoted to a discussion of phrenitis; it is this reliance on Soranus’ work that enables us to consider Caelius as a contemporary of Galen and Aretaeus. In order to provide a relevant background to the opinions of these authors, concepts of phrenitis from the Hippocratic Corpus, and the 4th century BC authors Diocles and Praxagoras

²⁰ Kotsopoulos, 1986: 172.

²¹ Kotsopoulos, 1986: 172 and 173 respectively.

²² For example, Potter, 1980, and Jouanna, 2000.

will also be discussed. Together, the opinions of these early authors make up the approach to medicine that later became known as the Dogmatic, or Rationalist tradition. This approach is based on a humoral view of medicine, in which diseases are in some way connected to an imbalance in the body's overall composition of humours. As we will see, Galen and Aretaeus both seek to connect themselves to this Dogmatic tradition: Aretaeus' view of phrenitis clearly reflects this humoral approach to disease, and is further emphasized by his deliberate use of Ionic Greek, the dialect used by the Hippocratic authors. Galen's specific explanation of phrenitis is not as heavily influenced by the opinions of the Hippocratic authors, yet his overall approach to medicine encompasses the traditional theories of humours and elemental qualities. For Galen, it is his knowledge of human anatomy that shapes his account of phrenitis. Finally, Caelius offers a distinct contrast to both of these authors, openly rejecting the Rationalist approach to disease and medicine. Like other Methodists, Caelius uses the Hippocratic tradition as something to fight against when putting forth his theories of disease. While clearly aware of human anatomy, he does not let this information influence his understanding of disease. A large portion of his discussion of phrenitis is devoted to the criticism of other physicians, many of whom belonged to the Rationalist tradition.

In order to avoid the aforementioned pitfalls of the study of ancient mental diseases, the discussion of each author's concept of phrenitis will be preceded by a brief discussion of their medical background, including the relevant history of their particular medical sect, and an overview of their general theories of health and disease. Each author's specific approach to phrenitis will then be discussed, in the context of the symptoms which they believe to be most important, their views on how the disease is caused, and the methods by which they seek to remedy the illness.

Special attention will be given to aspects of their explanations which are significant to the overall history of phrenitis. The highly fatal nature of phrenitis, for example, is frequently mentioned by Hippocratic authors, yet rarely occurs in the accounts of Aretaeus, Galen, and Caelius; similarly, certain symptoms that are mentioned in the Hippocratic authors receive varied levels of attention in the three later authors. Throughout this discussion, the authors' opinions on these aspects will be highlighted, and possible explanations for their attitudes will be suggested.

Emphasis will also be placed on a number of key issues, which relate to the changing views of phrenitis over time. Advances in anatomical research in the 3rd century BC, for example, led to the discovery of the origin of the nerves at the base of the brain, and vastly improved physicians' knowledge of the physical structure of the lungs, heart, and other internal parts. These discoveries precede the three main authors of this study by several hundred years. It must therefore be evaluated how much of an influence these discoveries have on each author's concept of phrenitis, relative to the writings of the Hippocratic and 4th century BC authors. Do our three authors accept these anatomical discoveries and, if so, to what extent does this information affect their understanding of phrenitis? Knowledge of the different organs of the body also resulted in an approach to medicine that sought to associate each disease with a specific part of the body. This approach, known as the *locus affectus*, or affected place (πεποιθὼς τόπος in Greek), is believed to have developed in the late classical period, alongside the 3rd century anatomical discoveries made by physicians such as Erasistratus and Herophilus.²³ In the context of the discussion of phrenitis and other mental illnesses, the *locus affectus* relates both to the question of the location of the diseases themselves, and to the question of the location

²³ van der Eijk, 1998: 350.

of the rational powers that they affect. Despite this close connection, however, the concept of the *locus affectus* was highly contested among ancient physicians; some authors argued over potential locations of different diseases, while others, such as the Methodists, rejected the very possibility of identifying such a location in the first place.

The impact of anatomical information on the diagnosis of phrenitis will also be examined. As the disease concepts of phrenitis, mania, and melancholia became more established, it became increasingly necessary for physicians to explain how and why these diseases varied from each other, and from other similar illnesses. Just as explanations of phrenitis often provide insight to these other diseases, clues to each author's understanding of phrenitis can sometimes be drawn from their explanations of other diseases. Each author's use of this differential diagnosis will be examined throughout this dissertation.

What was, for the ancient physicians, the mental illness known as phrenitis? Aretaeus of Cappadocia, Galen, and Caelius Aurelianus provide three contemporary concepts of this disease, each of which is based on a different medical background. For each author, we will seek to determine their definition of the disease: what do they believe are the distinguishing symptoms of phrenitis, and how is it different from other mental illnesses? What causes phrenitis, and what remedies can be used to treat it? How do the overall medical theories of each physician affect their concept of phrenitis, and to what extent are they influenced by the views and discoveries of other physicians, both contemporaries, and predecessors? The answers to these questions will reveal a clear picture of phrenitis in the ancient world and provide insight into the broader characteristics of mental illness in antiquity.

The Rationalist 'Tradition'

This chapter seeks to provide an analysis of the concepts of phrenitis described by the authors of the Hippocratic Corpus, and the fourth century BC physicians Diocles and Praxagoras. Together, the opinions of these authors make up the basis of what would later become known as the Rationalist, or Dogmatic 'tradition'. Since Aretaeus and Galen were both significantly influenced by the ideas contained in this tradition, they are essential to our understanding of their explanations of phrenitis. When examining Caelius' concept of phrenitis, an understanding of the Rationalist ideals helps us to understand Caelius' negative response to more traditional views of medicine, and his reasons for preferring the apparent simplicity of the Methodist doctrine.

The Hippocratic Corpus contains the first systematic discussions of phrenitis. As a result of the variety of medical beliefs expressed through these discussions, it is possible to establish only a general concept of so-called 'Hippocratic' phrenitis: each treatise in the Corpus has its own subtleties of explanation, which often contradict those that are found in other texts. Nevertheless, we will see that there is a general consensus in the Hippocratic Corpus regarding the concept of the term 'phrenitis'. As an illness of the mind, causal explanations of this disease require the integration of theories for both the overall nature of disease, and the nature and location of intelligence and rational thought. Of particular interest are the descriptions of phrenitis in the context of Rationalist medical philosophy, which are based primarily on humoral theory, and the Rationalist discussion of the physical sources of the rational powers.

The opinions of Diocles and Praxagoras represent the first steps in the adaptation of traditional Rationalist doctrines into individual approaches to the concept of phrenitis. Each of these authors offers an account of phrenitis that is grounded in Hippocratic medicine, yet is influenced by their own independent research on the body and its structures. In explaining phrenitis, Diocles and Praxagoras both suggest that the heart is the seat of the rational powers. While they also share the view that phrenitis occurs due to inflammation in the area of the chest, each author has a different explanation of how phrenitis comes to affect the seat of the rational powers.

Hippocratic ideas about the characterization of phrenitis and the location of the rational powers were very influential; as will be demonstrated in later chapters, certain of these ideas would remain popular among many generations of physicians. Equally influential are the Hippocratic suggestions for treatment; while there are only a few texts in the Corpus which discuss the treatment of phrenitis, we will see that the methods used by these physicians continue to be prescribed in later discussions on this subject.

Phrenitis in the Hippocratic Corpus

The Hippocratic Corpus contains the earliest surviving references to phrenitis.¹ Discussions of phrenitis in these works suggest that the Hippocratic authors inherited their knowledge of the disease from earlier physicians, and that they share at least a basic concept of what the disease entails.² In *Regimen in Acute Diseases*, the author lists phrenitis as one of the diseases which 'the ancients' had identified as an acute

¹ Discussions of phrenitis appear in: *Affections*, *Aphorisms*, *Coan Prenotions*, *Crises*, *Diseases* 1 and 3, *Epidemics* 1, 3, 4, 5, and 7, *Regimen in Acute Diseases*, *Prognostics*, and *Prorrhetics* 1.

² Jouanna (1999: 142) believes that most of the diseases identified in the Hippocratic Corpus, including those such as phrenitis which appear for the first time in these texts, were already well known to physicians of Hippocrates' time.

disease.³ In *Epidemics* 3, certain patients are identified as suffering from phrenitis, without reference to any one specific symptom that highlights the presence of this disease. Most of the symptoms offered in these case histories seem generic, and also appear in patients suffering from other diseases.⁴ The implication, therefore, is that the readers of this text would already have some knowledge of how to diagnose phrenitis, and would consequently understand the relevance of each diagnosis to the patient's overall case. A similar situation occurs in *Epidemics* 7.112, in which a patient is said to become 'deranged in the mind in a phrenitic manner'.⁵ This author offers no indication as to the exact manifestation of this delirium, which suggests that he expects his readers to have previous knowledge of these particular characteristics.

The following chapter will attempt to reconstruct this 'Hippocratic' concept of phrenitis, its most significant symptoms, theories about its cause, and methods by which the Hippocratic physicians sought to provide therapy. Emphasis will be placed on aspects of the disease which most Hippocratic authors agree upon, and attention will be drawn to any significant variations of opinion. In creating this concept – and indeed when discussing any aspect of Hippocratic thought – it is important to remember that the diverse nature of the Corpus makes it impossible to draw any conclusions about Hippocratic opinion as a whole. Each author in the Corpus has their own specific views, with their own subtleties of opinion. Nevertheless, it is useful to establish a general concept of phrenitis during this period, to improve our understanding of how these authors viewed the disease. Furthermore, since later

³ Hippocrates, *Acut.* 5 (2.232 Littré): "Ἔστι δὲ ταῦτα ὀξεία, ὁκοῖα ὠνόμασαν οἱ ἀρχαῖοι πλευρίτιν, καὶ περιπνευμονίην, καὶ φρενίτιν, καὶ λήθαργον, καὶ καῦσον, καὶ τᾶλλα νοσήματα ὁκοῖα τούτέων ἔχόμενά ἐστιν, ὧν οἱ πυρετοὶ τὸ ἐπίπαν ξυνεχέες. *These are the acute diseases, those which the ancients have named pleuritis, and peripneumonia, and phrenitis, and lethargy, and causus, and all those diseases which are similar to these, in which the fevers are generally continuous.* All translations in this dissertation are my own.

⁴ Hippocrates, *Epid.* 3.3.17(4) (3.116-118 Littré). These 'generic' symptoms include fever, sweating, heaviness of the head, loss of speech, and vomiting.

⁵ Hippocrates, *Epid.* 7.112 (5.460 Littré): παρέκρουσε τρόπον φρενιτικόν'

authors would use Hippocratic ideas as the basis of their own medical views, this reconstructed concept, however generalized, provides us with a starting point against which later concepts of phrenitis can be compared.

In selecting sources for this chapter, I have restricted myself to those passages and case studies which mention phrenitis directly or reference it in such a way as to leave little or no doubt about the disease to which it refers. I have excluded, for example, three case studies in chapter 17 of *Epidemics* 3 which have been identified as phrenitis even though they do not mention the disease directly.⁶ The word φρενίτις has been added to the end of these passages by various later scholars, along with the diagnostic characters.⁷ These stand in direct contrast to the more legitimate discussion of phrenitis in case 4 of this chapter, in which the diagnosis is included in the main text: Ὁ φρενιτικὸς τῆ πρώτῃ κατακλιθεῖς.⁸ I have also excluded from my study discussions of two diseases which modern scholars have suggested as being similar to phrenitis, the 'thick disease' caused by bile in *Internal Affections* 48, and φροντίς in *Diseases* 2.72, which Paul Potter amends to, and translates as, phrenitis.⁹

Before undertaking this reconstruction, it is useful to review the general Hippocratic approach to disease. Here again, there is no one theory of disease that was shared by all the authors in the Corpus. The following summary, therefore, is a review of some of the most prevalent theories of anatomy and pathology presented in the Corpus. Throughout this discussion, special attention will be given to those

⁶ Hippocrates, *Epid.* 3.3.17, cases 13 (3.136-140 Littré), 15 (3.142-146 Littré), and 16 (3.146-148 Littré).

⁷ Jones, 1923a: 213-217.

⁸ Hippocrates, *Epid.* 3.3.17(4) (3.116-118 Littré).

⁹ Hippocrates, *Intern.* 48 (7.284-288 Littré); *Morb.* 2.72 (7.108-110 Littré). In his version of this passage, Potter (1998a: 326-327) changes φροντίς to φρένιτις, but does not offer an explanation as to why he has made this amendment. Jouanna (1983) does not make this amendment. The similarity between *Intern.* 48 and phrenitis is also suggested by Potter, without any specific justification: Potter, 1988b: 337, s.v.: "Phrenitis".

aspects which contribute most to our understanding of the Hippocratic concept of phrenitis.

Hippocratic Physiology and Disease Theory

Generally speaking, the Hippocratic authors envision the body as an assemblage of fluids and structures, which interact with each other in specific ways.¹⁰ Since Hippocratic physicians did not perform anatomical dissections, their understanding of the body's internal structure was acquired through a combination of observation and analogy. Knowledge of parts close to the surface of the body could be gained through clinical examination, while certain internal parts could be examined during serious injuries, or studied through comparison of human parts with their animal equivalents.¹¹ Hippocratic physicians were aware that certain parts were responsible for particular activities.¹² As Beate Gundert explains, "each individual part is considered to have a certain shape and texture that makes it more or less apt to attract, receive, retain, and/or expel fluids."¹³ Spongy parts like the glands were thought to draw off water, hollow cavities enabled respiration and hearing, and the reflective membranes of the eyes were perfectly designed to enable sight.¹⁴ In this system, the individual parts of the body are seen to be 'passive sites' in which the various activities take place. As Paul Potter points out in his summary of Hippocratic Medicine, *Ancient Medicine* is one of the few texts which ascribe a more active role to the organs.¹⁵

¹⁰ Gundert, 2000: 15 and Potter 1988c: 38. For a more detailed discussion of Hippocratic medical views, see Potter, 1988c, Gundert 1992 and 2000, and Nutton, 2004: 72-86.

¹¹ Gundert 2000: 15 and 1992: 454.

¹² Gundert, 1992: 455.

¹³ Gundert, 2000: 15.

¹⁴ Gundert, 1992: 457.

¹⁵ Potter, 1988c: 39, and *VM* 22-23 (1.626-634 Littré).

In the category of 'fluids', the Hippocratic authors include all the bodily secretions and excretions, as well as blood, air, and humours.¹⁶ As Vivian Nutton explains, the Hippocratic authors do not agree on the exact number, or even the specific identities of these humours.¹⁷ Nevertheless, these authors do agree that health is dependent upon a proper balance of the constituent humours; when the balance is upset, diseases emerge in the body. In *Nature of Man*, for example, the author suggests that the body is composed of four humours: blood, phlegm, yellow bile, and black bile.¹⁸ These humours are themselves composed of various mixtures of the four universal qualities of heat, cold, moisture, and dryness.¹⁹ Since these are the same qualities which come together to form the universe as a whole, they are highly susceptible to similar qualities in entities such as foods, drinks, air, weather, and the seasons. The author of *Affections* provides an account of how these forces can produce disease. While this account incorporates a different concept of the bodily humours, the explanation of how the humours are affected is common to many Hippocratic texts:

All diseases happen in humans on account of bile and phlegm. This bile and phlegm produce disease whenever, inside the body, one of them is either dried out, or made wet, or heated, or cooled. The phlegm and bile suffer these things from foods and from drinks, and from exertions and traumas, and from smell, and sound, and sight, and sexual intercourse, and from both heat and cold; and the phlegm and bile suffer this whenever any of these things mentioned are either applied to the body at an unsuitable time, or not according to habit, or in amounts that are too great and too strong, or amounts that are too small and too weak.

¹⁶ Potter, 1988c: 40 and Gundert, 2000: 15.

¹⁷ Nutton, 2004: 79.

¹⁸ Hippocrates, *Nat. Hom.* 4 (6.38-40 Littré).

¹⁹ Hippocrates, *Nat. Hom.* 5 (6.40-44 Littré).

νουσήματα τοῖσιν ἀνθρώποισι γίνεται ἅπαντα ὑπὸ χολῆς καὶ φλέγματος· ἡ δὲ χολὴ καὶ τὸ φλέγμα τὰς νούσους παρέχει, ὅταν ἐν τῷ σώματι ἢ ὑπερξηραίνηται, ἢ ὑπερυγραίνηται, ἢ ὑπερθερμαίνηται, ἢ ὑπερψύχηται. Πάσχει δὲ ταῦτα τὸ φλέγμα καὶ ἡ χολὴ καὶ ἀπὸ σιτίων καὶ ποτῶν, καὶ ἀπὸ πόνων καὶ τρωμάτων, καὶ ἀπὸ ὀσμῆς καὶ ἀκοῆς καὶ ὄψιος καὶ λαγνείης, καὶ ἀπὸ τοῦ θερμοῦ τε καὶ ψυχροῦ· πάσχει δὲ, ὅταν τούτων ἕκαστα τῶν εἰρημένων ἢ μὴ ἐν τῷ δέοντι προσφέρηται τῷ σώματι, ἢ μὴ τὰ εἰωθότα, ἢ πλείω τε καὶ ἰσχυρότερα, ἢ ἐλάσσω τε καὶ ἀσθενέστερα.²⁰

As this author explains, the disease-causing humours – in this case bile and phlegm – are always present inside the body, and, under normal circumstances, are not inherently bad. These humours become harmful only when they are in excess or deficiency, or when their specific combinations of qualities become unbalanced. The factors which influence the humoral balance include specific characteristics of the individual and his habits, as well as more universal aspects that affect whole cities or regions. A significant part of Hippocratic medicine is based upon the study of these many factors, in hopes of being able to predict how and when certain factors will be most likely to affect a patient. This process, known as prognosis, is most useful when treating a sick patient: if the physician can assess the patient's individual constitution, and that of his surrounding environment, he will be better able to identify the disease in question, determine how it is likely to manifest itself in the patient, and predict its most likely outcome.²¹ It is necessary for a Hippocratic physician to be aware of the

²⁰ Hippocrates, *Aff.* 1 (6.208 Littré). This author's emphasis on bile and phlegm as the agents of disease is fairly common throughout the Corpus (Nutton, 2004: 79). See also Hippocrates, *Morb.* 1.2.

²¹ For a more detailed discussion of prognosis in the Hippocratic Corpus, see Hulskamp, 2008: 7-49, and Nutton, 2004: 82-93.

deadly nature of diseases, so that he can accurately predict if or even when his patient is most likely to die. In this way, the physician can both prepare the patient's family members for the eventual outcome, while also protecting his own reputation. In some cases, a physician might also refuse to take on a patient who is already close to death, thereby avoiding the possibility of being blamed for that patient's demise, and ruining his reputation as a physician.²²

The author of *Epidemics* 1 describes the factors that a physician takes into account when making a prognosis:

And concerning these diseases, from which we made our decisions, having learned the common nature of all people and diseases and the particular nature of each; from the disease, from the patient, from the prescribed regimen and the one who prescribed it – for based upon this too the diagnosis is easier or more difficult; from the constitution of the weather and each place, according to its parts and its entirety; from customs, from regimen, from the ways of living, from the ages of each patient; through their speech, manners, silences, thoughts, sleep, not sleeping, dreams – what kind? and when?; plucking, scratching, tears; from the paroxysms, excrements, urines, salivations, vomits; and the succession and transitions of the diseases – how many? from what? to where? – toward death and crisis; sweats, chills, rigor, cough, sneezing, hiccups, breaths, belches, flatulence – silent or with noises?, nose-bleeds, haemorrhages; from these things one must consider what will occur on account of these things.

Τὰ δὲ περὶ τὰ νοσήματα, ἐξ ὧν διαγιγνώσκωμεν, μαθόντες ἐκ τῆς κοινῆς φύσεως ἀπάντων, καὶ τῆς ἰδίης ἐκάστου· ἐκ τοῦ νοσήματος· ἐκ τοῦ νοσήοντος· ἐκ τῶν προσφερομένων· ἐκ τοῦ προσφέροντος, ἐπὶ τὸ ῥᾶον γὰρ καὶ χαλεπώτερον ἐκ τούτου· ἐκ τῆς καταστάσεως ὅλης, καὶ κατὰ μέρη τῶν οὐρανίων καὶ

²² Nutton, 2004: 88.

χώρης ἑκάστης· ἐκ τοῦ ἔθεος· ἐκ τῆς διαίτης· ἐκ τῶν
ἐπιτηδευμάτων· ἐκ τῆς ἡλικίης ἑκάστου· λόγοισι· τρόποισι·
σιγῇ· διανοήμασιν· ὕπνοισιν, οὐχ ὕπνοισιν· ἐνυπνίοισιν οἴοισι
καὶ ὅτε· τιλμοῖσι· κνησμοῖσι· δακρύοισιν· ἐκ τῶν παροξυσμῶν·
διαχωρήμασιν· οὔροισι· πτυάλοισιν· ἐμέτοισι· καὶ ὅσα ἐξ οἴων
ἐς οἷα διαδοχαὶ νοσημάτων, καὶ ἀποστάσεις ἐπὶ τὸ ὀλέθριον
καὶ κρίσιμον· ἰδρώς· ψύξις· ῥίγος· βῆξις· πταρμοί· λυγμοί·
πνεύματα· ἐρεύξεις· φύσαι, σιγῶδες, ψοφῶδες· αἰμορραγίαί,
αἰμορροΐδες· ἐκ τούτων καὶ ὅσα διὰ τούτων σκεπτέον.²³

As is evident from this list, the 'tools' of prognosis encompass a wide range of factors. To begin with, the physician must assess the external factors that can affect the patient. Since prognosis involves the past, present, and future of the patient's condition, the physician must look at the patient's typical habits, his daily activities, and recent intake of foods and beverages. Less changeable factors such as age and gender also play a role in prognosis, because of their effects on the person's natural constitution: age is thought to cool the body, while gender can affect one's susceptibility to certain diseases. On a more universal level, the physician must also consider the condition of the patient's home, the climate and geographic location of the city or town in which he lives, prevailing weather systems, and the current season of the year.²⁴ Some Hippocratic physicians associate each of the seasons with specific humours and elemental qualities. When a season proceeds normally, with seasonable weather patterns, diseases will occur in a normal fashion, with predictable crises and outcomes. When the seasons produce unusual weather conditions, diseases follow abnormal patterns, with outcomes and crises that are difficult to predict.²⁵

²³ Hippocrates, *Epid.* 1.3.10 (2.668 Littré).

²⁴ The text *Airs, Waters, Places* describes the effects of environmental conditions on health and disease.

²⁵ Hippocrates, *Aph.* 3.8 (4.488 Littré), *Humor.* 13.

Once a person has been affected by a disease, their resulting symptoms become additional tools from which the physician can make a prognosis. While ill, the patient's appearance and behaviour indicate how well he is holding up to the disease, and whether his condition is likely to improve or become worse.²⁶ The physician can also use these signs to determine how best to treat his patient; while certain treatments are useful for specific diseases, adjustments also have to be made to suit the remedy to the individual needs of the patient. Here again, a physician will base his decisions both on the habits and constitution of his patient, and on the characteristics of the surrounding environment.

Given the psychological aspects associated with phrenitis, it is necessary to consider some of the Hippocratic approaches to the rational powers, processes such as intelligent thought and sense perception.²⁷ The authors of the Corpus do not have a unified opinion of how these processes occur, or the parts of the body that are responsible for them; overall, opinions about these processes tend to associate the powers with either the brain, the heart, or the blood.²⁸ In many texts, Hippocratic interest in the rational mind is guided by their interest in so-called 'psychological' diseases – those which are caused by physical abnormalities, yet result in dysfunction

²⁶ See, for example, Hippocrates, *Prog.* 9 (2.132-134 Littré): *Εἰ δὲ πρὸς τῷ βάρει καὶ οἱ ὄνυχες καὶ οἱ δάκτυλοι πελιδνοὶ γίνονται, προσδόκιμος ὁ θάνατος παραυτίκα· μελαινώμενοι δὲ παντελῶς οἱ δάκτυλοι καὶ οἱ πόδες ἦσσαν ὀλέθριοι τῶν πελιδνῶν εἰσιν· ἀλλὰ καὶ ἄλλα σημεῖα σκέπτεσθαι χρή· ἦν γὰρ εὐπετέως φέρων φαίνεται τὸ κακόν, καὶ ἄλλο τι τῶν περιεστικῶν πρὸς τούτοις τοῖσι σημείοισιν ὑποδεικνύη, τὸ νοσήμα ἐς ἀπόστασιν τραπήναι ἐλπίς, ὥστε τὸν μὲν ἄνθρωπον περιγενέσθαι, τὰ δὲ μελανθέντα τοῦ σώματος ἀποπεσεῖν. And if, along with the heaviness of the body, the nails and fingers become livid in colour, death is expected at any moment; but if the fingers and toes become completely black, it is a less deadly sign than their being livid. But also it is necessary to consider the signs, for if the patient appears to bear up favourably against the evil, and some other of the signs indicating recovery are revealed in addition to those signs mentioned here, there is hope that the disease will turn into an abscess, so that the patient will recover, but the blackened parts of the body will fall off.*

²⁷ For more detailed discussions of the 'mind' in Hippocratic thought, see Gundert, 2000; Singer, 1992; and van der Eijk, 2005.

²⁸ van der Eijk, 2005: 124-125. Brain: Hippocrates, *Morb. Sacr.* (6.352-397 Littré); heart: Hippocrates, *Morb.* 2 (7.8-115 Littré), Hippocrates, *Cord.* (9.76-93 Littré); blood: Hippocrates, *Morb.* 1 (6.140-205 Littré), Hippocrates, *Flat.* (6.91-115 Littré).

of the various rational powers.²⁹ Of these discussions, only *On the Sacred Disease* and *On the Heart* make any deliberate attempt to associate the rational powers with particular parts of the body; the remaining texts associate the mental powers with internal processes that involve multiple areas of the body.³⁰

The most elaborate explanation of the rational powers is found in the work *On the Sacred Disease*, in connection with a description of epilepsy.³¹ Here, the brain is said to be responsible for intelligence and movement: air coming into the body goes straight to the brain, bringing external information that is interpreted by the brain. The air then moves from the brain to the lungs, abdominal cavity, veins, and the rest of the parts, enabling them to move in accordance with the brain's interpretations.³² Epilepsy occurs when the passage of air through the body is blocked. The various symptoms that can occur during the disease depend upon the location of the blockage.³³

The discussion of rational thought in this text is significant because it is the only work in the Hippocratic Corpus to place the responsibility for rational thought in the brain. In explaining how 'thought' works, this author makes a distinction between *σύνεσις*, the brain's ability to perceive and understand external stimuli, and *φρόνησις*, the awareness of, and reaction to external stimuli, which is common to all the parts of the body.³⁴ These processes continue normally, so long as the brain remains healthy and capable of interpreting the information provided by the air. If the brain becomes contaminated, it is rendered incapable of performing these

²⁹ van der Eijk, 2005: 131.

³⁰ van der Eijk, 2005: 124-125.

³¹ Hippocrates, *Morb. Sacr.* (6.352-397 Littré).

³² Hippocrates, *Morb. Sacr.* 19 (6.390-392 Littré). See also van der Eijk, 2005: 126-127; Gundert, 2000: 21-22; Simon, 1978: 220-225; and Temkin, 1971.

³³ Hippocrates, *Morb. Sacr.* 9-12 (6.370-374 Littré).

³⁴ van der Eijk, 2005: 127.

interpretations. The author believes that this can happen in cases of mania, which occurs when the brain is corrupted by either phlegm or bile.³⁵ In one form of this disease, phlegm moves into the brain, and produces a form of madness that renders the patient silent and calm.³⁶ In a second form, bile heats up the brain and causes the patient to become noisy and restless, to shout and cry out during the night, and to do things at inopportune moments.³⁷ In both cases, the madness is said to continue as long as the bile or phlegm remain in the brain; the symptoms end when the humours flow back through the blood-filled veins, into the body.³⁸ The brain can also be heated by excess blood, which moves into the brain when a person has frightening dreams. This state of fear is temporary, since the blood returns to the body when the person wakes up.³⁹ A final form of madness can occur from moisture, which saturates the brain and causes it to move around, damaging its powers of sight and hearing.⁴⁰

The author of *On the Sacred Diseases* uses these examples of madness as evidence that the brain is the only part of the body capable of rational thought. In positing this theory, he is going against the mainstream ideas of his time. To

³⁵ Hippocrates, *Morb. Sacr.* 18 (6.388-390 Littré). See also: Pigeaud, 1987: 59-60.

³⁶ Hippocrates, *Morb. Sacr.* 18 (6.388 Littré): οἱ μὲν γὰρ ὑπὸ τοῦ φλέγματος μαινόμενοι ἡσυχοί τε εἰσι καὶ οὐ βοῶσιν οὐδὲ θορυβέουσιν *Those who become mad on account of phlegm are silent and do not shout, nor do they make a disturbance.*

³⁷ Hippocrates, *Morb. Sacr.* 18 (6.388-390 Littré): οἱ δὲ ὑπὸ χολῆς κεκράκται καὶ κακοῦργοι καὶ οὐκ ἀτρεμαῖοι, ἀλλ' αἰεὶ τι ἄκαιρον δρῶντες... Ἐκ νυκτῶν δὲ βοᾷ καὶ κέκραγεν, ὅκοταν ἔξαπίνης ὁ ἐγκέφαλος διαθερμαίνεται· τοῦτο δὲ πάσχουσιν οἱ χολώδεις, οἱ φλεγματώδεις δὲ οὐ· *But those who become mad on account of bile scream and are mischievous and do not stay calm, but they are always doing something that is badly-timed.... And they shout and scream during the night, whenever the brain is suddenly overheated; this happens to those suffering from bile, but not those suffering from phlegm.* This reference to ill-timed behaviour suggests that the brain becomes unable to communicate actions to the rest of the body in a timely manner.

³⁸ Hippocrates, *Morb. Sacr.* 18 (6.388 Littré).

³⁹ Hippocrates, *Morb. Sacr.* 18 (6.390 Littré): διαθερμαίνεται δὲ καὶ ἐπὶ τὸ αἷμα ἐπέλθη πούλυ ἐπὶ τὸν ἐγκέφαλον καὶ ἐπιζέση. Ἔρχεται δὲ κατὰ τὰς φλέβας πούλυ τὰς προειρημένας, ὅκοταν τυγχάνη ἄνθρωπος ὀρέων ἐνύπνιον φοβερόν καὶ ἐν τεῷ φόβῳ ἔη· ... ὅκοταν δὲ ἐπέγρηται καὶ καταφρονήσει καὶ τὸ αἷμα πάλιν ἀποσκεδασθῆ ἔς τὰς φλέβας τὰς προειρημένας, πέπαυται. *And the brain is heated also when much blood comes upon the brain and boils. And the blood comes from the aforementioned veins in great amounts. whenever a human happens to see a frightening dream and goes into a state of fear... but whenever he awakens and comes to his senses, the blood falls back into the aforementioned veins.*

⁴⁰ Hippocrates, *Morb. Sacr.* 17 (6.388 Littré).

strengthen his argument, this author attacks the idea that intelligence can be the responsibility of either the heart or the *phrēn*:

For which reason I say that the brain interprets intelligence. But the phrēn takes its name in another way, having acquired it through chance and usage, not from reality or from nature; nor do I think that the phrēn has any powers such that it thinks or understands; however, if some person rejoices exceedingly, or is grieved from an unexpected thing, the phrēn jumps and makes leaps on account of its thinness and because it is especially stretched out in the body, and because it does not have a cavity in which to take anything good or bad that comes upon it, but from both of these it is disturbed on account of the weakness of its nature. Since it senses nothing before it is present in the body, it has this name at random, and the cause is just as it is with the parts at the side of the heart which are called 'ears', but contribute nothing to hearing. And some people say that we think with the heart and that this is the part which grieves and thinks. Yet it is not in this way, but it is diverted just like the phrēn, and more so, on account of these causes: for veins are directed from all parts of the body into this place, and it has valves so that it perceives if some pain or tension happens to the person, for by necessity, when distressed, the body shudders and is contracted, and it suffers the same thing when extremely happy. On account of this, the heart and the phrēn feel things especially. But indeed, neither has a share in thinking, but of all these things the brain is the cause.

Διὸ φημὶ τὸν ἐγκέφαλον εἶναι τὸν ἐρμηνεύοντα τὴν ξύνεσιν. Αἱ δὲ φρένες ἄλλως οὐνομα ἔχουσι τῇ τύχῃ κεκτημένον καὶ τῷ νόμῳ, τῷ δ' ἐόντι οὐκ, οὐδὲ τῇ φύσει, οὐδὲ οἶδα ἔγωγε τίνα δύναμιν ἔχουσιν αἱ φρένες ὥστε φρονέειν τε καὶ νοέειν, πλὴν εἴ τι ὠνθρωπος ὑπερχαρεῖ ἔξ ἀδοκῆτου ἢ ἀνιηθείη, πηδῶσι καὶ ἄλσι παρέχουσι ὑπὸ λεπτότητος καὶ ὅτι ἀνατέτανται μάλιστα ἐν τῷ σώματι, καὶ κοιλίην οὐκ ἔχουσι πρὸς ἣν δέξονται

ἢ ἀγαθὸν ἢ κακὸν προσπίπτον, ἀλλ' ὑπ' ἀμφοτέρων τούτων
 τεθορύβηται διὰ τὴν ἀσθενείην τῆς φύσιος· ἐπεὶ αἰσθάνονται γε
 οὐδενὸς πρότερον τῶν ἐν τῷ σώματι ἑόντων, ἀλλὰ μάτην τοῦτο
 τὸ οὖνομα ἔχουσι καὶ τὴν αἰτίην, ὥσπερ τὰ πρὸς τῇ καρδίῃ
 ἅπερ ὧτα καλέεται, οὐδὲν ἐς τὴν ἀκοὴν ξυμβαλλόμενα. Λέγουσι
 δέ τινες ὡς φρονέομεν τῇ καρδίῃ καὶ τὸ ἀνιώμενον τοῦτό ἐστι
 καὶ τὸ φροντίζον· τὸ δὲ οὐχ οὕτως ἔχει, ἀλλὰ σπᾶται μὲν ὥσπερ
 αἱ φρένες καὶ μᾶλλον διὰ ταύτας τὰς αἰτίας· ἐξ ἅπαντος γὰρ
 τοῦ σώματος φλέβες ἐς αὐτὴν συντείνουσι, καὶ ξυγκλείσασα ἔχει
 ὥστε αἰσθάνεσθαι, ἣν τις πόνος ἢ τάσις γίνηται τῷ ἀνθρώπῳ·
 ἀνάγκη γὰρ καὶ ἀνιώμενον φρίσσειν τὸ σῶμα καὶ συντείνεσθαι,
 καὶ ὑπερχαίροντα τὸ αὐτὸ τοῦτο πάσχειν· διότι ἡ καρδίη
 αἰσθάνεται τε μάλιστα καὶ αἱ φρένες. Τῆς μέντοι φρονήσιος
 οὐδετέρῳ μέτεστιν, ἀλλὰ πάντων τουτέων ὁ ἐγκέφαλος αἰτιός
 ἐστιν.⁴¹

This author believes that it is only the structure and location of the heart and the *phrēn* which makes them feel emotions such as joy, grief, and anxiety, and which leads other physicians to associate them with the rational powers.

An example of rational thought as a process can be seen in *Diseases* 1. In this work, the blood is said to be responsible for the greatest part of man's intelligence, *σύνεσις*.⁴² So long as the blood flows through the body normally, the patient remains rational; if the blood becomes corrupted by the invasion of hot bile, its consistency and movement changes, and the patient becomes irrational.⁴³

⁴¹ Hippocrates, *Morb. Sacr.* 20 (6.392-394 Littré).

⁴² Hippocrates, *Morb.* 1.30 (6.200 Littré).

⁴³ Hippocrates, *Morb.* 1.30 (6.200 Littré). There are no other references to this process in this text.

Signs and Symptoms of Phrenitis

The Hippocratic Corpus contains three pathologic discussions of phrenitis that are of particular value to our examination of this disease concept. For this reason, it is useful to include these passages here. The first passage comes from the text

Affections:

When phrenitis takes hold of the patient, at first the fever is very small, and there is pain near the hypochondria, more toward the right, in the liver; but when the fourth or fifth day begins, the fever becomes stronger, and the colour becomes bilious, and the patient becomes deranged in his thinking. In this disease, in the case of pain, provide the same [treatments] as in pleuritis, and warm him, whenever pain is present. Give a remedy to the cavity, and do the other treatments [as used in pleuritis] the same way, except for drink; in respect to drink use any you wish except wine, give either vinegar or honey and water. But wine does not bring benefit to derangement of thought, neither in this disease, nor in any other. To wash the patient from the head downwards with large quantities of warm water gives relief in this disease; for while softening the body, more sweat is created, and the cavity empties, and urine is excreted, and the patient becomes more in control of himself. The disease happens on account of bile, whenever the bile has been set in motion and settles next to the inward parts and the phrēn. In the shortest cases it comes to a crisis on the seventh day, in the longest cases, on the eleventh day. Few patients survive this disease. And it can also change into peripneumonia; if it changes, few patients survive it.

Φρενίτις ὅταν λάβῃ, πυρετὸς ἴσχει βληχρὸς τὸ πρῶτον, καὶ ὀδύνη πρὸς τὰ ὑποχόνδρια, μάλλον δὲ πρὸς τὰ δεξιὰ ἐς τὸ ἥπαρ· ὅταν δὲ τεταρταῖος γένηται καὶ πεμπταῖος, ὃ τε πυρετὸς ἰσχυρότερος γίνεται, καὶ αἱ ὀδύνη, καὶ τὸ χρῶμα ὑπόχολον γίνεται, καὶ τοῦ νοῦ παρακοπή. Τούτῳ, τῆς μὲν ὀδύνης, ἅπερ ἐν

τῆ πλευρίτιδι, διδόναι, καὶ χλιαίνειν, ἴν' ἡ ὀδύνη ἔχει· τὴν κοιλίην δὲ θεραπεύειν, καὶ ἄλλα ποιέειν τὰ αὐτὰ, πλὴν τοῦ ποτοῦ· ποτῶ δὲ χρῆσθαι τῶν ἄλλων ὅτῳ ἂν ἐθέλῃς, πλὴν οἴνου, ἢ ὄξος καὶ μέλι καὶ ὕδωρ διδόναι· οἶνος δὲ οὐ συμφέρει τοῦ νοῦ παρακόπτοντος, οὔτε ἐν ταύτῃ τῇ νόσῳ, οὔτε ἐν τῆσιν ἄλλῃσι· λούειν δὲ πολλῶ καὶ θερμῶ κατὰ τὴν κεφαλὴν ἐν ταύτῃ τῇ νόσῳ συμφέρει· μαλασσομένου γὰρ τοῦ σώματος, καὶ ἰδρῶς μᾶλλον γίνεται, καὶ ἡ κοιλίη καὶ τὸ οὔρον διαχωρέει, καὶ αὐτὸς ἑαυτοῦ ἐγκρατέστερος γίνεται· Ἡ δὲ νόσος γίνεται ὑπὸ χολῆς, ὅταν κινηθεῖσα πρὸς τὰ σπλάγχνα καὶ τὰς φρένας προσίζη· κρίνεται δὲ ἡ μὲν βραχυτάτη ἐβδομαίη, ἡ δὲ μακροτάτη ἑνδεκαταίη· διαφεύγουσι δὲ καὶ ταύτην ὀλίγοι· μεθίσταται δὲ καὶ αὕτη ἐς περιπλευμονίην, καὶ ἦν μεταστῆ, ὀλίγοι διαφεύγουσιν.⁴⁴

The second passage, found in *Diseases* 1, is divided between two chapters: chapter 30 describes the disease itself, while chapter 34 explains how the disease slowly weakens the patient and eventually causes him to die.

Phrenitis happens in this way: the blood in man contributes the greatest part of intelligence; some say it is all of it. And so whenever bile is put into motion, it comes into the veins and the blood, and through this therefore it moves into the blood and turns it from its usual composition and movement into serum, and it heats it; and it heats also all the other body parts; and the patient both loses his wits and is not in himself on account of both the greatness of the fever and because the blood is serous and its movement has become abnormal. Those being in this way because of phrenitis are especially similar to melancholics in respect to their derangement. For when the blood is destroyed by bile and phlegm, melancholics have this disease [i.e.: melancholia] and they become deranged, and some become mad. And in phrenitis it occurs in a similar manner; but in these cases the

⁴⁴ Hippocrates, *Aff.* 10 (6.216-218 Littré)

madness and the disordered thought happens to a lesser extent because the bile [that causes phrenitis] is more weak than the other bile. ...

They are delirious in this disease throughout the whole illness, inasmuch as the motion of the blood, having been corrupted and set in motion, is not normal. And inasmuch as they are out of their senses, [the phrenitis patients] do not take any of that which is offered to them, at least anything worthy of mention. And as time continues, they waste away and become thinner both from the fever and from not being nourished; and first the parts at the extremities wither up and grow cold, then the closer parts. This is the origin of the cold and the fever and the pains; whenever the blood in the veins is made cold on account of the phlegm, it changes and congeals, and coming together at one time in this place, at another time in another place, it trembles, and finally everything grows cold, and the patient dies.

Φρενίτις δὲ ὡδε ἔχει· τὸ αἷμα τὸ ἐν τῷ ἀνθρώπῳ πλεῖστον
 ξυμβάλλεται μέρος συνέσιος· ἔνιοι δὲ λέγουσι, τὸ πᾶν ὀκόταν
 οὖν χολὴ κινηθεῖσα ἐς τὰς φλέβας καὶ ἐς τὸ αἷμα ἐσέλθη,
 διεκίνησε καὶ διώρρωσε τὸ αἷμα ἐκ τῆς ἐωθυίης συστάσιός τε καὶ
 κινήσιος, καὶ διεθέρμηνε· διαθερμανθὲν δὲ διαθερμαίνει καὶ τὸ
 ἄλλο σῶμα πᾶν, καὶ παρανοεῖ τε ὠνθρωπος καὶ οὐκ ἐν ἐωυτῷ
 ἔστιν ὑπὸ τοῦ πυρετοῦ τοῦ πλήθους καὶ τοῦ αἵματος τῆς
 διορρώσιός τε καὶ κινήσιος γενομένης οὐ τῆς ἐωθυίης.
 Προσεοίκασι δὲ μάλιστα οἱ ὑπὸ τῆς φρενίτιδος ἐχόμενοι τοῖσι
 μελαγχολῶσι κατὰ τὴν παράνοϊαν· οἱ τε γὰρ μελαγχολώδεις,
 ὀκόταν φθαρῇ τὸ αἷμα ὑπὸ χολῆς καὶ φλέγματος, τὴν νοῦσον
 ἴσχουσι καὶ παράνοοι γίνονται, ἔνιοι δὲ καὶ μαίνονται· καὶ ἐν τῇ
 φρενίτιδι ὡσαύτως· οὕτω δὲ ἦσσον ἢ μανίη τε καὶ ἡ
 παραφρόνησις γίνεται, ὅσῳ περ ἢ χολὴ τῆς χολῆς ἀσθενεστέρα
 ἔστιν. ...

Ἐπὶ δὲ τῆς φρενίτιδος ἀπόλλυνται ὡδε· παραφρονέουσιν ἐν τῇ
 νοῦσῳ διὰ παντὸς, ἅτε τοῦ αἵματος ἐφθαρμένου τε καὶ
 κεκινημένου οὐ τὴν ἐωθυίαν κίνησιν· καὶ ἅτε παραφρονέοντες,

οὐκέτι τῶν προσφερομένων δέχονται, ὅ τι ἄξιον λόγου· ὅταν δὲ προίη ὁ χρόνος, μαραίνονται τε καὶ μινύθουσιν ὑπὸ τε τοῦ πυρετοῦ καὶ ὑπὸ τοῦ μηδὲν τρέφεσθαι· καὶ πρῶτα μὲν τὰ ἐν τοῖσιν ἀκρωτηρίοισι μινύθει τε καὶ ψύχεται, ἔπειτα δὲ τὰ ἐπ' ἐγγυτάτω. καὶ ψύχεός γε καὶ πυρὸς καὶ πόνων ἀρχὴν ταύτην ἴσχει· ὅταν τὸ αἷμα ἐν τῇσι φλεψὶν ὑπὸ τοῦ φλέγματος ψυχθῇ, μεταπίπτει τε καὶ ξυσπᾶται ἄλες ἄλλοτε ἄλλη, καὶ τρέμει, τέλος δὲ ψύχεται πάντα, καὶ ἀποθνήσκει.⁴⁵

The final passage is found in *Diseases* 3.

Phrenitis: Phrenitis occurs also from another disease. These patients suffer in the following way: they feel pain in the phrēn, such that they cannot suffer you to touch them, and there is fever, and there is derangement, and intense staring, and in other things the patients resemble those who suffering from peripneumonia, whenever those patients with peripneumonia are deranged. It is necessary to warm this patient with warm, moist fomentations, and with drinks except for wine, and if the patient is in a condition for it, purge them upwards: it is necessary for them to bring up material by coughing and spitting, just as in peripneumonia. But if not, prepare the cavity so as to evacuate it; moisten it with drinks, for this is a good thing. The disease is deadly; patients die on the third, fifth or seventh days; if it takes a milder course, it has a crisis just as in peripneumonia.

Φρενίτιδες· φρενίτιδες δὲ γίνονται καὶ ἐξ ἑτέρων νούσων. Πάσχουσι δὲ τάδε· τὰς φρένας ἀλγέουσιν, ὥστε μὴ ἕασαι ἂν ἄψασθαι, καὶ πῦρ ἔχει, καὶ ἔκφρονές εἰσι, καὶ ἀτενὲς βλέπουσι, καὶ τᾶλλα παραπλήσια ποιέουσι τοῖσιν ἐν τῇ περιπλευμονίῃ, ὁκόταν οἱ ἐν τῇ περιπλευμονίῃ ἔκφρονες ἔωσι. Τοῦτον χλιαίνειν δεῖ χλιασμασιν ὑγροῖσι καὶ πόμασι πλὴν οἴνου, καὶ ἦν μὲν οἶός τε ἦ, ἀποκαθαίρειν ἄνω, βηχί τε καὶ πτύσει ἀνάγειν χρὴ ὥσπερ

⁴⁵ Hippocrates, *Morb.* 1.30 (6.200 Littré) and Hippocrates, *Morb.* 1.34 (6.204 Littré).

ἐν τῇ περιπλευμονίῃ· εἰ δὲ μὴ, τὴν κάτω κοιλίην παρασκευάζειν
 ὅκως ὑποχωρήῃ· ὑγραίνειν δὲ πόματι· ἀγαθὸν γάρ· Ἡ δὲ νοῦσος
 θανατώδης· ἀποθνήσκουσι δὲ τριταῖοι ἢ πεμπταῖοι ἢ ἑβδομαῖοι·
 ἦν δὲ ἠπίως ληφθῆ, κρίνει ὡς περιπλευμονίῃ.⁴⁶

Having reviewed these pathologic discussions of phrenitis, we see that fever and delirium are the only symptoms common to all three texts.⁴⁷ In discussions of phrenitis in the other texts of the Hippocratic Corpus, fever and delirium are referenced more often than any of the other symptoms, indicating that they are the most significant symptoms of this disease. In the *Prorrhethics* and *Coan Prenotions*, for example, the combination of fever and delirium is often used as a means of diagnosing a case of phrenitis.⁴⁸ The Hippocratic Corpus also identifies a number of other significant symptoms of phrenitis. Many of these symptoms, such as trembling, sleeplessness, and the quality of the urine, are significant because of their connection to prognosis, the process of forecasting the course and outcome of a disease. As mentioned above, Hippocratic physicians rely heavily on prognosis both to assist them in their treatment of a disease, and to maintain their own reputations as successful physicians. It is not surprising then, that much of our information about phrenitis symptoms comes in the form of predictive statements, indicating how one or more symptom may indicate the future progression of the patient and his condition.

⁴⁶ Hippocrates, *Morb.* 3.9 (7.128 Littré).

⁴⁷ Hippocrates, *Aff.* 10 (6.216-218 Littré) lists fever, pain in the hypochondrium, a bilious complexion, and delirium; Hippocrates, *Morb.* 1.30 (6.200 Littré) lists only fever and delirium; and Hippocrates, *Morb.* 3.9 (7.128 Littré) lists pain in the diaphragm, fever, derangement, and a fixed gaze.

⁴⁸ For example, Hippocrates, *Prorrh.* 1.15 (5.514 Littré): Οἱ ἑκστάντες ὀξέως ἐπιπυρέξαντες σὺν ἰδρωτί, φρενιτικοὶ γίνονται. *Those who are out of their senses, who then suddenly have a fever together with sweating, they become phrenitic.* A similar statement is made in Hippocrates, *Coac.* 94 (5.602 Littré). See also Hippocrates, *Prorrh.* 1.27 (5.516 Littré)/ Hippocrates, *Coac.* 69 (5.598 Littré), and Hippocrates, *Prorrh.* 1.34 (5.518 Littré).

Before moving on to a discussion of these symptoms, it must be noted that the Hippocratic authors frequently refer to the dangerous, highly fatal nature of phrenitis. Each of the pathologic discussions of phrenitis (mentioned above), comment on the fact that many phrenitis patients die from their disease.⁴⁹ A similar trend is evident in the case histories of phrenitis patients presented in the *Epidemics*: of the seven cases that are described in detail, only two of the patients survive.⁵⁰ In addition, as will be demonstrated, the majority of prognostic information gathered from symptoms of phrenitis is negative, indicating that the patient is in danger of death.⁵¹

Delirium, or derangement of the rational faculties, is possibly the most significant symptom in the Hippocratic concept of phrenitis. In their review of phrenitis in the Hippocratic Corpus, Simon Byl and Willy Szafran point out that Greek authors frequently use the prefixes παρα- and ἐκ- with words of thinking to indicate damaged thought.⁵² This is evident in Hippocratic terminology for phrenitic delirium, which frequently uses variants of παρακρούω, and παρακοπτέω, meaning *I am struck falsely in the mind, or deranged*.⁵³ In *Affections* 10, phrenitic derangement is expressed as damage of the *nous*, or organ of thought (καὶ τοῦ νοῦ παρακοπή⁵⁴); in

⁴⁹ Hippocrates, *Aff.* 10 (6.218 Littré): διαφεύγουσι δὲ καὶ ταύτην ὀλίγοι· μεθίσταται δὲ καὶ αὕτη ἐς περιπλευμονίην, καὶ ἦν μεταστῆ, ὀλίγοι διαφεύγουσιν. *Few patients survive this disease. And it can also change into pneumonia; if it changes, few patients survive it.* See also Hippocrates, *Morb.* 1.34 (6.204 Littré) (which concludes the discussion begun in *Morb.* 1.30), Hippocrates, *Morb.* 3.9 (7.128 Littré).

⁵⁰ Case histories of individual patients are found at Hippocrates, *Epid.* 3.3.17(4)(3.116-118 Littré), 5.52 (5.236-238 Littré)/7.71 (5.432 Littré) (the same patient is described in two, almost identical passages), 7.53 (5.422 Littré), 7.79 (5.434-436 Littré), and three patients in 7.112 (5.460 Littré). Only the patients in 5.52/7.71 and 7.79 survive. It is possible that Nicoxenus, the patient in Hippocrates, *Epid.* 7.80 (5.436 Littré) is also suffering from phrenitis; if so, there are three survivors out of eight patients.

⁵¹ For example, Hippocrates, *Coac.* 269 (5.642 Littré) and Hippocrates, *Prorrh.* 1.11 (5.512-514 Littré). Other examples are provided in the following discussion.

⁵² Byl and Szafran, 1996: 99.

⁵³ Liddell, Scott and Jones, 1996: 1314, s.v.: παρακόπτω and παρακρούω. The definitions of these terms are almost identical; the variant παρακρουστικός is listed as being equivalent to παρακοπτικός, ἢ, ὄν (Liddell, Scott and Jones, 1996: 1314, s.v.: παρακρουστικός).

⁵⁴ Hippocrates, *Aff.* 10 (6.216-218 Littré). νοῦς as the agent of inner sight, or instinct, goes back to the Homeric Epics; it operates alongside the φρήν, the seat of intelligent thought, and the θυμός, the seat of emotion. For a discussion of these concepts in medical and non-medical sources, see Gundert, 2003: 13-36, and Sullivan, 1995: 18-35.

other instances, παρακοπή is used without reference to the particular damaged organ.⁵⁵ Other passages in the Corpus describe the damaged reason of phrenitis using such terms as παρανοέει, παραφρονέουσιν, and ἔκφρων, all of which indicate a state of being out of one's 'mind', or incapable of rational thought.⁵⁶ In a few passages, similar states are indicated by variants of ἐξίστημι: *I am displaced, out my senses*.⁵⁷

As Jackie Pigeaud points out, Galen believed that the Hippocratic authors chose their words with deliberate precision, in order to differentiate between the various forms, and degrees of severity of each kind of delirium.⁵⁸ In his introduction to volume 1 of the Loeb *Hippocrates* series, W.H.S. Jones makes a similar assumption, pointing out that the terms used by the Hippocratic authors can be divided into two categories⁵⁹: words such as those mentioned above, which indicate derangement of the rational faculties, and words such as παράληρος and παραλέγω, which refer to the wandering, unfocussed speech that is often seen in delirious people.⁶⁰ Jones suggests that within each of these categories, the terms can be ranked according to the severity of delirium to which they refer; despite his admission that it is difficult to establish this hierarchy of terms due to lack of primary evidence, Jones still takes the

⁵⁵ Examples include Hippocrates, *Prorrh.* 1.4 (5.510-512 Littré) and 1.34 (5.518 Littré), Hippocrates, *Epid.* 3.3.17(4) (3.116-118 Littré), and Hippocrates, *Coac.* 76 (5.600 Littré) and 269 (5.642 Littré).

⁵⁶ More precise translations of these terms are: παρανοέω (παρα + νοέω) *think amiss, misunderstand, lose one's wits* (Liddell, Scott and Jones, 1996: 1319); παραφρονέω (παρα + φρονέω), *to be beside one's self, deranged* (Liddell, Scott and Jones, 1996: 1330); and ἔκφρων (ἐκ + φρήν) *to be demented* (Liddell, Scott and Jones, 1996: 526).

⁵⁷ Liddell, Scott and Jones, 1996: 595, s.v.: ἐξίστημι. For these terms in use, see Hippocrates, *Coac.* 93 (5.602 Littré): οἱ ἐξιστάμενοι; Hippocrates, *Coac.* 94 (5.602 Littré) and Hippocrates, *Prorrh.* 1.15 (5.514 Littré): οἱ εκστάντες.

⁵⁸ Pigeaud, 2008a: 653; See also: Galen, *De comate secundum Hippocratem* 3 (7.657-658 Kühn), and Galen, *Hipp. Epid.* 3.1 (17a.481 Kühn).

⁵⁹ Jones, 1923a: lvii-lviii. While Jones appears to share Galen's opinion, he makes no reference to his comments.

⁶⁰ In Liddell, Scott and Jones, παράληρος is defined as *raving, delirious* (1996: 1316, s.v.: παράληρος, ου); it comes from παραληρέω, *I talk nonsense, rave*. Liddell, Scott and Jones, 1996: 1316, s.v.: παρληρέω. παραλέγω: *speak beside (the purpose), wander in one's talk, rave* (Liddell, Scott and Jones, 1996: 1315, s.v.: παρλέγω).

liberty of creating such a scheme, and declaring that “ἐκμαίνομαι is obviously the most vigorous word” to indicate derangement of the mind.⁶¹ Such an assumption is misleading, because the Hippocratic authors themselves make no deliberate attempt to rank, or even to explain their various words for delirium. In addition, since these authors do not share a unified view of the location of, or even the processes involved in rational thought, it would be extremely difficult to create any such hierarchical scheme.

In relation to phrenitis, it is notable that delirium is almost always described using words that relate to derangement of the rational powers. There is only one, rather tenuous, instance in which παραλέγω is used in reference to phrenitis. This occurs in *Epidemics* 1, when πολλά παρέλεγον, ‘much wandering speech’, is listed as one of the dangerous symptoms which appears in fatal cases of *causus*.⁶² A few lines later, the author briefly states that patients with phrenitis also display ‘all these aforementioned symptoms’.⁶³ Given the sweeping nature of such a comment, it seems equally likely that the author does not mean to state definitively that phrenitis patients exhibit wandering speech. This possibility becomes even more likely when one considers that of all the references to wandering speech in *Epidemics* 1, or indeed in any of the Hippocratic texts, this is the only one that appears to be connected to

⁶¹ Jones, 1923a: lx. Jones defines ἐκμαίνομαι as ‘wild raving’; I prefer to translate it as *I become mad*, or *am driven mad*.

⁶² Hippocrates, *Epid.* 1.2.9 (2.652 Littré).

⁶³ Hippocrates, *Epid.* 1.2.9 (2.650-652 Littré): τοῖσι μὲν οὖν καυσώδεσιν ἀρχομένοισιν ἐπεσημαινεν, οἷσι τὰ ὀλέθρια συνέπιπτεν· αὐτίκα γὰρ ἀρχομένοισι πυρετὸς ὄξυς, σμικρὰ ἐπερρίγουν· ἄγρυπνοι, διψώδεις, ἀσώδεις, σμικρὰ ἐφίδρουν, περὶ μέτωπον καὶ κληίδας, οὐδεὶς δι’ ὅλου· πολλά παρέλεγον·... τοῖσι δὲ φρενιτικοῖσιν συνέπιπτε μὲν καὶ τὰ ὑπογεγραμμένα πάντα... *And so in those cases of ardent fever, symptoms appeared at the beginning, those symptoms which indicate danger of death. For immediately in the beginning there was acute fever, slight rigours, wakefulness, thirst, nausea, slight sweating around the face and collarbone, but in no case in the whole body; much wandering speech;... And in cases of phrenitis indeed, all these aforementioned symptoms befell them.*

phrenitis.⁶⁴ A second notable feature in descriptions of phrenitis delirium is that it is rarely described using forms of μανία, *madness*, or ἐκμαίνομαι, *I am driven mad*.⁶⁵ One exception to this rule is in *Diseases* 1.30, in which the author explains that while both phrenitis and melancholia produce madness, ἡ μανία, and disordered thought, ἡ παραφρόνησις, the severity of these symptoms is weaker in phrenitis because the bile which produces the disease is weaker than that which produces melancholia.⁶⁶ It is important to note that in this passage, ἡ μανία is not being used to refer to a specific disease entity, only to a general form of madness.⁶⁷

Fever is the second significant symptom in the Hippocratic concept of phrenitis.⁶⁸ In *Affections* 10, the author states that the fever starts out mild and becomes stronger on the fourth or fifth day.⁶⁹ Most other references to the fever indicate only that it is present in the disease, or suggest that it is usually considered to be severe and acute.⁷⁰ The Hippocratic authors are undecided about the timing of the delirium and fever of phrenitis. In *Affections* 10, for example, the author explains that the delirium appears four or five days after the fever, at the time when the patient's fever becomes

⁶⁴ παρέλεγεν appears in Hippocrates, *Epid.* 1.3.13, cases 4 (2.692 Littré) and 7 (2.702 Littré); παράληροι appears in Hippocrates, *Epid.* 1.1.2, line 30 (2.610 Littré), and 1.2.4, line 38 (2.620 Littré). Phrenitis is mentioned in Hippocrates, *Epid.* 1.2.4 (2.620 Littré), line 42; 1.2.6, line 3 (2.636 Littré); and 1.2.9, lines 2, 19, 22, and 87 (2.650, 654, and 666 Littré); not one of these passages makes reference to the delirium experienced by phrenitis patients.

⁶⁵ The Hippocratic authors do not have a strong concept of mania as a specific disease, and often use the term to indicate general delirium. For a discussion of μανία in the Hippocratic Corpus, see Pigeaud, 1987: 29-63.

⁶⁶ Hippocrates, *Morb.* 1.30 (6.200 Littré). Note that the author does not mention the types of bile that produce each disease (i.e.: black and yellow), as one might expect from later authors. For a discussion of μελανχολία in the Hippocratic Corpus, see Flashar, 1966: 21-49.

⁶⁷ Pigeaud, 1987: 35-36.

⁶⁸ In their discussion of phrenitis in the Hippocratic Corpus, Byl and Szafran (1996: 100) state 'Mais la fièvre est assurément le symptôme de la *phrenitis le plus fréquemment mentionné par les médecins hippocratiques*.' Although they do not provide a complete list of the discussions of phrenitis that they include in their survey, their footnotes suggest that they incorporate at least three case histories which I do not believe to be cases of phrenitis (*Epid.* 3.3.17, cases 13 (3.136-140 Littré), 15 (3.142-146 Littré), and 16 (3.146-148 Littré)). Nevertheless, these authors are correct in suggesting that fever is a significant feature of phrenitis.

⁶⁹ Hippocrates, *Aff.* 10 (6.216 Littré).

⁷⁰ Hippocrates, *Prorrh.* 1.15 (5.514 Littré): ὀξέως ἐπιπυρέξαντες *fever following suddenly afterwards*; Hippocrates, *Epid.* 1.2.9 (2.650 Littré): πυρετὸς ὀξύς *acute fever*.

stronger.⁷¹ *Coan Prenotions* 94 and *Prorrhetic* 1.15 suggest an alternate view, stating that the fever appears after the patient has lost his senses.⁷² A third possibility is offered in *Diseases* 1.30, in which the fever and delirium appear simultaneously, on account of heated blood.⁷³

In some passages, fever is associated with trembling or spasms: some passages speak of shivering, which is usually accompanied by fever, chills, and sweating, while others describe a more violent form of spasms or convulsions.⁷⁴ In both cases, the presence of trembling in phrenitis is thought to be a negative, even fatal sign: in *Coan Prenotions* 96, for example, the author clearly states that violent trembling (νεανικῶς τρομώδεα) in cases of phrenitis indicates death.⁷⁵ A few of these passages refer to the trembling as rigor, τὸ ρίγος, suggesting that the motions are related to a cooling sensation in the body.⁷⁶ This feeling of cold is echoed in a number of other passages, which refer to the cooling as κατάψυξις; this symptom usually occurs while the fever is still present, and is a very bad sign in phrenitis.⁷⁷ The danger of this scenario seems

⁷¹ Hippocrates, *Aff.* 10 (6.216 Littré): Φρενίτις ὅταν λάβη, πυρετὸς ἴσχει βληχρὸς τὸ πρῶτον... ὅταν δὲ τεταρταίος γένηται καὶ πεμπταίος, ὅ τε πυρετὸς ἰσχυρότερος γίνεταί καὶ αἱ ὀδύνηαι, καὶ τὸ χρῶμα ὑπόχολον γίνεταί, καὶ τοῦ νοῦ παρακοπή. *When phrenitis takes hold of the patient, the fever is very small; ... but when the fourth or fifth day begins, the fever becomes stronger, and the colour becomes bilious, and the patient becomes deranged in his nous.*

⁷² Hippocrates, *Coac.* 94 (5.602 Littré): Οἱ ἐκστάντες ὀξέως ἐπιπυρέξαντες, φρενιτικοὶ γίνονται. *Those who are suddenly out of their senses, having fever afterwards, they become phrenitic;* Hippocrates, *Prorrh.* 1.15 (5.514 Littré): Οἱ ἐκστάντες ὀξέως ἐπιπυρέξαντες σὺν ἰδρώτι, φρενιτικοὶ. *Those who are out of their senses, when they suddenly have fever afterwards together with sweating, are phrenitic.*

⁷³ Hippocrates, *Morb.* 1.30 (6.200 Littré).

⁷⁴ Hippocrates, *Epid.* 7.79 (5.434 Littré): μετὰ δὲ καύσιος τρομώδης· *Burning fever together with trembling;* *Epid.* 1.2.9 (2.650-652 Littré): αὐτίκα γὰρ ἀρχομένοισι πυρετὸς ὀξύς, ἐπερρίγειον σμικρά· *For immediately in the beginning there was acute fever, slight rigours.* Spasms and trembling in phrenitis are also mentioned without reference to fever: Hippocrates, *Coac.* 76 (5.600 Littré), 90 (5.602 Littré), 95 (5.602-604 Littré), 96 (5.604 Littré), and 100 (5.604 Littré); Hippocrates, *Epid.* 1.2.6 (2.636 Littré); Hippocrates, *Prog.* 24 (2.186-188 Littré); and Hippocrates, *Prorrh.* 1.9 (5.512 Littré).

⁷⁵ Hippocrates, *Coac.* 96 (5.604 Littré): Τὰ ἐν φρενιτικοῖσι νεανικῶς τρομώδεα, θανάσιμα.

⁷⁶ Hippocrates, *Coac.* 90 (5.602 Littré): ρίγος τουτέοισι κάκιστον. See also Hippocrates, *Prorrh.* 1.13 (5.514 Littré), and Hippocrates, *Epid.* 1.2.9 (2.650-654 Littré).

⁷⁷ Hippocrates, *Prorrh.* 1.27 (5.516 Littré): Αἱ μετὰ καταψύξις οὐκ ἀπυρέτω, ἐφιδρώντι τὰ ἄνω, δυσφορία φρενιτικαί, ὡς καὶ Ἄρισταγόρη, καὶ μέντοι καὶ ὀλέθρια. *Those with cooling that is not free from fever, sweating in the upper parts of the body, and discomfort, are phrenitic, as in*

to be related to the fact that the patient feels cold, even though the fever has not ended. In *Prorrhetic* 1.27, the author uses the phrase 'cooling without relief from the fever': καταψύξιος οὐκ ἀπυρέτω; he believes that this symptom, combined with sweating in the upper body, is a fatal sign in phrenitis. This opinion is shared by the author of *Prognostics*, who explains that the best sweats in acute diseases are those which completely do away with the fever: when cold sweats occur in conjunction with acute fevers, they are indicative of death.⁷⁸

The most severe forms of trembling in phrenitis are manifest as convulsions, οἱ σπασμοί.⁷⁹ Convulsions are a very severe symptom in the Hippocratic texts, and are usually said to be a bad sign.⁸⁰ In phrenitis, convulsions seem to be connected to the fever. The author of *Epidemics* 1 believes that convulsions are a regular part of phrenitis.⁸¹ In *Prognostics* 24, the author explains that convulsions during fevers are not common in adults or children over the age of seven 'unless some of the most powerful and pernicious signs appear, such as those which happen in cases of

the case of Aristagora, and indeed these people are in danger of death. See also Hippocrates, *Coac.* 69 (5.598 Littré).

⁷⁸ Hippocrates, *Prog.* 6. (2.122-124 Littré): Οἱ δὲ ἰδρωῶτες ἄριστοι μὲν εἰσιν ἐν πάσι τοῖσιν ὀξέσι νοσημασιν, ὀκόσοι ἐν ἡμέρησι τε κρίσιμοισι γίνονται καὶ τελείως τὸν πυρετὸν ἀπαλλάσσουσιν. Ἀγαθοὶ δὲ καὶ ὀκόσοι διὰ παντὸς τοῦ σώματος γινόμενοι ἀπέδειξαν τὸν ἄνθρωπον εὐπετέστερον φέροντα τὸ νόσημα. Οἱ δ' ἂν μὴ τοιοῦτόν τι ἐξεργάσωνται, οὐ λυσιτελέες. Κάκιστοι δὲ οἱ ψυχροὶ τε καὶ μῶνον περὶ τὴν κεφαλὴν τε καὶ τὸ πρόσωπον γινόμενοι καὶ τὸν αὐχένα· οὗτοι γὰρ ξὺν μὲν ὀξεί πυρετῷ θάνατον προσημαίνουσι, ξὺν δὲ πρηύτερω, μῆκος νόσου. Καὶ οἱ κατὰ πᾶν τὸ σῶμα ὡσαύτως γινόμενοι τοῖσι περὶ τὴν κεφαλὴν· *The best sweats in all acute diseases are those which happen on critical days and completely do away with the fever. Also good are sweats that happen throughout the whole body, indicating that the person is bearing the disease most favourably. But those that do not accomplish any of these things, they are not advantageous. The cold sweats are the worst kind, those that happen only around the head and the face and the neck; for these, when they occur together with acute fever, foretell death; but when they occur together with milder fevers, they foretell a long disease. And those cold sweats that occur throughout the whole body happen in a similar manner to those which occur around the head.*

⁷⁹ Hippocrates, *Epid.* 1.2.6 (2.636 Littré): φρενιτικοῖσι μὲν σπασμοὶ, καὶ ἰώδεα ἐπανεμέουσιν, ἔνιοι ταχυθάνατοι τούτων· *People with phrenitis have convulsions, and afterward vomit green material, some of them are liable to sudden death.*

⁸⁰ See, for example: Hippocrates, *Acut. (Sp.)* 23 (2.442 Littré) and 25 (2.444 Littré); Hippocrates, *Aph.* 4.66 and 67 (4.526 Littré); Hippocrates, *Aph.* 5.1-4 (4.532 Littré); Hippocrates, *Aph.* 7.9 (4.580 Littré); Hippocrates, *Prorrh.* 54 (5.524 Littré) and 102 (5.540 Littré).

⁸¹ Hippocrates, *Epid.* 1.2.6 (2.636 Littré).

phrenitis.'⁸² This can be seen in *Epidemics* 7.112, in which two patients become phrenitic and then 'die in violent convulsions'.⁸³ Polyphantos, the first of these patients, is said to have suffered a severe fever (ἐν πυρετῶ σφόδρα) at the start of his illness.⁸⁴ Similarly, a phrenitis patient in *Epidemics* 3 suffers from acute fever and convulsions on the second day of his illness and then dies two days later.⁸⁵

Although fever and delirium are the key symptoms of phrenitis, there are a number of other symptoms which help Hippocratic physicians identify this disease. As with trembling, some of these symptoms are also useful for the prognosis of a particular case of phrenitis. An important symptom in this regard is urine: since urine comes from inside the body, its characteristics can provide clues about certain internal problems. For the most part, the qualities of urine associated with phrenitis are indicative of the severe and potentially fatal nature of this disease. In many passages, the urine is described as white, transparent, and watery⁸⁶; in *Aphorisms* and *Coan Prenotions* 568, this kind of urine is identified as a negative sign.⁸⁷ A few authors report seeing sediment in the urine of phrenitis patients. The author of *Epidemics* 3

⁸² Hippocrates, *Prog.* 24 (2.186-188 Littré): τὰ δὲ πρεσβύτερα τῶν παιδίων καὶ οἱ ἄνδρες οὐκ ἔτι ἐν τοῖσι πυρετοῖσιν ὑπὸ τῶν σπασμῶν ἀλίσκονται, ἢν μὴ τι τῶν σημείων προσγένηται τῶν ἰσχυροτάτων τε καὶ κακίστων, οἷά περ ἐν τῆσι φρενίτισι γίγνεται.

⁸³ Hippocrates, *Epid.* 7.112 (5.460 Littré): παρέκρουσε τρόπον φρενιτικόν· ἀπέθανεν ἐν σπασμοῖσιν ἰσχυροῖσιν. / φρενιτικῆ γενομένη ἀπέθανεν ὡσαύτως σπασμοῖσιν ἰσχυροῖσι· (Polyphantos') mind was unsound in a phrenitic manner; he died in violent convulsions. / (The maidservant of Eualcides in Thasos) after becoming phrenitic, died in a similar manner in violent convulsions.

⁸⁴ Hippocrates, *Epid.* 7.112 (5.460 Littré).

⁸⁵ Hippocrates, *Epid.* 3.3.17(4) (3.116-118 Littré).

⁸⁶ Hippocrates, *Prorrh.* 1.4 (5.510-512 Littré); Hippocrates, *Epid.* 3.3.6 (3.80-82 Littré); and Hippocrates, *Coac.* 568 (5.174 Littré). In Hippocrates, *Epidemics* 1.2.9 (2.652 Littré), phrenitis patients are said to have had 'small amounts of black, thin urine' (οὐρα μέλανα, ὀλίγα, λεπτά). This anomaly may be explained by the fact that the passage is technically describing symptoms in cases of ardent fever, which are then cursorily attributed to cases of phrenitis.

⁸⁷ Hippocrates, *Aph.* 4.72 (4.528 Littré): Οκοσοῖσιν οὐρα διαφανέα λευκά, πονηρά· μάλιστα δὲ ἐν τοῖσι φρενιτικοῖσιν ἐπιφαίνεται. When the urine is translucent and white, it is a bad sign; this is especially prevalent in cases of phrenitis. / Hippocrates, *Coac.* 568 (5.174 Littré): Λευκὸν δὲ καὶ καταχέομενον διαφάνες οὐρον, πονηρόν· μάλιστα ἐν φρενιτικοῖσιν ἐπιφαίνεται. A prevalence of white, translucent urine is a grievous sign; this appears especially in cases of phrenitis.

reports small, scattered substances that float in the urine and do not settle⁸⁸, while in *Coan Prenoions* 571, the sediment is said to be dark and suspended, floating in a colourless fluid.⁸⁹ These descriptions of sediments are echoed in *Prognostics*, in which the author explains that sediments which are similar to coarse meal, or are flaky, bran-like, or white and thin, are bad signs in a disease.⁹⁰

In *Epidemics* 7.112, the author describes three cases of phrenitis in which the patient's urine was 'shaggy', δασέα.⁹¹ Jouanna, in his commentary on this passage, suggests that this term refers to the sediments in the urine, not the urine itself.⁹² Given this interpretation, this passage offers another example of the negative prognosis acquired from sediment in the urine: each of the patients in this passage is said to have 'shaggy' sediment in the urine, and each of these patients dies from their case of phrenitis. The author reinforces the dangerous nature of this kind of urine by explaining that 'bristly deposits and turbid urine are precise signs of headache and convulsions and death.'⁹³

Another symptom common to Hippocratic discussions of phrenitis is sleeplessness. Many Hippocratic physicians believe that a moderate amount of sleep is an important factor in maintaining one's health.⁹⁴ Any deviation from one's normal sleeping pattern is thought to be indicative, or even causative of some sort of mental

⁸⁸ Hippocrates, *Epid.* 3.3.17(4) (3.116-118 Littré): οὐρα λεπτά, ἐναιωρήματα σμικρά, διεσπασμένα, οὐχ ἴδρυτο. In Hippocrates, *Epidemics* 7.79 (5.436 Littré), the author reports that there wasn't any sediment in the urine of a phrenitis patient; the physician attributes this irregularity to the treatment clyster of thapsia he has just administered to the patient. Jouanna, 2000: 95, note 8.

⁸⁹ Hippocrates, *Coac.* 571 (5.716 Littré): τὰ δ' ἄχροα μέλασιν ἐναιωρούμενα μετὰ ἀγρυπνίης καὶ ταραχῆς, φρενιτικά. *And colourless urine with suspended dark matter, with sleeplessness and confusion, indicates phrenitis.* See also Hippocrates, *Coac.* 258 (5.640 Littré).

⁹⁰ Hippocrates, *Prog.* 12 (2.140-142 Littré)

⁹¹ Hippocrates, *Epid.* 7.112 (5.460 Littré); Smith, 1994: 405.

⁹² Jouanna, 2000: 112, note 9.

⁹³ Hippocrates, *Epid.* 7.112 (5.460 Littré): πάνυ γὰρ τὰ δασέα οὐρα καὶ ἀνατεταραγμένα, σημεῖον ἀκριβές κεφαλαλγίης καὶ σπασμοῦ καὶ θανάτου.

⁹⁴ Hippocrates, *Epid.* 6.8.23 (5.352 Littré); and *Prog.* 10 (2.134 Littré). For a detailed discussion of sleep and its role in Hippocratic medicine, see Hulskamp, 2008:72-94.

or physical disturbance. The author of *Aphorisms* reports that getting too much, or too little sleep is harmful, and may lead to disease.⁹⁵ In *Prognostics*, the author states that no sleep at all will either bring pain and distress that results in further sleeplessness, or it will result in delirium.⁹⁶

In discussions of phrenitis, lack of sleep is expressed in two ways. In a few cases, an author suggests only that the patient does not sleep: οὐδὲν ὑπνωσεν or οὐχ ὑπνωδεις.⁹⁷ In other passages, authors use the term ἡ ἀγρυπνία; often translated as insomnia, this word seems to imply a condition in which the patient remains awake and restless, often troubled by mental or physical discomfort. This use of the term is evident in *Epidemics* 7.80, in which a patient remains awake on the seventeenth day of his illness, 'lying on his back, legs wide open because of feebleness; entirely wakeful.'⁹⁸ This patient is clearly worn out by his disease, yet is unable to fall asleep⁹⁹; his position in bed corresponds to the comment in *Prognostics* which suggests that it is not a good sign when patients lie on their back with arms and legs spread out.¹⁰⁰ *Coan Prenotions* 223 points out that disturbed sleep and wakefulness

⁹⁵ Hippocrates, *Aph.* 7.72 (4.602 Littré): "Υπνος, ἀγρυπνία, ἀμφοτέρα μᾶλλον τοῦ μετρίου γινόμενα, νοῦσος. Sleep, wakefulness, when either of these happen more than moderately, there is disease. See also Hippocrates, *Aph.* 2.3 (4.470 Littré);

⁹⁶ Hippocrates, *Prog.* 10 (2.134 Littré): κάκιστον δὲ μὴ κοιμᾶσθαι, μήτε τῆς νυκτὸς, μήτε τῆς ἡμέρης· ἢ γὰρ ὑπὸ ὀδύνης τε καὶ πόνων ἀγρυπνέειν ἢ παραφρονήσκειν ἔπεται ἀπὸ τούτου τοῦ σημείου. It is the worst not to sleep, neither during the night nor during the day, for either sleeplessness on account of pain and suffering, or delirium will follow from this sign.

⁹⁷ Hippocrates, *Epid.* 3.3.6 (3.80-82) and 3.3.71(4) (3.116-118 Littré).

⁹⁸ Hippocrates, *Epid.* 7.80 (5.436 Littré): κλίσις ὑπτία, σκέλεα διηνοιγμένα διὰ τὴν ἔκλυσιν παράπαν ἀγρυπνος.

⁹⁹ The disease from which this patient is suffering is not named: the passage says only that his case is 'similar' to that of the previous patient, the fuller of Syros who had phrenitis. Hippocrates, *Epid.* 7.80 (5.436 Littré): καὶ ὁ ἐν Ὀλύμπῳ Νικόξενος ὁμοίως.

¹⁰⁰ Hippocrates, *Prog.* 3 (2.118 Littré): Ὑπτίον δὲ κέεσθαι καὶ τὰς χεῖρας καὶ τὸν τράχηλον καὶ τὰ σκέλεα ἐκτεταμένα ἔχοντα, ἥσσον ἀγαθόν. But to lie on one's back, having the arms and neck and legs spread out is a less good sign (i.e.: than lying on one's side, with arms and legs relaxed).

are bad signs in acute diseases.¹⁰¹ In another passage, this author suggests that wakefulness and confusion are signs that the patient will soon get phrenitis.¹⁰²

Throughout the *Corpus*, ἄγρυπνια is frequently mentioned alongside *kōma*¹⁰³, both in cases of phrenitis, and in connection with other diseases.¹⁰⁴ In *Prorrhethics* 1.1 and *Coan Prenotions* 175, *kōma* and sleeplessness are listed as symptoms which may precede the onset of phrenitis.¹⁰⁵ For the Hippocratic authors, *kōma* is a drowsy condition in which patients usually sleep, but sometimes remain coherent but listless.¹⁰⁶ In *Epidemics* 3, the author describes a group of phrenitis patients who alternate between a sleepless form of *kōma*, and a state of wakefulness accompanied by pain.¹⁰⁷ The fact that the author specifies that it is 'kōma without sleep' (τὸ κῶμα ξυνεχῆς, οὐχ ὑπνωδῆς) suggests that this is an atypical situation in *kōma*. Another passage in *Epidemics* 3 depicts the more common situation: here, the author explains that for the duration of their disease, patients with phrenitis and other severe diseases

¹⁰¹ Hippocrates, *Coac.* 223 (5.632 Littré): Ὀμμάτων ὀρθότης ἐν ὀξεί, ἢ κίνησις ὀξεΐη, καὶ ὕπνος παραχῶδης, ἢ ἀγρυπνίη, ποτὲ δὲ καὶ στάξεις ἐκ ῥινῶν, οὐδὲν ἀγαθόν· *Straight staring of the eyes in an acute disease, or sharp changes, or disturbed sleep, or wakefulness, are in no way good, especially when accompanied by blood dripping from the nose.*

¹⁰² Hippocrates, *Coac.* 571 (5.716 Littré): τὰ δ' ἄχροα μέλασιν ἐναιωρεύμενα μετὰ ἀγρυπνίης καὶ παραχῆς, φρενιτικά· *And colourless urine with suspended dark matter, together with sleeplessness and confusion, indicates phrenitis.*

¹⁰³ I have chosen to spell κῶμα in this manner as a reminder that this is not the modern concept of coma.

¹⁰⁴ Galen finds these passages particularly troubling, since he does not think that koma is a symptom of phrenitis. His treatise *De comate secundum Hippocratem* (7.643-665 Kühn) is an attempt to redefine Hippocrates' linking of these terms, so as to better align this statement with his own beliefs.

¹⁰⁵ Hippocrates, *Coac.* 175: Οἱ κωματώδεις ἐν ἀρχῇσι γενόμενοι μετὰ κεφαλῆς, ὀσφύος, τραχήλου, ὑποχονδρίου ὀδύνης, ἀγρυπνέοντες, ἤρά γε φρενιτικοί; *Those people who suffer coma in the beginning, with pain in the head, the lower back, the hypochondria, and the throat, and are sleepless, are they not phrenitics?* Hippocrates, *Prorrh.* 1.1 repeats this almost word for word.

¹⁰⁶ Hippocrates, *Epid.* 1.2.4 (2.624 Littré), 2.3.1 (5.102 Littré), 3.2.11 (3.62 Littré), 3.3.3 (3.70 Littré), and 3.3.17, cases 1, 2, and 13 (3.102-108, 3.110-112, 3.136-140 Littré).

¹⁰⁷ Hippocrates, *Epid.* 3.3.6 (3.82 Littré): κατεΐχε δὲ ἢ τὸ κῶμα ξυνεχῆς, οὐχ ὑπνωδῆς, ἢ μετὰ πόνων ἀγρυπνοί·

'either were attended with heavy *kōma*, or they slept lightly and for short periods.'¹⁰⁸

In all cases, *kōma*, like sleeplessness, is seen as a dangerous sign.¹⁰⁹

The Hippocratic authors identify numerous other symptoms that appear in cases of phrenitis. Most of these are mentioned only a few times, with little or no indication as to their significance in the overall context of the disease. These symptoms include such things as pain in the head or abdomen¹¹⁰; aphonia, or speechlessness¹¹¹; small swellings that resemble bug-bites¹¹²; frequent expectoration¹¹³; and the fact that phrenitis patients drink very little.¹¹⁴ Some of these symptoms are also mentioned in connection with other diseases; thus, while they may be of use in the prognosis of a patient's illness, they have only limited value in terms of diagnosis. A good example of this are the symptoms that later become known as *carphologia* and *crocydismos*, plucking motions of the hands, directed towards bits of straw in the former case, and bits of wool and thread in the latter. The terms for these actions derive from the behaviours themselves: *crocydismos* seems to be derived from the seeking, *δίζημαί*, for bits of thread or wool, *ἡ κροκή*.¹¹⁵ The term '*carphologia*' appears to refer to the making of a collection, *ἡ λογεία*, of *κάρφος*, small bits of twigs or straw.¹¹⁶

¹⁰⁸ Hippocrates, *Epid.* 3.3.11 (3.90-92 Littré): διὰ παντὸς δὲ τοῖσι πλείστοισιν ἢ βαρὺ κῶμα παρείπετο, ἢ μικροὺς καὶ λεπτοὺς ὕπνους κοιμᾶσθαι.

¹⁰⁹ The dangerous nature of koma is evident in Hippocrates, *Prorrh.* 1.89 (5.532 Littré), 1.91 (5.532-534 Littré), 1.93 (5.534 Littré), and 1.102 (5.540 Littré).

¹¹⁰ Hippocrates, *Epid.* 7.112 (5.460 Littré) places the pain in the head; Hippocrates, *Morb.* 3.9 (7.128 Littré) states that it is in the diaphragm; Hippocrates, *Aff.* 10 (6.216 Littré) places it in the left side of the hypochondrium.

¹¹¹ Hippocrates, *Epid.* 3.3.17(4) (3.116-118 Littré) and 7.53 (5.422 Littré). See also Hippocrates, *Epid.* 7.79 (5.434-436 Littré), which mentions a broken, unintelligible voice.

¹¹² Hippocrates, *Epid.* 7.79 (5.434-436).

¹¹³ Hippocrates, *Prorrh.* 1.6 (5.512 Littré) and *Coac.* 239 (5.636 Littré).

¹¹⁴ Hippocrates, *Coac.* 95 (5.602-604 Littré).

¹¹⁵ Liddell, Scott and Jones, 1996: 426, s.v.: *δίζομαι*; and 997, s.v.: *κρόκη*. See also Liddell, Scott and Jones, 1996: 998, s.v.: *κροκιδίζω*, "pick loose flocks off a garment".

¹¹⁶ Liddell, Scott and Jones, 1996: 881, s.v.: *κάρφος*, "any small, dry body... generally, in plural, dry twigs, chips, straws, bits of wool, such as birds make their nests of"; and 1055, s.v.: *ἡ λογεία*, "collection". See also Liddell, Scott and Jones, 1996: 881, s.v.: *καρπολογέω* "properly, gather dry twigs: hence, pick bits of hair, etc."

In the Hippocratic Corpus, these plucking actions are mentioned (by name or indirectly) approximately eleven times: three of the references relate directly to phrenitis, two discuss the need to note these plucking motions when making a prognosis, and the remaining six report the actions as symptoms of other, usually unnamed diseases.¹¹⁷ From these passages, we learn that these movements of the hands are very dangerous signs, and that they can be indicators of phrenitis as well as of peripneumonia, ardent fever, and headache.¹¹⁸

This Hippocratic attitude towards *carphologia* and *crocydismos* becomes more interesting when it is compared with later discussions of these symptoms. Whereas the Hippocratic authors view these symptoms as widespread, certain later authors view them almost exclusively as symptoms of phrenitis. Aretaeus believes that these actions are common in phrenitis: as part of treatment, he suggests that patients be given smooth blankets, so as to reduce the stimulus for their plucking actions.¹¹⁹ In *De locis affectis*, Galen uses the presence of these symptoms to diagnose his own case of phrenitis.¹²⁰ Caelius Aurelianus includes *carphologia* and *crocydismos* in his own definition of phrenitis, and argues that this disease cannot be diagnosed unless these

¹¹⁷ Plucking motions in relation to phrenitis: Hippocrates, *Prorrh.* 1.34 (5.518 Littré), Hippocrates, *Coac.* 76 (5.600 Littré), and Hippocrates, *Prog.* 4 (2.122 Littré); as a tool for prognosis: Hippocrates, *Epid.* 1.3.10 (2.670 Littré), and Hippocrates, *Hum.* 2 (5.478 Littré); In other, mostly unspecified diseases: Hippocrates, *Prorrh.* 1.109 (5.544 Littré), Hippocrates, *Coac.* 262 (5.640 Littré), Hippocrates, *Acut. (Sp.)* 16 (2.426 Littré), and Hippocrates, *Epid.* 3.3.17(15) (3.142 Littré), 4.14 (5.152 Littré), and 7.25 (5.396 Littré). Jouanna (2000: 84 note 11) suggests a fourth reference to *carphologia*, in the case of the phrenitic woman in Hippocrates, *Epidemics* 7.53 (5.422 Littré), whose elaborate hand movements eventually cause her to cut herself: "Une autre interprétation est possible si l'on se souvient que la phrenitis peut-être accompagnée de tremblements et, comme c'est sans doute le cas ici, de *carphologie*. La malade s'égratigne, par suite des mouvements non coordonnés de ses mains."

¹¹⁸ Hippocrates, *Prog.* 4 (2.122 Littré) associates these hand motions with all four of these diseases, and explains that they are dangerous signs. Hippocrates, *Prorrh.* 1.34 (5.518 Littré) and Hippocrates, *Coac.* 76 (5.600 Littré) connect them only with phrenitis.

¹¹⁹ Aretaeus, 5.1.2 (91.23-24 Hude).

¹²⁰ Galen, *De locis affectis* 4.2 (8.226 Kühn)

symptoms are present.¹²¹ There is no indication in the Corpus to suggest how or why these symptoms eventually become so prevalent in later concepts of phrenitis.

Causes of Phrenitis

The general view in the Hippocratic Corpus is that diseases are caused by the internal humours, whenever they become negatively affected by certain individual and universal factors. In phrenitis, the humour usually at fault is bile: the authors of *Affections* and *Diseases* 1 both identify this humour as the causative agent of phrenitis.¹²²

In *Affections*, the author explains that phrenitis occurs when bile, already set in motion inside the body, settles down in the upper abdomen, next to the *phrēn* and the 'inward parts' (τὰ σπλάγχνα).¹²³ This explanation reflects the author's belief that all diseases are caused by either bile or phlegm. These humours are not inherently bad, but they become dangerous when they become too hot, too cold, too wet, or too dry.¹²⁴ In chapter 12, for example, this author explains that during winter, effects such as tiredness or excesses of wine can cause the bile to become stirred up; if no beneficial treatment is applied, the bile will produce disease in whichever location it settles.¹²⁵

The author of *Diseases* 1 also believes that diseases are produced when bile and phlegm are made too hot or too cold. His explanation of phrenitis is as follows:

¹²¹ Caelius Aurelianus, *Acute Diseases* 1.4.42 (44.27-46.4 Bendz) and 48 (48.23-33 Bendz).

¹²² Hippocrates, *Aff.* 10 (6.216-218 Littré), Hippocrates, *Morb* 1.30 (6.200 Littré), and Hippocrates, *Morb.* 3.9 (7.128 Littré).

¹²³ Hippocrates, *Aff.* 10 (6.218 Littré): Ἡ δὲ νοῦσος γίνεται ὑπὸ χολῆς, ὅταν κινηθεῖσα πρὸς τὰ σπλάγχνα καὶ τὰς φρένας προσίζη. *The disease happens from bile, whenever, having been set in motion, it settles next to the inward parts and the phrēn.*

¹²⁴ Hippocrates, *Aff.* 1 (6.208 Littré).

¹²⁵ Hippocrates, *Aff.* 12 (6.220 Littré).

Phrenitis happens in this way: the blood in man contributes the greatest part of intelligence; some say it is all of it. And so whenever bile is put into motion, it comes into the veins and the blood, and through this therefore it moves into the blood and turns it from its usual composition and movement into serum, and it heats it; and it heats also all the other body parts, and the patient both loses his wits and is not in himself on account of both the greatness of the fever and because the blood is serous and its movement has become abnormal.

Φρενίτις δὲ οὕτως ἔχει· τὸ αἷμα τὸ ἐν τῷ ἀνθρώπῳ πλείστον συμβάλλεται μέρος συνέσιος· ἔνιοι δὲ λέγουσι, τὸ πᾶν· ὅταν οὖν χολὴ κινηθεῖσα ἐς τὰς φλέβας καὶ ἐς τὸ αἷμα ἐσέλθῃ, δι' οὖν ἐκίνησε καὶ διώρρωσε τὸ αἷμα ἐκ τῆς ἑωθυίης συστάσιός τε καὶ κινήσιος, καὶ διεθέρμηνε· διαθερμαίνει καὶ τὸ ἄλλο σῶμα πᾶν, καὶ παρανοεῖ τε ὠνθρωπος καὶ οὐκ ἐν ἑωυτῷ ἐστὶν ὑπὸ τοῦ πυρετοῦ τοῦ πλήθεος καὶ τοῦ αἵματος τῆς διορρώσιός τε καὶ κινήσιος γενομένης οὐ τῆς ἑωθυίης.¹²⁶

Mental phenomena in *Diseases 1* are directly related to the movement of the blood throughout the body.¹²⁷ Thus, when the bile heats the blood and makes it more watery, the patient's mental capacities are also weakened – he becomes deranged, and no longer himself. The author of this work believes that the derangement, which persists throughout the disease, prevents the patient from taking any food. Since the serous blood cannot provide nutriment either, patients become emaciated and starved. This causes the extremities to cool and shrivel up; as the cold moves closer to the core of the body, the patient eventually dies.¹²⁸

¹²⁶ Hippocrates, *Morb.* 1.30 (6.200 Littré).

¹²⁷ Gundert, 2000: 26.

¹²⁸ Hippocrates, *Morb.* 1.34 (6.204 Littré).

In *Diseases* 3, it is suggested that phrenitis can also develop out of another disease.¹²⁹ Although not named, it is likely that this disease is peripneumonia, since the author believes that phrenitis patients closely resemble those with peripneumonia, with the added symptom of delirium. He also indicates that the treatments for peripneumonia are equally useful when treating cases of phrenitis. The close connection between these diseases is also recognized by a number of other authors in the Hippocratic Corpus: *Aphorisms* states that it is a bad sign when peripneumonia turns into phrenitis¹³⁰; *Diseases* 1 and *Affections* state that phrenitis that turns into peripneumonia is usually fatal.¹³¹

While bile is the substance that causes phrenitis, it is not in itself a 'bad' humour. In order for the bile to produce phrenitis, it must first be affected in some way by an external force – in this case, one that will stir up the bile and cause it to move into the blood, or to settle in a particular part of the body. Two of the most influential of these factors are the seasons and the weather: in *Aphorisms*, for example, the author believes that the changing of the seasons is the chief cause of the production of diseases.¹³² He explains that although any disease may occur at any time during the year, certain diseases are most common in particular seasons.¹³³ In *Nature of Man*, the author describes how one humour grows stronger in each season, maintains its

¹²⁹ Hippocrates, *Morb.* 3.9 (7.128 Littré): φρενίτιδες δὲ γίνονται καὶ ἐξ ἑτέρων νούσων. *Phrenitis occurs also from another disease.*

¹³⁰ Hippocrates, *Aph.* 7.12 (4.580 Littré): Ἐπὶ περιπλευμονίῃ φρενίτις, κακόν.

¹³¹ Hippocrates, *Morb.* 1.3 (6.144-146 Littré): Μεταπίπτει δὲ τάδε· ἐκ πλευρίτιδος ἐς καῦσον, καὶ ἐκ φρενίτιδος ἐς περιπλευμονίην· *And changes occur in this way, from pleuritis into causus, and from phrenitis into pneumonia*; Hippocrates, *Aff.* 10 (6.218 Littré): διαφεύγουσι δὲ καὶ ταύτην ὀλίγοι· μεθίσταται δὲ καὶ αὕτη ἐς περιπλευμονίην, καὶ ἦν μεταστῆ, ὀλίγοι διαφεύγουσιν. *And few escape this disease [phrenitis]; and this changes also into pneumonia, and if it changes, few escape it.*

¹³² Hippocrates, *Aph.* 3.1 (4.486 Littré).

¹³³ Hippocrates, *Aph.* 3.19 (4.494 Littré), Hippocrates, *Nature of Man* 8 (6.50-52 Littré), Hippocrates, *Humours* 13 (5.492-494 Littré).

strength into the next season, and is eventually replaced by a new humour.¹³⁴ The author of this text likens the changing strengths of the humours to the changing of the seasons, demonstrating the interconnectedness of man and his environment:

In the period of a year, sometimes the winter is especially strong, sometimes the spring, sometimes the summer, and sometimes the autumn. And so it is in man also, sometimes the phlegm is strong, sometimes the blood, sometimes the bile, first the yellow, and then what is called black bile.

Ἰσχύει δὲ ἐν τῷ ἐνιαυτῷ τοτὲ μὲν ὁ χειμῶν μάλιστα, τοτὲ δὲ τὸ ἦρ, τοτὲ δὲ τὸ θέρος, τοτὲ δὲ τὸ φθινόπωρον· οὕτω δὲ καὶ ἐν τῷ ἀνθρώπῳ τοτὲ μὲν τὸ φλέγμα ἰσχύει, τοτὲ δὲ τὸ αἷμα, τοτὲ δὲ ἡ χολή, πρῶτον μὲν ἡ ξανθὴ, ἔπειτα δ' ἡ μέλαινα καλεομένη.¹³⁵

While phrenitis is not included in the catalogue of diseases in *Aphorisms*, it is clear from other texts that phrenitis was most prevalent and most dangerous during the winter or early spring: for example, most of the cases of phrenitis described in the *Epidemics* occur during these seasons.¹³⁶ Phrenitis may also occur in late spring or the summer, but these cases are less frequent, and usually milder in nature.¹³⁷

¹³⁴ Hippocrates, *Nat. Hom.* 7 (6.46-50 Littré). This passage explains that phlegm increases in winter, and remains strong into spring; blood increases in spring, and is strong into summer; bile increases in summer, and remains strong into the autumn; black bile is greatest and strongest in autumn.

¹³⁵ Hippocrates, *Nat. Hom.* 7 (6.50 Littré).

¹³⁶ Hippocrates, *Epid.* 1.2.9 (2.650 Littré): Περὶ δὲ ἰσημερινῆν καὶ μέχρι πληιάδος καὶ ὑπὸ χειμῶνα, παρείποντο μὲν οἱ καῦσοι· ἀτὰρ καὶ φρενιτικοὶ πλείστοι τηνικαῦτα ἐγένοντο, καὶ ἔθνησκον τούτων οἱ πλείστοι· ἐγένοντο δὲ καὶ κατὰ θέρος ὀλίγοι. *Around the equinox and up to the setting of the Pleiades and throughout winter, cases of causus continued; but the most cases of phrenitis happened in this time, and most of them were fatal; and a few cases had also occurred in summer.* See also: Hippocrates, *Epid.* 1.2.9.87 (2.666 Littré); Hippocrates, *Epid.* 3.3.6.1 (3.80-82); Hippocrates, *Epid.* 7.53 (5.422 Littré); Hippocrates, *Epid.* 7.112 (5.460 Littré).

¹³⁷ Hippocrates, *Aff.* 6 (6.214 Littré): Περὶ δὲ τῶν κατὰ κοιλίην νοσημάτων ἐνθυμέεσθαι χρὴ τὰδε· πλευρίτις, περιπλευμονίη, καῦσος, φρενίτις, αὐταὶ καλέονται ὀξεῖαι, καὶ γίνονται μὲν μάλιστα καὶ ἰσχυρόταται τοῦ χειμῶνος, γίνονται δὲ καὶ τοῦ θέρος, ἥσσαν δὲ καὶ μαλακώτεραι· *Concerning diseases of the lower cavity, it is necessary to consider the following:*

The characteristics of an individual's constitution can also have an impact on his susceptibility to phrenitis and other diseases. In *Aphorisms*, the author explains that phrenitis is common in people beyond the prime of life¹³⁸; when it appears in people older than forty, it is almost always fatal.¹³⁹ The author later qualifies this statement by explaining that diseases are less risky when they are similar to the natural constitution of the patient¹⁴⁰; since bodies cool as they age, they become less suited to the heat of phrenitis, and patients therefore endure greater suffering when it arises.

Treatment of Phrenitis

The overall goal of Hippocratic treatment is to help the body return to its natural state of balance and, therefore, health. The first stage of this process begins with the diagnosis of the patient's disease; as Paul Potter explains, diagnosis "identifies the 'fundamental anatomico-physiological disturbance' from which the disease arose, and against which specific therapeutic measures must be directed."¹⁴¹ In addition, knowledge of the specific disease provides the physician with a general guideline for how the disease is likely to progress through the patient's body, when its critical periods are most likely to occur, and how the disease most commonly comes to an end.¹⁴² With this information in mind, the Hippocratic physician is able to decide whether or not to begin treatment of the patient. If the disease is thought to be

pleuritis, pneumonia, causus, phrenitis, and the other diseases known as 'acute', they occur most often and most strongly in winter, but they also occur in the summer, but less often, and more mildly.

¹³⁸ Hippocrates, *Aph.* 3.30 (4.500 Littré): Τοῖσι δὲ ὑπὲρ τὴν ἡλικίην ταύτην, ἄσθματα, πνευριτιδες, περιπνευμονίαι, λήθαργοι, φρενιτιδες, καῦσοι, διάρροιαι χρόνιαι, χολέραι, δυσεντερίαι, λειεντερίαι, αἰμορροΐδες. *In those people above this age (i.e. that of the prime of life), asthma, pleuritis, pneumonia, lethargy, phrenitis, causus, chronic diarrhoea, cholera, dysentery, lientery, and haemorrhoids are common.*

¹³⁹ Hippocrates, *Aph.* 7.82 (4.606 Littré).

¹⁴⁰ Hippocrates, *Aph.* 7.82 (4.606 Littré): ἦσσον γὰρ κινδυνεύουσιν, οἷσιν ἂν οἰκείη τῆς φύσιος καὶ τῆς ἡλικίης ἢ νοῦσος ἦ. *For the danger is less in those for whom the disease is akin to their nature and age.*

¹⁴¹ Potter, 1988c: 49.

¹⁴² Potter, 1988c: 49.

dangerous, agreeing to take on a patient puts the physician at risk of losing his medical reputation, even if he might be able to determine beforehand that any medical intervention will turn out to be more palliative than curative.¹⁴³ In these cases, it is considered acceptable for the physician to refuse to treat the patient.

Treatment of disease requires that the body's internal balance of humour and elements be returned to its natural state. In order to accomplish this, the disease-causing agent – whatever it might be – must be removed from the body.¹⁴⁴ In some cases, this occurs naturally; more frequently, medical intervention is required. Physicians can accomplish this evacuation by way of medicines – such as emetics, diuretics, and sternutatories – or through surgical intervention such as bloodletting, or the incision of abscesses to remove excess fluid.¹⁴⁵ Very severe diseases are sometimes treated with cauterization, a treatment which is believed to stop the movement of the disease from one part of the body to another.¹⁴⁶

For many Hippocratic authors, regimen is an important part of the therapeutic process. These authors believe that one's diet, exercise, and bathing habits can help restore the body to its natural balance. If applied while the patient is healthy, proper regimen can also be used to prevent diseases from occurring in the first place. In order to do this, physicians established the various properties of different foods and beverages, and prescribed them as necessary, to heat, cool, moisten, or dry out the body. The effect of certain foods on the body is also recognized and employed, such as the ability of some foods to relax or tighten the bowels, cause flatulence, or provide

¹⁴³ Nutton, 2004: 92. As Nutton explains, most Hippocratic authors believed that it was within the doctors' rights to refuse to treat a particular patient.

¹⁴⁴ Potter, 1988c: 43-44.

¹⁴⁵ Potter, 1988c: 44; Jouanna, 1999: 159-160.

¹⁴⁶ Jouanna, 1999: 160-161.

nourishment.¹⁴⁷ In many diseases, regimen also includes the prescription of certain exercises – mild exercise such as walking, or more violent forms such as running or wrestling. Bathing can also be useful to a patient, provided that the patient's house has all the necessary apparatus to make the bathing process safe.¹⁴⁸

Specific methods of treating phrenitis are discussed in only a few of the Hippocratic texts. The most extensive discussion comes from *Regimen in Acute Diseases*, which lists phrenitis as one of the acute diseases for which these instructions are useful.¹⁴⁹ In *Diseases* 3.9, a few specific treatments are listed in the chapter on phrenitis; additional remedies are provided in the chapter on peripneumonia, in which the author explains that treatments for peripneumonia are equally applicable for cases of phrenitis and pleuritis.¹⁵⁰ *Affections* offers a similar situation: chapter 10 provides a few specific therapies for phrenitis, along with a recommendation that the pain of phrenitis requires the same treatment as pains that are caused by pleuritis.¹⁵¹ The connection between these diseases is due to the anatomical proximity of the *phrēn* and the pleura, and the fact that both diseases arise from the abnormal accumulation of humours in their respective parts.¹⁵² There is also one case study of a phrenitis patient which refers to treatment of the disease; although

¹⁴⁷ Jouanna, 1999: 163.

¹⁴⁸ Jouanna, 1999: 168-169. See also Hippocrates, *Acut.* 65-68 (2.364-376 Littré).

¹⁴⁹ Hippocrates, *Acut.* 5 (2. 232 Littré): "Ἔστι δὲ ταῦτα ὀξεία, ὅκοῖα ὠνόμασαν οἱ ἀρχαῖοι πλευρίτιν, καὶ περιπλευμονίην, καὶ φρενίτιν, καὶ λήθαργον, καὶ καύσον, καὶ τὰλλα νοσήματα ὁκόσα τουτέων ἐχόμενά ἐστιν, ὧν οἱ πυρετοὶ τὸ ἐπίπαν ξυνεχέες. *These are the acute diseases, those which the ancients have named pleuritis, and peripneumonia, and phrenitis, and lethargy, and causus, and all those diseases which are similar to these, in which the fevers are generally continuous.*

¹⁵⁰ Hippocrates, *Morb.* 3.15 (7. 140 Littré): Θεραπεύειν δὲ χρὴ τὴν περιπλευμονίην οὕτως· οὐ μέντοι ἐξαμαρτήσῃ καὶ πλευρίτιν καὶ φρενίτιν οὕτω μεταχειριζόμενος· *It is necessary to treat peripneumonia in this way; and indeed it would not be incorrect to deal with both pleuritis and phrenitis in this way.* See also Hippocrates, *Morb.* 3.9 (7.128 Littré).

¹⁵¹ Hippocrates, *Aff.* 10 (6.216-218 Littré): Τοῦτω, τῆς μὲν ὀδύνης, ἅπερ ἐν τῇ πλευρίτιδι, διδόναι... *In this disease, in the case of pain, provide the same as in pleuritis...*

¹⁵² Pleuritis is described in Hippocrates, *Aff.* 7 (6.214-216 Littré).

these remedies were effective, they are not in keeping with most other recommendations for treating the disease.¹⁵³

As discussed earlier, the Hippocratic authors are aware that patients very often die from phrenitis. This is equally clear in discussions of treatment, most of which are accompanied by a reference to the mortality of this illness.¹⁵⁴ In *Diseases 1*, the author gives a very clear statement of the fatality of phrenitis, explaining that phrenitis patients essentially starve to death because of their deranged state:

And inasmuch as they are out of their senses, [the phrenitis patients] do not take any of that which is offered to them, at least anything worthy of mention. And as time continues, they waste away and become thinner both from the fever and from not being nourished; and first the part at the extremities wither up and grow cold, then the closer parts.

καὶ ἄτε παραφρονέοντες, οὐκέτι τῶν προσφερομένων δέχονται, ὅτι ἄξιον λόγου· ὅταν δὲ προίη ὁ χρόνος, μαραίνονταί τε καὶ μινύθουσιν ὑπὸ τοῦ πυρετοῦ καὶ ὑπὸ τοῦ μηδὲν τρέφεσθαι· καὶ πρῶτα μὲν τὰ ἐν τοῖσιν ἀκρωτηρίοισι μινύθει τε καὶ ψύχεται, ἔπειτα δὲ τὰ ἐπ' ἐγγυτάτῳ.¹⁵⁵

Hippocratic authors seek to cure phrenitis by removing the excess bile which causes the disease. Removal of the bile also helps to relieve the pain in phrenitis, since it is the presence of the bile which causes the pain. In *Diseases 3*, the pain – and

¹⁵³ This passage is presented with almost identical phrasing in Hippocrates, *Epid.* 5.52 (5.236-238 Littré) and 7.71 (5.432 Littré).

¹⁵⁴ In Hippocrates, *Morb.* 3.9 (7.128 Littré), for example, the instructions for treatment are immediately followed with a warning that the disease is fatal, and usually kills people on the third, fifth, or seventh day of the disease. See also Hippocrates, *Acut.* 5 (2.232 Littré), and Hippocrates, *Aff.* 10 (6.218 Littré).

¹⁵⁵ Hippocrates, *Morb.* 1.34 (6.204 Littré).

therefore the excess bile – is located in the diaphragm.¹⁵⁶ *Affections* suggests that the pain occurs in the right side of the hypochondrium, near the liver and beside the 'inward parts' (τὰ σπλάγχνα) and the *phrēn*.¹⁵⁷ This excess bile represents an imbalance in the body's humours; thus, in order to let the body regain its balance, the bile must be removed. To do this, the Hippocratic authors recommend that the 'lower cavity' (ἡ κοιλίη) be emptied at the beginning of the disease, and regularly throughout its course.¹⁵⁸ The author of *Diseases 3* believes that evacuations of this nature dull a patient's fever and reduce his pain.¹⁵⁹ Repeating these purges every other day will help to maintain balanced moisture in the body, without harming the patient's strength.¹⁶⁰

Regimen in Acute Diseases is the only discussion of phrenitis treatment to explain which purgative drugs should be used for treating phrenitis. This author suggests two key medications: black hellebore mixed with wild carrot, cow-parsnip, cumin, dill, or some other fragrant compound, and wild purslane mixed with the juice of laserwort.¹⁶¹ He explains the benefits of these remedies as follows:

Black hellebore makes better and more critical evacuations than wild purslane, but wild purslane is better at creating diarrhoea than black

¹⁵⁶ Hippocrates, *Morb.* 3.9 (7.128 Littré): τὰς φρένας ἀλγέουσιν, ὥστε μὴ ἔασαι ἀν' ἄψασθαι *The phrēn (diaphragm) is painful, such that they cannot suffer you to touch them.*

¹⁵⁷ Hippocrates, *Aff.* 10 (6.216-218 Littré): Ἡ δὲ νοῦσος γίνεται ὑπὸ χολῆς, ὅταν κινηθεῖσα πρὸς τὰ σπλάγχνα καὶ τὰς φρένας προσίζη· *The disease occurs from bile, whenever, after having been moved around, it settles next to the inner parts, and the phren.*

¹⁵⁸ Hippocrates, *Aff.* 7 (6.214) and 10 (6.218 Littré); Hippocrates, *Morb.* 3.15 (7.140 Littré).

¹⁵⁹ Hippocrates, *Morb.* 3.15 (7.140 Littré): Τὰς δὲ κοιλίας ἐν μὲν τῆσι πρώτῃσιν ἡμέρησι τέσσαρσιν ἢ πέντε ὑποχωρέειν χρὴ καὶ ὀλίγω μᾶλλον, ἵνα οἱ τε πυρετοὶ ἀμβλύτεροι ἔωσι καὶ τὰ ἀλγήματα κουφότερα· *It is necessary to empty downward the lower cavity in the first four or five days, and more than a little, in order that the fever might be dulled, and the pain made lighter.*

¹⁶⁰ Hippocrates, *Morb.* 3.15 (7.140 Littré).

¹⁶¹ Hippocrates, *Acut.* 23 (2.274 Littré): Ἦν δὲ ὑπὸ τὰς φρένας ἢ τὸ ἀλγῆμα, ἐς δὲ τὴν κληῖδα μὴ σημαίνει, μαλθάσσειν δεῖ τὴν κοιλίην, ἢ μέλανι ἐλλεβορῶν ἢ πεπλίῳ, μέλανι μὲν δαῦκον ἢ σέσελι ἢ κύμινον ἢ ἄνησον ἢ ἄλλο τι τῶν εὐωδέων μίσγοντα, πεπλίῳ δὲ ὀπὸν σιλφίου· *If the suffering is under the phrēn, and there is no sign of it in the collarbone, it is necessary to soothe the cavity, either with black hellebore or wild purslane, and with the black hellebore mix wild carrot or cow-parsnip, or cumin, or dill, or some other fragrant compound; and with the wild purslane, mix the juice of laserwort.*

bile. Both of these stop pain; many other purgative medicines also stop pain, but these are the best of which I know.

Ἄγει δὲ μέλας μὲν καλλίω καὶ κρισιμώτερα πεπλίου, πέπλιον δὲ μέλανος μᾶλλον φυσέων καταρρήκτικόν ἐστίν· ἄμφω δὲ ταῦτα ὀδύνην παύει· παύει δὲ καὶ ἄλλα πολλὰ τῶν ὑπηλάτων· κράτιστα δὲ ταῦτα ὧν ἐγὼ οἶδα ἐστίν.¹⁶²

This physician also suggests adding purgatives to the patient's gruel, if it can be done without affecting its taste or colour, or becoming otherwise noticeable to the patient.¹⁶³

After the patient's body has been purged, pain can also be treated by the application of warm, usually moist fomentations, or compresses.¹⁶⁴ *Regimen in Acute Diseases* suggests that the most efficient way to apply this heat is to fill a skin, bladder, or vessel with hot water, and to place this against a soft cloth on the body, near the site of the pain.¹⁶⁵ The heat of these compresses causes the collected bile to concoct, allowing to it to be cleansed out of the body.¹⁶⁶ Compresses are frequently mentioned in conjunction with the purgatives, suggesting that the two remedies are complementary.

Regimen in Acute Diseases is the only text to suggest bloodletting as a remedy for pain in phrenitis. In this text, the author suggests that venesection is the best remedy

¹⁶² Hippocrates, *Acut.* 23 (2.274-276 Littré).

¹⁶³ Hippocrates, *Acut.* 23 (2.276 Littré).

¹⁶⁴ Hippocrates, *Morb.* 3.9. (7.128 Littré): Τοῦτον χλιαίνειν δεῖ χλιάσασιν ὑγροῖσι *It is necessary to warm this patient with moist fomentations...* See also: Hippocrates, *Acut.* 21 (2.268-270 Littré), Hippocrates, *Aff.* 10 (6.216-218 Littré).

¹⁶⁵ Hippocrates, *Acut.* 21 (2.268-270 Littré).

¹⁶⁶ Hippocrates, *Aff.* 7 (6.214 Littré). ὅταν δὲ καθαίρεσθαι ἄρξηται τὸ πῦον, θερμαίνοντα ξυμφέρει τὸ πλευρὸν ἔξωθεν πεπαίνειν τὰ πρὸς τὸ πλευρὸν· *When the pus begins to be cleaned, warming the side from outside the body is advantageous to soften the materials beside the ribs.* This author explains that pleuritis-related pain remedies should also be used for phrenitis (see above); we can therefore assume that this explanation of the efficacy of compresses in pleuritis also applies to phrenitis.

when the pain extends from the abdomen to the collarbone, or whenever there is a feeling of weight on the forearm, in the area of the breast, or above the diaphragm.¹⁶⁷ In these cases, blood is to be withdrawn from the inner vein at the elbow; the author believes that a considerable amount of blood should be withdrawn – the flow should be continued until the blood becomes a deeper red, or becomes livid instead of clear and red.¹⁶⁸ The author cautions that venesection will not be as beneficial to the patient if the pains do not extend toward the collarbone.¹⁶⁹

Treatment instructions for phrenitis also include advice regarding the types of food and drink that should be administered during the disease. As described earlier, proper diet is an important aspect of Hippocratic treatment, because it helps to maintain the patient's strength and provide the qualities necessary to help rebalance the humours. Regarding beverages, most of the Hippocratic authors refuse to give wine to phrenitis patients because it causes headache and delirium.¹⁷⁰ *Regimen in Acute Diseases* makes some variation in this regulation, suggesting that very pale yellow, diluted wine may be administered, provided that every sip is followed by a sip of water.¹⁷¹ Otherwise, drinks in phrenitis should be restricted to oxymel, a mixture of vinegar and honey, or hydromel, a mixture of honey and water.¹⁷² The author of

¹⁶⁷ Hippocrates, *Acut.* 22 (2.272 Littré).

¹⁶⁸ Hippocrates, *Acut.* 22 (2.272-274 Littré): τάμνειν χρῆ τὴν ἐν τῷ ἀγκῶνι φλέβα τὴν ἔσω, καὶ μὴ ὀκνέειν συχνὸν ἀφαιρέειν τὸ αἷμα ἕως ἂν ἐρυθροτερον πολλῶ ρυῆ, ἀντὶ καθαροῦ τε καὶ ἐρυθροῦ πελιόν· ἀμφοτέρα γὰρ γίγνεται. *It is necessary to cut the vein in the elbow, the inside one, and not to hesitate to remove a large amount of blood, until, because of the great flow, the blood becomes darker or livid red in colour instead of clear and red. For both of these things can happen.*

¹⁶⁹ Hippocrates, *Acut.* 22 (2.272 Littré): Τομὴ μέντοι γε οὐχ ὁμοίως λύει ὀδύνην, ἢν μὴ πρὸς τὴν κληῖδα περᾶνῃ ἢ ὀδύνη. *Indeed, cutting a vein will not release the pain in the same way, if the pain does not reach the collarbone.*

¹⁷⁰ Hippocrates, *Acut.* 50 (2.332 Littré): Ὁ μὲν γλυκὺς ἥσσόν ἐστι καρῆβαρικὸς τοῦ οἴνωδεος, καὶ ἥσσον φρενῶν ἀπτόμενος... *Sweet wine is less likely to cause headache than vinous wines, and attacks the phrēn less...* / Hippocrates, *Acut.* 63 (2.360 Littré): Ὑποπτεύσαντι μέντοι ἐν ταύτησι τῆσι νοῦσοισιν ἢ καρῆβαριὴν ἰσχυρὴν ἢ φρενῶν ἄψιν, παντάπασιν οἴνου ἀποσχετέον. *If you suspect in these diseases either severe headache or distraction of the phrēn, in all these cases one must abstain from wine.* c.f.: Hippocrates, *Morb.* 3.9 (7.128 Littré) and Hippocrates, *Aff.* 10 (6.218 Littré).

¹⁷¹ Hippocrates, *Acut.* 63 (2.360 Littré).

¹⁷² Hippocrates, *Aff.* 10 (6.218 Littré).

Regimen in Acute Diseases explains that while both drinks are useful as diuretics, the acidity of the vinegar is better at dissolving bitter biles, such as the yellow bile in phrenitis.¹⁷³

The most commonly prescribed food in Hippocratic treatment is a gruel made from boiled barley.¹⁷⁴ *Regimen in Acute Diseases* contains a long discussion about this gruel, including instructions on how it should be prepared, the ways it benefits the patient, and the correct times at which it is to be offered.¹⁷⁵ Essentially, the purpose of the gruel is to maintain the patient's strength; food should be offered to the patient every day, as often as he would normally eat when not ill.¹⁷⁶ Similarly, if the patient undergoes a purge, gruel should be given to the patient immediately afterwards, in a quantity equal to the efficacy of the purge.¹⁷⁷ According to *Regimen in Acute Diseases*, there are only a few times at which it is not safe to give gruel to a patient: when the bowels have not been emptied of previous meals – either naturally or with medications; and whenever the feet are cold during a fever.¹⁷⁸

A final treatment recommended for phrenitis patients is bathing; In *Affections*, the author states the following:

In this disease it is beneficial to wash the patient with plenty of hot water, downward from the head. For, when the body is made softer, the sweat is increased and the cavity is emptied and the urine is excreted, and the patient becomes more in control of himself.

¹⁷³ Hippocrates, *Acut.* 61 (2.356-358 Littré): 'Ἐν κεφαλαίῳ δ' εἶρησθαι, αἱ ἀπὸ ὀξέος ὀξύτητες πικροχόλοισι μᾶλλον ἢ μελαγχολικοῖσι συμφέρουσι· τὰ μὲν γὰρ πικρὰ διαλύεται καὶ ἐκφλεγματοῦται, μετεωριζόμενα ὑπ' αὐτέου· *To say it in summary, the sharpness of vinegar is of more advantage to bilious people than to melancholic people; for the bitter bile is broken up and turned to phlegm, after it is raised up.* The benefits of hydromel and oxymel are discussed in Hippocrates, *Acut.* 53-61 (2.336-358 Littré).

¹⁷⁴ Jouanna, 1999: 164.

¹⁷⁵ Hippocrates, *Acut.* 15 (2.244 -264 Littré).

¹⁷⁶ Hippocrates, *Acut.* 11 (2.246 -248 Littré).

¹⁷⁷ Hippocrates, *Acut.* 13 (2.244 -264 Littré).

¹⁷⁸ Hippocrates, *Acut.* 16-20 (2.250-252 Littré).

λούειν δὲ πολλῶ καὶ θερμῶ κατὰ τὴν κεφαλὴν ἐν ταύτῃ τῇ νούσῳ
 ξυμφέρει· μαλασσομένου γὰρ τοῦ σώματος, καὶ ἰδρῶς μᾶλλον
 γίνεται, καὶ ἡ κοιλίη καὶ τὸ οὖρον διαχωρεῖ, καὶ αὐτὸς ἑαυτοῦ
 ἐγκρατέστερος γίνεται.¹⁷⁹

Regimen in Acute Diseases also recommends bathing as a treatment of phrenitis, provided that the necessary accommodations for a bath are available in the patient's home. These include a sufficient supply of water, a good number of attendants to carry out the work, and a sheltered location that is separated from the smoky fire which is heating the bath water.¹⁸⁰ While this author believes that baths are beneficial – especially for those who are usually in the habit of bathing, he cautions that baths are less effective in ardent fevers than in acute diseases such as peripneumonia.¹⁸¹ Although phrenitis is not mentioned in this context, the presence of fever in this disease may reduce the efficacy of bathing for these patients.

As a final note on treatment, we may look at a case history of phrenitis that discusses the treatment of phrenitis. This case, which appears in *Epidemics 5* and *7*, states the following:

A humpback from phrenitis occurred in the butcher from Acanthus; In this man, not one medication was useful, except sweet wine and bread; to abstain from baths, and to massage him softly, and to warm him with fomentation not much, but gently.

¹⁷⁹ Hippocrates, *Aff.* 10 (6.218 Littré).

¹⁸⁰ Hippocrates, *Acut.* 65 (2.364 Littré): "Ἔστι δὲ ὅτε ἦσσαν χρηστέον διὰ τὴν ἀπαρασκευασίην τῶν ἀνθρώπων· ἐν ὀλίγοι γὰρ οἰκίῃσι παρεσκευάσται τὰ ἄρμενα καὶ οἱ θεραπεύοντες ὡς δεῖ· εἰ δὲ μὴ παγκάλως λούοιτο, βλάπτειτ' ἂν οὐ σμικρά· καὶ γὰρ σκέπης ἀκάπνου δεῖ, καὶ ὕδατος δαψιλέος, καὶ τοῦ λουτροῦ συχνοῦ καὶ μὴ λίην λάβρου, ἦν γε μὴ οὕτω δέη. *And sometimes one must use baths less often, because of lack of preparation on people; for in few houses have the attendants prepared the necessary apparatus. And if one is not bathed well, it would be not just a little harmful. For a shelter free of smoke is necessary, and abundant water for a long and non-violent bath, unless this is necessary.* See also Jouanna, 1999: 168-169.

¹⁸¹ Hippocrates, *Acut.* 66 (2.368 Littré).

Τῷ μαγεύειν ἐν Ακάνθῳ τὸ κύφωμα ἐκ φρενίτιδος ἐγένετο·
 τούτῳ φαρμακοποσίη οὐδεμίη ξυνήνεγκεν, οἶνος δὲ μέλας καὶ
 ἄρτοσιτή· λουτρῶν ἀπέχεσθαι, καὶ ἀνατρίβεσθαι λείως,
 θάλπεσθαι τε μὴ πολλῶ πυριήματι, ἀλλὰ πρηέως.¹⁸²

This case study demonstrates an unconventional approach to the treatment of phrenitis, in permitting the use of sweet wine, and preventing bathing. By comparison, the recommendation of gentle massage and warm fomentation are not so unusual, and resemble the methods of softening the body that were described above, by the author of *Regimen in Acute Diseases*. It is not clear, however, why this physician chose to permit the use of wine as a remedy. The fact that this passage appears in two different books of the *Epidemics* suggest that at least one version is not based on the personal experiences of the author, making it difficult to explain this anomalous approach to treatment. In the 18th century, it was suggested that this passage actually refers to a different disease, and has been inadvertently associated with phrenitis.¹⁸³

¹⁸² Hippocrates, *Epid.* 5.52 (5.236-238 Littré). See also Hippocrates, *Epidemics* 7.71 (5.423 Littré). Littré's edition of this text offers the alternative reading of τὸ κώφωμα... ἐγένετο, 'he became deaf', in place of τὸ κύφωμα... ἐγένετο, 'a humpback occurred'.

¹⁸³ In the introduction to their translation of *Epidemics* 5 and 7, Jouanna and Grmek point out that the 18th century scholar D.W. Triller questioned whether φρενίτις in this passage might not be a *lectio facillior* for νεφρίτις, an affection of the kidneys. Triller's assumption appears to be based on a retrospective diagnosis of the cause of the hunchback as a type of tuberculosis of the spine, and is not supported by any comments of the Hippocratic editors. D.W. Triller. (1754). *De gibbo ex nephitide potius quam ex phrenitide orto ad Hippocratem (lib. V. de moris epidemicis, p. 785, edit, Linden)*. Wurtemberg., as cited in Jouanna, 2000: LXXXVIII-LXXXIX.

Diocles of Carystus

Diocles of Carystus was one of the most respected physicians of the fourth century BC.¹⁸⁴ In the sources, he is described as a 'younger Hippocrates', second only to Hippocrates in age and fame.¹⁸⁵ It is evident from the fragments that Diocles was a prolific author with interests in a wide range of medical topics. References to the titles of his works include such topics as gynaecology, surgery, bandaging, fevers, regimen, and pathology.¹⁸⁶ According to Galen, Diocles was the first to write a text on the subject of animal anatomy.¹⁸⁷ While it is possible that Diocles used this study as a means of exploring human anatomy (i.e.: by way of analogy between human and animal parts), there is no evidence to prove that Diocles actually performed dissections.¹⁸⁸

In spite of this large number of works, only fragments of Diocles' texts survive. Most of our information on him is taken from the accounts of later authors, and is therefore often of questionable authenticity.¹⁸⁹ This is particularly true of Diocles' views of phrenitis, which are mentioned in only six fragments.¹⁹⁰ One of these passages is decidedly spurious, and was probably not written by Diocles.¹⁹¹ Another passage is found in the work of Caelius Aurelianus, and is presented with very

¹⁸⁴ Diocles' exact dates are not known. Philip van der Eijk (2000-1: 2.xxxiii) states that, based on the evidence, "any reasonable pair of dates between 400 and 300 is theoretically possible". The most recent collection of Diocles' fragments is van der Eijk, 2000-1. I have followed this system of numbering for Diocles' fragments.

¹⁸⁵ Fragments 3 and 4 van der Eijk, respectively.

¹⁸⁶ Nutton, 2004: 121. For a list of Diocles' reconstructed titles, see van der Eijk, 2000-1: 1.xxxiii-xxxiv.

¹⁸⁷ Nutton, 2004: 121 and Fragment 17 van der Eijk.

¹⁸⁸ Fragments 24a-c and 39 van der Eijk. See also van der Eijk, 2000-1: 2.xxvii.

¹⁸⁹ For an account of the most prevalent sources of information about Diocles, and their associated biases, see van der Eijk, 2000-1: 2.viii-xxii.

¹⁹⁰ Fragments 71, 72, 73, 219a-b, and 183a van der Eijk.

¹⁹¹ Fragment 183a van der Eijk. This passage is a letter to Antigonus on the subject of regimen; the likelihood that it was actually written by Diocles is very slim. For more information on this fragment, see van der Eijk, 2000-1: 2.xiii, and the commentary on this passage at van der Eijk, 2000-1: 2.352-360.

negative overtones.¹⁹² The information contained in these six passages is limited – we are offered only a brief explanation of the cause of the disease, a few comments about its development, and a short list of remedies that were used against it. With such limited information, it is almost impossible to reconstruct Diocles' entire concept of phrenitis. Instead, the following chapter will discuss these fragments in more detail, highlighting both the relevance of the information to Diocles' own views of phrenitis, and significant features of the context in which each passage is presented. It will then be possible to examine the significance of these passages to the overall discussion of phrenitis.

The scarcity of information about Diocles' concept of phrenitis forces us to look beyond the minor details of his concept. Diocles represents a transition between certain aspects of the Hippocratic concept of phrenitis, and later authors' discussions of the disease. These connections will be considered in more detail at the end of the chapter.

Diocles' Physiology and Disease Theory

Diocles' approach to medicine appears to be based on a system of humours and elemental qualities, in which health is dependent upon a balance of the composite parts. While he seems to accept the four qualities of hot, cold, wet, and dry, as well as the four humours of blood, phlegm, yellow bile, and black bile, the exact role that he attributes to these humours is not clear.¹⁹³ Diocles' fragments also refer to a 'psychic *pneuma*', a particular kind of breath that originates in the heart and flows through the

¹⁹² Fragment 72 van der Eijk.

¹⁹³ van der Eijk, 2000-1: 2.xxix and Nutton, 2004: 121. See also fragments 27; 40, section 2; and 183a, section 6; each of which presents a different humoral theory.

body to enable consciousness and voluntary movement.¹⁹⁴ Diocles believes that the rational powers are located around the heart; it is the movement of the *pneuma* from heart to brain which enables the powers of rational thought and sensation. It is possible that the blood helps facilitate the movement of the *pneuma*.¹⁹⁵

Diocles' views on the cause of disease are also unclear. In some fragments, diseases are said to result from an imbalance of the humours and/or elements of the body.¹⁹⁶ Other fragments suggest that disease can occur when phlegmatic and sometimes bilious humours obstruct the passages of the body and hinder the natural movement of the *pneuma*.¹⁹⁷ Phlegm and bile are also said to cause diseases by entering the veins and corrupting the blood¹⁹⁸; in these instances, bile boils and curdles the blood, while phlegm cools it and causes it to congeal.¹⁹⁹ The humours of bile and phlegm may also cause inflammation, φλεγμονή, the pathological heating and swelling of a particular body part.²⁰⁰ Treatment for diseases appears to be accomplished through removal of the excess humours and the application of medicinal and physical remedies with properties opposite to those of the humour that is in excess.²⁰¹ The specific methods of treatment that Diocles uses will be discussed in more detail below.

¹⁹⁴ Nutton, 2004: 121 and van der Eijk, 2000-1: 2.xxviii. While this concept is clearly part of Diocles' theories, the actual term 'psychic *pneuma*' (ψυχικὸν πνεῦμα) has most likely been projected onto Diocles' theories by the Anonymus Parisinus.

¹⁹⁵ van der Eijk, 2000-1: xxviii. See also Fragments 78, 80, 98 van der Eijk.

¹⁹⁶ Fragments 51a-d and 53 van der Eijk.

¹⁹⁷ See, for example, fragments 80 (headache), 83 (paralysis of the sense of smell), 87 (pleuritis), 102 (paralysis) and 108 (mania).

¹⁹⁸ Fragment 59 van der Eijk.

¹⁹⁹ Nutton, 2004: 122. See also Fragments 34 and 78 van der Eijk.

²⁰⁰ van der Eijk, 2000-1: xxviii. See also Fragments 72, 90, 138 van der Eijk.

²⁰¹ van der Eijk, 2000-1: xxx. See also Fragments 55a and 138 van der Eijk.

Concept of Phrenitis

The following passage from the Anonymus Parisinus provides our most substantial piece of evidence regarding Diocles' concept of phrenitis:

Diocles says that phrenitis is an inflammation of the diaphragm, naming the affection from the place of the affection, and not from the activity affected, and [he says that] the heart is affected together with it. For it seems that he, too, suggests that thinking is located around this place; for it is on account of this that loss of reason occurs with this affection also.

Ὁ δὲ Διοκλῆς φλεγμονὴν τοῦ διαφράγματος φησὶν εἶναι τὴν φρενίτιν, ἀπὸ τόπου καὶ οὐκ ἀπὸ ἐνεργείας τὸ πάθος καλῶν, συνδιατιθεμένης καὶ τῆς καρδίας· ἔοικε γὰρ καὶ οὗτος τὴν φρόνησιν περὶ ταύτην ἀπολείπειν· διὰ τοῦτο γὰρ καὶ τὰς παρακοπὰς ἔπεσθαι τούτοις.²⁰²

The Anonymus Parisinus' work *De morbis acutis et chroniis* is one of our more reliable sources for information about Diocles.²⁰³ In this text, the Anonymus describes sixteen acute, and thirty-five chronic diseases, under the headings of causes, symptoms, and therapies. Within these sections, the Anonymus' own medical opinions are largely restricted to the discussions of signs and therapies; his sections on the aetiology of these diseases is almost entirely composed of doxographic reports of the opinions of the 4th century physicians Diocles, Erasistratus, Hippocrates and Praxagoras.²⁰⁴ For many diseases, each authors' opinion is stated independently; where the ideas of the physicians overlap, the Anonymus links the authors together,

²⁰² Anonymus Parisinus, *De morbis acutiis et chroniis* 1 / Fragment 72 van der Eijk.

²⁰³ For a discussion of the reliability of the Anonymus as a source for Diocles, see van der Eijk, 2000-1: 2.xv-xvii. For a general discussion of the Anonymus' doxography, see van der Eijk, 1999d.

²⁰⁴ The only variation to this is in chapter 51, where the Anonymus reports the philosopher Democritus' view of the cause of elephantiasis. Anonymus Parisinus, *De morbis acutis et chroniis* 51.1.

always with the intention of stressing their agreement with each other, rather than their opposition.²⁰⁵ This information is provided in a straightforward manner, without any indication of bias. If an extrapolation or inference has been made, the Anonymus is clear to point this out; in many cases, he reinforces these extrapolations with supporting evidence taken directly from the texts of the individual authors.²⁰⁶

While the Anonymus' accounts of these authors' opinions are clearly very reliable, they are not entirely free from alteration. This is due to the fact that in presenting the ideas on cause, the Anonymus deliberately structures the information in a manner that seeks to answer the question 'what part of the body is affected by this disease?'²⁰⁷ Emphasis is placed on the identification of an affected part, along with a description of the abnormal occurrence which results in the emergence of the disease. In the aforementioned passage on phrenitis, Diocles appears to identify the diaphragm and the heart as the places of affection, and the inflammation as the abnormal occurrence. The Anonymus presents information in this way because of his interest in the concept of the *locus affectus* (πεπουθὼς τόπος, affected place), a way of thinking about disease that focuses on internal anatomy, and seeks to determine which part of the body is affected in each disease.²⁰⁸ While it is not impossible for Diocles and the other authors to have thought about diseases in this context, it is believed that the idea of the *locus affectus* as a means of studying diseases did not appear until the post-Classical period.²⁰⁹ In presenting the ideas of 'the Ancients' in this manner, the Anonymus is participating in what became a doxographic tradition of reformulating

²⁰⁵ van der Eijk, 2000-1: xvi.

²⁰⁶ van der Eijk, 1999d: 314-315.

²⁰⁷ van der Eijk, 1999d: 322.

²⁰⁸ The concept of the *locus affectus* in relation to this study of phrenitis is discussed in more detail at the start of the chapter on Aretaeus. For a broader discussion of the concept, see McDonald, forthcoming, 2010; for its use in the Anonymus Parisinus, see van der Eijk, 1999d: 322-324; in Caelius Aurelianus, see van der Eijk, 1998: 350-352.

²⁰⁹ van der Eijk, 1998: 350.

the views of older authorities, in order to use them in support of one's own opinions.²¹⁰

To return to the fragment in question, we learn from this passage that Diocles believes that phrenitis is brought about by an inflammation of the diaphragm, the more traditional term for which is the *phrēn*.²¹¹ As the Anonymus suggests, it is from this organ that phrenitis is said to have been named; whether Diocles himself shares this opinion is not clear.²¹² From Homeric times, the *phrēn* was thought to be the 'organ' of rational thought; as mentioned in the discussion of Hippocrates, the *phrēn* functioned alongside the *nous* and the *thumos* to provide humans with their full range of mental capacities.²¹³ It is interesting, therefore, that the Anonymus emphasises the fact that Diocles does not associate this organ with the powers of intelligence. Instead, Diocles places intelligence around or near the heart; thus, in order to account for the mental derangement of phrenitis, the Anonymus tells us that Diocles believes that the heart is also affected during phrenitis. Philip van der Eijk provides this comment on the authenticity of this explanation:

The Anonymus seems keen to point out that, although Diocles' use of the name phrenitis is connected with the name of the part that is affected, not with the fact that the disease manifests itself in mental disturbance (as with Erasistratus and Praxagoras), Diocles nevertheless acknowledges that phrenitis is accompanied by mental disturbance, albeit only indirectly. Although there is no reason to

²¹⁰ For a discussion of the origins of this practice, see van der Eijk, 1998: 349-351. Caelius Aurelianus also participates in this tradition, with considerably more manipulation of the earlier authors' opinions. See below, in the section on Diocles' treatments, and in the chapter devoted to Caelius in this dissertation.

²¹¹ van der Eijk, 2000-1: 2. 146, note 9.

²¹² van der Eijk, 2000-1: 2.146, note 10. See also Pseudo-Galen, *Introductico seu medicus* 13 (14.733 Kuhn): συνίσταται δὲ περὶ ἐγκέφαλον, ἢ μῆνιγγας, ἢ ὡς τινες λέγουσι περὶ φρένας, ὃ διάφραγμα καλεῖται. θεραπεία δὲ ἀρμόδιος ἦδε. *Phrenitis occurs around the head, or the membranes of the brain, or as certain people say, around the phrēn, which is called the diaphragm.*

²¹³ For a discussion of these concepts in medical and non-medical sources, see Gundert, 2003: 13-36, and Sullivan, 1995: 18-35.

*question the validity of the Anonymus' report on Diocles here, it is not impossible that this latter point [i.e.: that phrenitis manifests itself in mental disturbance] is also an extrapolation by the doxographer (as in the case of Erasistratus) motivated by his desire to record agreement between the four authorities.*²¹⁴

Another piece of information about Diocles' concept of phrenitis comes from Galen's work *On Critical Days*.²¹⁵ Here, Galen is discussing the days of crisis of acute diseases, namely, the days on which a disease reaches a turning point, and the patient either begins to improve, or becomes worse. According to this passage, Diocles believes that the crisis of an acute disease occurs within twenty-one days of its onset.²¹⁶ Galen disagrees with this statement, arguing that in acute diseases the crisis occurs on or before the fourteenth day. Instead of discrediting Diocles, Galen tries to justify his predecessor's mistake by reminding the reader that Diocles also believes that phrenitis patients can be ill for several days before their disease begins to show severe symptoms. This statement is comparable to the Hippocratic work *Affections*, in which the symptoms of phrenitis are said to become more severe on the fourth or fifth day of the disease.²¹⁷ Galen suggests that in proposing a twenty-one

²¹⁴ van der Eijk, 2000-1: 2.147, note 13.

²¹⁵ Fragment 71 van der Eijk / Galen, *Di. dec.* 2.13 (9.896-897 Kühn).

²¹⁶ Fragment 71 van der Eijk / Galen, *Di. dec.* 2.13 (9.896 Kühn): τῶν ὀξέων ὁμολογουμένων εἶναι νοσημάτων, ἓνια τὴν ἰδ' ἡμέραν ὑπερβαίνοντα φαίνεται, καὶ διὰ τοῦτο καὶ Διοκλῆς οὐ τὴν ἰδ', ἀλλὰ τὴν εἰκοστὴν πρῶτην ὄρον αὐτῶν ἐτίθετο, κατὰ τοῦτο μὲν ἀμαρτάνων ὅτι μὴ τὴν κ' μάλλον, ἀλλὰ τὴν κα' ὄρον αὐτῶν ἐτίθετο, οὐ μὴν ἐκεῖνός γε πάντως σφαλόμενος ἐν τῷ ἰδ' ὑπερβαίνειν. *And of those diseases which are said to be acute, some appear to last beyond the fourteenth day, and on account of this, Diocles set not the fourteenth day but the twenty-first day as their limit; but accordingly, he was mistaken in this, in that he set the boundary not at the twentieth day but rather at the twenty-first day, but indeed he was not entirely mistaken in going beyond the fourteenth day.*

²¹⁷ Hippocrates, *Aff.* 10 (6.216 Littré): Φρενίτις ὅταν λάβῃ, πυρετὸς ἴσχει βληχρὸς τὸ πρῶτον... ὅταν δὲ τεταρταῖος γένηται καὶ πεμπταῖος, ὃ τε πυρετὸς ἰσχυρότερος γίνεται καὶ αἱ ὀδύνη, καὶ τὸ χρῶμα ὑπόχολον γίνεται, καὶ τοῦ νοῦ παρακοπή. *When phrenitis takes hold of the patient, the fever is very small;... but when the fourth or fifth day begins, the fever becomes stronger, and the colour becomes bilious, and the patient becomes deranged in his nous.*

day limit for acute diseases, Diocles is simply counting both the early days of the disease, and the fourteen-day period that is marked by more severe symptoms.²¹⁸

Treatment of Phrenitis

Diocles' therapeutics are based on the theory that health is a matter of keeping the body in proper balance.²¹⁹ As explained above, most diseases seem to occur as a result of an excess of certain humours, often in the form of blockages in the various passages of the body. In these situations, the goal of the treatment is to remove the excess material, and assist the body in re-establishing its natural equilibrium.²²⁰ Often, this seems to be accomplished using evacuative remedies such as venesection, medicinal purgation of the body, and the application of medicinal and physical remedies with properties that are opposite to those of the excess humour.²²¹

Much of our information about Diocles' treatments of phrenitis comes from Caelius Aurelianus' text *Acute Affections*.²²² In reading this text, it is important to be aware that Caelius has a very critical attitude toward non-Methodist views of disease and treatment. In reporting the opinions of earlier authors, Caelius makes no attempt

²¹⁸ Fragment 71 van der Eijk / Galen, *Di. dec.* 2.13 (9.897 Kühn): οἶδε δὲ τοῦτο μὲν καὶ ὁ Διοκλῆς καὶ οἱ ἄλλοι σχεδὸν ἅπαντες οἱ παλαιοί. φρενιτικούς γοῦν εὐθὺς ἀπὸ τῆς πρώτης ἡμέρας οὐ πάνυ τι γίνεσθαί φησιν. εἰ τοίνυν τις ἀρξάμενος φρενιτίζειν, ἤτοι πεμπταῖος, ἢ ἐβδομαῖος, ἢ ἑπτακαίδεκαταῖος, ἢ εἰκοσταῖος κριθείη, πρόδηλον ὡς ἐντὸς τῆς ἑαυτοῦ ιδ' ἐκρίθη. *And Diocles knows this, and almost all the other ancients. Indeed he says that people with phrenitis indeed do not become very ill directly from the first day. If indeed someone who begins to suffer from phrenitis were to have their crisis on the fifth day, or the seventh, or the seventeenth, or the twentieth day, it is clear that he had a crisis within the fourteenth day of his own disease.*

²¹⁹ Nutton, 2004: 123. See also Fragments 51a-d and 53 van der Eijk.

²²⁰ Fragment 51a-d van der Eijk.

²²¹ van der Eijk, 2000-1: xxix-xxx.

²²² Caelius Aurelianus, *Acute and Chronic Affections*. The final chapter of this dissertation discusses Caelius in more detail.

to conceal this hostility.²²³ As Philip van der Eijk points out in his introduction to Diocles' fragments,

*Caelius often seems to mention only those Dioclean measures which are suitable targets for his criticism: thus he highlights the sharpness or drasticness of the measure, its highly dangerous nature, its ineffectiveness, its inappropriateness, its irrationality, its inconsistency with other measures, its uncertainty, or the absence of detailed specifications concerning the dosage of a therapeutic substance (e.g. vinegar, oxymel) to be administered and concerning the time a particular measure should be applied and – for example in the case of abstention from food – the time the measure should stop.*²²⁴

Many of these negative characteristics are evident in Caelius' account of the treatments that Diocles uses against phrenitis. Here, Caelius reports that Diocles prescribes bathing, venesection, and clysters as remedies against the disease; not surprisingly, Caelius finds fault with each of these procedures.²²⁵ We are also told that in prescribing these treatments, Diocles gives special attention to the age, strength, and habits of each patient, aspects which Caelius does not think to be relevant to treatment. Diocles suggests that bathing should only be used for patients who are strong and impulsive²²⁶, and that venesection is best for young men who have lots of blood, or who regularly drink wine.²²⁷ In determining whether these

²²³ For further discussion of Caelius' doxographic style, see van der Eijk, 1998, 1999b, and 2000-1: 2.xviii-xix.

²²⁴ van der Eijk, 2000-1: 2.xix. This is true for most of the authors whom Caelius discusses, although some receive more biting commentary than others. This will be discussed in more detail in the chapter on Caelius in this dissertation.

²²⁵ Caelius Aurelianus, *Acut.* 1.12.100-103 (78.2-80.8 Bendz) / Fragment 73 van der Eijk.

²²⁶ van der Eijk (2000-1: 2.150 note 7) suggests that from this line, "we may infer that Diocles was thinking of people who display their strength without any rational control."

²²⁷ Fragment 73 van der Eijk: Diocles vero libro quem de febribus scripsit, ait oportere phreniticos fortes atque audaces lavacro curari, simili<ter> etiam phlebotomari iuvenes fortes atque plurimum sanguinis abundantes vel consuetudine vinolentos, quosdam intra sextum diem, aliquos vero etiam post septimum et octavum. item libro quem de passionibus et earum causis et curationibus scripsit non

treatments were suitable, it is probable that Diocles would have also considered the overall constitution of the patient, as well as environmental factors such as climate, weather, and location; these are possibly the 'other things' which Caelius refers to later in this passage.²²⁸ As for the clysters, Caelius reports that Diocles makes them 'rather sharp'; his statement that they are 'harmful' and 'in no way different than poison' is evidence of his hostile attitude towards Diocles' opinions, and can therefore be largely overlooked.²²⁹

As we saw above, Diocles believes that phrenitis arises from an inflammation of the *phrēn* and the simultaneous affection of the heart. Although we are not told the exact process that causes this inflammation, Diocles' approach to treatment suggests that it is due to an excess of a particular humour: both the venesection and the clyster described by Caelius would accomplish the removal of a humoral excess. Once the excess is removed, the heat and swelling would be able to dissipate; bathing may have been used as a means of assisting with this dissipation. As Philip van der Eijk suggests in his commentary on this fragment, Diocles' use of bathing as a remedy for phrenitis is reminiscent of the treatment advice given in the Hippocratic work *Affections*.²³⁰ This text describes the softening effects of bathing on the body, its

solum, inquit, ex brachio sanguinis est phreniticis detrahendus, sed etiam de venis quae sub lingua sunt. *Diocles indeed, in the book which he wrote about fevers, says that it is proper for phrenitics who are strong and spirited to be treated with baths, and similarly, young men who are strong and have a great abundance of blood or who are in the habit of drinking wine, it is proper for them to be treated with venesection, some within six days, others even after the seventh or eighth day. Again, in the book which he wrote about affections and their causes and treatments, he says not to withdraw blood from the forearm of phrenitis patients, but also from the veins under their tongue.* Methodists have a more universal approach to treatment, and do not make alterations according to individual patients' needs.

²²⁸ Caelius Aurelianus, *Acut.* 1.12.103 (80.1-8 Bendz) / Fragment 73 van der Eijk: cum enim non aetates neque cetera, quae superfluo posuerunt, praevienda probemus, sed passionem magis atque eius comitantia consideremus. *For let us not commend making provisions for either age [of the patient] or the other things which they superfluously set down, but let us consider more completely the disease and its accompanying signs.* See also the commentary on this passage, van der Eijk, 2000-1: 2.151, line 28.

²²⁹ Caelius Aurelianus 1.12.102 (78.18-26 Bendz) / Fragment 73 van der Eijk: Dehinc noxius est etiam clyster acrior, quem saepissime probant, atque nihil a veneficio differens. *What is more, to use a rather sharp clyster, which they recommend frequently, is harmful and in no way different than poison.*

²³⁰ van der Eijk, 2000-1: 2.150; and Hippocrates, *Aff.* 10 (6.218 Littré).

tendency to bring out sweat, and its ability to relax and empty the bowels and bladder.²³¹ There is evidence that Diocles chooses his treatments on the principle that health is restored by way of treatment with opposites; thus, in order to reduce the heat and swelling of the inflammation, Diocles would probably have applied cooling remedies that would soothe and reduce the swellings.²³²

Although there is no mention of it by Caelius, it is most probable that Diocles would also have relied on regimen as a means of treating phrenitis. Regimen, or the use of diet and exercise to cure disease and maintain health, is an area of particular interest to Diocles.²³³ In a book entitled *Matters of Health*, he discusses the elemental properties contained in a variety of foods and medicinal substances, and the ways that these substances act upon the body – especially in terms of their laxative, diuretic, nutritive, and related powers.²³⁴ Diocles recognizes the fact that these powers vary according to the way each substance is prepared, and based on the specific characteristics of the person to whom they are administered. Diocles argues that it is difficult to predict the effects of a substance based on its individual properties alone, and that it is not always possible to explain why certain foods acted the way they do. In his opinion, experience is the best way to learn how the various foods and medicines are most likely to react in a given situation.²³⁵

²³¹ Hippocrates, *Aff.* 10 (6.218 Littré). This text is included in Appendix 1 of this dissertation. There is no specific evidence in Diocles' surviving fragments to either support or disprove this similarity.

²³² Fragments 55a-b van der Eijk, and van der Eijk, 2000-1: 2.xxx.

²³³ Nutton, 2004: 123; and van der Eijk, 2000-1: 2.xxx. See also Fragments 182 and 183a.

²³⁴ Nutton, 2004: 123; and van der Eijk, 2000-1

²³⁵ Fragment 176 van der Eijk. The overall discussion of this passage is summed up as follows: αὐτὴ μὲν ἢ τοῦ Διοκλέους ῥῆσις ἔστιν ἐκ πείρας μόνης ἐγνωσθαι τὰς ἐν ταῖς τροφαῖς δυνάμεις ἡγουμένου καὶ μὴτ' ἐκ τῆς κατὰ κράσιν ἐνδείξεως μὴτ' ἐκ τῆς κατὰ τοὺς χυμούς. *And this is the declaration of Diocles, who believes that one can come to know the powers in foods from experience alone, and not from an indication according to its treatment not an indication according to its humours.* See also van der Eijk, 2000-1:2. 321-334 (the commentary on this passage) and 2.xxx; van der Eijk, 1996; and Nutton, 2004: 123.

Diocles' fragments contain only one recommendation for the use of foodstuffs in the treatment of phrenitis: in fragments 219a and b, we are told that Diocles uses boiled garlic as a remedy for phrenitis.²³⁶ Although neither passage indicates the specific benefits of this remedy against phrenitis, one possibility can be derived from the passage from Pliny the Elder (fragment 219a), which tells us that Diocles makes use of garlic's laxative properties in the treatment of dropsy.²³⁷ Garlic is used for a similar purpose in fragment 183a, a letter about dietetics that is spuriously attributed to Diocles.²³⁸ Here, boiled garlic is listed as a safe, non-pharmaceutical method of evacuating the lower cavity, a procedure that resembles the effect of the clysters described in the fragment from Caelius Aurelianus.²³⁹ This connection is only speculative, however, since fragment 183a does not include phrenitis as one of the diseases that can be prevented with laxatives. Instead, this letter lists phrenitis as a disease of the chest, the prevention of which is said to be accomplished by way of forced vomiting, which ensures that the stomach does not become overfull.²⁴⁰

Whatever Diocles' intended goal in the administration of the boiled garlic, it is most likely that this remedy would have been only one of a number of treatments that he recommends in the treatment of phrenitis.

²³⁶ Fragments 219a-b van der Eijk.

²³⁷ Fragment 219a van der Eijk: *Diocles hydropicis cum centauro aut in fico duplici ad evacuandam alvum... Diocles for dropsy with centaury or in double fig, to evacuate the belly...*

²³⁸ The questionable authorship of this letter is discussed in the commentary on this passage, van der Eijk, 2000-1: 2.352-358.

²³⁹ Fragment 183a, section 4 van der Eijk: ὅταν τι τούτων προσημαίνῃ, τὴν κοιλίαν δεῖ μαλακῆν προπαρασκευάζειν μετὰ διαίτης ἀνευ φαρμακείας· ἔστι δὲ πλείω καὶ ἀσφαλῆ, οἷσινσι χρώμενος οὐκ ἂν διαμάρτοις, σευτλία μελικράτω καθηψημένα, σκόρδα ἑφθά, μαλάχη, λάπαθα, λινοζώστις, μελιτώματα· πάντα γὰρ ὑπακτικά κοιλίας ἐστίν. *Whenever one of these signs occurs beforehand, it is necessary to soften the lower cavity, and to prepare it in advance with regimen, without employing drugs; there are many methods, and safe ones, making use of which you will not go astray: beets boiled down with hydromel, boiled garlic, mallow, monk's rhubarb, mercury, honeycakes. For all of these are evacuants for the lower cavity.* Caelius's reference is in Fragment 73 van der Eijk.

²⁴⁰ Fragment 183a, section 3 van der Eijk. The other diseases of the chest are pleuritis, peripneumonia, melancholia, acute fevers, lethargy, and burning fever with hiccup. Garlic is not included as one of the substances that can be used to facilitate this forced vomiting.

Praxagoras of Cos

Praxagoras of Cos was a younger contemporary of Diocles, born around 340 BC.²⁴¹ His father, Nicarchus, was also a physician; Galen reports that Praxagoras' belief that arteries carry only *pneuma* was an opinion he shared with his father Nicarchus.²⁴² Praxagoras is known both as an eminent physician, and as the teacher of several well-known physicians, including the third century anatomist Herophilus. The Praxagorean school, based on his teachings, became well established, and probably existed to Galen's time. Galen himself is said to have written a work discussing Praxagoras' view of the humours; there is evidence to suggest that he also wrote a work on mixtures according to Praxagoras.²⁴³ Like Diocles, Praxagoras' medical interests were wide-ranging; the sources report that he wrote books on such subjects as therapeutics, diseases, anatomy, diseases in foreign countries, and works on two specific kinds of symptoms, *περὶ συνεδρευόντων*, symptoms which can assist with the diagnosis of a disease, and *περὶ ἐπιφαινόμενα*, or concurrent symptoms which help a physician predict the outcome of the disease.²⁴⁴

As with Diocles, our knowledge of Praxagoras' approach to medicine is passed down to us only through fragments of his works, and references to him in other sources. In the collection of these passages compiled by Fritz Steckerl, there are only two fragments which offer information about Praxagoras' understanding of

²⁴¹ Steckerl, 1958: 2. This work offers most recent collection of fragments from Praxagoras and some of his followers; unless otherwise noted, all fragment numbers refer to Steckerl's fragments of Praxagoras. In a few cases, Steckerl has included multiple passages under one fragment number; in these instances, to improve on clarity, I have labeled each of these passages with letters, to help differentiate between them. Steckerl's volume is problematic because it lacks any analysis of the fragments or their sources. In addition, especially in his introductory discussion of Praxagoras' doctrines (1958: 7-44), Steckerl frequently accepts Galen's accounts of Praxagoras at face value, without any consideration of Galen's personal biases and/or rhetorical technique.

²⁴² Fragment 85 Steckerl.

²⁴³ Steckerl, 1958: 4-5 and 13, and Fragments 86, 92, and 93.

²⁴⁴ Fragments 86 and 92 Steckerl.

phrenitis.²⁴⁵ In Fragment 61, Galen reports that in a text about the different kinds of acute diseases, Praxagoras includes a reference to fevers that occur in phrenitis.²⁴⁶

The second fragment, Fragment 62, is taken from the Anonymus Parisinus' doxographic account of the possible causes of phrenitis: in this passage, Praxagoras' views immediately precede those of Diocles. A third piece of information, one that is not included in Steckerl's collection, is offered by Caelius Aurelianus, in his doxographic discussion of treatments for phrenitis. Here, in the interests of showing his own thoroughness as a doxographer, Caelius Aurelianus tells us that Praxagoras did not pass down any treatments for phrenitis.²⁴⁷

Given these limited fragments, the best way to analyse Praxagoras' concept of phrenitis is to place it in direct contrast with Diocles' concept of this disease. These authors were contemporaries, and shared a similar background of medical influences. As we will see, both authors have a cardio-centric view of intelligence, yet only Praxagoras believes that the heart is the primary site of affection in phrenitis. Diocles, as we have seen, prefers the idea that phrenitis is located in the *phrēn*, with the heart being affected only indirectly. Before going into this discussion in more detail, however, it is useful to review some of Praxagoras' general approach to medicine, in order to gain some context for his views of phrenitis.

²⁴⁵ Fragments 61 and 62 Steckerl.

²⁴⁶ Fragment 61 Steckerl / Galen, *Hipp. Epid.* 6 (17a.889-890 Kühn): ὁ δὲ Πραξαγόρας καὶ φρενιτικούς καὶ ληθαργικούς καὶ πρὸς γε τούτοις ἰκτερικούς τινὰς ὀνομάζει πυρετοὺς ἐν ταῖς διαφοραῖς τῶν ὀξέων. *And Praxagoras, among the different kinds of acute diseases, named phrenitic fevers, and lethargic fevers, and indeed near to these, certain icteric fevers.* Galen offers this comment in the middle of a discussion on the different ways of naming fevers.

²⁴⁷ Caelius Aurelianus, *Acut.* 1.12.100 (78.2-10 Bendz) / Fragment 73 van der Eijk: nam curationem nillam tradidit. sed neque Praxagoras neque Herophilus. *For [Hippocrates] did not pass down any remedies. And neither did Praxagoras or Herophilus.* For a discussion of Caelius' use of this technique, see van der Eijk, 1999b: 434-435.

Praxagoras' Physiology and Disease Theory

Praxagoras believes in a humoral approach to medicine. He is said to have identified as many as eleven humours, one of which is blood.²⁴⁸ In his work *On the Natural Faculties*, Galen tries to reconcile Praxagoras' beliefs with those of Hippocrates – and therefore with his own beliefs as well – by arguing that these ten new humours are simply explanatory subdivisions of phlegm, yellow bile, and black bile.²⁴⁹ Despite Galen's insistence, which apparently extended into a work on the humours according to Praxagoras, this interpretation is very unlikely.²⁵⁰ Rufus of Ephesus offers the following explanation of Praxagoras' humours:

Praxagoras named the humours in his own personal way, sweet, and well-balanced, and vitreous; these are divisions of the form of phlegm; and he names others sharp and sodic and salty and bitter; and these appear just as in flavours. And others are named leek-green in respect to colour, and yolk-like in respect to their thick consistency. And others are named corrosive because they are provided with corrosive properties; and other are named stationary humours because they are present in the veins and they do not spread out into the flesh, because they are thin and steadfast humours in the veins. And on the whole, Praxagoras calls every liquid a humour.

Πραξαγόρας δὲ ἴδιον τρόπον τοὺς χυμοὺς ὠνόμαζε, γλυκὺν, καὶ ἰσόκρατον, καὶ ὑαλοειδῆ· τούτους μὲν κατὰ τὴν ἰδέαν τοῦ φλέγματος· ἄλλους δὲ ὄξυν καὶ νιτρώδη, καὶ ἀλυκόν, καὶ πικρόν· τούτους δὲ ὡς γευσασμένω φαίνονται· ἄλλους δὲ, πρασοειδῆ μὲν τῇ χροῶ, λεκιθώδη δὲ τῇ παχύτητι· ἄλλους δὲ, ξυστικόν μὲν, ὅτι ξύεσθαι παρασκευάζει· στάσιμον δὲ, ὅτι ἐν ταῖς φλεψὶν ἐνέστηκε, καὶ οὐ διαδίδωσιν εἰς τὴν σάρκα, διὰ τὸ λεπτοὺς καὶ φλεβώδεις

²⁴⁸ Fragments 20, 21, 22 Steckerl.

²⁴⁹ Fragment 21 Steckerl. See also Nutton, 2004: 124.

²⁵⁰ Steckerl, 1958: 10.

εἶναι τοὺς στασίμους χυμούς. Τὸ δὲ ὅλον, χυμὸν ὁ Πραξαγόρας
πᾶν τὸ ὑγρὸν καλεῖ.²⁵¹

The most frequently mentioned of Praxagoras' humours is the so-called 'vitreous humour', a very cold humour with an appearance and consistency similar to that of liquefied glass.²⁵² Galen refers to this humour repeatedly, and believes that it is a species of phlegm.²⁵³

Praxagoras believes that diseases can be caused by excess humours, which putrefy when they become collected in one place.²⁵⁴ Fevers, for example, arise when humours begin to putrefy in the 'hollow vein', the large vein which runs from the liver to the kidneys.²⁵⁵ It is possible to suffer excesses of more than one humour at a time: if, for example, there is a simultaneous accumulation of bile (a hot humour) and phlegm (a cold humour), patients will suffer both shivering and a fever.²⁵⁶

Sometimes, as in inflammation of the liver, old humours can become mixed with new humours, causing the humours – and, presumably, the surrounding area – to become putrid, stagnant, and inflamed.²⁵⁷

²⁵¹ Fragment 22 Steckerl / Rufus of Ephesus, *De corporis humani appellationibus* 226.

²⁵² Fragment 52 Steckerl / Galen, *Caus. Symp.* 1.7.7 (7.137-138 Kühn): ψύξις τε γὰρ ἰσχυρὰ ποτὲ μὲν αὐτὴ καθ' αὐτὴν, ἔστι δ' ὅτε ἐπὶ φλέγματι πάνυ ψυχρῶ, (τοιούτων δὲ ἔστι παραπλήσιον ὑάλω κεχυμένη κατὰ τε τὴν χροάν καὶ τὴν σύστασιν, ὃν περ δὴ καὶ ὑαλώδη χυμὸν οἱ περὶ τὸν Πραξαγόραν τε καὶ Φιλότιμον ὀνομάζουσιν)... *For sometimes [the condition arises from] intense chilling by itself, or sometimes from very cold phlegm (this is of the sort that is nearly similar to liquefied glass in respect to appearance and composition, of the sort which followers of Praxagoras and Phylotimus called vitreous)...*

²⁵³ Fragments 50-57 Steckerl.

²⁵⁴ Fragment 46 Steckerl.

²⁵⁵ Fragment 60 Steckerl. On the identification of the 'hollow vein', see Fragment 7 Steckerl. Only Praxagoras refers to this vein as the 'hollow vein'. Most other physicians say that the 'hollow vein' is the one which runs through the diaphragm and heart.

²⁵⁶ Fragment 51(b) Steckerl.

²⁵⁷ Fragment 68 Steckerl / Anonymus Parisinus, *De morbis acutis et chroniis* 32.1: ἥπατος φλεγμονῆς αἰτία... κατὰ δὲ Πραξαγόραν, συμπλοκὴν ἐν τῷ μέρει τούτῳ χυμῶν προσφάτων ἐώλοις· καὶ διὰ τοῦτο στάσιν καὶ σῆψιν καὶ τὴν τούτων φλεγμονήν. The cause of inflammation of the liver... according to Praxagoras, combination in this place of new humours with old humours; and on account of this there is stagnation and putrefaction and inflammation of these humours.

Treatment of diseases is primarily through the evacuation of the troublesome humours, using such methods as venesection, emetics, and purgatives. Galen believes that Praxagoras uses Hippocrates' instructions as a guide for employing venesection, to decide when this remedy will be beneficial, and from which part of the body the blood is to be removed.²⁵⁸ Additional treatment is administered through the use of medications and dietetics. Galen reports that Praxagoras bases his selection of medications on the nature of the specific disease, and that his remedies are designed to treat both the area of the humoural accumulation, and the entire body.²⁵⁹ In his rather bitter accounts of Praxagoras' methods of treatment, Caelius Aurelianus mentions such remedies as bathing, massage with oils, fasting, and the application of poultices and plasters.²⁶⁰

Praxagoras' anatomical studies are focussed on the processes and structures of the body.²⁶¹ In his opinion, the heart is responsible for rational thought, φρόνησις.²⁶² Galen reports that Praxagoras and his student Phylotimus believe that the brain is only an outgrowth of the spinal column, with no particular connection to the rational powers.²⁶³ Praxagoras believes that the veins, which carry the blood and other humours, begin in the liver.²⁶⁴ The arteries, which begin in the heart, gradually become thinner as they stretch out through the body; when they become too thin to support themselves, the hollow passages collapse inwards and become nerves.²⁶⁵

²⁵⁸ Fragment 98(b) Steckerl.

²⁵⁹ Fragments 96 and 97 Steckerl.

²⁶⁰ Fragments 100, 101(a), 102-108, 109a, and 111-114 Steckerl. The diseases mentioned in these passages are (in order): cholera, dysentery, liver disease, lethargy, epilepsy, paralysis, phthisis, hemorrhage, tetanus, ileus, synanche, dropsy, pleuritis, and pneumonia.

²⁶¹ Nutton, 2004: 125.

²⁶² Fragment 62 Steckerl: Πραξαγόρας δὲ φλεγμονὴν τῆς καρδίας εἶναι φησι τὴν φρενίτιν, ἧς καὶ τὸ κατὰ φύσιν ἔργον φρόνησιν οἶεται εἶναι. *Praxagoras says that phrenitis is an inflammation of the heart, of which he believes the natural duty is rational thought.* See also Fragments 30, 69, 72, and 75.

²⁶³ Fragment 15 Steckerl, and *Phylotimus*, Fragments 1-2 Steckerl.

²⁶⁴ Nutton, 2004: 126.

²⁶⁵ Fragment 11 Steckerl; see also Nutton, 2004: 126.

According to Galen, it is in this way that Praxagoras is able to claim that the nerves have their origin in the heart, the seat of the rational powers.²⁶⁶ The arteries carry *pneuma* from the heart to the rest of the body; that the *pneuma* is in some way responsible for the body's movement is evident from the fact that if the passage of the *pneuma* is halted, as in epilepsy, the blocked *pneuma* makes the body shake and convulse.²⁶⁷ The arteries also have their own natural movement – the pulse.²⁶⁸ Praxagoras uses the various speeds and qualities of the pulse as a means of determining certain information about accumulations of the humours in the body.²⁶⁹ Although it is not clear how he made use of this information, Praxagoras' attempts to use the pulse as a diagnostic tool have had a lasting impact on future physicians' research in this area.²⁷⁰

Concept of Phrenitis

Only three of Praxagoras' extant fragments refer to phrenitis.²⁷¹ Two of these fragments provide some general details: that Praxagoras considers phrenitis to be an acute disease with fever, and that he does not record any treatments for phrenitis that

²⁶⁶ Fragment 11 Steckerl. Galen seems to emphasize the connection between the nerves and the seat of the 'mind' as a means of explaining how the nerves are capable of sensation; the scenario he presents parallels his own view that the brain is responsible for the rational powers, and is also the starting point of the nerves. It is not possible to know if Praxagoras' own explanation was as comprehensive as Galen implies.

²⁶⁷ Fragment 70 Steckerl: Πραξαγόρας περὶ τὴν παχεῖαν ἀρτηρίαν φησὶ γίνεσθαι φλεγματικῶν χυμῶν συστάντων ἐν αὐτῇ· οὕς δὲ πομφολυγούμενους ἀποκλείειν τὴν δίοδον τοῦ ἀπὸ καρδίας ψυχικοῦ πνεύματος καὶ οὕτω τοῦτο κραδαίνειν καὶ σπᾶν τὸ σῶμα· πάλιν δὲ κατασταθεισῶν τῶν πομφολύγων παύεσθαι τὸ πάθος. *Praxagoras says that epilepsy develops around the thick artery, when the phlegmatic humours become stopped in this area; these humours, having formed into bubbles, stop the passage of the psychic pneuma out of the heart, and in this way the pneuma causes the body to shake and have spasms. And when the bubbles have come down again the affection stops.* See also Fragment 75, in which the Anonymus Parisinus explicitly links the arteries with voluntary motion.

²⁶⁸ Fragments 27 and 28 Steckerl.

²⁶⁹ Fragments 84 and 85 Steckerl.

²⁷⁰ Nutton, 2004: 126-127.

²⁷¹ Fragments 61 and 62 Steckerl, and Caelius Aurelianus, *Acut.* 1.12.100 (78.2-10 Bendz).

are significant enough to have been known by Caelius Aurelianus or his sources.²⁷²

The third surviving fragment, taken from the Anonymus Parisinus' *De morbis acutis et chroniis*, offers the following account of how Praxagoras views the cause of phrenitis. For the sake of comparison, the account of Diocles' views is included here also, as it is recorded in the original source:

Praxagoras says that phrenitis is an inflammation of the heart, of which he believes the natural duty is rational thought; when the heart is disturbed on account of this inflammation, it becomes productive of this affection.

Diocles says that phrenitis is an inflammation of the diaphragm, naming the affection from the place of the affection, and not from the activity affected, and [he says that] the heart is affected together with it. For it seems that he, too, suggests that thinking is located around this place [i.e.: the heart]; for it is on account of this that loss of reason occurs with this affection also.

Πραξαγόρας δὲ φλεγμονὴν τῆς καρδίας εἶναί φησι τὴν φρενίτιν, ἧς καὶ τὸ κατὰ φύσιν ἔργον φρόνησιν οἶεται εἶναι· ὑπὸ δὲ τῆς φλεγμονῆς ταρασσομένην τὴν καρδίαν τοῦδε τοῦ πάθους συστατικὴν γίνεσθαι.

Ὁ δὲ Διοκλῆς φλεγμονὴν τοῦ διαφράγματός φησιν εἶναι τὴν φρενίτιν, ἀπὸ τόπου καὶ οὐκ ἀπὸ ἐνεργείας τὸ πάθος καλῶν, συνδιατιθεμένης καὶ τῆς καρδίας· ἔοικε γὰρ καὶ οὗτος τὴν φρόνησιν περὶ ταύτην ἀπολείπειν· διὰ τοῦτο γὰρ καὶ τὰς παρακοπὰς ἔπεσθαι τούτοις.²⁷³

²⁷² Fragment 61 Steckerl, and Caelius Aurelianus, *Acut.* 1.12.100 (78.2-10 Bendz) respectively.

²⁷³ Fragment 62 Steckerl / Fragment 72 van der Eijk: Πραξαγόρας δὲ φλεγμονὴν τῆς καρδίας εἶναί φησι τὴν φρενίτιν, ἧς καὶ τὸ κατὰ φύσιν ἔργον φρόνησιν οἶεται εἶναι· ὑπὸ δὲ τῆς φλεγμονῆς ταρασσομένην τὴν καρδίαν τοῦδε τοῦ πάθους συστατικὴν γίνεσθαι. Ὁ δὲ Διοκλῆς φλεγμονὴν τοῦ διαφράγματός φησιν εἶναι τὴν φρενίτιν, ἀπὸ τόπου καὶ οὐκ ἀπὸ ἐνεργείας τὸ πάθος καλῶν, συνδιατιθεμένης καὶ τῆς καρδίας· ἔοικε γὰρ καὶ οὗτος τὴν φρόνησιν περὶ ταύτην ἀπολείπειν· διὰ τοῦτο γὰρ καὶ τὰς παρακοπὰς ἔπεσθαι τούτοις.

Leaving Diocles aside for the moment, we see that Praxagoras situates phrenitis directly in the heart, the seat of the rational 'mind'. Although not explained in this passage, examination of other fragments suggests that the inflammation is very likely caused by the stagnation and putrefaction of humours in the 'hollow vein', the large vein which runs from the liver to the kidneys.²⁷⁴ The heat created by the inflammation accounts for the fever which, as mentioned in fragment 61, Praxagoras believes to be present in phrenitis. Based on the Anonymus Parisinus' presentation of Praxagoras' views, this fever seems to be a distinguishing factor between phrenitis and mania. In another example, the Anonymus Parisinus reports that Praxagoras believes mania to be caused by a swelling of the heart, which disturbs the rational powers but does not create fever.²⁷⁵ By contrast, in cases of phrenitis, the putrefaction of the humours causes both inflammation and the fever.²⁷⁶ As we will see in later chapters, the use of fever as a means of differentiating between these diseases became a standard aspect of later concepts of phrenitis; it is possible the Anonymus has mistakenly imposed this idea upon Praxagoras' concept of these diseases.

Going back to this passage as a whole, we are able to compare Praxagoras' and Diocles' concepts of phrenitis. The Anonymus' motives for phrasing this information in a way that emphasizes the *locus affectus* have already been discussed in the section on Diocles. Praxagoras, on the one hand, suggests that phrenitis is caused by direct

²⁷⁴ A similar explanation is offered as the cause of inflammation of the liver. See Fragment 68 Steckerl.

²⁷⁵ Fragment 72 Steckerl: Μανίας αίτία. Πραξαγόρας τήν μανίαν γίνεσθαι φησι κατ' οίδησιν τής καρδίας, οὐπερ καί τὸ φρονεῖν εἶναι δεδόξακε. μὴ ἐπιγίνεσθαι δὲ αὐτῇ πυρετούς διὰ τὸ μὴδὲ τὰ ἐκτὸς οἰδήματα ποιεῖν πυρώδεις. *The cause of mania. Praxagoras says that mania occurs on account of swelling of the heart, in which place he thinks rational thought is located. But fever does not occur along with this because external swellings do not create feverish states.*

²⁷⁶ Fragment 60 Steckerl: λοιπὸν δὲ τὸ τῶν συνόχων γένος, ὧν ὁ σύμπαρ χρόνος εἰς παροξυσμὸς ἐστὶν ἢτοι διὰ παντὸς ὁμότονος, ἢ μειούμενος, ἢ αὐξανόμενος ἄχρι κρίσεως, ὑπὸ τοιαύτης αίτίας γενέσθαι πέφυκεν, οἷαν ἀπάντων πυρετῶν ὁ Πραξαγόρας ὑπέθετο, σῆψιν οἰόμενος τῶν χυμῶν ἐν τῇ κοίλῃ φλεβί συνίστασθαι. *And it remains that the type of continuous fevers which are at their highest state throughout, either becoming weaker or increasing up to the crisis, on account of these causes they are brought forth, just as Praxagoras suggested of all fevers, believing it to be established by putrefaction of the humours in the hollow vein.*

inflammation of the heart. This damage to the rational powers manifests itself in the delirium common to phrenitis. Diocles, though sharing the view that the rational powers are situated in – or at least around – the heart, maintains the more traditional view that phrenitis occurs inside the *phrēn*. To account for the delirium of this illness, Diocles must therefore clarify that the heart is affected by way of a simultaneous affection, in the sense that the inflammation of the *phrēn* has a direct influence upon the heart.²⁷⁷

Placed together in this way, Diocles and Praxagoras represent the development of opinions about the location of the rational powers, and the connection between this location and the location of phrenitis. Diocles, the older physician, maintains the older, more traditional belief that phrenitis is a disease of the *phrēn*; he is not entirely traditional, however, in that he accepts that the 'mind' is located near the heart. Praxagoras, who is younger than Diocles, takes these concepts a step further, by combining the location of phrenitis with the location of the rational powers, and stating that both of these aspects are situated in the heart.

Summary

The authors of the Hippocratic Corpus represent a diverse, and sometimes contradictory, set of medical backgrounds. Most of these physicians use humours as the basis of their theories of disease. The variations in their definitions of phrenitis, combined with their various theories as to its causes and treatments, prevent us from creating a conclusive Hippocratic definition of phrenitis. Nevertheless, there is a general consensus that emerges from the Corpus, describing phrenitis as an acute and

²⁷⁷ Some 500 years later, Galen will speak of such situations as 'sympathetic affections'. See the chapter on Galen in this dissertation for a detailed discussion of this concept.

normally fatal disease characterized by the presence of fever and delirium. Other symptoms, such as sleeplessness, particular qualities of the urine, and tremors are introduced by different authors, often as prognostic signs indicating the likely outcome of the illness. Although an important defining symptom of phrenitis for later authors, *carphologia* and *crocydismos* are here listed only as occasional symptoms of phrenitis; they appear equally often as symptoms of other diseases.

The key symptom of delirium is an important lens for analysing the Hippocratic concepts of phrenitis, because delirium is understood by the Hippocratic authors to be derangement of the rational powers. Their theories regarding the nature of intelligence and the physical processes or locations that were responsible for this power were quite different, resulting in a variety of explanations regarding the role of the humours in producing delirium. Many authors identify bile as the cause of phrenitis; abnormal accumulations of bile are said to affect the *phrēn* or the blood, depending on where the author believes the source of intelligence and rational powers to be located. Although it does not discuss phrenitis in particular, the treatise *On the Sacred Disease* provides a new approach to the location of the mind, using anatomy to demonstrate that the rational powers are seated in the brain, not in the heart or the *phrēn*.

The goal of Hippocratic treatment is connected with the humoral explanations of disease. Many of the treatments seek to remove excess accumulations of humours through the application of remedies with opposite properties. Other physicians seek to remove excess bile by purging the lower cavity, and also recommend that warm compresses be used to ease the pain that occurs in this disease. In *Regimen in Acute Diseases*, the author advocates the use of dietetics as a means of treatment for phrenitis. This interest in the therapeutic properties of food was a relatively new

development amongst Hippocratic authors, one that would be further developed by later physicians.

Diocles and Praxagoras continue many of the basic tenets of Hippocratic thought. While the fragmentary nature of their surviving texts limits our precise knowledge of their approach to disease, there is evidence that they subscribe to the fundamental aspects of humoral theory. In respect to phrenitis, both Diocles and Praxagoras view inflammation as the cause of the disease: Diocles names inflammation of the *phrēn*, while Praxagoras situates it in the heart. In a similar manner as several Hippocratic authors, both authors identify the chest as the location of the rational powers; Praxagoras suggests they are in the heart, while Diocles suggests the area around the heart.

The comparison of Hippocratic views of phrenitis with the concepts presented by Diocles and Praxagoras reveals an evolution of thinking regarding phrenitis. Both Diocles and Praxagoras accept the key symptoms of fever and delirium as core to the concept of phrenitis, yet progressively begin to incorporate new ideas about the functioning of the body. This integration of new ideas with traditional concepts anticipates the approaches to medicine taken by both Aretaeus and Galen. Caelius Aurelianus chooses simply to reject these traditional ideas, accepting in their place a new set of doctrines that incorporates a new explanation for the origins of disease. In every case, however, a clear understanding of this Rationalist tradition is integral to our review of later concepts of phrenitis.

Anatomy and the Development of the *locus affectus*

The period between Praxagoras and Aretaeus brought significant changes to the medical understanding of the human body. In the third century BC, anatomical discoveries by physicians such as Herophilus, Erasistratus, and Eudemus began to change earlier views of the internal parts of the body, by improving the understanding of the structure and functions of the various organs. By way of dissection, these physicians investigated the structure of organs such as the lungs, heart, and brain, as well as the body's intricate systems of nerves, veins, and arteries. In addition to the valuable insight that these discoveries offered into the workings of each organ, they also provided physicians with an overall physical schematic in which to position their theories of disease.

Exploration of the body's organs improved physicians' ability to differentiate between different diseases. Investigation of the lungs, for example, improved the understanding of diseases such as pleuritis and peripneumonia.²⁷⁸ Whereas the Hippocratic author of *De locis in homine* differentiates between peripneumonia and pleuritis only by the question of whether it is one side or both that is affected by the flux²⁷⁹, anatomical research enabled Erasistratus to locate pleuritis in the membrane around the ribs, and peripneumonia in the lungs themselves.²⁸⁰ This ability to associate diseases with specific parts of the body facilitated the development of the

²⁷⁸ Philip van der Eijk (1998: 351, note 53) indicates that the discussion of the location of affection in these diseases is linked to the increase in anatomical knowledge of these organs.

²⁷⁹ Hippocrates, *De locis in homine* 14.2 (6.302-304 Littré): αὐται δὲ γίνονται διὰ τόδε· ὅταν ἐς τὸν πλεύμονα ῥεύσῃ ἐκ τῆς κεφαλῆς διὰ τοῦ βρόγχου καὶ τῶν ἀρτηριῶν, ὁ πλεύμων, ἅτε ψαφαρὸς ἐὼν καὶ ξηρὸς φύσει, ἔλκει ἐφ' ἑωυτὸν τὸ ὑγρὸν ὃ τι ἂν δύνηται· καὶ ἐπὶν εἰρύση, μέζων γίνεται, καὶ ὅταν μὲν ἐς ὅλον ῥεύσῃ, μέζων ὁ λοβὸς γενόμενος ἀμφοτέρων ἔψαυσε τῶν πλευρέων, καὶ περιπνευμονίην ἐποίησεν· ὅταν δὲ τῆς ἐτέρης μούνον, πλευριτίην. These diseases occur on account of this: whenever there is a flow into the lungs from the head through the windpipe and bronchial tubes, the lung, since it is loose and dry in nature, draws to itself any moisture that it can. And when it has drawn the moisture, it becomes bigger; and whenever there is flow to the whole lung, the lobe, having become bigger, touches both sides of the pleura, and this is peripneumonia; but when only one side touches, this is pleuritis. See also Craik, 1998: 56-57.

²⁸⁰ Anonymus Parisinus, *De morbis acutis et chroniis*, 8.1.1 and 9.1.1 respectively.

concept of the *locus affectus*, an approach to medicine that seeks to identify the specific parts of the body affected by each disease.²⁸¹

Galen credits Erasistratus with being the first to come up with the concept of the affected place; he claims, however, that Erasistratus used this concept only as a rational exercise.²⁸² Around 100 AD, Archigenes, a Pneumatist, wrote what appears to be the first treatise on the affected place in disease.²⁸³ In this text, Archigenes identified various types of pain, and used them as a means of identifying the part that was affected in each disease. For example, pains from an affection in the liver were said to be fixed and dull, while the pain of the kidneys were said to resemble a harsh and steady constriction. In his own study of the affected parts, *De locis affectis*, Galen frequently criticizes Archigenes' work. He argues that Archigenes could not possibly have experienced all of these pains himself, and therefore cannot consider them as reliable means of diagnosis.²⁸⁴ Galen's own view of the *locus affectus* is based on the idea that diseases cause damage to the activities of each organ; simply put, he believes that the location of a disease can be identified by looking for the activity of the body that is in some way hindered, or prevented altogether.²⁸⁵ As will be explained in the discussion of Galen's physiology, this approach is grounded in Galen's own

²⁸¹ For a broader discussion of the *locus affectus*, see McDonald, forthcoming, 2010.

²⁸² Galen, *Loc. Aff.* 1.1 (8.14K).

²⁸³ For a detailed discussion of Archigenes, see Mavroudis, 2000.

²⁸⁴ Galen, *Loc. Aff.*, 2.9 (8.117K): ἔπειτα δὲ καὶ ἄγνωστος ἡμῖν τοῖς μὴ πεπονθόσιν ἐστὶν, εἰ μὴ ἄρα πάντ' ἔπαθεν ὁ Ἀρχιγένης τὰ τοῦ σώματος μέρη· καὶ συγχωρηθῆ δὲ τοῦτο, τίς ἂν πιστεύσειεν ὅτι καὶ πάντα τὰ καθ' ἕκαστον μέρος ἔπαθεν εἰς ἄνθρωπος; ὑποκείσθω δ', εἰ βούλει, καὶ τοῦτο, καίτοι γ' ἀδύνατόν ἐστιν· *Therefore it is unknown for us in respect to those not suffering parts, if Archigenes did not suffer in all the parts of his body; and if this is agreed, who will trust that one man suffered everything, in each part [of the body]? Let it be established, if you wish, also this, that it is impossible.* Much of Book 2 is devoted to discussing and criticizing Archigenes' text; there are also many other passing references to him in the work.

²⁸⁵ Galen, *Loc. Aff.* 1.5 (8.44-45K). In her study of Galen's use of the concept in this work, Almuth Gelpke (1987) suggests that in order to formulate a concept of an affected part, physicians must view organs as complete, active structures, each with its own individual function or purpose. I do not agree with her argument.

anatomical research, which provided him with a detailed understanding of physical structures of the body.

The concept of the *locus affectus* became very influential among ancient physicians. It has already been demonstrated that physicians such as the Anonymus Parisinus used this concept as a guiding principle in their doxographic studies of older physicians' views on disease.²⁸⁶ Despite this popularity, the concept of the *locus affectus* was not without its critics. The greatest opponents to this concept were the Methodists, who doubted the very possibility of identifying the affected places. As will be demonstrated in our chapter on Caelius Aurelianus, Methodists argue that diseases result from general conditions of the body, the common states, which affect all parts at once. In this system, speculation about individual affected parts is rendered irrelevant, since the treatment of a disease is governed by the overall nature of the disease, not by the part which appears to be most affected.²⁸⁷

In the study of mental diseases such as phrenitis, mania, and melancholia, anatomical research was limited in its ability to assist in determining a location for these diseases. Further research into human anatomy could not determine the location of the mind, because of the non-physical nature of the rational powers. The discovery of the starting point of the nerves in the brain provided a means of explaining sensation, yet this accounted for only a portion of a human's mental powers. Those physicians who believed that the mind was in the heart were now faced with the additional problem of how to incorporate this centre of sensation into their overall concept of the rational mind. In terms of disease, improved knowledge of sensation

²⁸⁶ See above, in the discussion of Diocles' Concept of Phrenitis.

²⁸⁷ Caelius Aurelianus, *Acute Affections* 2.28.148 (232.10-13 Bendz): *ubi totum corpus laborare senserimus; et neque mutabilis sit adiutoriorum qualitas pro patientibus locis, sed talis perseveret in genere donec passio ipsa perseverat. ...whereby we see that the whole body suffers; and neither does the quality of the treatment change because of the affected place, but it remains the same in respect to its nature so long as the disease itself remains.*

also led to new theories about the specific mental powers that were affected by each disease. If presented with a deranged patient who saw objects that were invisible to others, physicians had to decide whether this resulted from damage to the powers of sense perception, or to the faculty of reason. Consideration about the various manifestations of derangement also led to new medical theories about the nature of the different diseases that affect the mind. While the basic symptoms of phrenitis, namely fever and delirium, would continue to define the concept of this disease, the anatomical knowledge gained in this period would come to have a significant impact on the explanations of the nature of phrenitis put forth by Aretaeus, Galen, and Caelius Aurelianus. As we will see, their responses are closely related to their different approaches to anatomy and the concept of the *locus affectus* as a whole.

Aretaeus of Cappadocia

Aretaeus of Cappadocia is a Pneumatic physician from the 1st century AD. As a member of this sect, his approach to medicine is related to the traditional Rationalist ideas that developed out of the ideas of the Hippocratic authors, Diocles, and Praxagoras. His primary work on diseases, his only surviving text, is written in the Ionic dialect of the Hippocratic authors, and contains many allusions to the Hippocratic Corpus.¹ Aretaeus believes in a humoral system of medicine, in which illnesses emerge when the body's elemental balance becomes offset. Added to this system is the concept of the *pneuma*, or spirit, which brings movement and function to the various parts of the body.²

Aretaeus' concept of phrenitis shows many parallels with earlier concepts of this disease. He maintains the opinion that phrenitis is distinguished by the presence of delirium and fever, and treats the disease with remedies that are reminiscent of Hippocratic opinions. In explaining the location of this disease, however, Aretaeus shows distinct advancements over his predecessors' ideas. In a manner resembling that of Diocles, Aretaeus separates the location of phrenitis from the location of the rational powers: he argues that rational powers of the mind are located in the heart, while phrenitis, an affection of the senses, is located in the head. Unlike Diocles, it is the anatomical discoveries of the 3rd century BC that have a strong influence on Aretaeus' understanding of phrenitis. In particular, two important discoveries affected Aretaeus' concept of phrenitis: the role of the nerves in the transmission of sensation; and the discovery of the base of the nerves in the brain. This knowledge, combined with the Rationalist-inspired Pneumatic approach to medicine and mental

¹ Nutton, 2004: 205.

² Oberhelman, 1994: 962.

illness, resulted in the development of a new understanding of the symptoms, causes, and treatments of phrenitis.

Pneumatic Physiology and Disease Theory

Pneumatic medicine takes its name from the emphasis it places on the role of *pneuma* in the determination of illness and health.³ Galen tells us that the originator of the pneumatic doctrines was Athenaeus of Attaleia, the student of Posidonius.⁴ As Vivian Nutton explains, if the Posidonius mentioned here is the Stoic philosopher and scientist Posidonius of Apamea, and if Galen means that Athenaeus actually studied with Posidonius in person, it is likely that Athenaeus founded this new form of medicine in the last century BC, perhaps around 60 BC.⁵ Alternatively, since neither Pliny nor Celsus mentions this story, it is equally possible that Athenaeus lived in the early part of the Roman Empire, and was the student of Posidonius only insofar as he studied this scientist's texts.⁶ Athenaeus' doctrines combine elements of Stoicism and Hellenistic Dogmatic, or Hippocratic Medicine.⁷ In his work *περὶ βοηθημάτων*, for example, he uses Stoic pneumatology as the basis of his medical theories, and lays out many of the doctrines that come to characterize members of the pneumatic sect.⁸ While Galen does not support all of the ideas presented in this 30-volume work, he praises it as being the best review of the whole of medical theory written by a modern author, largely because of its accurate representations of earlier physicians.⁹

³ Nutton, 2004: 202. For recent discussions of the Pneumatic 'school', see Oberhelman, 1994, and Smith, 1979.

⁴ Galen, *De causis contentivis*, 1.2. This work survives only in later translations: Lyons, 1969: 54-5 (Arabic and English) and 134 (Latin).

⁵ Nutton, 2004: 202.

⁶ Nutton, 2004: 202-203.

⁷ Nutton, 2004: 203.

⁸ Verbeke, 1945: 191.

⁹ Galen, *De elementis ex Hippocrate*. (1.457 Kühn).

Unfortunately, neither this nor any of Athenaeus' other works survive today except in fragmentary form.

Although there are many physicians who are described by ancient and modern scholars as 'pneumatic', it is not clear whether this term refers to a cohesive 'school' of medicine.¹⁰ From the very beginning, adherents of this sect combine pneumatic ideas with those of other schools. For example, Claudius Agathinus of Sparta, Athenaeus' most famous student, combines the ideas of his teacher with those of Methodist and Empiricist origin, producing a more eclectic form of medicine.¹¹ Archigenes of Apamea, living around 100 AD,¹² shares many pneumatic ideas, but is, to quote Steven Oberhelman, "an Eclectic in outlook and practice."¹³ Archigenes is believed to have written a work discussing the eight different qualities of the pulse, as well as several other texts on fevers, surgery, symptomatology, nosology, and pharmacology. He is also believed to have written the first treatise on the *locus affectus*, or affected place in disease, in which various types of pain are used as a means of identifying the part of the body that is affected by each disease.¹⁴ Other well-known physicians who have been identified as Pneumatists include Herodotus, Leonidas of Alexandria, Heliodorus, and possibly the author known only as Anonymous Londinensis.¹⁵

Part of the difficulty in assessing the unity of the Pneumatic school stems from the fact that our knowledge of these physicians is almost entirely based on fragments taken from later authors. The most complete Pneumatic work that survives today is

¹⁰ Nutton, 2004: 206 and 385 n.30.

¹¹ Verbeke, 1945: 191; Nutton, 2004: 202.

¹² Verbeke, 1945: 192.

¹³ Oberhelman, 1994: 958.

¹⁴ For a detailed discussion of Archigenes, see Mavroudis, 2000. For a discussion of the *locus affectus*, see McDonald, 2009 (forthcoming).

¹⁵ Verbeke, 1945: 191; For Anonymous Londinensis, see Nutton, 2004: 206.

Aretaeus' work on the causes, symptoms, and treatments of acute and chronic diseases. This work, which is divided into eight books, dates to the latter half of the first century AD.¹⁶ Unfortunately, many parts of this text have been lost, including the first four and a half chapters; without this opening section of the text, we cannot know if it was originally known by a single title.¹⁷ From its current form, we know that Aretaeus groups his discussions of diseases under four headings, with two books for each title: *On the Causes and Symptoms of Acute Diseases*, *On the Causes and Symptoms of Chronic Diseases*, *Therapeutics of Acute Diseases*, and *Therapeutics of Chronic Diseases*.¹⁸ In this system, each disease has two chapters of the work devoted to it: a chapter in one of the first four books to describe its causes and symptoms, and a chapter in one of the latter four books, discussing the method of treatment it requires.¹⁹ While the division of diseases by acute and chronic was common among the works of ancient physicians, Aretaeus' separation of the

¹⁶ Roselli, 2004: 163. Aretaeus' chronology is a much debated topic, as it is based on several contributing factors, most of which cannot be fully resolved. Oberhelman, 1994 provides a good discussion of the history of this debate. More recent, yet brief discussions can be found in Roselli, 2004: 163 n. 1, and Nutton, 2004: 205.

¹⁷ Roselli, 2004: 164. Book 1, chapters 1-4 are lost entirely. These included discussions of the causes and symptoms of phrenitis, lethargy, marasmus, and apoplexy. Chapter 5, on epilepsy, commences partway through the chapter. The titles of these chapters can be restored by their parallel chapters in Book 5, which provide the treatments of these illnesses. The following sections of this work have also been lost; here again, chapter titles are based on the surviving passages of the corresponding works: Book 5, parts of chapters 4 (treatment of apoplexy), and 7 (treatment of synanche); from Book 7, portions of chapter 5 (treatment of melancholia), 13 (treatment of affections of the liver) and 14 (treatment of affections of the spleen), and all of chapters 6, 7, 9-13, and 15-16 (treatments of mania, paralysis, phthisis, empyema, abscesses of the lungs, asthma, pneumodes, jaundice, and cachexia respectively); from Book 8, chapters 1 (treatment of dropsy) and 6-11 (treatments of colic, dysentery, lientry, and hysterics) are missing, as well as portions of chapter 3 (treatment of kidney affections), 7 (treatment of the celiac affection), 12 (treatment of arthritis), and 13 (treatment of elephantiasis).

¹⁸ The only modern critical edition of this text is Hude, 1958. Hereafter, I will follow Hude's number system, and refer to these books as follows: *On the Causes and Symptoms of Acute Diseases* – books 1 and 2; *On the Causes and Symptoms of Chronic Diseases* – books 3 and 4; *Therapeutics of Acute Diseases* – books 5 and 6; *Therapeutics of Chronic Diseases* – books 7 and 8. Corresponding citations from Hude will refer to page and line numbers.

¹⁹ Roselli, 2004: 164.

discussion of pathology and treatment of one and the same disease into separate books is very unusual.²⁰

Another interesting feature of Aretaeus' work is the content of the prefaces which begin each of the four main sections of the text.²¹ The preface to book 5 is of a style rather typical of medical prefaces: it appears prior to the beginning of chapter 1 and outlines the contents of the two following books.²² In contrast to this, and more uncommon in this genre, are the prefaces to books 3 and 7, which are listed as the opening chapters to each of these books.²³ In these, Aretaeus outlines the painful and often dangerous nature of chronic diseases and their treatments, and depicts something of the relationship that must exist between a successful physician and his patient. In the preface to book 3, for example, Aretaeus urges the physician to encourage his patient by way of diversified treatments and leniency in less important aspects of regimen; he also reminds patients that they must be courageous and willing to cooperate with their physicians.²⁴ Only in this way will a chronic disease be prevented from wearing down the patient's soul as well as his body.²⁵

This concern for his patient is also evident in other sections of Aretaeus' work: in his discussion of treatment for cardiac affections, for example, Aretaeus points out

²⁰ Roselli, 2004: 164–165. While it is true that other physicians – such as Diocles (van der Eijk, 2000–1), Anonymous Parisinus (Garofalo and Fuchs, 1997), and Praxagoras (Steckerl, 1958) – separated their discussions of each disease into causes, signs and treatments, these physicians seemed to have kept the topics together in a single chapter for each disease. The individuality of Aretaeus' work is that the causes and symptoms sections of each disease are entirely isolated from their related sections on treatment. There is some indication that Archigenes' lost work on nosology may have used a similar organizational scheme as Aretaeus; this, however, is not known for certain. For more information, see Roselli, 2004: 165 n. 6; Mavroudis, 2000.

²¹ Roselli, 2004: 165. The prefaces are found at the start of books 3, 5 and 7; presumably, there would also have been a preface to book 1, although this part of the work is now lost.

²² Aretaeus 5.0.1 (91.3–11 Hude). One is reminded of the preface to Celsus' *De Medicina*, which outlines the historical development of medicine, and serves as an introduction to the 8 books of Celsus' work. See Mudry, 1982.

²³ Aretaeus 3.1.1 (36.4–18 Hude) and 7.1.1 (144.3–15 Hude).

²⁴ Aretaeus, 3.1.1–3.1.2 (36.11–14 Hude).

²⁵ Aretaeus, 3.1.2 (36.14–18 Hude).

that diseases and therapies can be very taxing for a patient.²⁶ Thus, the physician must encourage the patient with cheerful words and assist him by offering diversified versions of treatment.²⁷ In his discussion of tetanus, Aretaeus laments that in some cases, a physician cannot offer his patient any assistance as regards life, relief from pain or relief from deformity. In these cases the physician can only offer sympathy, as the patient slowly succumbs to the illness. The overall impression that one gains from these passages is that as a physician, Aretaeus' primary concern was the treatment of his patients. This type of comment is not common in medical literature.²⁸

Although there is no one single text that outlines the doctrines of pneumatic medicine, it is possible to establish some basic principles of the sect. To begin with, Pneumatists pick up the traditional Hippocratic notion that everything in the cosmos is composed of different mixtures of four elemental qualities of heat, cold, moisture, and dryness.²⁹ These mixtures are permeated by *pneuma*, which provides the resultant bodies with movement and function.³⁰ When the *pneuma* and elements are correctly balanced according to the nature of the body, the condition is known as *eukrasia*. In this state, the *pneuma* retains its *tonos*, or tension, and health is maintained in the body.³¹ When the elemental qualities fall out of balance, *dyskrasia* is produced, a condition that causes *atonia*, or dissolution of the *pneuma*, illness, and eventually death.³² Diseases emerge during the shift from *eukrasia* to *dyskrasia*.³³ As in the Hippocratic Corpus, the various causes of disease are both internal and external, and

²⁶ Aretaeus, 6.3.12 (128.25–37 Hude).

²⁷ Aretaeus, 6.3.12 (128.27–30 Hude): χρῆ ὦν αὐτόν τε ἀλκίηντα καὶ εὐθυμον ἔμμεναι καὶ τὸν ἰητρὸν ἔπεισι μὲν παραφάσθαι ἐς εὐελπιστήν ἔμμεναι, ὡς δὲ ἀρήγειν ποικίλη τροφή τε καὶ οἶνον. *And so it is necessary for the patient to be courageous and cheerful and for the doctor to remain speaking in hopeful terms, and to assist with varied food and wine.*

²⁸ Roselli, 2004: 172.

²⁹ Verbeke, 1945: 199.

³⁰ Oberhelman, 1994: 962.

³¹ Verbeke, 1945: 199.

³² Aretaeus, 2.3.4 (23.7–11 Hude). See also: Oberhelman, 1994: 962; Smith, 1979: 231; Stannard, 1964: 30 n.2.

³³ Stannard, 1964: 31.

include such things as imbalances in the elements or humours, climate, wine, deficiencies in the quality or quantity of one's food, wounds, medicines, and even other illnesses.³⁴ It is up to the physician to determine which of the elements have become imbalanced, so that he may immediately work to counteract the *dyskrasia*.

Aretaeus' concept of the body encompasses many of the anatomical discoveries of the 3rd century BC. He believes that living things require both food and *pneuma* in order to live; of these, *pneuma*, or breath, is more important, since humans cannot live without breathing.³⁵ Aretaeus believes that the heart is the origin of respiration and life.³⁶ It is also the seat of the soul, and of the rational powers.³⁷ As the central organ of the body, the heart is responsible for distributing the body's innate heat (ἔμφυτος θερμη), a substance that gives life and sensibility to all parts of the body.³⁸ It creates respiration by transferring some of its heat into the lungs, which then strive to draw in cool air as a means of reducing the heat.³⁹ With each breath that is inhaled, more *pneuma* is brought into the body.

The heart takes the *pneuma* from the lungs, and distributes it to the rest of the body by means of the veins and arteries⁴⁰; blood and *pneuma* are transported through the body in both the veins and the arteries.⁴¹ Aretaeus believes that blood originates in the liver: its purpose is to transport the nutriment that is created in the liver to all

³⁴ Oberhelman, 1994: 963. Descriptions of these causes are numerous throughout Books 1 to 4 of Aretaeus' work.

³⁵ Aretaeus, 2.1.1 (15.1-4 Hude): Δυοῖσι τοῖσι πρώτοισι, τροφῇ καὶ πνεύματι, τὰ ζῶα ζῆ, τουτέων δὲ πολλὸν ἐπικαιροτέρη ἢ ἀναπνοή· ἦν γὰρ ἐπισχη τις ὠπτήν, οὐκ εἰς μακρὰν διαρκέσει, ἀλλ' αὐτίκα θνήσκει ὠνθρωπος. *Living things live by two primary things, food, and pneuma, and of these breath [i.e.: pneuma] is more important; for if breath should be stopped, not one person will hold out, but immediately the human dies.*

³⁶ Aretaeus, 2.1.1 (15.10-11 Hude).

³⁷ Aretaeus, 2.3.4-5 (22.26-23.3 Hude): μὴ ὦν καὶ αἶδε στομάχου αἱ δυνάμεις, ἀλλὰ καρδίας, ἔνθα καὶ ἡ ψυχὴ καὶ ἡ φύσις αὐτέης ἦν, ἐς ἣν καὶ τὸ πάθος ἢ τῶν τῆδε δυνάμεων. *These are not the powers of the stomach, but of the heart, in which place are both the soul and the nature of the person, and in this place also is the affection of these powers.*

³⁸ Aretaeus, 4.12.3-4 (83.9-14 Hude).

³⁹ Aretaeus, 2.1.1 (15.10-12 Hude)

⁴⁰ Aretaeus, 6.7.1 (136.12-13 Hude); Oberhelman, 1994: 962.

⁴¹ Verbeke, 1945: 197-198.

other parts of the body.⁴² He argues that the heart is the origin of arteries, to which it imparts heat, while the liver is the origin of the veins, to which it imparts blood.⁴³

These systems are connected by way of the *vena cava*, the large vein which runs from the liver into the heart in one direction, and from the liver to the base of the spine in the other direction.⁴⁴ In order to accommodate Erasistratus' 3rd century BC discovery of the starting point of the nerves inside the brain, Aretaeus contends that the powers of sense perception are located in the brain, and not in the heart with the remaining rational powers.⁴⁵ The presence of the senses in the brain makes it susceptible to excess amounts of heat; heat damages the senses, and prevents them from functioning properly.⁴⁶ Aretaeus also believes that the brain receives more blood from the heart than any other part of the body.⁴⁷

⁴² Aretaeus, 5.4.2 (103.1-2 Hude) and 6.6.1 (134.18-21); See also Oberhelman, 1994: 962.

⁴³ Aretaeus, 6.7.1 (136.10-13 Hude).

⁴⁴ Aretaeus, 2.8.2 (28.14-21 Hude): ἐντεῦθεν δὲ δοιαὶ ἐξ ἀποσχίσιος γιγνόμεναι πέρην τοῦ ἥπατος ἀφικνεύονται. ἡ μὲν γὰρ ἄνω τὸν πρῶτον λοβὸν διαπερήσασα ἐς τὰ κυρτὰ αὐτέου ἐξεφάνθη· ἔπειτα περήνασα τὸ διάφραγμα ἐμφύνει τῇ καρδίῃ· κοίλη φλέψ ἦδε καλεῖται. ἡ δὲ ἕτερη, τὸν κάτω λοβὸν τὸν πέμπτον διαπερήνασα μέχρι τῶν κυρτῶν, ἐπὶ τὴν ράχιν ἔξεισι καὶ τῆδε παρατέταται μέχρι τῶν ἰσχίων· ἀτὰρ καὶ ἦδε κοίλη· οὐνομα γὰρ τὸ αὐτό, οὐνεκεν μία καὶ ὡυτὴ ἐστὶν ἡ φλέψ, τὴν ἀρχὴν ἀπὸ τοῦ ἥπατος ἴσχουσα. *Thus, having become two parts by branching out, these arrive at the other side of the liver. For one, passing above the first lobe, appears on the convex side of the liver. Then, having passed by the diaphragm, it goes into the heart. And this is called the vena cava [literally: the hollow vein]. And the other part, which goes beneath the fifth lobe, passing through the middle of the convex side, it comes up along the spine and extends along as far as the hip-joints. But this also is called the vena cava. For it has the same name, because it is one and the same vein, having its origin from the liver.*

⁴⁵ Aretaeus, 5.1.5 (92.28-29 Hude): κεφαλὴ δὲ χώρος μὲν αἰσθήσιος καὶ νεύρων ἀφέσιος· *And the head is the location of sense perception and of the beginning of the nerves;* See also 5.2.12 (100.29-101.30 Hude). Aretaeus' separation of sensory and rational powers is unusual, and serves as a sort of transition between the fourth century authors, who placed these powers in various parts of the chest, and Galen, who accommodates for the placement of the nerves by moving all of the mental powers to the brain. As we will see, this separation also has a significant impact on Aretaeus' understanding of diseases that affect the mental powers

⁴⁶ Aretaeus, 5.6.4 (100.9-11 Hude): ἐβιήσατό κοτε ἀνάγκη πυριῆσαι κεφαλὴν, οὐκ ἀσφαλὲς μὲν αἰσθήσεσι, νεύροισι δὲ ἀγαθόν· τάσδε μὲν γὰρ ὀμίχλης ἐπαναφορῇ ἀτμῶν πίμπλησι, ἀνίησι δὲ τὰ νεύρα. *Necessity sometimes compels us to warm the head with fomentations, this not beneficial for the senses, but it is good for the nerves. For this fills [the senses] with a rising of a mist of vapours, but it loosens the nerves.*

⁴⁷ Aretaeus, 5.1.5 (92.28-29 Hude): αἷμα δὲ παρὰ καρδίας ἔλκει μᾶλλον ἢ ἄλλοισι διδοῖ. *And the heart gives to it [i.e.: the brain] more blood than to any other part.*

It should be noted here that the extant sections of Aretaeus' work do not provide a specific explanation of the role of the *phrēn* in regards to the rational powers.⁴⁸ Nevertheless, Aretaeus' use of this term indicates that he sees some connection, however limited, between the *phrēn* and the powers of the mind. In two passages from his chapter on the causes of melancholia, the *phrēn* is named as the gathering place of the black bile that results in mania and melancholia.⁴⁹ These passages tell us that the *phrēn* is located in the chest, the same area of the body that houses the heart, the seat of the rational powers. The *phrēn* is not to be mistaken with the diaphragm, however, which Aretaeus refers to as the διάφραγμα.⁵⁰ The connection between the *phrēn* and the black bile of melancholia is reinforced by Aretaeus' citation of a passage from Homer's *Iliad*, in which Agamemnon's great *phrēn* has been darkened with anger.⁵¹ Aretaeus believes that the terminology for black bile and anger have become associated with one another because of the ability of this substance to drive a person to anger and dejection.⁵² In three other passages, Aretaeus speaks of the ability of wine to affect the *phrēn*: one passage speaks of wine's ability to soften the *phrēn* and soothe the mind (*thumos*), while the other two passages suggest that wine can be damaging to the powers of the mind (*phrēn*).⁵³ It is not clear from these passages whether Aretaeus is suggesting that the *phrēn* has a responsibility

⁴⁸ The *phrēn* is distinct from the διάφραγμα, or diaphragm, an organ located between the pleura and the liver: Aretaeus, 3.13.2 (54.5-6 Hude).

⁴⁹ Aretaeus, 3.5.1 (39.14 Hude) and 3.5.4 (40.7 Hude).

⁵⁰ For example, at Aretaeus, 2.7.2 (27.11 Hude), 2.8.2 (28.17 Hude), 3.9.1 (49.15 Hude), and 5.1.23 (96.24 Hude).

⁵¹ Homer, *Iliad*, 1.102-104, as cited at Aretaeus, 3.5.2 (41.22-25 Hude): "Ἡρώς Ἀτρείδης εὐρυκρείων Ἀγαμέμνων / Ἀχῦμένος· μένεος δὲ μέγα φρένες ἀμφιμέλαινοι / Πίμπλαντ', ὅσσε δὲ οἱ πυρὶ λαμπετόωντι εἴκτην. *The wide-ruling Agamemnon, son of the hero Atreus /grieved; with his great phrēn darkened all around, / filled full of anger, eyes shining like fire.*

⁵² Aretaeus, 3.5.2-3 (39.17-27 Hude).

⁵³ Aretaeus, 5.1.28 (97.29 Hude): θυμόν τε γὰρ πρηῦνονται μαλθαῖξει φρενῶν καὶ ἐξ ἑωυτέων ἐς δύναμιν τρέφονται, ἀτὰρ ἡδὲ ἑωυτέοισι ἐμπνέουσι ἐς ἡδονήν. *For [wine] makes the mind soothed by softening the phrēn, and out of themselves they are roused to strength;* 5.1.9 (93.24 Hude): κεφαλῆς γὰρ καὶ φρενῶν ἄψιν ποιέει. *For [wine] touches the head and the phrēn;* and 6.3.11 (128.19-20 Hude): προὔπερηρεῖσθαι δὲ χρὴ, ὡς μὴ ἄψιν φρενῶν ὁ οἶνος ποιέηται. *And it is necessary to be firm, so that the wine does not make the phrēn deranged.*

for the rational powers, or if these passages simply use traditional phrasing to express ideas that have existed since Hippocratic times.⁵⁴

According to pneumatic doctrine, diseases emerge when the body's equilibrium of elemental qualities and *pneuma* becomes imbalanced. For the most part, illnesses are said to be caused by one of four types of *dyskrasia* of the elements: heat and dryness, cold and moisture, dryness and cold, and heat and moisture.⁵⁵ While it is possible to categorize different diseases according to the *dyskrasia* that causes them, the various diseases in each group do not necessarily have other factors in common. Mania, for example, is thought to be caused by a *dyskrasia* of dryness and warmth, the same kind of imbalance that leads to cholera, peripneumonia, and synanche.⁵⁶ These diseases have little in common aside from the underlying *dyskrasia*.

Aretaeus also believes that diseases can be caused by an unnatural condition of the *pneuma*. In some cases, diseases are said to be caused by a combination of *dyskrasia* and the *pneuma*. In his discussion of epilepsy, for example, Aretaeus explains that disease develops out of a *dyskrasia* of cold and moisture. The seizures, however, are provoked by the spinning of the *pneuma* that becomes trapped inside the body.⁵⁷ Ileus shows a similar dual-cause: while the underlying source of the disease is said to be a *dyskrasia* of dryness and warmth, Aretaeus believes that the main symptoms of the disease are triggered by the build-up of cold, sluggish *pneuma* that becomes

⁵⁴ Namely, the belief that wine has a damaging effect on the rational powers. In 5.1.9 (93.24 Hude) and 6.3.11 (128.19-20 Hude), the expression ἄψιν φρενῶν, is used as a metaphor for derangement of the mind. This phrase is also found in the Hippocratic work *Regimen in Acute Diseases*: Hippocrates, *Acut.* 63 (2.360 Littré). See also Liddell, Scott and Jones, 1996: 299, s.v.: ἄψις.

⁵⁵ Aretaeus mentions this last form of *dyskrasia* only once, as one of the causes of spitting up blood: Aretaeus, 2.2.16-17 (21.10-13 Hude); See also Oberhelman, 1994: 964.

⁵⁶ Mania: Aretaeus 3.6.2 (41.20-21 Hude); cholera: Aretaeus, 2.5.2 (24.15-25.8 Hude); peripneumonia: Aretaeus, 2.1.3 (16.3-6 Hude); and synanche: Aretaeus 1.7.2 (8.11-12 Hude). See also Oberhelman, 1994: 963.

⁵⁷ On *dyskrasia* as the cause of epilepsy, see Aretaeus, 3.4.3 (39.9 Hude) and 7.4.15 (155.30 Hude). On the spinning of the *pneuma*, see Aretaeus 7.4.10 (154.20-24 Hude).

lodged in the intestines after the area becomes inflamed.⁵⁸ Other diseases, such as synanche, can be caused by *pneuma* alone.⁵⁹ Aretaeus tells us that one form of this disease appears to be caused by a change in the condition of the *pneuma* to the hottest and driest state, without any accompanying inflammation of the body.⁶⁰

In order to cure illness, Pneumatic physicians must determine the type of *dyskrasia* that is affecting the patient, and then use opposing remedies to reset the imbalance of elements. Bleeding, including venesection, cupping, and the application of leeches, was believed to be the most effective treatment whenever a patient suffered from too much blood or *pneuma*.⁶¹ Pneumatists also believed that humours and *pneuma* can become collected in certain parts and/or areas of the body. If these accumulations cannot be treated directly by way of drug therapy or surgery, cupping and rubifacients can be used to move the fluids to an area that is more susceptible to treatment (i.e.: from an organ to the surface of the skin).⁶² In treating peripneumonia, for example, Aretaeus suggests that blood be withdrawn from points on both arms near the elbows, in order to repel the humours from both sides of the lungs.⁶³ This removal is said to take away any causes of the disease located in the blood; in addition, the evacuation is thought to pull blood from the vessels in the lungs, leaving

⁵⁸ Here, the dryness and warmth is indicated by the seasons in which the disease is most common. Dyskrasia of heat and dryness: Aretaeus 2.6.2 (25.27-28 Hude); role of *pneuma*: Aretaeus, 2.6.1 (25.11-13 Hude). See also: Oberhelman, 1994: 964ff.

⁵⁹ Aretaeus explains synanche as the inflammation of the organs of breathing, involving the tonsils, epiglottis, esophagus, uvula, and top of the trachea, and sometimes also the tongue and parts of the jaw. Aretaeus, 1.7.1 (7.25-8.3 Hude).

⁶⁰ Aretaeus, 2.7.2 (8.11-13 Hude): ἔμοι δὲ δοκέει αὐτέου τοῦ πνεύματος μόνου τὸ κακὸν ἔμμεναι τροπὴν πονηρὴν ἐς τὸ θερμότεον καὶ ξηρότεον τρεπομένου, ἄνευθεν τοῦ σώματος τινος φλεγμονῆς. *For it seems to me that the evil is the grievous change of this pneuma alone, when it changes to the hottest and driest condition, without any inflammation of the body.*

⁶¹ Stannard, 1964: 33ff; Oberhelman, 1994: 964; Brain, 1986: 148. Examples of the use of venesection in such diseases include satyriasis: Aretaeus, 6.11.2 (141.25-142.7 Hude); diseases of the large arteries Aretaeus, 6.71-2 (136.4-16 Hude); and diseases of the kidneys: Aretaeus, 6.8.3 (137.23-28 Hude).

⁶² Stannard, 1964: 34.

⁶³ Aretaeus, 6.1.1 (119.5-8 Hude).

more space for breath to pass through them.⁶⁴ In the event that venesection is not suitable for a patient, Aretaeus recommends that cupping instruments be used to draw the humours and *pneuma* outward from the body⁶⁵; the inflammation produced by the cupping treatment is proof of the collection and/or withdrawal of the excess *pneuma*.⁶⁶ Purging is also recommended as an effective means of reducing excess *pneuma* from the body.⁶⁷

Due to the taxing nature of bleeding and purging therapies, Pneumatic physicians believe that it is important to monitor the overall health and mental states of their patients. Aretaeus frequently prescribes caution when performing venesection on his patients, to ensure that the amount of blood withdrawn is regulated by the strength of the patient.⁶⁸ Since the period of bleeding and purging can last as many as ten days, Pneumatic physicians recommend the use of dietary and exercise regimes to maintain the strength of the patient throughout the period of treatment.⁶⁹ Patients are not permitted to go without food during this time, and they are encouraged to exercise or take part in physical therapy so long as their strength can permit it.⁷⁰ In this way, physicians can prepare their patients for the next stage in treatment, which involves the use of drugs and other medications.⁷¹ The goal of this pharmaceutical phase of treatment is to restructure the imbalance of elements and *pneuma*, and to restore the patient's natural condition of *eukrasia*.⁷² The drugs used for this purpose are selected according to their elemental properties, the theory being that the best treatment for an

⁶⁴ Aretaeus, 6.11 (119.11-13 Hude).

⁶⁵ Aretaeus describes this approach in his treatment of peripneumonia: Aretaeus, 6.1.3 (119.19-25 Hude).

⁶⁶ Stannard, 1964: 34.

⁶⁷ Oberhelman, 1944: 964; Stannard, 1964: 34. This can also be seen in the treatment of peripneumonia, in which clysters are given to the patient in order to help relieve the fluids and flatus that contribute to the illness. Aretaeus, 6.1.2 (119.13-19 Hude).

⁶⁸ Aretaeus, 7.2.2 (144.22-145.1 Hude).

⁶⁹ Oberhelman, 1994: 964; Stannard, 1964: 34-35.

⁷⁰ Stannard, 1964: 34-35.

⁷¹ Stannard, 1964: 34-35; Oberhelman, 1994: 964.

⁷² Oberhelman, 1994: 964.

excess of a particular element is the application of its opposite: warming substances are recommended for excess of cold, moistening substances for excesses of dryness, and so on.⁷³ Pharmaceuticals are administered to the patient in a number of ways, including compresses, poultices, diuretics, sternutatories, clysters, and cataplasms.⁷⁴

Signs and Symptoms of Phrenitis

Aretaeus' account of phrenitis is divided into two sections: the first part, which would have discussed the causes and symptoms of phrenitis, is thought to have formed the first chapter of book 1; unfortunately, this chapter is now lost. The second part of Aretaeus' discussion is found in the first chapter of the fifth book of his overall work on diseases; this section contains an account of Aretaeus' suggested treatments for phrenitis. Additional references to phrenitis are also found in certain other chapters of Aretaeus' work, in his discussions of syncope, mania, and lethargy.⁷⁵ The relationship between phrenitis and these other diseases is discussed in more detail below, in the context of the relevant aspects of phrenitis.

Based on the surviving material, it is evident that Aretaeus views phrenitis as an acute disease accompanied by fever and delirium.⁷⁶ Aretaeus refers to the fever of phrenitis in the plural, perhaps in reference to the fact that they are long-lasting: he tells us that the fevers are continual, with short, poorly marked remissions.⁷⁷ Aretaeus

⁷³ Oberhelman, 1994: 964; Stannard, 1964: 39.

⁷⁴ Stannard, 1964: 39-53.

⁷⁵ Aretaeus describes syncope as a form of loss of consciousness, which results from the complete dissolution of the *tonos* of the *pneuma*. Aretaeus, 2.3 (21.27-23.12 Hude).

⁷⁶ Fever: Aretaeus, 5.0.1 (91.8 Hude); delirium: 5.1.3 (92.2 Hude).

⁷⁷ Aretaeus, 5.1.6 (92.33-93.2 Hude): ξυνεχέες γὰρ τοῖσι φρενιτικοῖσι οἱ πυρετοὶ καὶ οὐδὲ ἐπανεσίας μακράς, ἀλλὰ βραχείας καὶ ἀσήμους κουφισμοὺς ποιούμενοι. *For in those suffering with phrenitis, the fevers are continuous and the abatements are not long, but they produce short and unmarked remissions.*

also reports that the fevers of phrenitis are more dry than those of a ‘single’ fever⁷⁸; although he does not explain this phenomenon, it is possible that this added heat is due to the continuing nature of the fever, which does not allow time for the heat to dissipate between intervals.

Unlike the Hippocratic authors, Aretaeus is very consistent with his terminology for delirium in phrenitis.⁷⁹ He refers to this condition as ἡ παραφορή, ‘a going aside’, or ‘derangement’ of the mind; this use of the prefix ‘παρα-’ to indicate variation from what is expected is reminiscent of the words for delirium that were used by the Hippocratic authors.⁸⁰ There are also a few instances in which Aretaeus uses the verb μαίνομαι to describe phrenitis patients ‘going mad’.⁸¹ In each of these situations, he appears to be referring to a form of madness that goes beyond the typical delirium of phrenitis: it is brought on by loud noises or lack of food, indicating the patient’s inability to withstand any form of irritation.⁸² Whenever this kind of madness occurs, Aretaeus believes that it is necessary to treat the patient with cooling remedies.⁸³

⁷⁸ Aretaeus, 5.1.7 (93.7 Hude): τροφή ὑγρὴ πᾶσι μὲν τοῖσι πυρεταίνουσι, οὐχ ἥκιστα δὲ φρενιτικοῖσι· ἐπιξηρότεροι γὰρ πυρετῶν μούνων· *Liquid food is best for all those suffering from fever, and not least in phrenitis; for these fevers are more dry than single fevers.*

⁷⁹ ἡ παραφορή is also used to describe delirium (or lack of delirium) in other diseases (pleuritis, affections of the liver, satyriasis, etc). In these instances, the derangement can apply to the mind (Aretaeus, 2.4.2 (23.19-20 Hude), in *causus*; and 2.8.7 (29.21 Hude), in affections of the vena cava), or to the senses (Aretaeus, 7.5.5 (157.3-4 Hude), in melancholia).

⁸⁰ Liddell, Scott and Jones, 1996: 1330, s.v.: παραφορά. ἡ παραφορή is the Ionic form of this word.

⁸¹ Aretaeus, 5.1.1 (91.17 Hude): μαίνονται; at 5.1.3 (92.11 Hude) and 5.1.12 (94.10 Hude), ἐκμαίνωνται is used. The third instance relates to the treatment of this condition. The madness caused by mania and melancholia is also described using this verb.

⁸² Loud noises: Aretaeus, 5.1.1 (91.17 Hude); lack of food: 5.1.3 (92.11 Hude).

⁸³ Treatment of the madness: 5.1.12 (94.10 Hude): ἢ δ’ ἂν ἐκμαίνωνται, τῆδε μάλιστα τέγγειν ψυχρῶ, καὶ ψυχομένῳ ἐπὶ μᾶλλον θέρεος ὥρη, χειμῶνος δὲ χλιαρῶ. *And whenever they are driven mad, at this time especially it is the right time to moisten with cooling agents, with colder ones during the season of summer, and warm ones during winter.* This will be discussed in more detail below.

Aretaeus believes that the delirium of phrenitis is caused by the accumulation of heat in the brain.⁸⁴ It usually appears one or two days after the onset of fever, but can also appear as many as six or seven days into the disease.⁸⁵ Like the fevers, delirium in phrenitis comes in waves, repeatedly going through periods of increase and remission; it is a good thing when the fever and delirium increase and decrease at the same time.⁸⁶ Aretaeus specifies that the delirium of phrenitis results from an affection of the senses in the head, not from affection of the rational powers, which are located in the chest. This distinction is an important aspect of the differentiation between phrenitis, mania, and melancholia:

The cause of the disease [i.e.: mania] involves the head and hypochondria, sometimes beginning in both places together, other times these parts bring suffering to each other. The superior cause in mania and melancholia is in the internal parts, just as in phrenitis it is for the most part in the head and senses. For phrenitics, being subjected to illusions of the senses, see things that aren't present just as if they were present, and things that don't appear to others seem to appear to them. But those who are mad [with mania or melancholia] see as it is necessary to see, but they do not form judgments about these things as it is necessary to form judgments.

ἴσχουσι δὲ τὴν αἰτίην τοῦ νοσήματος κεφαλὴ καὶ ὑποχόνδρια,
 ἄλλοτε μὲν ἅμα ἄμφω ἀρξάμενα, ἄλλοτε δὲ ἀλλήλοισι
 ξυντιμωροῦντα· τὸ δὲ κῦρος ἐν τοῖσι σπλάγχνοις ἐστι ἐπὶ μανίῃ
 καὶ μελαγχολίῃ, ὅκωσπερ ἐν τῇ κεφαλῇ καὶ τῆσι αἰσθήσεσι τὰ
 πολλὰ τοῖσι φρενιτικοῖσι. οἶδε μὲν γὰρ παραισθάνονται καὶ τὰ
 μὴ παρεόντα ὀρέουσι δῆθεν ὡς παρεόντα, καὶ τὰ μὴ φαινόμενα

⁸⁴ Oberhelman, 1994: 962-963.

⁸⁵ Aretaeus, 5.1.4 (92.15-21 Hude).

⁸⁶ Aretaeus, 5.13 (92.12-14 Hude).

ἄλλω κατ' ὄψιν ἰνδάλλεται· οἱ δὲ μαινόμενοι ὀρέουσι μὲν ὡς χρῆ
ὀργῆν, οὐ γιγνώσκουσι δὲ περὶ αὐτέων ὡς χρῆ γιγνώσκειν.⁸⁷

Aretaeus considers mania and melancholia as two parts of the same disease: he tells us that melancholia is the beginning phase, and a specific form, or species of mania.⁸⁸ In mania, the mind can be turned to either anger or delight, whereas in melancholia, it turns only to grief and despondency.⁸⁹ These diseases are chronic, and are not accompanied by fever.⁹⁰ They are caused by a combination of a *dyskrasia* of heat and dryness, and the presence of black bile in the area of the *phrēn*.⁹¹ If this bile moves downwards, it causes melancholia; mania seems to occur when bile moves upward: the head and senses become affected by sympathy, and the increased severity of the disease eventually drives the patient mad.⁹²

As explained in the aforementioned passage, mania and melancholia are based in the hypochondria and directly affect the patient's rational powers. Although the head might also become affected through sympathy, the underlying cause of these diseases

⁸⁷ Aretaeus, 3.6.7 (42.29-43.4 Hude).

⁸⁸ Aretaeus, 3.5.3 (39.27-28 Hude): δοκέει [τε] δέ μοι μανίης γε ἔμμεναι ἀρχὴ καὶ μέρος ἢ μελαγχολίη. It is interesting that, although making this connection between the diseases, Aretaeus still chooses to discuss mania and melancholia in separate chapters. Unfortunately, his accounts of these diseases are not intact either: the chapter on the treatment of mania is entirely lost, as well as the final portion of the chapter on the treatment of melancholia. For a discussion of mania in Aretaeus, see Pigeaud, 1987: 71-94. For melancholia in Aretaeus, see Flashar, 1966: 73-83.

⁸⁹ Aretaeus, 3.5.3 (39.4-6 Hude): τοῖσι μὲν γὰρ μαινομένοισι ἄλλοτε μὲν ἐς ὀργῆν, ἄλλοτε δὲ ἐς θυμηδίην ἢ γνώμη τρέπεται, τοῖσι δὲ μελαγχολῶσι ἐς λύπην καὶ ἀθυμίην μῶνον. *For those with mania at one time are in a state of anger, at another time they are in a state of delight, but those with melancholia are only in a state of grief and despondency.*

⁹⁰ Aretaeus, 3.5.2 (39.27 Hude): ἔστι δὲ ἀθυμίη ἐπὶ μιῇ φαντασίῃ, ἀνευθε πυρετοῦ. *It is despondency from one apparition, without fever;* and 3.6.1 (41.36 Hude): ἔκστασις γάρ ἐστι τὸ ξύμπαν χρόνιος, ἀνευθε πυρετοῦ. *It is altogether chronic displacement of the mind, without fever.*

⁹¹ Dyskrasia of heat and dryness: Aretaeus, 3.5.5 (40.10-11 Hude), and 3.6.2 (41.20-21 Hude). Black bile: Aretaeus, 3.6.1 (39.10-16 Hude), and 3.6.4 (40.5-10 Hude). Aretaeus does not seem to associate the *phrēn* with any form of rational powers – as outlined above, he places the senses in the brain, and the rational powers in the heart.

⁹² Aretaeus, 3.5.4 (40.8-10 Hude): ἦν δὲ καὶ κεφαλὴν ἐς ξυμπαθείην ἄγη καὶ ἀμείβηται τὸ παράλογον τῆς ὀξεθυμίας ἐς γέλωτα καὶ ἡδονὴν ἐς τὰ πολλὰ τοῦ βίου, οἱ δὲ μαινόνται, αὔξη τῆς νούσου μᾶλλον ἢ ἀλγεί πάθεος. *And if the head is led in sympathy, also the abnormal irritability of temper changes into laughter and pleasure in the greatest part of their life, and they are driven mad, by increase of disease more than by the suffering of the affection.*

is in the chest, near to the seat of the rational powers.⁹³ The delirium in these diseases is a product of the patient's inability to form a correct judgement about what he sees. Phrenitis, on the other hand, is based in the head and senses; the delirium caused by phrenitis results from damage to the powers of sense perception, which causes the patient to see things that do not really exist.⁹⁴ At one point, Aretaeus describes this damage as a dark mist that contaminates the senses.⁹⁵ Examples of this damaged sense perception is evident in Aretaeus' description of the visual disturbances that certain phrenitis patients suffer when they remain in the light:

For if they become angered by the light, and they see things that do not exist and deceive themselves with non-existent appearances, or recognize one thing in place of another, or are stuck by strange images and are altogether afraid of the light and the things in the light, it is necessary to choose darkness [for them].

ἦν γὰρ πρὸς τὴν αὐγὴν ἀγριαίνωσι καὶ ὀρέωσι τὰ μὴ ὄντα καὶ τὰ μὴ ὑπεόντα φαντάζονται ἢ ἀνθ' ἑτέρων ἕτερα γιγνώσκωσι, ἢ ξένα ἰνδάματα προβάλλονται καὶ τὸ ξύνολον τὴν αὐγὴν ἢ τὰ ἐν αὐγῇ δεδίττωνται, ζόφον αἰρέεσθαι χρή.⁹⁶

⁹³ This reference to affection by sympathy foreshadows Galen's use of this concept to differentiate between phrenitic delirium that is caused by primary affections of the brain, and non-phrenitic delirium, which is caused by sympathetic affection of the brain.

⁹⁴ Jackie Pigeaud (2006: 97-98, and 97, note 307) sees in this passage the beginning of a differentiation between illusions and hallucinations. He suggests that illusions, which result from mania and melancholia, are based on actual sensory data; hallucinations, the product of phrenitis, are based entirely on images created by the mind, and are not based on external sensory data. This distinction, however, is a modern concept, one that I do not think should be imposed upon ancient descriptions of derangement.

⁹⁵ Aretaeus, 5.1.29 98.4-6 Hude): ὡδε γὰρ τὸ μὲν ξηρὸν ἀμβλύνεται καὶ καθαρεύεται τῆς ὀμίχλης ἢ αἰσθησις, ἢ δὲ γνώμη εὐσταθῆς ἢ δὲ ἔμπεδος μίμνει. *For in this way the dryness will lose strength and the senses will become clean of the dark mist, and judgement will remain calm and steadfast.*

⁹⁶ Aretaeus, 5.1.3 (92.3-7 Hude).

Aretaeus believes that it is a sign of recovery when these patients are once again able to remain calm when placed in a bright room.⁹⁷

The delirium of damaged sense perception also seems to cause the plucking motions of the hands that Aretaeus attributes to phrenitis patients. In some cases, these motions are driven by a desire to pluck at the nap, or fluff of the bedclothes; Aretaeus refers to this action as *crocydismos*, a symptom that was also recognized by the Hippocratic authors. In other cases, the patients seem to reaching out in front of them, as if to grasp at invisible objects floating before their eyes. They may also reach for projections from the walls that do not exist, or simply raise their hands for no apparent reason.⁹⁸ While Aretaeus suggests that these motions are common in phrenitis, it is not clear whether he believed that they were always present as part of the disease. It is not until Caelius Aurelianus that *carphologia* and *crocydismos* become requisite aspects of phrenitis.⁹⁹

Aretaeus also describes a number of affections which can accompany cases of phrenitis: information about these symptoms is limited, since it comes in the form of instructions on how to remedy these conditions. As a result, Aretaeus gives no indication as to the frequency, or significance of these conditions. He does, however, indicate some of the processes which bring them about. As an interesting point of comparison, it should be noted that several of these symptoms were also described in the Hippocratic Corpus. We have seen that Aretaeus believes phrenitis patients to be

⁹⁷ Aretaeus, 5.1.3 (92.7-8 Hude): ἀγαθὸν δὲ πρὸς αὐγὴν σωφρονέειν τε καὶ πρηγνέσθαι τὴν παραφορῆν. *It is a good sign when the patient is of sound mind and the delirium is calm while in the light.*

⁹⁸ Aretaeus, 5.1.1-2 (91.19-23 Hude): καὶ γὰρ πρὸ τῶν ὀφθαλμῶν ἀμφαιρέουσί τινα ψευδέα ἰνδαλματα, καὶ τὰ μὴ ἐξίσχοντα ἀμφαφόωσι ὡς ὑπερίσχοντα, καὶ πάσα πρόφασις ἀναιτίη πρόκλησις χειρῶν φορῆς. *And they grasp at certain false images before their eyes, and grasp at things that don't project outward just as if they did stick out, and everything is a motive for unjustified motions of the hands.*

⁹⁹ Caelius Aurelianus, *Acute Diseases* 1.4.42 (46.1-6 Bendz); and *Acut.* 1.5.47-48 (48.13-33 Bendz).

sensitive to loud noises or want of food.¹⁰⁰ This increased sensitivity is likely due to the effects of the disease upon the senses; this affection of the senses can also result in bouts of anger.¹⁰¹ Since phrenitis is located in the head, Aretaeus believes that this disease also affects the nerves; this involvement may give rise to convulsions.¹⁰² He also reports that sleeplessness may occur, on account of the dryness and thinness of the *pneuma*.¹⁰³ The hypochondria may sometimes become distended from inflammation, hardness, and flatulence, or it might become collapsed and retracted upwards.¹⁰⁴ Constipation of the bowels is also said to be frequent in phrenitis, as is enlargement of the spleen, and pain in the liver.¹⁰⁵ Finally, Aretaeus explains that the increase of heat in the body during phrenitis and other acute diseases causes damage to the organs of the chest region. As heat is transferred from the extremities into the chest – leaving the head, feet, and hands cold – the natural heat of the chest is put out of balance, resulting in high fever, cough, and affection of the diaphragm, pleura, and stomach.¹⁰⁶

Toward the end of his account of the treatment of phrenitis, Aretaeus explains that certain cases of phrenitis may also be accompanied by *causus*, an independent disease

¹⁰⁰ Aretaeus, 5.1.1 (91.16-17 Hude) and 5.1.3 (92.10-11 Hude).

¹⁰¹ Aretaeus, 5.1.2 (92.1-2 Hude).

¹⁰² Aretaeus, 5.1.2 (91.25-92.1 Hude). This is reminiscent of the dangerous convulsions described by the authors of *Epidemics* 1 and *Prognostics*: Hippocrates, *Epid.* 1.2.6 (2.636 Littré), and *Prog.* 24 (2.186-188 Littré).

¹⁰³ Aretaeus, 5.1.14 (94.22-24 Hude). This symptom is also identified by the Hippocratic authors. See, for example, Hippocrates, *Epid.* 3.3.6 (3.82 Littré) and *Coac.* 571 (5.716 Littré).

¹⁰⁴ Aretaeus, 5.1.16 (95.4-5 Hude) and 5.1.17 (95.15-16 Hude).

¹⁰⁵ Constipation: Aretaeus, 5.1.20 (96.3 Hude); enlargement of the spleen: Aretaeus, 5.1.17 (95.13-14 Hude); pain in the liver: 5.1.16 (95.9-10 Hude).

¹⁰⁶ Aretaeus, 5.1.23-24 (96.19-31 Hude): ἐπεὶ δὲ καὶ θωρήκα ἐν πάσῃσι τῆσι ὀξείῃσι νούσοισι ἀκέεσθαι χρή, πάντη τὸν κάμνοντα ξὺν κραδίῃ καὶ πνεύμονι, πρῶτιστα μὲν ὑπ' ἀνάγκης τῆς ἀναπνοῆς ἄλλοτε μὲν θερμῆς, ἄλλοτε δὲ ψυχρῆς· ἔτι δὲ ὑπὸ πυρετοῦ καυσώδεος καὶ βηχὸς καὶ ὑγρῶν πονηρίας καὶ νεύρων κοινωνίης καὶ στομάχου ξυμφορῆς ὑπεξωκότος τε καὶ διαφράγματος κακίης (κραδίῃ γὰρ ἦν πάθη μέζον τι δεινόν, οὐκοτε ἀκέεται), ἐπὶ δὲ τοῖσι φρενιτικοῖσι καὶ μάλα χρή τάδε μειλίσσειν. *Since it is necessary to apply remedies to the chest in all acute diseases, all parts suffering together with the heart and lungs, principally by necessity of the respiration, which is sometimes hot and sometimes cold; but indeed from the severity of fever, and the cough, and the bad state of humours, and association of the nerves and the concurrence of the badness of the stomach and pleura, and diaphragm (for if the heart suffers some great danger, certainly it does not recover), and in cases of phrenitis also it is especially necessary to soothe these things.*

that often appears as the preliminary stage of syncope.¹⁰⁷ In these cases, the patient experiences thirst, perplexity (ἀπορίη), and a desire for cold water, symptoms which are also common to *causus* in its independent form. Aretaeus also mentions that mania can appear alongside the *causus* and phrenitis, but does not indicate how or why this might come about; such details may have been included in Aretaeus' lost chapter on the causes and symptoms of phrenitis.¹⁰⁸ Since phrenitis is normally accompanied by a fever, it is likely that the appearance of these diseases is an indication that the fever of phrenitis has become very severe. In an earlier passage in this chapter, for example, Aretaeus describes a situation in which an excessive amount of heat in the body results in delirium that grows progressively worse.¹⁰⁹ It is possible that the onset of mania occurs in a similar manner, as the delirium ceases to have periods of remission. Regarding the presence of *causus*, the appearance of the disease due to excessive fever is supported by Aretaeus' statement that *causus* with phrenitis can easily be converted into syncope, a transformation that also occurs when *causus* appears as an independent disease.¹¹⁰ In both situations, the conversion from *causus* to syncope results from the complete dissolution of the *tonos* of the *pneuma*, which occurs when the *dyskrasia* of heat and dryness reaches its most extreme state.¹¹¹ At this point, hot becomes cold, and dry becomes moist: as Aretaeus explains, 'things that are stretching into the extreme state of matters quickly turn into

¹⁰⁷ Aretaeus, 5.1.27 (97.14-15 Hude); on *causus* as an independent disease, see Aretaeus, 2.4 (23.13-24.14 Hude); on *causus* in syncope, see Aretaeus, 2.3.5 (23.7-12 Hude).

¹⁰⁸ Aretaeus, 5.1.27 (97.15 Hude). Jackie Pigeaud (1987: 84, and 239, note 24) believes that while Aretaeus' earlier use of the verb ἐκμαίνομαι referred only to a general state of madness, his use of the term μανίη in this instance refers specifically to the disease. The three extant chapters on mania and melancholia do not refer to the occurrence of these diseases in cases of phrenitis.

¹⁰⁹ Aretaeus, 5.1.10-11 (93.29-94.5 Hude).

¹¹⁰ Aretaeus, 5.1.27 (97.19 Hude); For the connection between *causus* and syncope, see Aretaeus, 2.4.3 (23.25-26 Hude) and 2.3.5 (23.11-12 Hude).

¹¹¹ Aretaeus, 5.1.27 (97.19-23); see also Aretaeus, 2.3.5 (23.7-12 Hude) and 2.4.2 (23.22-23 Hude).

the opposite form.’¹¹² Dissolution of the *pneuma* in this manner is generally fatal, and requires great care to ensure that the patient will survive.¹¹³ As we will see, this is one of the few occasions upon which Aretaeus gives wine to patients with delirium.¹¹⁴

Causes of Phrenitis

Aretaeus believes that the cause of phrenitis is based in the head and senses.¹¹⁵ In pneumatic terms, the underlying cause of the disease appears to be a *dyskrasia* of heat and dryness; this is evident from the cooling and moistening remedies that Aretaeus uses to treat the disease.¹¹⁶ The individual symptoms of phrenitis – such as fever and delirium – also appear to have specific physical causes. Delirium, for example, occurs when heated *pneuma* and vapours become trapped in the head and cause the senses to become disordered.¹¹⁷ Aretaeus also refers to a form of delirium that arises from the affection of certain parts of the chest; it appears to emerge as a result of the build up of heat in this part of the body.¹¹⁸

During a fever, Aretaeus believes that the body’s heat is drawn from all parts of the body to the internal organs of the chest, leaving the extremities and even the

¹¹² Aretaeus, 2.4.2 (23.23-25 Hude): αἱ γὰρ τῶν πρηγματῶν ἐς τὸ ἔσχατον ἐπιτάσιες ἐς τὴν ἐναντίην μεταβάλλουσι ἰδέην.

¹¹³ Aretaeus, 5.1.28 (97.23-31 Hude).

¹¹⁴ Aretaeus, 5.1.28 (97.23-24 Hude).

¹¹⁵ Aretaeus, 3.6.7 (42.32-43.1 Hude): τὸ δὲ κῦρος ἐν τοῖσι σπλάγχνοις ἐστὶ ἐπὶ μανίῃ καὶ μελαγχολίῃ, ὅκωσπερ ἐν τῇ κεφαλῇ καὶ τῇσι αἰσθήσεσι τὰ πολλὰ τοῖσι φρενιτικοῖσι. οἶδε μὲν γὰρ παραισθάνονται καὶ τὰ μὴ παρεόντα ὀρέουσι δῆθεν ὡς παρεόντα, καὶ τὰ μὴ φαινόμενα ἄλλω κατ’ ὄψιν ἰνδάλλεται. *The superior cause in mania and melancholia is in the internal parts, just as in phrenitis it is for the most part in the head and senses. For phrenitics, being subjected to illusions of the senses, see things that aren’t present just as if they were present, and things that don’t appear to others seem to appear to them.*

¹¹⁶ This is evident from Aretaeus’ recommendations to use moistening cooling remedies to treat phrenitis. See, for example, Aretaeus, 5.1.24 (96.31-32 Hude).

¹¹⁷ Aretaeus, 5.1.11 (94.5-6 Hude): ἀτμῶν γὰρ τάδε καὶ θερμῆς διαπνευστικὰ καὶ παχέων χυμῶν διαλυτικά, τὰ τῆς παραφορῆς ξυναίτια. *For these things relieve hot vapours through exhalation and dissolve the thick humours, the things that contribute to the delirium.*

¹¹⁸ Aretaeus, 5.1.24 (96.26-27 Hude). Galen also recognizes a form of delirium that originates ‘around the diaphragm’ and is ‘almost phrenetic’. Galen, *Loc. Aff.* 5.4 (8.329 Kühn).

surface of the torso cold to the touch.¹¹⁹ This collection of heat is further aggravated by poor respiration, which is sometimes hot and sometimes cold.¹²⁰ Since, under normal circumstances, the purpose of respiration is to bring a fresh supply of cooling *pneuma* into the body, poor respiration limits the body's ability to moderate its internal heat.¹²¹ The problem is enhanced by constipation of the bowels, a common symptom of phrenitis.¹²² The usual function of the bowels is to draw heat and vapours from the head and chest, and remove unwanted matter from the abdomen; constipation prevents this process, rendering the body incapable of regulating its internal heat.¹²³ The resultant condition is a *dyskrasia* of heat and dryness.

Treatment of Phrenitis

Aretaeus' treatment of phrenitis is typical of what we know about Pneumatic therapeutic regimes. He believes that phrenitis is caused by a *dyskrasia* of heat and dryness; thus, in order to treat the disease, Aretaeus recommends a series of remedies that are designed to cool and moisten the body. Many of these treatments are prescribed for specific symptoms; this is in keeping with the belief expressed in Aretaeus' preface to this chapter, that the remedies of acute diseases are connected to the symptoms of the disease.¹²⁴ In prescribing these treatments, Aretaeus pays special attention to the individual needs of the patient, in order to make the recovery process as comfortable as possible for the patient. It is interesting to note that Aretaeus does not deal directly with the treatment of fever in this chapter, or indeed in any section of

¹¹⁹ Aretaeus, 5.1.24 (96.28-31 Hude). See also Aretaeus' discussion of the symptoms of *causus*, Aretaeus, 3.4.1 (23.13-17 Hude).

¹²⁰ Aretaeus, 5.1.23 (96.22 Hude).

¹²¹ Nutton, 2004: 202.

¹²² Aretaeus, 5.1.20 (96.3 Hude).

¹²³ Aretaeus, 5.1.20 (96.2-7 Hude).

¹²⁴ Aretaeus, 5.0.1 (91.1-2 Hude).

his text.¹²⁵ In the preface to this book Aretaeus explains that he has described the varieties and treatments of fever in a separate text; unfortunately, this work is no longer extant.¹²⁶

Aretaeus' overall discussion of remedies can be loosely divided into five general topics. It begins with a description of the best environment in which to lay the sick patient, in order to provide the most comfort to the patient during his recovery. Second, Aretaeus gives instructions for bloodletting, one of the few time-specific remedies in this regime. The third area of interest is food; like his Rationalist predecessors, Aretaeus has a particular interest in the specific properties of individual foodstuffs, and the beneficial effects that these can have on the body. This information is followed by a discussion of treatments for the individual symptoms of phrenitis, most of which involve topical applications of substances with cooling and moistening properties. Finally, Aretaeus ends his chapter with a description of the signs that indicate the removal of phrenitis. While this is a positive sign for the potential outcome of this disease, Aretaeus gives no indication of the actual survival rates amongst patients with phrenitis.

In describing the requirements of a phrenitis patient's sickroom, Aretaeus is effectively setting the stage for the remainder of the treatment. While, in general, recommendations for the sickroom are not unique to his treatment of phrenitis, the specific instructions offered in this chapter do appear to be distinctly suited to the

¹²⁵ Although Aretaeus' work includes a chapter on the causes and symptoms of *causus*, a very severe form of fever (Aretaeus, 2.4 (23.13-24.14 Hude)), there is no corresponding chapter on the treatment of *causus*. The corresponding treatment chapter should be found at 6.4, however, this chapter discusses the treatment of cholera.

¹²⁶ Aretaeus, 5.0.1 (91.3-7 Hude): ὁκόσα μὲν ὦν ἐν πυρετῶν θεραπείῃ γίγνεται, κατὰ τε τὴν τούτων διαφορὴν καὶ κατὰ τὴν τῶν νοσημάτων ἰδέην καὶ τὴν ἐν αὐτοῖς ποικιλίην, τούτων τὰ πλείω ἐν τοῖσι ἀμφὶ πυρετῶν λόγοισι λελέξεται. *As many of these remedies as occur in the treatment of fevers, according to the differentia of these symptoms and according to the form of the diseases and the varieties in these, of these things the greater part will have been written in my accounts concerning fevers.* See also, Nutton, 2004: 205.

requirements of phrenitis.¹²⁷ Throughout these instructions, Aretaeus seems to be focused on the most prevalent symptom of phrenitis, delirium. He therefore recommends that the patient's room be free of any decorations or adornments that could inspire false visions and add to the patient's restlessness.¹²⁸ Walls and bedding are to be kept free of unnecessary decorations or embellishment, features which might encourage the tendency toward *carphologia* and *crocydismos*.¹²⁹ The bed is to be of a good size so that the patient will not toss about from discomfort or be able to fall out of it, and it should be soft enough to prevent further aggravation of the patient's troubled nerves.¹³⁰ Noise should be kept to a minimum, and the conversation of visitors should not be too exciting.¹³¹ It is also important to humour the whims of the patient, especially when his delirium tends towards anger.¹³² Regarding the level of illumination of the room, it has already been pointed out that for certain patients, being in a bright room can aggravate their delirium; for these patients, Aretaeus believes that a dark room is preferable.¹³³

Aretaeus also offers instructions for the temperature of the patient's room, to ensure that the heat of the room does not add to the *dyskrasia* of heat and dryness in the patient's body. Like the Hippocratic authors, Pneumatic physicians believe that the characteristics of a person's environment – both on a personal scale, and on a more universal scale – can have a direct impact on people's health; it is therefore

¹²⁷ Similar recommendations also appear in the chapters on the treatment of lethargy: Aretaeus, 5.2.1 (98.8-14 Hude); tetanus: 5.6.1 (107.13-20 Hude); and bloodspitting: 6.2.2 (121.1-7 Hude).

¹²⁸ By contrast, in the recommendations for the sickroom of a patient with lethargy, Aretaeus recommends that the room be full of decoration, to help stimulate the patient's dulled senses. Aretaeus, 5.2.1 (98.8-14 Hude). In tetanus, the recommendations refer only to the necessary softness of the bedding, to comfort the patient's stretched and damaged nerves. Aretaeus, 5.6.1 (107.13-20 Hude).

¹²⁹ Aretaeus, 5.1.1-2 (91.14-23 Hude).

¹³⁰ Aretaeus, 5.1.2 (91.21-22 and 91.24-92.1 Hude).

¹³¹ Noise: Aretaeus, 5.1.1 (91.14-17 Hude); visitors: Aretaeus, 5.1.2 (92.1 Hude).

¹³² Aretaeus, 5.1.2 (92.1-2 Hude).

¹³³ Aretaeus, 5.1.3 (92.2-7 Hude). Aretaeus' concern for the appropriate lighting will be echoed in Caelius Aurelianus directions for the sickroom. In Caelius' case, however, the decision between light and dark is based on the therapeutic properties of illumination.

necessary to keep the heat and humidity of the room at a moderate level, and to adjust it in accordance with the season. Consequently, Aretaeus recommends that the room be kept cool and humid in summer, warm in winter, and appropriately moderated in spring and autumn.¹³⁴

As is common in Pneumatic treatments, Aretaeus begins his treatment with bloodletting and purging, remedies which appear to be applied after the delirium has set in. Aretaeus' purpose in prescribing venesection is to remove excess blood and *pneuma* from the patient's body, thereby reducing the amount of heat in the body. Aretaeus is particularly concerned with the time-sensitivity of this treatment: if a patient's delirium appears within five days of the appearance of their fever, venesection should be carried out as soon as possible. Venesection should be performed during remissions of the fever and delirium, before giving food to the patient.¹³⁵ Aretaeus suggests that the proper time for bleeding is before the sixth or seventh day of the disease.¹³⁶ If the delirium begins after this time, the taxing nature of the disease will have weakened the body to a point where it is no longer able to withstand the demands of venesection. In these cases, the patient's body must be emptied by way of purgatives or other stimulants.¹³⁷ Where venesection is appropriate, Aretaeus instructs that blood should be removed from the middle vein at the elbow.¹³⁸ This procedure should be followed in all cases of phrenitis, except those in which the disease appears to be affecting the head more than the abdomen: since

¹³⁴ Aretaeus, 5.1.1 (91.12-14 Hude).

¹³⁵ Aretaeus, 5.1.4 (92.14-18 Hude). The specific timing of the disease is evident from Aretaeus' comment that decisions about bloodletting should be made when it comes to the right time for nourishment: ἦν ὧν ἦκη ὁ καιρὸς ἐς θρέψιν, πρῶτιστα σκεπτέον, εἰ χρὴ ἀφαιρέειν αἷμα. A few lines earlier, Aretaeus explained that the proper time for giving food is during the remissions of both the fever and the delirium: Aretaeus, 5.1.3 (92.9-10): εὐκαιρὴ δὲ ἐν τῆσι ἐπανέεσι ἀμφοῖν, καὶ πυρετοῦ καὶ παραφορῆς.

¹³⁶ Aretaeus, 5.1.4 (92.18-19 Hude): εἰ δὲ προσωτέρω τοῦ δέοντος χρόνου ἕκταίω ἔόντι ἢ ἑβδομαίω ἔην... *But if [the delirium arrives] after the fitting time, arriving on the sixth or seventh day...*

¹³⁷ Aretaeus, 5.1.4-5 (92.18-21 Hude).

¹³⁸ Aretaeus, 5.1.4 (92.14-18 Hude).

the head takes in more blood from the heart than it sends out to other parts, it will suffer considerable damage if its vessels are emptied of blood.¹³⁹

Aretaeus warns his reader that the strength of the patient should be used as the guide to the amount of blood that should be withdrawn.¹⁴⁰ If too much blood is removed, the body's *tonos* will be lost, and the patient will develop syncope.¹⁴¹ For this reason, only a small amount of blood should be withdrawn in phrenitis, even if the procedure takes place at the onset of the illness, when the patient is at his strongest.¹⁴² Whenever possible, the entire amount should be taken at once, so that the patient can be fed before the remission in his fever and delirium ends.¹⁴³ If the patient faints before that amount is removed, the physician must wait until the next remission before removing any more blood. The only exception to this is in cases where the intervals between remissions are very long. If this is so, the patient should be immediately revived so that the current withdrawal can continue.¹⁴⁴

The third topic that Aretaeus discusses in this chapter is the patient's diet. Like other Rationalist physicians, Aretaeus is interested in the properties of different kinds of food, and the ways in which these properties can be used to assist in treatment. He explains some of the motivation for this interest in his chapter on the treatment of bloodspitting:

Foods are diverse, as are the form of the medicines in the food. And truly there are medications in food. For neither will you easily find all the good properties of food from only one kind, nor, if only one food is sufficient in the cure, should only one be used, because this will easily

¹³⁹ Aretaeus, 5.1.5 (92.22-31 Hude).

¹⁴⁰ Aretaeus, 5.1.6 (93.5 Hude).

¹⁴¹ Aretaeus, 5.1.5 (92.22 Hude); see also Aretaeus, 2.3.5 (23.10-12 Hude).

¹⁴² Aretaeus, 5.1.5 (92.21-22 Hude).

¹⁴³ Aretaeus, 5.1.6 (92.31-33 Hude).

¹⁴⁴ Aretaeus, 5.1.6 (93.2-5 Hude).

result in satiety. And it is fitting to have variety; for already this happens from chronic diseases.

τροφᾶι ποικίλαι καὶ τὴν ἰδέην ὀκοῖα τὰ φάρμακα. ἀτὰρ καὶ τὰ φάρμακα ἐν τροφῇ· οὔτε γὰρ ἐπὶ μιῇ μούνη ἅπαντα εὐρεῖν τὰ τροφῆς ἀγαθὰ εὔπορον, οὔτε ἦν μίᾳ οὐ μούνη ἐς ἰητρείην ἀρκέη, μιῇ μούνη χρέεσθαι διὰ τὸν κόρον ῥήϊδιον. καὶ γὰρ κατὰ ποικίλα εἴκειν· ἥδη δὲ ἀπὸ χρονίων γίγνεται.¹⁴⁵

In phrenitis, Aretaeus is interested in foods with properties that will cool the body and increase its internal moisture. He recommends a number of foods that help lubricate various parts of the body. This added moisture helps to reduce the patient's fever and improve his respiration; it also acts as a diuretic, helping the body to naturally evacuate blockages in the intestines and lower abdomen.¹⁴⁶ Suggested foods for this purpose include spelt grains mixed with water or a mulse, a combination of milk and honey; porridges boiled with savoury, parsley, or dill; and herbs such as mallow, beets, hartshorne, and round gourds.¹⁴⁷

The main goal of Aretaeus' dietary recommendations is to ensure that the patient's strength is maintained throughout treatment. For this reason, he does not want patients to be left without food for long periods of time.¹⁴⁸ Instead, he suggests that patients be given small amounts of food at frequent intervals, during the remissions of fever and delirium.¹⁴⁹ If these intervals are too far apart, the patient can be fed while the fever is still present, provided that foods are restricted to only those that will not

¹⁴⁵ Aretaeus, 6.2.17 (124.19-20 Hude). See also Aretaeus, 5.10.4 (114.20-21): ἐν τροφῇ γὰρ κείσεται τὰ φάρμακα, ἀτὰρ καὶ τὰ φάρμακα ἐν τροφῇ. *For in food lies medication, and truly medications lie in food.*

¹⁴⁶ Aretaeus, 5.1.7 (93.10-14 Hude).

¹⁴⁷ Aretaeus, 5.1.7 (93.7-15 Hude).

¹⁴⁸ Aretaeus, 5.1.3 (92.10-11 Hude).

¹⁴⁹ Since this was also the time at which he performed venesection, it can be assumed that food would be provided after the procedure has taken place (5.1; p. 92.14-15 and 93.31-33).

aggravate the fever; Aretaeus believes that this method is better than allowing the patient to be driven mad by lack of food.¹⁵⁰ Aretaeus suggests that the nourishing qualities of the patient's diet be increased as the disease progresses, to ensure that the patient maintains his strength.¹⁵¹ His one exception is to reduce the amount of nourishment during the crises of the disease, and for a short time before they occur.¹⁵² This restriction indicates that Aretaeus does not believe that a patient's body can process strong foods during the paroxysms of phrenitis. The nourishing qualities of a patient's diet can be enhanced with cereals, meat, poultry, and fish, all of which should be boiled down into soups.¹⁵³ The specific varieties of these foods should be selected according to what is best in each particular geographic area.¹⁵⁴

Aretaeus' one restriction on food is a common element of ancient dietary regimes: as with many of the Hippocratic authors, Aretaeus believes that it is not safe to give wine to phrenitis patients because of its effects on the rational and sensory powers.¹⁵⁵ This rule extends to fruit that contains wine, which should only be given to patients after it has been boiled, a process that removes its vinous qualities.¹⁵⁶ Aretaeus permits the use of wine only in extreme circumstances, for example when a case of phrenitis has become so severe as to bring on an attack of syncope. Aretaeus explains that in these cases, wine is the only effective remedy: it swiftly counteracts the dissolution of the body and penetrates right to the extremities. It also tightens the *tonos* of the *pneuma*, rouses the deadened *pneuma*, warms that which is cold, and

¹⁵⁰ Aretaeus, 5.1.3 (92.10-12 Hude).

¹⁵¹ Aretaeus, 5.1.8-9 (93.15-19).

¹⁵² Aretaeus, 5.1.8 (93.17-18)

¹⁵³ Aretaeus, 5.1.8 (93.18-21 Hude).

¹⁵⁴ Aretaeus, 5.1.7 (93.14-15 Hude), and 5.1.9 (93.21-23 Hude).

¹⁵⁵ Aretaeus, 5.1.9 (93.24 Hude).

¹⁵⁶ Aretaeus, 5.1.9 (93.26-28 Hude).

supports and restrains those things which are flowing outwards.¹⁵⁷ Wine also pleases the sense of smell, strengthens the power of life, and temporarily relieves the patient's delirium, thereby giving the patient the strength required to continue fighting the disease.¹⁵⁸

The penultimate 'section' of Aretaeus' chapter describes the various pharmaceutical remedies for phrenitis; these are discussed in connection with the specific symptoms for which they are recommended. As with the majority of Aretaeus' treatment regime, these remedies are chosen according to their cooling and moistening properties; when describing the effects of these remedies on the body, Aretaeus often alludes to the heat and dryness that contribute to the various symptoms. These remedies are applied externally, in the form of fomentations and plasters, and internally, as diuretics and clysters.

The first symptom that Aretaeus addresses is delirium; clearly, he considers this a significant aspect of phrenitis. His recommendations for this symptom are primarily topical: fomentations made of olive and rose oils are suggested, with additional herbs mixed into these oils as necessary, to increase the cooling properties.¹⁵⁹ Aretaeus suggests that a very effective fomentation can be made from the hair of wild thyme that has been boiled in oil, an infusion of ivy or knot-grass juice, or cow's parsnip and sulfur-wort boiled in oil and mixed with a little vinegar.¹⁶⁰ These medications help to

¹⁵⁷ Aretaeus, 5.1. (97.23-28 Hude): ἄλκαρ μούνον ἔστι οἶνος, θρέψαι μὲν ὠκέως κατ' οὐσίην, καὶ πάντη μέχρι περάτων μολεῖν, τόνω δὲ προσθεῖναι τόνον, καὶ πνεῦμα νεναρκωμένον ἐγείραι, ψῦξιν ἀλεῖναι, στῦψαι πλάδον, φερομένων ἔξω καὶ ῥεόντων κρατῆσαι, ἥδυσ μὲν ὀσφραίνεσθαι ἐς ἡδονήν, κραταιὸς δὲ στηρίξαι δύναμιν ἐς ζωήν, ἀριστος δὲ μειλίξαι θυμὸν ἐν παραφορῇ.

¹⁵⁸ Aretaeus, 5.1.28 (97.27-28 Hude).

¹⁵⁹ Aretaeus, 5.1 (93.29-94.5 Hude).

¹⁶⁰ Aretaeus, 5.1; p. 94.1-5 Hude).

dissipate vapours and heat that are trapped in the head, and dissolve the thick vapours that contribute to delirium.¹⁶¹

External applications of herbal medicines are also suggested as remedies against insomnia, inflammation of the hypochondria, flatulence, pain of the liver, swelling of the spleen, and constipation of the bowels. Aretaeus suggests that poppies are particularly useful for insomnia, because of their ability to moisten and thicken the *pneuma*.¹⁶² These flowers can be boiled in oil and then applied to the forehead, placed whole under the pillow when still green and freshly plucked, or the expressed juice of the flowers can be mixed with water and rubbed into the forehead and nostrils, and poured into the ears; all of these methods will bring sleep to a restless patient.¹⁶³ Insomnia may also be remedied by the gentle motion of patting the head and rubbing the feet with oils, motions which cause the patient to relax.¹⁶⁴ In a recommendation that certain scholars have taken to be an early form of psychiatric therapy, Aretaeus also suggests that patients will be soothed if they are surrounded by familiar circumstances, such as music for a musician, the rocking motion of a boat for a sailor, or the sounds of children for a teacher.¹⁶⁵

Inflammation of the hypochondria should be treated with embrocations mixed with oil from over-ripe olives that has been boiled with dill or fleabane.¹⁶⁶ This substance is thick and sticky, and causes reddening of the skin, properties that will help to reduce the inflammation.¹⁶⁷ The liver and spleen are to be treated with a fomentation made from lanolin-rich wool, unripe olive oil or rose-oil, and Hellenic or

¹⁶¹ Aretaeus, 5.1.11 (94.5-6 Hude): ἀτμῶν γὰρ τάδε καὶ θέρμης διαπνευστικά καὶ παχέων χυμῶν διαλυτικά, τὰ τῆς παραφορῆς ξυναίτια. *For these things promote exhalation of the vapours and heat and destroy the consistency of the humours.*

¹⁶² Aretaeus, 5.1.14 (94.22-24 Hude).

¹⁶³ Aretaeus, 5.1.13 (94.19-22 Hude), and 5.1.14 (24-26 Hude).

¹⁶⁴ Aretaeus, 5.1.14 (94.26-27 Hude).

¹⁶⁵ Aretaeus, 5.1.15 (94.29-95.3 Hude).

¹⁶⁶ Aretaeus, 5.1.15-16 (95.3-7 Hude).

¹⁶⁷ Aretaeus, 5.1.16 (95.5-6 Hude).

Cretan rob; oxycrate should be added if the spleen is swollen, and vinegar if it is not.¹⁶⁸ If the hypochondria is retracted upwards, similar treatments should be used, with butter being used instead of or in addition to the oils, and with the addition of rosemary, fleabane, and dill.¹⁶⁹ Finally, constipation of the bowels can be removed by externally applied liniments or internal suppositories.¹⁷⁰ For this latter treatment, a clyster of mulse, oil, and natron should be used.¹⁷¹ Many of these remedies can also be altered for use as plasters or lotions, which can be applied to the body as necessary.

In some cases, medicinal treatments are not strong enough to treat the symptoms of phrenitis. The distension of the hypochondria, for example, may not be reduced by the application of topical treatments. In these instances, Aretaeus suggests the use of cupping instruments with scarification, which will help to remove the blood that is adding to the inflammation.¹⁷² On the first or second day of the inflammation, the cupping glasses are to be applied to the point at which the swelling is the greatest, and a quantity of blood removed.¹⁷³ As in venesection, this amount is to be determined by the strength of the patient, and should be limited so as not to bring on syncope.¹⁷⁴ Cupping can also be used to relieve delirium, if the previous cooling fomentations have been ineffective. The hair on the head must first be cut off, or trimmed to half its length if it is long.¹⁷⁵ This will allow the head to breathe more freely, and release some of its heat. Once the patient has been sufficiently strengthened through diet, dry

¹⁶⁸ Aretaeus, 5.1.17 (95.9-15 Hude).

¹⁶⁹ Aretaeus, 5.1.17 (95.15-18 Hude).

¹⁷⁰ Aretaeus, 5.1.20 (96.2-3 Hude).

¹⁷¹ Aretaeus, 5.1.20 (96.6-7 Hude).

¹⁷² Aretaeus, 5.1.20-21 (96.7-10 Hude).

¹⁷³ Aretaeus, 5.1.21 (96.8-10 Hude).

¹⁷⁴ Aretaeus, 5.1.21 (96.10-11 Hude).

¹⁷⁵ Aretaeus, 5.1.22 (96.15-17 Hude).

cupping glasses should be applied to the back, followed by cupping with scarification on the top of the head.¹⁷⁶

Aretaeus ends his chapter on phrenitis treatment on a positive note: a description of the signs that indicate that the patient has started to recover from phrenitis. This stage is reached when the patient's fever is reduced, his mind becomes calm, and his hypochondria is no longer inflamed or swollen.¹⁷⁷ At this point, the patient's head is still affected by the *dyskrasia* of heat and dryness, and must be frequently washed with cool water. In this way, the head and the rest of the body will be able to exhale the remainder of the excess heat, removing the mist from the senses, and adding moisture to those parts of the body that are still arid.¹⁷⁸ When these final symptoms have been relieved, the patient is on the proper course for recovery.¹⁷⁹ Unlike his Hippocratic predecessors, Aretaeus does not comment on the rate of survival in this disease.

Summary

Aretaeus' account of phrenitis combines the traditional, Rationalist ideas of disease causation, with an anatomical understanding of the body that derives from the Alexandrian discoveries of the 3rd century BC. He believes that phrenitis arises from a *dyskrasia* of heat and dryness; although we do not have Aretaeus' exact account, this unnatural humoral condition appears to arise during fever, when heat moves from all parts of the body into the chest. The accumulation is further aggravated when involvement of the lungs and bowels hinders their ability to help regulate the

¹⁷⁶ Aretaeus, 5.1.22 (96.17-19 Hude).

¹⁷⁷ Aretaeus, 5.1.29 (97.31-98.1 Hude).

¹⁷⁸ Aretaeus, 5.1.29 (98.2-5 Hude)

¹⁷⁹ Aretaeus, 5.1.29 (98.6-7 Hude): τάδε μέντοι τῆς λύσεως τῆς νόσου γνώματα. *These indeed are the signs of the release of the disease.*

body's heat. Hot vapours also rise up to the brain, where they affect the sensory powers. The resulting condition is the damaged sense perception that Aretaeus identifies as phrenitic delirium.

By placing phrenitis in the brain, Aretaeus presents a new development in the concept of phrenitis. The novelty of his approach stems from the fact that he separates the *locus affectus* of phrenitis, the brain, from the location of the rational powers, which he believes to be situated in the heart. He is not, of course, the only physician to do this: we have already seen that Diocles also posited separate locations for phrenitis and the rational powers. In Aretaeus' case, however, this separation is based upon a division of the mental powers. Aretaeus accepts the belief that the starting point of the nerves in the brain indicates that the powers of sensation are also located in this place. Since phrenitis affects the senses, he suggests that the *locus affectus* of this disease must also be the brain. The loss of Aretaeus' chapter on the symptoms and causes of phrenitis is of particular regret in this respect, since it prevents us from knowing Aretaeus' criteria for making this decision. In his extant chapter on treatment, Aretaeus speaks of phrenitis patients having strange visions and seeing things that do not exist; it is possible that he used these φαντασία as evidence for his decision. We will see in the following chapter that Galen uses the symptoms of *carphologia* and *crocydismos* as evidence of damage to the sensory powers; it is possible that Aretaeus may have viewed them in a similar light, perhaps giving inspiration to Galen's approach.

Aretaeus' separation of the rational and sensory powers, and his belief that phrenitis is located in the brain both foreshadow Galen's approach to phrenitis. Aretaeus, however, continues to rely on humoral explanations for disease. His incorporation of anatomy provides an organ-based explanation for the humoral

process occurring in the body. As we will see in the following chapter, Galen's approach to phrenitis moves a step beyond Aretaeus, placing even more importance on the involvement of the body's organs.

Galen

Galen's medical career dates to the 2nd century AD.¹ His approach to medicine is strongly influenced by the teachings of the Hippocratic Corpus, combined with a strong interest in philosophy. Galen places great emphasis on his adherence to the Rationalist tradition. Throughout his many texts, he frequently highlights the connections between his own ideas and those of 'the Ancients', authors such as Hippocrates, Diocles, and Praxagoras. Galen's system of medicine also draws heavily on anatomical research; he believes that hands-on experience with anatomy is the only means of gaining a clear understanding of the proper structure and function of the human body.² Galen himself carried out considerable anatomical experiments and dissections, on both human and animal bodies. He used the knowledge acquired from this research to formulate a complex theory of disease that focuses on the different organs of the body, and the activities for which they are responsible. This system emphasizes the *locus affectus* of each disease, offering complex anatomical explanations for the symptoms they produce. Galen's concept of phrenitis is one of the diseases described in this system. As we will see, Galen identifies phrenitis as a primary affection of the mind, capable of causing damage to the powers of sensation, and to the rational faculty. For Galen, both of these powers are viewed as activities of the brain.

In contrast to Aretaeus and Caelius, Galen did not write a single, unified text about phrenitis. Instead, his concept of this disease must be pieced together from short references to the illness that are found in a number of his many texts.³ In these

¹ For a more detailed history of Galen's life and career, see Nutton, 2004: 216-229.

² Nutton, 2004: 230.

³ Significant discussions of phrenitis can be found in the following texts: Galen, *De symptomatum differentiis* (7.42-84 Kühn), Galen, *De symptomatum causis* (7.85-272 Kühn), Galen, *De comate*

works, Galen's comments about phrenitis are suited to the goals of each specific text, and do not necessarily correspond with each other. His most comprehensive discussion of phrenitis is found in *De locis affectis*, in which he discusses diseases in the context of the parts of the body that they affect. Here, passages about phrenitis are found in discussions of the eyes, the brain, and the diaphragm, parts of the body which he believes to be affected during cases of phrenitis.⁴ In each of these passages, emphasis is placed on the delirium and hallucinations that are associated with phrenitis, and the processes by which these symptoms are produced. By contrast, in *De causis pulsuum*, Galen focuses on the characteristics of the pulse during phrenitis, and mentions delirium only briefly. This is in keeping with the overall purpose of this text, which is to explain why the pulse takes on certain characteristics in each disease.

Galen's Physiology and Disease Theory

Galen's medical views are based upon the traditional Hippocratic theories of the elemental qualities and humours. He believes that the human body, and indeed all animate and inanimate bodies, are composed of the four elemental qualities of heat, cold, wetness and dryness. Each type of body – be it human, animal, or vegetable – has its own specific mixture of elements, according to the nature of its species. In the case of humans, for example, there exists a particular mixture of elemental qualities that comes together to form an 'ideal' human. Galen describes this kind of person as 'well-fleshed', and suggests that he might resemble the man upon whom the Canon of

secundum Hippocratem (7.643-665 Kühn), Galen, *De difficultate respirationis* (7.753-960 Kühn), Galen, *De locis affectis* (8.1-452 Kühn), Galen, *De pulsibus ad tirones* (8.453-492 Kühn), Galen, *De causis pulsuum* (9.1-204 Kühn), Galen, *De crisibus* (9.550-760 Kühn), Galen, *In Hippocratis prorrheticum* (16.489-840 Kühn), Galen, *In Hippocratis epidemiarum libri* (17a.1-17b.344 Kühn), and Galen, *In Hippocratis aphorismi* (17b.345-18a.195 Kühn). While phrenitis is mentioned in certain other of Galen's texts, these tend to be only passing references to the disease, with very little added insight.

⁴ Galen, *Loc. Aff.* 3.9 (8.173-179 Kühn), 4.2 (8.225-227 Kühn), and 5.4 (8.329-332 Kühn) respectively.

Polyclitus is based.⁵ Within the balance of qualities that creates each species, there is room for some subtle variation, so that one person may have more or less of a particular element in them than another. These minor variations result in different physical characteristics, depending on the part of the body in which the excess is located; in his text *De Temperamentis*, for example, Galen explains that excesses of heat and dryness in a human's skin will generally result in a hairier body.⁶

In humans⁷, Galen believes that variations in the mixtures also affect the ruling powers of the soul, activities such as memory, perception, understanding, and the faculties of the senses, which Galen places in the head.⁸ In *Quod animi mores corporis temperamenta sequantur*, Galen explains that an excellent soul is built from the same good balance of food, drink, and daily regimen that creates a well-balanced body.⁹ If a person's physical mixture is affected by these factors, the rational powers of their soul also become affected. Clear evidence of this is seen in people who drink copious amounts of wine, or have excesses of bile collect in their brains. As Galen explains:

⁵ Galen, *De Temperamentis*. 1.6 (1.541 Kühn): μέσος δ' ὡς ἐν ἀνθρώποις κατ' εἶδος ὁ καλούμενος εὖσαρκος· οὗτος δ' ἐστίν, ὃν οὔτε παχὺν οὔτε λεπτόν ἔχομεν εἰπεῖν οὔτε θερμόν οὔτε ψυχρόν οὔτ' ἄλλω τινὶ τῶν ἀμετρίαν ἐνδεικνυμένων ὀνομάτων προσαγορευῆσαι. *And within humans, the middle form is called 'well-fleshed'; this is the person whom we can say is neither fat nor slender, neither hot nor cold, nor can they be called demonstrably disproportionate in any way.* Galen refers to the Canon of Polyclitus at *Temp* 1.9 (1.567 Kühn).

⁶ Galen, *De Temp*. 2.5 (1.611 Kühn).

⁷ Galen, *QAM* 3 (4.775 Kühn): τολμῶ λέγειν αὐτός, ὡς οὐ πᾶν εἶδος σώματος ἐπιτήδειόν ἐστιν ὑποδέξασθαι τὴν λογιστικὴν ψυχὴν. *I undertake to explain this, that not all forms of body are suitable to receive a rational soul.* Galen does not believe that every form of body is capable of receiving a logical soul.

⁸ Galen, *QAM* 1 (4.770 Kühn): ἡ ἐν ἐγκεφάλῳ καθιδρυμένη λογιστικὴ ψυχὴ... *The rational soul that is seated in the brain....* See also Galen, *Loc Aff.* 2.10 (8.126-130 Kühn) and 3.7 (8.166-167 Kühn). For the specific activities, see Galen, *QAM* 1 (4.770-771), and the discussion below.

⁹ Galen, *QAM* 1 (4.768 Kühn):...[καὶ] διὰ τῶν ἐδεσμάτων τε καὶ πομάτων ἔτι τε τῶν ὁσημέραι πραττομένων εὐκράσιαν ἐργαζόμεθα κακὰ ταύτης εἰς ἀρετὴν τῇ ψυχῇ συντελέσομεν, ὡς οἱ περὶ Πυθαγόραν τε καὶ Πλάτωνα καὶ τινες ἄλλοι τῶν παλαιῶν ἱστοροῦνται πράξαντες. *...through our food and drink and daily actions already we make a good [bodily] mixture, and from this also we produce an excellence in the soul, as the followers of Pythagoras and Plato and the other ancients give accounts of occurring.*

It is necessary to agree, even in respect to suggestions that the soul has its own specific substance, that the soul is subject to mixtures of the body. Indeed, the mixtures have the power to separate the soul [from the body], and they force it to become delirious, and they take away memory and comprehension, and they make the soul more grievous and more cowardly and more spiritless, just as the soul appears in melancholia, and they make the soul have the opposite characteristics, as when one drinks wine moderately.

ἀναγκαῖον οὖν ἔσται καὶ τοῖς ἰδίαν οὐσίαν ἔχειν ὑποθεμένοις τὴν ψυχὴν ὁμολογῆσαι δουλεύειν αὐτὴν ταῖς τοῦ σώματος κράσεσιν, εἴ γε καὶ χωρίζειν ἐξουσίαν ἔχουσι καὶ παραφρονεῖν ἀναγκάζουσι καὶ μνήμην καὶ σύνεσιν ἀφαιροῦνται καὶ λυπηροτέραν καὶ ἀτολμοτέραν καὶ ἀθυμοτέραν ἐργάζονται, καθάπερ ἐν ταῖς μελαγχολίαις φαίνεται, καὶ τούτων ἔχειν τὰναντία τὸν πίνοντα τὸν οἶνον συμμέτρως.¹⁰

Galen recognizes that these changes to the mixtures can also occur naturally, such as in the case of aging, which cools the body and eventually causes damage to all of the soul's faculties.¹¹

Galen uses the term φύσις to refer to a body that is in its natural state¹²; that is, when the elemental qualities in the body are balanced, and the person is neither diseased nor in perfect health.¹³ In this condition, all parts of the body are able to

¹⁰ Galen, *QAM* 3 (4.779 Kühn).

¹¹ Galen, *QAM* 5 (4.786-787 Kühn): διὰ τί τοίνυν εἰς ἔσχατον γῆρας ἀφικνούμενοι παρελήρησαν οὐκ ὀλίγοι τῆς τοῦ γῆρας ἡλικίας ἀποδεδειγμένης εἶναι ξηρᾶς; οὐ διὰ τὴν ξηρότητα φήσομεν ἀλλὰ διὰ τὴν ψυχρότητα· φανερώς γὰρ αὕτη πᾶσι τοῖς ἔργοις τῆς ψυχῆς λυμαίνεται. *Why then do those who reach extreme old age talk nonsense, and not just a few old people, when [old age] is a time of life that has been shown to be dry? I would not explain this as being on account of dryness, but of coldness. For manifestly, this damages all actions of the soul.*

¹² Galen also speaks of φύσις in a teleological sense, in which the personified 'Nature' serves as the creator of living bodies. For a discussion of this form of φύσις, see Hankinson, 1988.

¹³ Dean-Jones, 1993: 25.

function κατὰ φύσιν, ‘according to nature’.¹⁴ If the elemental qualities should fall out of balance, and an excess of one or more qualities be produced in a particular part of the body, that part becomes somehow damaged and παρὰ φύσιν, ‘contrary to nature’.¹⁵ In this unhealthy condition, the part is either hindered, or entirely prevented from performing its proper function. Galen refers to these affected parts as ‘diseased’.¹⁶

Galen divides the parts of the body into several different structural levels.¹⁷ Based on his anatomical understanding, he identifies the homoiomeric, or uniform parts as the lowest structural level of composition. These parts are directly composed of the four elemental qualities, mixed together in such a way that when divided – for example, during dissection – the individual pieces look identical to the part from which they were severed.¹⁸ Homoimeres are the smallest units of structure visible to the naked eye,¹⁹ and include such parts as veins, arteries, bones, nerves, cartilages, membranes, and flesh.²⁰ Due to their composition, these parts are very susceptible to the class of diseases which Galen calls *dyskrasiai*, or imbalances.²¹ There are four primary *dyskrasiai* in this category, each of which is caused by an unnatural excess in one of the four elemental qualities.²² These excesses arise either from internal changes in the part itself, or from external forces that flow into the body and off-set

¹⁴ Galen, *De morborum differentiis* 2.1 (6.837 Kühn), Galen, *CAM* 9.2 (1.255 Kühn).

¹⁵ Galen, *Morb. Diff.* 2.1 (6.837 Kühn); Galen, *CAM* 9.2 (1.255 Kühn).

¹⁶ Galen, *Morb. Diff.* 2.1 (6.837-838 Kühn): ἀλλ’ εἴπερ ἡ ὑγεία τοῦτο, δηλον ὡς ἡ νόσος τὸ ἐναντίον, ἤτοι κατασκευὴ τις παρὰ φύσιν, ἢ βλάβης ἐνεργείας αἰτία. *But if health is this, it is clear that disease is the opposite, that is some condition contrary to nature, or a cause of damaged activity.*

¹⁷ In *De morborum differentiis*, Galen identifies 3 levels: homoiomeric parts, organic parts, and the whole body. Galen, *Morb. Diff.* 3.1 (6.841 Kühn).

¹⁸ Galen, *De placitis Hippocratis et Platonis* 8.4.7-15 Kühn (De Lacy, vol. 2, p.500).

¹⁹ Dean-Jones, 1993: 37.

²⁰ Galen, *Morb. Diff.* 3.1 (6.841 Kühn). See also Galen, *Hipp. Elem.* (1.493 Kühn).

²¹ Galen, *Morb. Diff.* 4.1-4.2ff (6.843-844 Kühn) and Johnson 2006.

²² Galen, *Morb. Diff.* 4.2 (6.844 Kühn).

the quantities of elements.²³ Galen also identifies six combined *dyskrasiai* of the homoiomeres, which occur when there is an excess of two elemental qualities at the same time.²⁴ The most frequent combinations are excesses of heat and dryness, heat and moisture, cold and dryness, and cold and moisture. On rare occasions, an ‘anomalous *dyskrasia*’ of heat and cold, or dryness and moisture may also occur.²⁵

Homoiomeric parts come together to form the second structural level in the body, that of the organic, or compound parts.²⁶ Galen describes an ‘ὄργανον’²⁷ as any part of the body that performs a specific action; in *De methodo medendi*, he offers the examples of the eye for sight, the tongue for speaking, and the legs for walking.²⁸ Diseases which affect the organic parts are primarily those which involve an abnormality in the overall structure of the organ. While each organ is composed of multiple homoiomeric parts, Galen believes that only one of these smaller parts will be responsible for carrying out the function; the secondary parts exist to assist with

²³ Galen, *Morb. Diff.* 5.2 (6.848-849 Kühn) : ἐπὶ δὲ τῆς δευτέρας ὑποθέσεως ἡ διαφορὰ τῶν νοσημάτων διττὴ τυγχάνει, ποτὲ μὲν δὴ ταῖς ποιότησι μόναις ἀλλοιουμένων τῶν ὁμοιομερῶν σωμάτων, ἔστιν ὅτε δὲ ρυείσης εἰς αὐτὰ τινος οὐσίας τὰς εἰρημένας ἐχούσης ποιότητος. *And concerning the second hypothesis, the differentia of diseases happens to be two-fold: for sometimes the homoiomeric bodies are changed in their qualities alone, at other times it is changed from the flowing into them of something that has the qualities spoken of.* See also Galen, *De optima corporis nostri constitutione* 3 (4.742 Kühn), and Johnson, 2006: 70.

²⁴ Galen, *Caus. Morb.* 1.1 (7.2 Kühn) and Galen, *Morb. Diff.* 12.1 (6.873 Kühn). See also Johnston, 2006: 113.

²⁵ Galen, *Caus. Morb.* 6.2 (7.20-21 Kühn): καί τι δόξειεν ἂν εἶναι τοῦτό γε ἀδύνατον ἅμα θερμότερον τε καὶ ψυχρότερον ἀποτελεῖσθαι τοῦ κατὰ φύσιν ἐν καὶ ταῦτόν σῶμα, καὶ ὑγρότερον αὐ καὶ ξηρότερον, ἀλλὰ καὶ γίνεται τοῦτο. *And something which might seem to be impossible, for the same body to be rendered at the same time both more hot and more cold than is in accordance with nature, or again more moist and more dry, but even this does occur.* Galen discusses these anomalous dyscrasiai in *De inaequali intemperie* (7.733-752 Kühn).

²⁶ Dean-Jones, 1993: 38. In *Morb. Diff.* 4.4 (6.846 Kühn), Galen refers to organic structures as ‘secondary organs’, with primary organs being the homoiomeric structures. In this system, the more complex organic structures (see below) are known as tertiary and/or quaternary organs.

²⁷ Note that in using the term ‘organ’, I am referring to Galen’s concept of an ‘ὄργανον’, not the modern English understanding of the word. May, in her translation of *UP*, uses ‘instrument’ to define ‘ὄργανον’, in order to indicate the inclusivity of Galen’s term. May, 1968: Vol. 1., 67-68.

²⁸ Galen, *MM* 1.6.3 (10.47 Kühn): ὄργανον δὲ ὀνομάζω μέρος ζώου τελείας ἐνεργείας ἀπεργαστικόν, οἷον ὀφθαλμὸν ὄψεως καὶ γλῶτταν διαλέκτου καὶ σκέλη βαδίσεως: *I call an organ a part of the living body that is capable of performing a complete action, such as the eye of sight, and the tongue of speech, and the legs of walking.* At *Morb. Diff.* 3.1 (6.841 Kühn) Galen lists the brain, heart, lungs, liver, stomach, eyes, and kidneys as examples of organic structures.

that function.²⁹ Galen calls an organ ‘diseased’ only when these smaller parts are affected in such a way that the function of the organ is hindered or entirely prevented: if the secondary parts are affected but the function is *not* impeded, the condition is merely ‘a cause of disease’.³⁰ Abnormalities can occur in the form, number, size, and/or the relative position of these smaller parts. Finally, Galen also identifies a category of diseases which affects both homoiomeric and organic structures.³¹ He calls this group ‘dissolution’, or ‘breakdown of continuity’.³² It includes injuries of traumatic origin, such as flesh wounds, broken bones, ulcers, torn ligaments or arteries, and injuries from internal erosion, such as ulcers caused by abrasion from abnormal humours.³³

Galen’s interest in defining the structures of the body is connected to his belief that diseases are essentially affections of particular parts of the body. This concept of the *locus affectus* (Greek: ὁ πεποιηθὼς τόπος) or ‘affected place’ forms the basis of Galen’s work *De locis affectis*. In this text, Galen picks up the explanation of an ‘organ’ that was outlined in *De methodo medendi*, namely, that an organ is any part of the body which performs a specific activity (ἐνέργεια).³⁴ Galen explains that diseases can be identified by looking for changes in the various organs of the body, including excretions, growths, colour, and impediment or cessation of a particular bodily activity.³⁵ Of these, the most reliable symptoms for diagnosis are the changes

²⁹ Galen, *Morb. Diff.* 6.1 (6.855 Kühn).

³⁰ Galen, *Morb. Diff.* 6.1 (6.855 Kühn).

³¹ In both *CAM* 5.2 (1.238 Kühn) and *Morb. Diff.* 11.1 (6.872 Kühn), Galen calls this the “fifth” category of disease, indicating that he considers it part of the same category as diseases of the organic structures. Johnston, however, believes that this category can be interpreted as an independent, third category of diseases (2006: 71 and 75ff.).

³² Galen, *MM* 2.6.16 (10.126 Kühn); Galen, *Morb. Diff.* 4.5 (6.847 Kühn) and 11.1ff (6.872 Kühn); Galen, *CAM* 5.2 (1.238-239 Kühn).

³³ Johnston, 2006: 115.

³⁴ Galen, *Loc. Aff.* 1.1 (8.2 Kühn), and Galen, *MM* 1.6.3 (10.47 Kühn).

³⁵ Galen, *Loc. Aff.* 1.5 (8.44 Kühn): Πολλάκις δ’ ἅμα τόπου τε καὶ διαθέσεως ἐξ ἐνὸς γνωρίσματος ἐστὶν ἡ ἔνδειξις, ἡ τόπου τε ἅμα καὶ αἰτίου· οἷον ἐπὶ μὲν τῶν τόπων ἀπὸ τε τῆς βεβλαμμένης ἐνεργείας καὶ τῶν ἐκκρινόμενων καὶ τῆς θέσεως καὶ τῆς κατὰ τὴν ὁδύνην

that occur in bodily activities: the location of an illness is easily determined by identifying which part of the body is responsible for that damaged activity. The remaining physical symptoms can then be used to determine the exact nature of the affection in question. Galen believes that it is essential for physicians to be well trained in human anatomy, so that they will have no difficulties carrying out this process of diagnosis.³⁶

Galen identifies two types of affection: direct affections, known as idiopathic (ἰδιοπάθεια), or primary affections (πρωτοπάθεια³⁷), and indirect affections, known as sympathetic affections (κατὰ συμπάθειαν).³⁸ Primary affection of an organ occurs when a disease is present in the organ itself; symptoms of primary affections are continuous, and usually remain for the duration of the disease.³⁹ In contrast, sympathetic affection occurs when an organ suffers through transference of

ἰδιότητος καὶ τῶν οἰκείων συμπτωμάτων ἢ ἔνδειξις, ἐπὶ δὲ τῶν παθῶν ἀπὸ τε τῆς τῶν ἐκκρινομένων ἰδέας καὶ τῆς τοῦ τόπου φύσεως καὶ τῆς κατὰ τὴν ὀδύνην ἰδιότητος καὶ τῶν οἰκείων συμπτωμάτων. ἀπὸ μὲν οὖν τῆς βεβλαμμένης ἐνεργείας ἔνδειξις τοῦ πεπονθότος μορίου γίνεται κατὰ τόνδε τὸν τρόπον. *Many times the indication is from one sign, both of the place [of the affection] and of its disposition, or of the place together with the cause. For example, in the case of the places, the indication of the places [of affection] is from the damaged activity and the excretions and the position, and from the particular nature of pain and the specific symptoms. In the case of the affections, the indication is from both the specific excretions and from the species of the place and from the particular nature of the pain and the specific symptoms. And so the indication of the affected part based on the damaged activity, happens in this way.*

³⁶ Galen, *Loc. Aff.* 1.1 (8.16 Kühn): ἡ δ' ὑφ' ἡμῶν ἀρτίως λεγομένη τῆς προκειμένης πραγματείας ἐστὶν οἰκεία, καὶ φαίνεται τό γε τοσοῦτον ἤδη κατ' αὐτὴν, ὡς χρὴ γινώσκειν πρῶτον μὲν ἐξ ἀνατομῆς ἐκάστου τῶν μορίων ἀκριβῶς τὴν οὐσίαν, ὅποια τις ἐστὶν· ἔπειτα δὲ τὴν ἐνεργείαν τε καὶ πρὸς τὰ πλησιάζοντα μόρια κοινωνίαν, ὅπερ ἐν τῷ τῆς θέσεως ὀνόματι περιλαμβάνεται. καὶ μὴν καὶ ἡ χρεια τῶν μορίων ἐκάστου μεγάλα συντελεῖ πρὸς τὴν τῶν πεπονθότων τόπων εὔρεσιν. *But the meaning of our present discussion is precise, and it has made evident this much already, that it is necessary to learn first, from dissection of each of the parts, precisely its nature, of what sort it is; then both its activity and its association with the parts nearby, that which is understood by the name thesis (placement). And especially, the function of each of the parts greatly contributes to the discovery of the affected part.*

³⁷ At *Loc. Aff.* 30-31, Galen says that the term idiopathy (ἰδιοπάθεια, a disease pertaining to a particular part) is a more appropriate term than protopathy (πρωτοπάθεια, a primary disease) when speaking of the opposite to sympathy. Nevertheless, he later speaks of protopatheias when speaking of primary affections of the various parts of the body.

³⁸ Galen, *Loc. Aff.* 3.7 (8.166 Kühn), Galen, *Caus. Symp.* 7.2 (7.202 Kühn). An explanation of primary and secondary affections can be found at Galen, *Loc. Aff.* 1.3 (8.30-31 Kühn) and 3.1 (8.137 Kühn), respectively.

³⁹ Galen, *Loc. Aff.* 3.7 (8.166 Kühn): τὰ μὲν ἠκριβωμένα τοῖς ἰδίῳ συμπτώμασι καὶ διηνεκῇ καὶ μὴ προηγησάμενων ἑτέρων γενόμενα κατὰ πρωτοπάθειαν. *The latter [a primary disease] can be well understood from the specific symptoms, which are continuous and do not arise on the basis of other preceding affections.*

affection from a different primarily affected organ. As Galen explains, “it is clear from the word ‘sympathy’ that the organ does not suffer alone, but it suffers together with another organ. And it would be better and more clear to say that a certain organ suffers sympathy from another organ.”⁴⁰ This transfer of affection can occur through nerve conduction (or lack thereof), humoural transfer, movement of vapours within the body, or through direct, physical contact.⁴¹ Generally, symptoms of sympathetic affection are temporary, and disappear when the affection of the other organ is removed,⁴² although this is not always true: there is also a second form of sympathy, in which the symptoms will remain after the primary affection has disappeared.⁴³ In these cases, Galen believes that the sympathetic affection has become so severe as to create a primary affection in that organ. He offers as an example of this the case of a patient with pleuritis who develops a persistent delirium: in such a situation, Galen concludes that the sympathetic affection has caused the head to become affected by an idiopathic disease.⁴⁴

Signs and Symptoms of Phrenitis

Galen defines phrenitis according to its primary symptoms: he states that it is an acute illness characterised by fever, delirium, and the plucking motions of the hands known as *carphologia* and *crocydismos*.⁴⁵ While this description of the disease is in

⁴⁰ Galen, *Loc. Aff.* 1.6 (8.49 Kühn) : δηλούται γὰρ οὐ τὸ μηδὲως πάσχειν ἐκ τῆς συμπάσχειν φωνῆς, ἀλλὰ τὸ σὺν ἑτέρῳ πάσχειν. ἄμεινον δὲ καὶ σαφέστερον ἐφ’ ἑτέρῳ πάσχειν ἂν εἴποι τις τὸ συμπάσχον.

⁴¹ Siegel, 1976: 208 n.58.

⁴² Galen, *Loc. Aff.* 3.7 (8.166 Kühn).

⁴³ Galen, *Loc. Aff.* 3.7 (8.166 Kühn) and 2.10 (8.134 Kühn).

⁴⁴ Galen, *Loc. Aff.* 2.10 (8.134 Kühn): ὅθεν εἰ καὶ πλευριτικῶ τινι μόνιμος ἐπιγένηται παραφροσύνη, νοσεῖν ἤδη λογίζου τὴν κεφαλὴν αὐτῷ νόσον ἰδίαν, ὥστε καὶ καταστῆ τὸ τῆς πλευρᾶς πάθος, ἐνδέχασθαι μείναι τὸ τῆς κεφαλῆς

⁴⁵ Galen, *Caus. Symp.* 7.1 (7.202 Kühn). Galen uses *carphologia* (picking at threads of woolen fabric) and *crocydismos* (plucking at straw in the walls or mattress) to diagnose his own case of phrenitis in

keeping with the more traditional view of phrenitis, Galen differs from his predecessors by focussing mostly on the characteristics of the delirium that is produced by this disease, and placing only limited emphasis on the presence of the fever.⁴⁶ In doing this, Galen appears to be focussing on the aspects of phrenitis which can be used to diagnose its presence: while fever is definitely one of these aspects, its presence alongside delirium is so easily identified that it requires little explanation. The various forms of delirium, by contrast, cover a wide range of abnormal behaviours, and can be produced by many different diseases. Galen therefore focuses on explaining these various manifestations, and explains how the characteristics of a case of delirium indicate its particular causes.

In his discussion of Galen's psychopathology, Jackie Pigeaud points out that Galen is very precise in his use of psychological vocabulary, both when discussing the different activities of the brain, and when speaking about the diseases that affect its functioning.⁴⁷ In *De placitis Hippocratis et Platonis*, for example, Galen identifies six different activities for which the brain is responsible: interpretation of what is seen by the eyes (φαντασία)⁴⁸, memory (μνήμη), reminiscence (ἀνάμνησις), understanding (ἐπιστήμη), intelligence (νόησις), and reasoning (διανόησις).⁴⁹

Loc. Aff. 4.2 (8.226 Kühn); they are also included in definitions of phrenitis in the Pseudo-Galenic texts *Int.* (14.732) and *Def. Med.* (19.412).

⁴⁶ Galen refers to fever as a distinguishing aspect of phrenitis in only a few passages, and usually only in passing; for example, at *Symp. Caus.* 7.1(7.202 Kühn), Galen briefly mentions that yellow bile can produce delirium with or without fever: ὀνομάζονται δὲ φρενίτιδες μὲν αἱ μετὰ πυρετῶν, μανίαι δὲ αἱ χωρὶς τούτων. He then continues with the causes of the different kinds of delirium. See also Galen, *Hipp. Epid.* (17a.698-699 Kühn), and Galen, *Loc. Aff.* 3.7 (8.166 Kühn).

⁴⁷ Pigeaud, 2008a, specifically p. 562-568 (diseases of the mind) and p. 571-572 (terminology for the faculties of the mind).

⁴⁸ I prefer to translate φαντασία as 'image-reception' to emphasize that the word refers to the process of interpreting the images that are picked up by the eyes during the process of seeing. 'Imagination', the more common translation of this word, can easily give the wrong impression of this process, as it can also refer to the creation of mental images which are not understood to be real.

⁴⁹ Galen, *PHP* 7.3.2 (DeLacy, 2005: vol.2, p.438): δέδεικται μὲν γὰρ ὡς ἡ τοῦ γεγεννημένου ζώου διοίκησις ὑπὸ τριῶν ἀρχῶν γίνεται, μίας μὲν τῆς ἐν τῇ κεφαλῇ κατακλιμένης ἧς ἔργα καθ' ἑαυτὴν μὲν ἢ τε φαντασία καὶ ἡ μνήμη καὶ ἡ ἀνάμνησις, ἐπιστήμη τε καὶ νόησις καὶ διανόησις... For it has been demonstrated that when it is born, a rational animal is ruled by three

Several of these activities are also mentioned in *De locis affectis*, in which Galen identifies the faculties of understanding (ἐπιστήμη), judgement (δόξα), thought (διανοήσις), consideration (ἐννοεῖν), remembrance (μεμνήσθαι), calculation (λογίζεσθαι), and deliberation (προαιρεῖσθαι).⁵⁰

Galen's precision in defining these activities is reflected in his discussion of the diseases which damage them. In *De symptomatum causis*, he explains that symptoms of affection of the authoritative activities (ἡγεμονικᾶς ἐνεργείας) can be divided into three classes: damage to the function, complete destruction of the function, and a changing of the activity into another form.⁵¹ Galen explains that destruction of the authoritative activities results in loss of memory, of the type seen in the sluggish mind (μωρώσις) and forgetfulness (λήθη) that are caused by illness and old age.⁵²

Coldness seems to be the underlying cause of this destruction: Galen says that similar symptoms are produced by medicines which are known to have cooling properties.⁵³

Moderate damage to the authoritative activities are also caused by slight cooling, and are manifest as numbness (νάρκη) of reason (λογισμός) and/or memory.⁵⁴ In this text, Galen places delirium in the third class of symptoms, explaining that these

ruling principles, one of which is located in the brain, the duty of which is, by itself, the interpretation of (sensed) images, memory, reminiscence, understanding, intelligence, and skillful thought...

⁵⁰ Galen, *Loc. Aff.* 2.10 (8.126-127 Kühn). See also Pigeaud, 2008a: 571.

⁵¹ Galen, *Caus. Symp.* 7.1 (7.200 Kühn): ἔστι μὲν οὖν καὶ ταύταις τρία τὰ πρῶτα γένη τῶν συμπτωμάτων· ἓν μὲν ἀπώλεια τῆς ἐνεργείας· ἕτερον δὲ βλάβη· τὸ δὲ τρίτον εἰς ἑτέραν ἰδέαν ἐκτροπήν.

⁵² Galen, *Caus. Symp.* 7.1 (7.200-201 Kühn).

⁵³ Galen, *Caus. Symp.* 7.1 (7.201 Kühn): ὧ καὶ δῆλον, ὡς ἐπὶ καταψύξει γίνεται καὶ μωρώσις καὶ λήθη. καὶ γὰρ οὖν καὶ τὰ φάρμακα τὰ τῶν τοιούτων συμπτωμάτων ποιητικὰ ψυχρὰ ταῖς δυνάμεσιν ἔστι. *From which it is clear, that both sluggishness and forgetfulness are caused by cooling. And indeed medicines producing symptoms of this sort are cold in respect to their qualities.*

⁵⁴ Galen, *Caus. Symp.* 7.1 (7.201-202 Kühn): αἱ δὲ μέτρια βλάβαι καὶ οἷον νάρκαι τοῦ λογισμοῦ τε καὶ τῆς μνήμης ἐπὶ βραχυτέρα καταψύξει συμβαίνουσιν, ἢτοι διὰ τι τῶν εἰσῶ τοῦ σώματος ληφθέντων φαρμάκων ψυχρῶν, ἢ κατὰ τῆς κεφαλῆς ἐπιτεθέντων, ἢ καὶ χυμοῦ ψυχροῦ κατὰ τὸν ἐγκέφαλον ἡθροισμένου· *And moderate damage also, such as numbness of the reasoning powers and memory, arises from slight cooling, either through some one of the cold medications being taken inside the body, or being placed upon the head, or from a cold humour gathering inside the head.*

unnatural movements of the authoritative powers are caused by abnormal humours.⁵⁵

Phrenitis, delirium with fever, and mania, delirium without fever, result from hot humours such as yellow bile; melancholia alone results from colder humours such as black bile.⁵⁶

As Pigeaud explains, Galen often uses case-study style examples to illustrate exactly which activity is damaged by each disease.⁵⁷ In discussing phrenitis, Galen uses two examples to demonstrate that during this disease, the faculties of rational thought and image reception are damaged: whether it is one or both of these faculties that is affected depends on the form (εἶδесιν) of phrenitis that affects the patient.⁵⁸

Galen's first example is that of a young male patient from Rome who was able to recognize people and objects around him, yet could not draw rational conclusions about the outcome of his actions:

A certain man, having been left in his home in Rome with one slave who was a wool-worker, got up from his bed and came to the open window, from which he could be seen and see the people passing by.

⁵⁵ Galen, *Caus. Symp.* 7.1(7.202 Kühn): καὶ παραφροσύναι δὲ πᾶσαι, πλημμελεῖς ὑπάρχουσαι κινήσεις τῆς ἡγεμονικῆς δυνάμεως, ἐπὶ μοχθηροῖς συνίστανται χυμοῖς ἢ δυσκρασίᾳ τῶν κατὰ τὸν ἐγκέφαλον. Galen does not refer to these categories of symptoms in any of his other discussions of phrenitis.

⁵⁶ Galen, *Caus. Symp.* 7.1 (7.202-204 Kühn): ὀνομάζονται δὲ φρενίτιδες μὲν αἱ μετὰ πυρετῶν, μανία δὲ αἱ χωρὶς τούτων, ποτὲ μὲν τοῖς δακνώδεσι καὶ θερμοῖς ἐπόμεναι χυμοῖς, ὁποῖος ὁ τῆς ξανθῆς χολῆς ἐστὶ μάλιστα, πολλάκις δὲ κατὰ τὴν δυσκρασίαν τὴν ἐπὶ τὸ θερμότερον αὐτοῦ τοῦ ἐγκεφάλου συνιστάμεναι μόναι δ' αἱ μελαγχολικαὶ παράνοιαι ψυχρότερον ἔχουσι τὸν αἴτιον χυμόν. *And those with fever are called phrenitis, and those without fever are called mania; and sometimes they follow from biting and hot humours, especially of the sort that yellow bile is; and at other times they arise on account of a hotter dyskrasia in the brain; and melancholic derangements alone have as their cause the colder humours.*

⁵⁷ Pigeaud outlines a number of Galen's case-study examples of patients with different diseases of the rational powers. Pigeaud, 2008a: 564-572.

⁵⁸ Galen, *Loc. Aff.* 4.2 (8.225 Kühn): εἰσὶν μὲν γὰρ αὐτῆς ἀπλαῖ μὲν δύο, σύνθετος δὲ ἐξ ἀμφοῖν ἢ τρίτη. τινὲς μὲν γὰρ τῶν φρενιτικῶν, οὐδὲν ὅλως σφαλόμενοι περὶ τὰς αἰσθητικὰς διαγνώσεις τῶν ὁρατῶν, οὐ κατὰ φύσιν ἔχουσι ταῖς διανοητικαῖς κρίσεις· ἔνιοι δ' ἔμπαλιν ἐν μὲν ταῖς διανοήσεσιν οὐδὲν σφάλλονται, παρατυπωτικῶς δὲ κινουῦνται κατὰ τὰς αἰσθήσεις, ἄλλοις δὲ τισὶν κατ' ἀμφω βεβλάφθαι συμβέβηκεν. *There are two simple types of phrenitis, and a third type from both [simple] types occurring together. For some people with phrenitis do not suffer in respect to their sense perception of visible things, but they do not make rational judgments according to nature. And, on the contrary, other people with phrenitis are not overpowered in their powers of judgement, but they are led astray by mistaken sense-perception; and certain others happen to be struck by both symptoms.*

When he showed each glass vessel to the people outside, he enquired whether they might urge him to throw it. When they laughingly asked him to throw the items, and clapped their hands, he successively threw down everything he had picked up, and the people below shouted in laughter. Sometime later, he enquired of them if they might order him to throw out the wool-worker, and when they had called for him to do this, he threw down the slave; when the people saw him fall from high up they were amazed, and they stopped laughing. Running toward the fallen, crushed man, they lifted him up.

καταλειφθείς τις ἐπὶ τῆς οἰκίας ἐν Ρώμῃ μεθ' ἑνὸς ἐριουργοῦ παιδὸς, ἀναστὰς ἀπὸ τῆς κλίνης ἤκεν ἐπὶ τῆς θυρίδος, δι' ἧς οἶόν τ' ἦν ὁρᾶσθαι τε αὐτὸν καὶ ὄρᾶν τοὺς παριόντας. εἶτα τῶν ὑαλίνων σκευῶν ἕκαστον ἐπιδεικνύς αὐτοῖς, εἰ κελεύοιεν αὐτὸ βάλλειν, ἐπυθάνετο. τῶν δὲ μετὰ γέλωτος ἀξιούντων τε βαλεῖν καὶ κροτούντων ταῖς χερσὶν, ὁ μὲν ἔβαλεν ἐφεξῆς ἅπαντα προχειριζόμενος, οἱ δὲ γελῶντες ἐκεκράγεισαν. ὕστερον δὲ ποτε πυθόμενος αὐτῶν, εἰ καὶ τὸν ἐριουργὸν κελεύοιεν βληθῆναι, κελευσάντων αὐτῶν, ὁ μὲν ἔβαλεν, οἱ δὲ ἐπεὶ καταφερόμενον ἐξ ὕψους ἐθεάσαντο, γελῶντες μὲν ἐπαύσαντο, πεσόντα δὲ προσδραμόντες ἀνείλοντο συντριβέντα.⁵⁹

This same patient – or one very similar – is described in Galen's *De symptomatum differentiis*.⁶⁰ In this version of the case, the phrenitis patient is also described as

⁵⁹ Galen, *Loc. Aff.* 4.2 (8.226 Kühn).

⁶⁰ Galen, *Symp. Diff.* 3.4 (7.61 Kühn): ἐνίοις δὲ φάντασμα μὲν οὐδὲν φαίνεται. λογίζονται δ' οὐκ ὀρθῶς, τοῦ διανοητικοῦ τῆς ψυχῆς αὐτοῖς πεπονθότος· ὥσπερ καὶ τῷ φρενιτικῷ τῷ κλείσαντι μὲν τὰς θύρας ἔνδοθεν, ἕκαστον δὲ τῶν σκευῶν προτείνοντι διὰ τῶν θυρίδων, εἶτα ἐρωτῶντι τοὺς παριόντας, εἰ κελεύοιεν ρίπτειν. οὗτος γὰρ ἕκαστου μὲν τῶν σκευῶν ἀκριβῶς ἔλεγε τὸν ὄνομα, καὶ τῷδε δῆλος ἦν οὐτ' ἐν τῇ φαντασίᾳ τῇ περὶ αὐτὰ βεβλαμμένος οὐτ' ἐν τῇ τῶν ὀνομάτων μνήμῃ. τί δὲ βούλεται αὐτῷ τὸ πάντα ρίπτειν ἀφ' ὕψηλου καὶ καταγνύναι; τοῦτ' οὐκέθ' οἷός τ' ἦν συμβαλεῖν, ἀλλ' ἐν αὐτῷ δὴ τῷ ἔργῳ τῷδε κατάδηλος ἐγένετο παραπαιῶν. *In some, no false image appears. They do not calculate things correctly, because they are affected in the intellectual part of their soul. Just as in the phrenitis patient who, having closed up the doors to his house, was holding each of his vessels out through the window, then asking the people passing by if they might order him to throw the vessels out. For each of these items, he said the name of the vessel accurately, and in this it was clear that he was not damaged in respect to his image-*

holding household utensils out of the window, and asking passers-by to order him to throw the items down. This patient is able to identify each object that he holds up; thus, Galen believes that his faculties of image-reception (φαντασία) and memory (μνήμη) are not affected. Instead, he suggests that the patient's inability to explain *why* he wants to throw and break the items demonstrates that he is no longer able to think rationally about his actions. This same argument can be applied in the case of the man from Rome: he is able to see and recognize the glass vessels for what they are, but his impaired faculty of reason drives him to smash them on the ground below. This man's damaged faculties are further revealed by his inability to realize the consequences of tossing the slave out the window along with the glass vessels.

Galen illustrates the second form of phrenitis by relating the story of when he himself was ill with the disease:

And I know the opposite [type] not only from another's case, but also from when it happened to me when I was a young man in my prime. For, being feverish in the summer, I was burning up with fever, and I believed – on account of some dark shadows – that pieces of straw were standing out from the bed, and similarly that threads were standing out from my gown. When I tried to remove these, having picked up nothing in my fingers, I continued to attempt this both more frequently, and more violently. And when I heard my two friends who were nearby saying to each other that already this action was crocydismos and carphologia, I became aware that I was suffering what they spoke of, but that I was understanding accurately and was not delirious in respect to my ability to reason. I said, "You speak correctly, but help me, lest I should suffer from phrenitis." After they turned themselves to bringing wet dressings to my head, throughout the whole day and night certain troubling visions came to me in my

reception, nor in respect to his memory of the name. But why did he wish to throw everything from high up and to break them? This he was no longer able to put together, but in this very deed it was clear that he had become confused.

*sleep, so much that I both called out loud and jumped up from my bed.
But all the symptoms went away on the following day.*

τὸ δ' ἐναντίον οὐ μόνον ἐπ' ἄλλων, ἀλλὰ καὶ ἑμαυτῷ συμβὰν οἶδα μειρακίῳ τὴν ἡλικίαν ὄντι. πυρέττων γὰρ ἐν θέρει πυρετῷ διακαεῖ, τῆς τε κλίνης ἐξέχειν τινα κάρφη, κατὰ τὴν χροῶν ὀρφνώδη, καὶ τῶν ἱματίων ὁμοίας κροκύδας ἐνόμιζον· εἴτ' ἀφαιρεῖν μὲν αὐτὰς ἐπεχείρουν, οὐδενὸς δὲ ὑπὸ τῶν δακτύλων ἀναφερομένου, συνεχέστερόν τε καὶ σφοδρότερον ἐπεχείρουν οὕτω πράττων. ἑταίρων δὲ δυοῖν παρόντων ἀκούσας ἀλλήλοιν λεγόντων, ὡς οὗτος ἤδη κροκυδίξει τε καὶ καρφολογεῖ, συνῆκα μὲν ὡς αὐτὸ τοῦτο πεπόνθοιμι τὸ λεγόμενον ὑπ' αὐτῶν, ἀκριβῶς δὲ παρακολουθῶν ἑμαυτῷ μὴ παραπαίοντι κατὰ τὴν λογιστικὴν δύναμιν, ὀρθῶς, ἔφην, λέγετε, καὶ βοηθεῖτέ μοι, μὴ φρενιτίσω. τραπομένων δ' αὐτῶν ἐπὶ τὰς προσηκούσας ἐπιβροχὰς τῆς κεφαλῆς, δι' ὅλης τῆς ἡμέρας καὶ νυκτὸς ἐνύπνια μὲν μοι ταραχώδη τινὰ συνέπεσεν ἄχρι τοῦ βοῆσαί τε καὶ ἀναπηδῆσαι πρὸς ταῦτα, κατέστη δὲ τὰ συμπτώματα πάντα κατὰ τὴν ἐξῆς ἡμέραν.⁶¹

Galen believes that this form of phrenitis affected his ability to understand what he was seeing, but did not affect his ability to make rational decisions. He distinctly remembers seeing the imaginary pieces of wool and straw, and believing that they were real; his decision to try and pick at these objects was therefore a rational decision, based on erroneously interpreted visual images. Galen does not think that this is evidence of a damaged faculty of reason. Galen provides further discussion of the motivations for *crocydismos* and *carphologia* in his commentary on Hippocrates' *Prognostics*. Here, he explains that some of his patients have told him that they could see, and were trying to pick up the sticks and pieces of wool. These reports were

⁶¹ Galen, *Loc. Aff.* 4.2 (8.226-227 Kühn).

given both by patients who were ill at the time of the interview, and patients who remembered seeing the images after they became well.⁶² Galen explains that these visual illusions are created when humours combust in the brain and create smoke-like fumes, which then move into the fluid of the eyes. This causes the patients to see dark shadows, which they then try to reach out and touch.⁶³

Galen's interest in defining these two forms of phrenitis is limited to these passages; elsewhere, he generally refers to the mental aberrations of phrenitis simply as delirium, παραφροσύνη. Galen believes that delirium can be caused by a number of different diseases, which affect the brain both directly and through sympathy. In a different section of *De locis affectis*, Galen discusses the characteristics of these various forms of delirium, in order to provide a means of differentiating between them.⁶⁴ Here, he explains that delirium can arise from an abnormality in the opening of the stomach, or from pleuritis, peripneumonia, or very high fevers.⁶⁵ In these cases, the delirium is temporary, lasting only as long as the fever. Delirium may also arise from an affection of the diaphragm, in a form which appears 'almost phrenitic'

⁶² Galen, *Hipp. Prog.* 23 (18b.74 Kühn): ἔνιοι γοῦν ἡρμήνευσαν ἡμῖν τὴν τε τῶν <κροκῦδων καὶ τὴν τῶν ἀχύρων φαντασίαν, ἐν αὐτῷ τε τῷ γίνεσθαι καὶ μετὰ ταῦθ' ὕστερον ἀπομνημονεύσαντες. *Some, at least, described to me the appearance of pieces of wool and straw, both in the same time (of the illness) and from remembrance, sometime after this.* This contrasts with Galen's statement in *Mot. Musc.* 2 (4.445 Kühn) that due to their damaged faculty of sense perception, phrenitis patients cannot remember things that happened to them during their illness: ἂν μὲν οὖν ἐναργεῖς τοὺς τόπους τῶν πραγμάτων ἐν ταῖς φαντασίαις λάβῃ, διασώζει μέχρι παντός, καὶ τοῦτο μὲν τὸ μνημονεύειν ἐστίν· ἂν δ' ἀμυδρῶς καὶ παντάπασιν ἐπιπολῆς, οὐ διασώζει, καὶ τοῦτ' ἐστὶ τὸ ἐπιλελησθαι. καὶ διὰ τοῦτ' ἐν θυμοῖς, καὶ φροντίσι, καὶ μέθαις, καὶ φρενίτισι, καὶ φόβοις, καὶ ὅλως τοῖς ἰσχυροῖς τῆς ψυχῆς παθήμασιν οὐδενὸς ὧν ἂν πράξωσιν εἰς ὕστερον ἔτι μέμνηται. *Therefore if the soul grasps the manifest places of events in the faculties of imagination, it preserves nearly everything, and this is remembering. But whenever it grasps something weakly and entirely superficially, it does not preserve it, and this is forgetting. And, on account of this, in anger, and in thought, and in drunkenness, and in phrenitis, and in fear, and on the whole in difficulties of the soul, there are not any misfortunes which the soul might suffer, that in the future it will still remember.*

⁶³ Galen, *Loc. Aff.* 4.2 (8.227 Kühn). This will be explained in more detail in the discussion of Galen's explanation of the cause of phrenitis.

⁶⁴ Galen, *Loc. Aff.* 5.4 (8.329-332 Kühn).

⁶⁵ Galen, *Loc. Aff.* 5.4 (8.329 Kühn).

(ἐγγύς τῶν φρενιτικῶν).⁶⁶ This type of delirium is continuous, and is accompanied by shallow and frequent, or deep and moaning respiration⁶⁷; phrenitic delirium, by contrast, is *nearly* continuous,⁶⁸ and is preceded by deep and slow respiration.⁶⁹

In the paragraphs following this discussion, Galen outlines the development of a case of phrenitis; in delineating this progression, he is providing a means of differentiating between cases of phrenitis and cases of delirium that are caused by sympathy. Galen believes that one of the principal differences is the duration of the delirium itself: phrenitic delirium develops slowly, and is almost continuous.⁷⁰ It is preceded by a certain set of symptoms, including sleeplessness, sleep disturbed by vivid false images, bleeding from the nostrils, and dry, bloodshot eyes.⁷¹ As the delirium sets in, patients lose their ability to make rational and correct judgements, and they may begin to display *crocydismos* and *carphologia*. Patients may suffer from acoustic illusions, and they may become unresponsive to touch or questioning.⁷² Galen believes that the delirium of phrenitis is so close to being continuous, that many physicians are unable to differentiate between it and the delirium of diaphragmatic origin; it is for this reason that they mistakenly believe phrenitis to be an inflammation of the *phrēn*, the diaphragm, and named the disease accordingly.⁷³ Galen concludes this discussion by reminding us that in cases of delirium not caused

⁶⁶ Galen, *Loc. Aff.* 5.4 (8.329 Kühn): ἀλλ' αἱ διὰ τὰς φρένας ἐγγύς τῶν φρενιτικῶν εἰσιν·

⁶⁷ Galen, *Loc. Aff.* 5.4 (8.331 Kühn).

⁶⁸ Galen, *Loc. Aff.* 5.4 (8.331 Kühn): πλησίον γάρ πως ἤκει τοῦ διηνεκοῦς

⁶⁹ Galen, *Loc. Aff.* 5.4 (8.331 Kühn): μέγα μὲν γάρ καὶ διὰ πολλοῦ χρόνου τὸ πνεῦμα τοῖς ἐπ' ἐγκεφάλῳ φρενιτικοῖς ἐφεξῆς ἐστὶν αἶ·

⁷⁰ Galen, *Loc. Aff.* 5.4 (8.329 Kühn): ταῖς φρενίτισι δ' ἴδιον ἐξαίρετον ὑπάρχει τὸ μηδ' ἐν ταῖς παρακμαῖς τῶν πυρετῶν παύεσθαι τὴν παραφροσύνην· οὐ γὰρ ἐπὶ συμπαθείᾳ κατ' ἐκείνην τὴν νόσον ὁ ἐγκεφάλος πάσχει, ἀλλὰ κατ' ἰδιοπάθειάν τε καὶ πρωτοπάθειαν κάμνει...

⁷¹ Galen, *Loc. Aff.* 5.4 (8.330-331 Kühn). In *De Crisibus*, (Galen, *Cris.* 3.3 [9.707 Kühn]) the presence of nosebleed is used as a means of differentiating phrenitis from lethargy and peripneumonia.

⁷² Galen, *Loc. Aff.* 5.4 (8.331 Kühn).

⁷³ Galen, *Loc. Aff.* 5.4 (8.331 Kühn): ...ἐπ' ἄλλῳ δ' οὐδενὶ μορίῳ τὸ διηνεκές ἐστὶ τῆς παραφροσύνης, ὅτι μὴ διαφράγματι μόνω· πλησίον γάρ πως ἤκει τοῦ διηνεκοῦς, ὡς δι' αὐτὸ τοῦτο δοξασθῆναι τοῖς παλαιοῖς, ἐπὶ τῷ μορίῳ τούτῳ φλεγμαίνοντι γίγνεσθαι φρενιτικοῦς, ὀνομάσαι τε φρένας αὐτὸ διὰ τὴν αὐτὴν ὑπόνοιαν, ὡς καὶ τῷ φρονούντι μορίῳ συμβαλλόμενον τι.

by phrenitis, these preliminary symptoms are either not present, or of little importance.⁷⁴ One may also look for tightness in the hypochondrium, another symptom which indicates that the origin of the delirium is in the diaphragm, and not in the brain.⁷⁵

In Galen's other works, we find references to other distinguishing symptoms of phrenitis. One of the more significant of these is pulse; Galen believes that the particular characteristics of the pulse indicate changes occurring elsewhere in the body.⁷⁶ Galen associates each of the various speeds, rhythms, and tensions of the pulse with different diseases. In *De causis pulsibus*, Galen explains that in phrenitis, the pulse is usually small, moderate of tension, hard, sinewy, very compact, and fast; only rarely is there a large pulse in phrenitis.⁷⁷ There is a certain wave-like aspect to the movement of this pulse, and often it seems to be trembling, or moving in a convulsive manner. Galen explains that these characteristics occur because the heat of phrenitis constricts and stiffens the membranes that surround the arteries, causing them to move convulsively.⁷⁸ He believes that this stiffening occurs in all fevers, in varying degrees.⁷⁹

Galen's works also refer to a number of conditions that occur alongside phrenitis, yet are not necessarily specific to the disease. In *De motu musculorum*, Galen tells us that loss of reason in phrenitis often causes the patient to become incontinent.⁸⁰ In *De*

⁷⁴ Galen, *Loc. Aff.* 5.4 (8.332 Kühn).

⁷⁵ Galen, *Loc. Aff.* 5.4 (8.332 Kühn).

⁷⁶ Nutton, 2004: 237-238.

⁷⁷ Galen, *Caus. Puls.* 4.14 (9.184 Kühn). This same information is given in Galen, *Puls.* 12 (8.483-484 Kühn), minus the accompanying causal explanation.

⁷⁸ Galen, *Caus. Puls.* 4.14 (9.185 Kühn).

⁷⁹ Galen, *Caus. Puls.* 4.14 (9.186 Kühn).

⁸⁰ Galen, *Mot. Musc.* 2 (4.439 Kühn): καὶ τὸ μεθεῖναι τι τῶν περιττωμάτων ἀκουσίως ἢ παραλυθέντων γίνεται τῶν μυῶν τούτων, ἢ τοῦ λογισμοῦ κακοπραγοῦντος, ὡς ἐν φρενίτισιν, ἢ καὶ τοῦ λογισμοῦ καὶ τῶν μυῶν ἀρνησθέντων, ὡς ἐν μέθαις: *And they release some excretions unwillingly either when the muscles become paralysed, or when reason is poorly, as in phrenitis, or when reason and the muscles are burdened, as in drunkenness.*

tremore, palpitatione, convulsion et rigore, we learn that spasms occur in phrenitis and ardent fevers because of the drying out of the sinews by the extreme heat in the body.⁸¹ Sleeplessness and agitation are also common, due to the vivid dreams and images that occur in phrenitis. In his commentary on Hippocrates' *Prorrhethics*, Galen says that the vividness of these dreams is brought on by the dryness of phrenitis.⁸² This dryness also contributes to the shrill voice and rough tongue that can occur during the illness.⁸³ Other aspects highlighted by Galen include a low tolerance for noise, the tendency to drink very little or not at all, and uncontrolled trembling.⁸⁴ Phrenitis patients may also fall into a *kōma*.⁸⁵ These are just a few symptoms of phrenitis that were identified by Hippocrates, and supported by Galen.

As a final note on symptoms, it is interesting to note that in several of Galen's texts, he refers to an illness known as 'Typhomania' (τυφομανία).⁸⁶ Galen identifies typhomania as a mixture of phrenitis and lethargy; he explains that it occurs when the head is affected by yellow bile and phlegm at the same time.⁸⁷ If one of these humours begins to take over, the disease will become either phrenitis or lethargy, in accordance with the prominent humour. Patients suffering from this disease often seem to display aspects of both diseases: "You will find many phrenitics not able to get up entirely nor able to open their eyes, but remaining in the same place, they are similar to lethargics."⁸⁸ These patients snore when they sleep, stare fixedly, are slow

⁸¹ Galen, *Trem. Palp.* (7.640-641 Kühn). See also Galen, *Loc. Aff.* 3.8 (8.173 Kühn).

⁸² Galen, *Hipp. Prorr.* 1.5.1 (16.525 Kühn). See also Hulskamp, 2008: 213-215.

⁸³ Centanni, 1987: 58.

⁸⁴ Galen, *Diff. Resp.* (7.941 Kühn).

⁸⁵ Galen, *Hipp. Epid.* (17a.713 Kühn).

⁸⁶ Jackson, 1969: 376-377. This disease is discussed primarily in Galen, *Comp. Hipp.* 2 (7.654-655 Kühn); Galen, *Puls.* 12 (8.484 Kühn); Galen, *Caus. Puls.* 4.15 (9.187-189 Kühn); Galen, *Hipp. Prorr.* (16.497 Kühn).

⁸⁷ Galen, *Hipp. Prorr.* (16.496-497 Kühn).

⁸⁸ Galen, *Comp. Hipp.* 2 (7.655 Kühn): *Invenies enim multos freneticos <nec> surgentes omnino nec elevare potentes oculos, sed in eodem loco manentes similiter litargicis.*

to respond to questioning, and often talk nonsense.⁸⁹ Despite offering these symptoms, Galen does not believe that Typhomania is an independent disease entity. In *De comate secundum Hippocratem*, for example, he is sceptical of the very existence of this disease, saying that ‘many ignorant doctors’ (*plurimi indocti medicorum*) came up with the name typhomania, because they did not know what else to call this mixture of diseases.⁹⁰ This is supported in Galen’s commentary on the *Prorrhethics*, in which he tells us that he prefers to refer to the disease simply as a mixture of lethargy and phrenitis. In *De pulsibus ad tirones* and *De causis pulsuum* Galen provides the characteristics of the pulse when this combination of diseases is present; he does not use the name ‘typhomania’ in either of these texts.⁹¹

Causes of Phrenitis

Galen defines phrenitis as a primary affection of the brain, characterized by fever, delirium, and the plucking motion of the hands known as *carphologia* and *crocydismos*. He uses the irrational behaviours associated with phrenitis as evidence of the fact that the illness is located in the brain, the organ responsible for the authoritative faculties.⁹² Diseases which damage these faculties are either primary or secondary affections of the brain and surrounding meninges. They differ from other diseases only in that they do not produce physical symptoms such as swellings,

⁸⁹ Galen, *Caus. Puls.* 4.15 (9.188 Kühn) and Galen, *Puls.* 12 (8.484 Kühn).

⁹⁰ Galen, *Comp. Hipp.* 2 (7.655 Kühn): unde hoc plurimi et indocti medicorum nec quid oportet vocare sciunt, sed omnino ambigunt et extranea eis esse videtur passio hec et innominata, quidam autem permixtam ex litargia et frenesi existimant et vocant eam ‘typhomaniam.’ *From this, many ignorant doctors know not what they ought to call it, but this disease and its name appears entirely ambiguous and extraneous to them, which however they suppose it is, and they call it ‘Typhomania’.*

⁹¹ Galen, *Caus. Puls.* 4.15 (9.188-189 Kühn) and Galen, *Puls.* 12 (8.484-485 Kühn).

⁹² Galen, *Loc. Aff.* 3.7 (8.166-167): τὸ μὲν οὖν ἐγκεφάλῳ πάντα γίνεσθαι τὰ τῶν ἡγεμονικῶν ἐνεργειῶν πάθη, πᾶσι τοῖς ἰατροῖς, ὅσοι γε μὴ διὰ φιλονεικίαν αἰρέσεως ἄλλα μὲν ἐν τῇ ψυχῇ φρονουσιν, ἄλλα δὲ λέγουσιν, ὡμολόγηται· *And therefore all those doctors, as many as do not make decisions from love of rivalry, but who think in their own soul and who speak out, they believe that every affection of the ruling powers is located in the brain.* See also Galen, *Loc. Aff.* 2.10 (8.126-130).

excretions, pain, or change in colour;⁹³ symptoms of these so-called ‘mental’ diseases are limited to changes in the activities of the brain.

Galen defines delirium, παραφροσύνη, as ‘defective movement of the authoritative power’.⁹⁴ He believes that it is caused by a *dyskrasia* of heat and dryness in the brain, and that it arises during both primary and secondary affections of the brain and surrounding meninges. In delirium from primary affection – such as in phrenitis – the *dyskrasia* occurs when hot humours such as yellow bile occupy the substance of the brain.⁹⁵ The excess heat created by the humours damages the rational powers and produces delirium, either with or without an accompanying fever.⁹⁶ The delirium of primary affections is present throughout the duration of the illness; it develops slowly, and does not fluctuate when the accompanying fever increases and decreases.⁹⁷ This form of delirium does not end until the fever has disappeared completely.⁹⁸ In delirium from sympathetic affection, the *dyskrasia* of the brain is caused by the transference of heat from an affected organ elsewhere in the body. Thus, delirium begins only at the highest point of the fever, and subsides whenever the fever lessens. Sympathetic delirium commonly occurs in high fevers, in cases of pleuritis and peripneumonia, and from an abnormal functioning of the

⁹³ Galen, *Loc. Aff.* 3.5 (8.156-157 Kühn): ἡ οἷον ῥίζα προβάλλει τι σημεῖον, οὔτε δι’ ὄγκου παρὰ φύσιν, οὔτε δι’ ὀδύνης, οὔτε διὰ χρώματος ἐξηλλαγμένου παρὰ τὸ πρόσθεν, ἢ διὰ τινος τῶν ἐκκρινομένων.

⁹⁴ Galen, *Caus. Symp.* 2.7 (7.202 Kühn). καὶ παραφροσύνη δὲ πάσαι, πλημελεῖς ὑπάρχουσαι κινήσεις τῆς ἡγεμονικῆς δυνάμεως, ἐπὶ μοχθηροῖς συνίστανται χυμοῖς ἢ δυσκρασίᾳ τῶν κατὰ τὸν ἐγκέφαλον. *And all deliria, which are defective movements of the hegemonic power, arise from bad humours or dyskrasias in the brain.*

⁹⁵ Galen, *Caus. Symp.* 2.7.2 (7.202 Kühn).

⁹⁶ Galen, *Loc. Aff.* 3.9 (8.178 Kühn).

⁹⁷ Galen, *Loc. Aff.* 5.8 (8.329 Kühn): ταῖς φρενίτισι δ’ ἴδιον ἐξάριετον ὑπάρχει τὸ μὴδ’ ἐν ταῖς παρακμαῖς τῶν πυρετῶν παύεσθαι τὴν παραφροσύνην. *But a unique and special fact in phrenitis is that the delirium does not stop in the time immediately after the high point of the fever.* See also Galen, *Loc. Aff.* 3.9 (8.178 Kühn).

⁹⁸ Siegel, 1973: 270.

opening of the stomach.⁹⁹ Galen also mentions a form of sympathetic delirium that ‘originates around the diaphragm’, and causes patients to become ‘almost phrenitic’.¹⁰⁰ This form of delirium is caused by an affection of the stomach, which sends hot vapours to the brain by way of the large nerves which reach from the brain to the upper opening of the stomach.”¹⁰¹ It is differentiated from actual cases of phrenitis by way of the symptoms which precede an attack of phrenitis.

In *De locis affectis*, Galen explains that the delirium of phrenitis is produced when yellow bile heats up in the brain, overflows into its substance (σώμα) and produces delirium, with or without a fever.¹⁰² The shade of the yellow bile determines the severity of the case of phrenitis: a moderate form of phrenitis originates from pale-yellow bile, while a more violent type is produced by dark-yellow bile.¹⁰³ If very dark-yellow bile is combusted, the resulting delirium is bestial, more in the realm of melancholia than of phrenitis.¹⁰⁴ The combustion of yellow bile in the brain is also responsible for the visual images that occur in some cases of phrenitis, which Galen claims to be the source of *carphologia* and *crocydismos*:

When a biliary humour accumulates in the brain at the time of a burning fever, the brain is affected in the same manner as objects

⁹⁹ Galen, *Loc. Aff.* 3.9 (8.178-179 Kühn) and 5.4 (8.329 Kühn). Galen believes that the stomach and the brain have a direct connection via the nerves of the spinal column, through which heat could be transferred. Galen does not explain how this transference takes place.

¹⁰⁰ Galen, *Loc. Aff.* 5.4 (8.329 Kühn): ἀλλ' αἱ διὰ τὰς φρένας ἐγγύς τῶν φρενιτικῶν εἰσιν·

¹⁰¹ Galen, *Loc. Aff.* 3.9 (8.179 Kühn): ἢ τε γὰρ κοιλία τῇ κεφαλῇ καὶ ἡ κεφαλὴ τῇ κοιλίᾳ μεταδίδωσι τῶν παθημάτων, διὰ τὸ μέγεθος τῶν ἐξ ἐγκεφάλου καθηκόντων νεύρων εἰς τὸ στόμα τῆς γαστρὸς... *For both the stomach communicates affections to the head, and the head to the stomach, on account of the magnitude of the nerves going down from the brain into the mouth of the stomach...*

¹⁰² Galen, *Loc. Aff.* 3.9 (8.177-178 Kühn): ὅτ' ἂν δ' ἐν αὐτῷ πλεονάσῃ τῷ τοῦ ἐγκεφάλου σώματι, μελαγχολίαν ἐργάζεται, καθάπερ ὁ ἕτερος χυμὸς τῆς μελαίνης χολῆς, ὁ κατωπτημένης τῆς ξανθῆς χολῆς γενόμενος, τὰς ηριώδεις παραφροσύνας ἀποτελεῖ χωρὶς πυρετοῦ τε καὶ σὺν πυρετῷ, πλεονάζων ἐν τῷ σώματι τοῦ ἐγκεφάλου.

¹⁰³ Galen, *Loc. Aff.* 3.9 (8.178 Kühn): καὶ διὰ τοῦτο τῆς φρενίτιδος ἢ μὲν τίς ἐστὶ μετριωτέρα, τὴν γένεσιν ἐκ τῆς ὠχρᾶς ἔχουσα χολῆς· ἢ δὲ τίς σφοδροτέρα, τῆς ξανθῆς ἔγγονος ὑπάρχουσα·

¹⁰⁴ Galen, *Loc. Aff.* 3.9 (8.178 Kühn): καὶ τίς ἄλλη θηριώδης τε καὶ μελαγχολικὴ παραφροσύνη γίνεται, κατοπτηθείσης τῆς ξανθῆς χολῆς. See also Siegel, 1973: 191.

which are burned by a very hot fire. A kind of smoky flame arises as from an oil lamp. When fumes enter the blood vessels leading to the eyes, they produce optical illusions in these patients.

ὅτ' ἂν γὰρ ἀθροισθῆ τις ἐν ἐγκεφάλῳ χολώδης χυμὸς ἅμα πυρετῶ διακαεῖ, παραπλήσιόν τι πάσχει τοῖς ὑπὸ πυρὸς ὀπτωμένοις, καὶ κατὰ τοῦτο λιγνύν τινα γεννᾶν πέφυκεν, ὥσπερ κἂν τοῖς λύχνοις τοῦλαιον· ἥτις λιγνὺς συνδιεκπίπτουσα τοῖς ἐπὶ τὸν ὀφθαλμὸν ἀφικνουμένοις ἀγγείοις, αἰτία γίνεται τῶν φαντασμάτων αὐτοῖς.¹⁰⁵

Galen believes that the lens of the eye is responsible for receiving visual impressions, and transmitting that information to the brain.¹⁰⁶ In the above explanation, the ‘humoural fumes’ move through the blood vessels and into the chamber of fluid that sits between the lens and the cornea. The fumes cause the fluid to become thickened and cloudy; this turbidity affects one’s vision, and causes various visual disturbances.¹⁰⁷ In *De locis affectis*, Galen explains that while some visual illusions (phantasmata) are caused by primary affections of the eye (i.e.: from suffusions, or cataracts¹⁰⁸), others may be caused only by sympathy, during primary affections of the brain or the opening of the stomach.¹⁰⁹ The type of affection can be diagnosed from the characteristics of the visual disturbances: phantasmata that affect both eyes simultaneously and intermittently are generally caused by sympathetic affection, whereas primary affection results in permanent visual illusions, usually only

¹⁰⁵ Galen, *Loc. Aff.* 4.2 (8.227 Kühn)

¹⁰⁶ For a detailed analysis of Galen’s concept of sight, see Siegel, 1970: 40-126. Galen’s writings on vision can be found in *UP* 10 (3.759-841 Kühn), and *PHP* (5.626ff Kühn). For Galen’s anatomy of the eye, see Duckworth, 1962: 27-50.

¹⁰⁷ Galen, *Caus. Symp.* 2.6 (7.96 Kühn), Galen, *Hipp. Prog.* 23 (18b.73 Kühn).

¹⁰⁸ Galen, *Loc. Aff.* 4.2 (8.223 Kühn): τῆς δὲ θατέρου κόρης ἀχλωδεστέρας, ἢ θολωδεστέρας, ἢ συνελόντι φάναι, μὴ καθαρᾶς ἀκριβῶς φαινομένης, ὑποχύσεως ἐστὶν ἀρχή· *But when one pupil becomes hazy, or turbid, or appears to be contracted, appearing not perfectly clear, a suffusion (cataract) is beginning.*

¹⁰⁹ Galen, *Loc. Aff.* 4.2 (8.221 Kühn). See also Galen, *Caus. Symp.* 2.7 (7.97 Kühn).

in one eye.¹¹⁰ Galen says that phrenitis can produce symptoms comparable to the suffusions, which indicates that the phantasmata of phrenitis remain with the patient for the duration of the illness.¹¹¹ For some patients, the phantasmata may resemble floating spots, which they may interpret as gnats, threads, beans, grains, or even figures.¹¹² When patients begin to pluck at these illusory images, they are said to be displaying *crocydismos* and *carphologia*.¹¹³

The cause of phrenitis is more comprehensive than the mere presence of yellow bile in the brain. In *De symptomatum causis*, Galen explains that ‘phrenitis does not come about simply from hot humours, but it is produced after inflammation of both the brain and the meninges.’¹¹⁴ Thus, in order for the yellow bile to cause phrenitis, the brain must first be in a condition (*diathesis*) of inflammation. Galen believes that inflammation is caused by *perittōmata*, or residues, the surplus products of digestion.¹¹⁵ When food is ingested, it is heated by the body’s innate heat, and converted into blood. If the correct amount of heat is applied, the blood will contain the correct balance of all the humours, and will be capable of nourishing the body and promoting growth. Residues are created when more food is consumed than is necessary for the nourishment of the body.¹¹⁶ They are composed of a mixture of all the humours, usually with one humour being predominant. The residues flow throughout the body, until they find a place in which to establish themselves. The various parts of the body are endowed with excretory faculties that are designed to

¹¹⁰ Galen, *Loc. Aff.* 4.2 (8.221-222 Kühn).

¹¹¹ Galen, *Loc. Aff.* 4.2 (8.225 Kühn): παραπλήσια δὲ τοῖς τῶν ὑποχρεομένων συμπτώματα γίνεται πολλάκις ἐγκεφάλου πάσχοντος ἐν τισὶ φρενιτίδων εἴτε εἶδῃσιν εἴτε διαφοραῖς ἐθέλοις ὀνομάζειν. *Symptoms nearly resembling those of suffusions (cataracts) occur many times in affections of the brain in certain forms or kinds of phrenitis, if you wish to use these terms.*

¹¹² Galen, *Hipp Prog.* 23 (18b.71-75 Kühn); Siegel, 1973: 157-165.

¹¹³ Galen demonstrates this connection in his discussion of his own experience of phrenitis. *Loc. Aff.* 4.2 (8.226-227).

¹¹⁴ Galen, *Caus. Symp.* 7.2 (7.202 Kühn): ἡ μὲν γὰρ φρενίτις οὐδὲ ἀπλῶς ἐπὶ θερμοῖς συνίσταται χυμοῖς, ἀλλὰ μετὰ τοῦ φλεγμονῆν ἐργάζεσθαι κατὰ τε τὸν ἐγκέφαλον καὶ τὰς μῆνιγγας.

¹¹⁵ Brain, 1986: 11; Dean-Jones, 1993: 44-45.

¹¹⁶ Brain, 1986: 11.

expel the residues and keep them moving through the body until they are concocted by another part.¹¹⁷ If a part's excretory faculty is weak, the residues will remain in that part and establish a focus of inflammation. Certain parts of the body are more susceptible to residues, because their excretory powers are naturally weaker. These parts include the skin, the lymph nodes (which Galen calls the glands), the lungs, the spleen, and the brain.¹¹⁸

The nature of the resulting inflammation is dependent upon both the part affected, and the predominant humour in the residues. An excess of phlegm produces watery swellings, yellow bile leads to ulceration, black bile makes hard and fibrous tumours, and an excess of blood – known as *plēthos* - creates inflammations with symptoms of redness, heat, and pain.¹¹⁹ Galen identifies two kinds of *plēthos*: 'dynamic *plēthos*', which results from the failure of a part to expel excess residues, as described above, and '*plēthos* by filling', which occurs when too much blood flows into a vessel and may cause it to rupture.¹²⁰ Galen believes that a *plēthos* of blood or other humours should be immediately treated by venesection, so that it does not result in further complications.¹²¹ The effects of venesection replicate the natural evacuation of *plēthos* that occurs during menstruation or from the bleeding of haemorrhoids. In *De venae sectione adversus Erasistratum*, for example, Galen argues that women who have regular menstrual cycles do not suffer from phrenitis or certain other diseases, yet are sure to fall victim to them if menstruation should cease.¹²² For men, a similar

¹¹⁷ Galen, *Cur. Rat. Ven. Sect.* 8 (11.274 Kühn).

¹¹⁸ Galen, *Cur. Rat. Ven. Sect.* 8 (11.275 Kühn); Galen believes that despite its weak excretory powers, the structure of the brain gives it an advantage in the excretion of the residues: the passages which run downward from ventricles of the brain allow the residues to drain out the nose or from other parts of the head. Galen, *Cur. Rat. Ven. Sect.* 8 (11.275 Kühn); Dean-Jones, 1993: 44; Brain, 1986: 11.

¹¹⁹ Brain, 1986: 12; Lytton and Resuhr, 1978: 533.

¹²⁰ Galen, *Cur. Rat. Ven. Sect.* 3 (11.257-261 Kühn); Brain, 1986: 12 and 126; Dean-Jones, 1993: 44.

¹²¹ Galen, *Cur. Rat. Ven. Sect.* 6 (11.267-268 Kühn); Brain, 1986: 122ff.

¹²² Galen, *Ven. Sect. Er.* 5 (11.165-166 Kühn): ἐάλω δέ ποτε φρενίτισιν ἢ ληθάργοις ἢ σπασμοῖς ἢ τρόμοις ἢ τετάνοις ἐπιμηνίων ἰόντων. εἶδες δέ ποτε μελαγχολῶσαν ἢ μαινομένην ἢ πτύουσαν ἐκ θώρακος ἢ ἐμοῦσαν ἐκ γαστροῦ αἷμα, ἢ κεφαλαία κάμνουσαν, ἢ συνάγχη πνιγομένην, ἢ τι

evacuation of excess blood is performed by haemorrhoids.¹²³ If left untreated, dynamic *plēthos* can lead to putrefaction of the impacted humour; alternatively, the collected residues may move elsewhere in the body and cause unnatural swellings. The danger of *plēthos* by filling lies in its tendency to cause swellings of the affected vessels, or apoplexies and ruptured veins.¹²⁴

A significant by-product of inflammation is heat, which is conducted through the body to the heart by way of adjoining parts. Once it reaches the heart, the excess heat is distributed to the rest of the body by way of the pumping of the arteries. Galen identifies this creation of excess heat as one of the most important causes of fever.¹²⁵ As Siegel explains, Galen generally views fever as a distinct illness in itself, which can sometimes be modified or complicated by other diseases.¹²⁶ If an inflammation begins to putrefy, an increased amount of heat will be produced; the resulting fever will develop faster and be more difficult to treat successfully.¹²⁷

From this discussion, we can see that there is no one single cause of phrenitis. For this disease to occur, yellow bile must move into a brain that is already in a state of inflammation; the concocting yellow bile causes delirium and visual disturbances, and adds to the production of the body's fever. When the delirium, fever, and visual

τῶν μεγάλων καὶ ἰσχυρῶν παθημάτων ὑπομένουσαν, εἰ καλῶς ἐκκρίνεται τὰ καταμηνία ἰσχομένων δ' αὐτῶν πάλιν ἔτοιμον ἐν παντὶ κακῶ γενέσθαι. *Was a woman with menstrual cycles ever seized with phrenitis or lethargy or spasms or trembling or tetanus? Or did you ever see a woman affected by melancholia or mania, or spitting from the thorax, or vomiting blood from the stomach, or suffering pain in the head, or vexed by a sore throat, or submitting to any of the strong and severe affections, if she has proper menstruation? But on the contrary, if the cycles are stopped again, she is most likely to become affected in all bad ways.*

¹²³ Galen, *Ven. Sect. Er.* (11.165-166 Kühn): καταλιπὼν δὲ ἤδη τὰς γυναῖκας ἐπὶ τοὺς ἄνδρας ἔλθε, καὶ μάθε, πόσοι μὲν αἰμορροῖδι τὸ περιττὸν εἰθισμένοι κενούσθαι, πάντες ἀπαθεῖς νοσημάτων διατελοῦσι, πόσοι δ' ἐπισχεθείσης τῆς κενώσεως ἐν χαλεπωτάτοις ἐγένοντο. *Leaving women alone now, let us speak of men, and learn how as many of them as regularly evacuate the excesses through haemorrhoids, all of them continue to be unaffected by diseases, but all those who have stopped these evacuations come into the most grievous conditions.*

¹²⁴ Galen, *Cur. Rat. Ven. Sect. 5* (11.266 Kühn).

¹²⁵ Siegel, 1968: 169.

¹²⁶ Siegel, 1968: 273-4.

¹²⁷ Brain, 1986: 11.

illusions take over, the patient is diagnosed as suffering from phrenitis. In *De comate secundum Hippocratum*, Galen lists a number of other aspects which he believes can contribute to phrenitis or ardent fevers (*causus*):

For upon this same condition and by these same reasons both causus and phrenitis, doubtless according to the season they are in excess in the summer and in warmer places, and in youth when it is at its height, and in nature, those who are warmer in constitution, and in the course of life the same thing, and in respect to habits...

ἐπεὶ γὰρ ταῖς αὐταῖς καταστάσεσι καὶ τοῖς αὐτοῖς αἰτίοις οἱ τε καῦσοι καὶ αἱ φρενίτιδες ἀμέλει κατὰ τὴν ὥραν πλεονάζουσι τὴν θερινὴν καὶ ἐν χωρίοις θερμότεροις καὶ ἐν ἡλικίᾳ τῆ τῶν ἀκμαζόντων καὶ ἐν φύσεσι θερμότεραις καὶ διαιτήμασιν ὥσαύτως καὶ ἐπιτηδεύμασιν...¹²⁸

Phrenitis, and the fever and inflammation which accompany it, are hot and dry conditions. Thus, any factors which increase the heat and dryness of the body also increase one's chances of developing phrenitis. While weather and climate have some effect on the body's condition, Galen also believes that a person's natural humoral composition can make them more or less susceptible to certain diseases.¹²⁹ As demonstrated in the first chapter of this dissertation, this belief is founded in Hippocratic medicine. Galen believes that hot and moist climatic conditions promote the occurrence of putrefactive fevers: the heat adds to the fever, while the moisture contributes to the putrefaction of impacted residues in the body.¹³⁰ Similarly, people with bilious temperaments are more susceptible to phrenitis and other fevers, because their bodies are naturally hotter and drier. Age also affects one's susceptibility to

¹²⁸ Galen, *Comp. Hipp.* (7.651 Kühn).

¹²⁹ Nutton, 2004: 234.

¹³⁰ Brain, 1986: 12-13.

disease: a person's innate heat is strongest when they are young, making them more susceptible to hot diseases in their youth. As people age, their bodies become more cool and moist, increasing their likelihood of cooler, wetter diseases.¹³¹ In regards to gender, women are seen to be colder than men, which is why they are also generally more predisposed to cold and wet diseases.¹³²

Treatment of Phrenitis

Galen's theory of treatment is very complex, encompassing most, if not all aspects of his medical theory as a whole.¹³³ For even the most basic understanding of how to apply proper treatment, Galen thinks that a good doctor must have considerable medical training. In order to perform his duties successfully, a physician should understand the composition and functioning of the body and all of its parts; the basic principles of how and why diseases operate within the body; the causes, symptoms, and habits of each of those diseases; and the various properties and effects of all foodstuffs and medicinal drugs that can be used to cure them. As Philip van der Eijk points out, there is a tension in Galen's therapy between the need to base treatment both on "universally valid, scientific knowledge... founded on secure theoretical principles and obeying the rigorous rules of logic", and on the different needs and requirements of each individual patient and/or case of a disease.¹³⁴ On the one hand, Galen believes that proper therapy should be based on a solid, logical understanding of the body and its operations. This kind of knowledge should be universally applicable to all patients since, in theory at least, all humans share the same basic

¹³¹ Galen, *Hum.* (19.489 Kühn).

¹³² Galen, *Temp.* 2.4 (1.606 Kühn)

¹³³ For more on the difficulties of understanding Galen's therapeutics, see van der Eijk, 2008: 284ff.

¹³⁴ van der Eijk, 2008: 286-287.

bodily structures and suffer from the same types of diseases. At the same time, Galen does not support the idea that one method of treatment can be applied to all cases of the same disease.¹³⁵ In his opinion, each person has his own distinct constitution and way of life, all of which impact the way in which a disease affects his body. A good physician must therefore be able to adjust his therapies to suit the exact needs of each individual patient.

There is not room in the present review for a detailed account of Galen's process of determining proper treatment for a disease. Simply put, we can say that Galen determines the correct course of treatment through a combination of diagnosis and prognosis. Using the signs and symptoms of a disease, Galen establishes both the nature and probable causes of the current affection, and the likely duration and course of development that the disease will follow. As David Dean-Jones explains,

*prognosis assists treatment not only by identifying the illness but also by giving the physician a better understanding of the possible course of disease, which will enable him to treat his patients better. If the physician knows the likely course of disease, he will know when and if he should intervene in matters of regimen or medication.*¹³⁶

A significant aspect of Galen's diagnosis process is the concept of *endeixis*, or 'indication'.¹³⁷ Galen defines *endeixis* as 'a reflection of the sequential result'¹³⁸; essentially, it can be described as the use of visible signs or symptoms to infer what internal, non-visible conditions are occurring inside the patient's body.¹³⁹ Galen uses the information gathered from these signs to establish a concept of the disease that is

¹³⁵ Galen claims that this is the approach taken by the Methodists, and frequently criticizes them for it.

¹³⁶ Dean-Jones, 1993: 50.

¹³⁷ On the notion of *endeixis* in Galen see Durling, 1991; Kudlien, 1991; and Hankinson, 1991:202ff.

¹³⁸ Galen, *MM* 2.7 (10.126 Kühn): τὴν γὰρ οἶον ἔμφασιν τῆς ἀκολουθίας ἔνδειξιν λέγομεν.

¹³⁹ Hankinson, 1991: xxvii. See also van der Eijk, 2008: 292.

affecting his patient. He is then able to combine this information with more universal medical theories – such as using opposites to treat opposites – to determine which remedies are most appropriate for his patient.¹⁴⁰

Galen's method of treatment consists of two general phases: removal of the cause of the disease, and restoration of the patient to a natural state of health. Galen also puts great emphasis on a preventative form of treatment, which helps to prevent the onset of disease altogether. Galen believes that most internal diseases are caused by the accumulation of excess residues. Thus, with a proper regimen of diet and exercise, this accumulation should be preventable.¹⁴¹ When a person does become ill, Galen first seeks to remove the disease from the body by attacking the causes and conditions that have brought upon the illness. Galen believes that evacuation of all excesses – both of quality and quantity – is the first step in removing an illness.¹⁴² He views venesection as the most efficient means of evacuation, especially in cases of *plēthos*, or where all of the humours have increased equally.¹⁴³ Venesection is preferable both because it is fast-acting, and because it can be easily controlled by the physician. Where venesection is too strong a remedy¹⁴⁴, other forms of evacuation can be used. Galen lists them in order of strength: friction, exercise, baths, and abstention from food.¹⁴⁵

In addition to these forms of evacuation, Galen also employs purgative medications. In *De Constitutione Artis Medicae*, he tells us that purgative medicines should be used to remove excess residues of black or yellow bile from the primary

¹⁴⁰ Dean-Jones, 1993: 49; Hankinson, 1991: xxvii.

¹⁴¹ Dean-Jones, 1993: 45.

¹⁴² Galen, *CAM* 18.4 (1.298 Kühn).

¹⁴³ Galen, *CAM* 18.5 (1.299 Kühn); Brain, 1986: 122.

¹⁴⁴ Galen did not use venesection on patients whom he did not deem strong enough. He never used it on children under 14 years of age, and was careful when using it on the elderly. Galen did not, however, limit its use by the number of days that the patient had been ill. Brain, 1986: 131-132.

¹⁴⁵ Galen, *CAM* 18.5 (1.299 Kühn).

veins; if these residues are in other veins they should be evacuated through the urine or by purging.¹⁴⁶ Evacuations for bile or phlegm can also be effected through sweat or concoction: this text does not explain how to bring this about, although one might assume that this would involve artificially increasing the patient's body temperature, perhaps through massage or some form of exercise.

Evacuation of the excess residues can be used to treat the body as a whole, or can be directed toward a specific part of the body. Galen provides very explicit instructions on how bloodletting can be used to remove residues from a particular part of the body, diverting them either to a nearby part, or to one that is far away (for example, from the mouth to the nose, and from the mouth to the foot).¹⁴⁷ Galen also treats the affected part by way of topical remedies. This includes both the area housing the organ that is primarily affected, and any areas that might be affected by sympathy.¹⁴⁸ He does this by selecting foods and drugs with properties opposite to those that were causing the illness, such as drying remedies for illnesses of moisture, and cold remedies for illnesses of heat.¹⁴⁹ Galen associates certain foods and medicinal drugs with the properties of the humours. In addition to hot, cold, moist,

¹⁴⁶ Galen, *CAM* 18.5 (1.299 Kühn).

¹⁴⁷ Brain, 1986: 129-130.

¹⁴⁸ Galen, *Loc. Aff.* 2.10 (8.129 Kühn): πρὶν μὲν γὰρ ἰδίαν τινὰ διάθεσιν ἐν ἔγκεφάλῳ γενέσθαι, κατὰ τὸ συμπάσχειν μόνον αὐτοῦ βλαπτομένου, θεραπευθέντος τοῦ πρωτοπαθοῦντος, οὐδὲν ἂν ἔτι καταλείποιο τούτῳ σύμπτωμα· γενομένης δὲ τινος ἐν αὐτῷ μονίμου διαθέσεως ἐκ τῆς συμπαθείας, οὐ τῷ πρωτοπαθήσαντι μόνῳ τὰ βοηθήματα χρή προσφέρειν, ἀλλὰ καὶ τῇ κεφαλῇ· *For when some specific condition has come about in the brain, it having been damaged by sympathy alone, if the primary affection is remedied, not any of the symptoms should remain; but should some steadfast condition come about in this place from sympathy, it is necessary to apply remedies not to the primarily affected place alone, but also to the head.*

¹⁴⁹ Galen, *Loc. Aff.* 2.10 (8.130 Kühn): εἰ μὲν γὰρ ὑγρὸν εἶη, ξηραίνειν αὐτὸ προσήκει· εἰ δὲ ξηρὸν, ὑγραίνειν· οὕτω δὲ καὶ τὸ ἐν ψυχρὸν θερμαίνειν, τὸ δὲ θερμὸν ψύχειν. ἔτι δὲ καὶ εἰ κατὰ τινὰ συζυγίαν πεπόνθη, διὰ τῆς ἐναντίας συζυγίας αὐτὸ θεραπεύειν προσήκει, τὸ μὲν ξηρὸν καὶ θερμὸν ὑγραίνοντα καὶ ψύχοντα, τὸ δ' ὑγρὸν καὶ ψυχρὸν ξηραίνοντα καὶ θερμαίνοντα, καὶ πῖ τῶν λοιπῶν δυσὶν συζυγιῶν ἀνάλογον· *For if the body is wet, it is proper to dry it out, and if it is dry, to moisten it; and in this way also it is proper to warm a cold body and to cool a hot one. And further, if there is some combined affection, it is proper to treat it through the opposite qualities to this combination: to dry and hot affections apply moistening and cooling remedies, and to wet and cold conditions apply drying and warming remedies, and the same applies to the two remaining analogous combinations.*

and dry, Galen also believes that certain substances can rarefy or thicken the humours, which can assist in the excretion of the unwanted excesses.¹⁵⁰ In the case of medicinal remedies, Galen believes that the different properties each have specific effects on the human body. Warm drugs, for example, cause a lack of sleep and increased bodily movement, whereas cold substances bring about numbness (*narkē*) and loss of consciousness.¹⁵¹ Galen stresses the need for a clear understanding of the effects of these properties, so that the physician will be able to choose the most appropriate remedy for the patient and illness in question. He does not support the belief that treatments are universally applicable to cases of a particular disease.¹⁵² Once the disease has been removed, Galen moves to a restorative phase of treatment, to restore the patient's strength and physical constitution. In this stage of treatment, he relies mostly on diet and exercise to restore the body to its natural balance of humours.¹⁵³

There are very few specific references to the treatment of phrenitis in Galen's works.¹⁵⁴ From Galen's explanation of when he suffered from phrenitis, we learn that wet dressings are applied to the head of phrenitics to prevent the onset of delirium.¹⁵⁵ This treatment is a logical counteraction to the heat and dryness of phrenitis. In *De methodo medendi*, Galen mentions that oxyrrhidion, a mixture of rose oil and vinegar, can also be applied to the head of phrenitis patients;¹⁵⁶ this, too, counteracts the heat and dryness of phrenitis. Based on Galen's overall theory, it is reasonable to believe that Galen would also use some form of evacuation to reduce the inflammation and

¹⁵⁰ Nutton, 2004: 241.

¹⁵¹ Galen, *Loc. Aff.* 2.10 (8.132 Kühn). See also 8.161-163 Kühn.

¹⁵² Nutton, 2004, 242.

¹⁵³ Nutton, 2004: 240.

¹⁵⁴ Most of the information on how 'Galen' treated phrenitis comes from the Pseudo-Galenic text *Int.* (14.731-742 Kühn).

¹⁵⁵ Galen, *Loc. Aff.* 4.2 (8.227 Kühn).

¹⁵⁶ Galen, *MM* 14 (10.928 Kühn).

fever of phrenitis. In order to remove the excesses of yellow bile, it is likely that Galen would have prescribed purgative medicines, diuretics, or even clysters to remove the excess residues. It is also likely that he performed venesection on phrenitis patients, to counteract the *plēthos* that brought on the fever of phrenitis.¹⁵⁷

Summary

Galen's adherence to the Rationalist tradition is evident in his identification of yellow bile as the basic cause of phrenitis. In order to elaborate on the processes that create this disease, Galen relies on his detailed anatomical understanding of the body and its structures. Like Aretaeus, Galen identifies the brain as the *locus affectus* of phrenitis. He specifies that phrenitis is a primary affection of this organ, evidence of which comes from the particular kind of delirium it produces: delirium that is nearly continuous, non-fluctuating, and slow to develop. At its height, this delirium can compromise a person's ability to make logical decisions about their behaviour, or affect their understanding of the things they are seeing. Galen believes that the damage to this latter faculty is the source of the plucking motions of the hands that were identified in phrenitis patients as far back as the Hippocratic Corpus. He explains that these images occur when smoky fumes move into the eyes, and contaminate the fluid that sits between the cornea and the lens. The shadowy images caused by this contamination are misinterpreted as the pieces of wool and straw towards which phrenitis patients claim to be reaching.

Galen's concept of phrenitis takes a further step in the integration of Rationalist tradition and new developments in medicine. He goes beyond Aretaeus in his

¹⁵⁷ Galen, *CAM* 18.5 (1.299 Kühn); *Brain*, 1986: 122.

acceptance of anatomical explanations of disease, often seeming to neglect humoral theory altogether. Nevertheless, Galen remains a proud member of the Rationalist tradition, as evidenced by his continual allusions to the authority of 'the Ancients'.

Caelius Aurelianus

Caelius Aurelianus is a Methodist physician from the 5th century AD. His primary extant work, entitled *Acute and Chronic Affections*, is the most substantial surviving Methodist work on the subject of disease pathology. In creating this text, Caelius drew heavily from a Greek work on the same subject written by Soranus, a well-known Methodist from the early part of the 2nd century AD.¹ While the exact connection between these works cannot be known, there is sufficient evidence in Caelius' work – especially as regards phrenitis – to indicate that his ideas are representative of 2nd century Methodist doctrine. It is on this basis that Caelius' concept of phrenitis can be compared with those of Aretaeus and Galen, despite the time span between the authors.

Caelius' concept of phrenitis provides an interesting contrast to those of Aretaeus and Galen because of his Methodist approach to disease. Like other Methodist authors, Caelius challenges the more traditional, humoural theories of disease in favour of a form of medicine that focuses on the practical treatment of illness. The Methodists' motivation in creating this new approach is the belief that if entities such as humours and *pneuma* are not physically observable, their very existence cannot be proven, and should not be used as the basis of a theory of medicine. Instead, Methodists argue that diseases, both physical and mental, develop out of the common states, physical conditions that are easily observed by a trained eye. The common states affect the whole body at once, and contain within themselves an indication of

¹ Modern scholars now agree that Caelius' *Acute and Chronic Affections* is more than just a Latin translation of Soranus' Greek work of the same name; however, the extent to which Caelius has expanded upon Soranus' ideas is still not clear. For further discussion of this relationship, see: Hanson and Green, 1994: 979; Lloyd, 1983: 186 note 258; Pigeaud, 1992: 105-117; Rubinstein, 1985: 85 note 3; van der Eijk, 1999a: 48 note 2.; and van der Eijk, 1999b: 415-424. For a general discussion of the paradoxes in, and possible developments of Caelius' Methodism over that of his predecessors, see van der Eijk, 1999a: 47-83.

the kind of treatment that they require. There is no need in this system for complex theories about the internal conditions that give rise to disease, or about the parts of the body in which they are located. The same applies to the powers of the mind: as Caelius explains, Methodists believe that the location of these powers cannot be known.

As can be inferred from the title of his work, Caelius Aurelianus divides his discussion into acute and chronic diseases: there are three books on acute diseases, and five books on chronic diseases. The overall impression that one gains from this text is that Caelius intends it to be a refined, systematic discussion of medicine. Throughout his work, Caelius is very concerned with proper diagnosis: he bases his discussion of each disease around a basic framework of issues, emphasizing such aspects as character and symptoms of the disease, the part of the body most affected, and the aspects of one disease which can make it appear similar to another.² Caelius' discussion of phrenitis is the longest in his work, taking up the entire first book on acute diseases. In addition to an explanation of the Methodist views on the symptoms, causes, and treatments of phrenitis, this book also contains a lengthy doxography of the treatments of phrenitis that were put forth by some of Caelius' most notable predecessors. As demonstrated in the section on Diocles, this doxography can be a useful source for other physicians' view on phrenitis treatment, if one separates the facts from the biting commentary. The commentary is also valuable for the insight it offers into the justification behind Caelius' negative attitude towards these other authors.

² van der Eijk 1998: 345–347.

Methodist Physiology and Disease Theory

The Methodist sect was founded in the 1st century BC by Themison of Laodicea, a follower of Asclepiades.³ Toward the end of his life, Themison broke from Asclepiades' teachings and developed the theory of the three *koinotêtes*, or common states. Around 50 AD, Thessalus of Tralles further developed these ideas, producing a form of medicine that focused on the method of healing rather than the theories behind it.⁴ The common states, which are sometimes translated as 'commonalities', come in three forms: a state of stricture (*strictura*), a state of flux, or looseness, (*solutio*), and a combined state (*status mixtus*).⁵ In the mixed state, the looseness and stricture are both present within the body, with each state becoming predominant at different times, or with both states active at the same time, but in different parts of the body.⁶ Methodists believe that the common states are manifest qualities. That is, they can be seen and understood by the naked eye, without any speculation or theorizing about their effects on the body. There are no internal, and therefore hidden properties or processes involved in these states, nor are there any difficult theories about how the states act within the body to create a disease.

Determining treatment for the common states is equally straightforward, due to the notion of *endeixis*, indication, an integral part of the common states doctrine. While the terminology for this concept is similar to that used by Galen when explaining how external symptoms indicate internal conditions, the Methodists use this term in a different way. For Methodists, *endeixis* is the intuitive connection

³ Tecusan 2004:13. For more general discussions of Methodist doctrine, see Pigeaud, 1985; Frede, 1987; Gourevitch, 1991; and Rubinstein, 1985.

⁴ Nutton 2004:167.

⁵ Celsus, *De Medicina*, Preface, 54-55: *satisque esse quaedam communia morborum intueri. siquidem horum tria genera esse, unum adstrictum, alterum fluens, tertium mixtum. They stand firm that there are certain visible common states of disease. Since, of these there are three types, one of constriction, another of flux, the third a mixture.*

⁶ Celsus, *De medicina*, preface.11 and Pliny, *Historia naturalis* 29.5.6; see also: Nutton, 2004: 190–191, and Hanson and Green, 1994: 989.

between the common state and the method that is required to cure it – that of applying remedies with properties opposite to those of the active common state. Sextus Empiricus, a philosopher and Methodist physician, explains the concept of indication by drawing a parallel between it and the impulse that drives us to eat or drink:

Just as the Sceptic, according to the necessity of the affection, is led by thirst to drink, by hunger to food, and by certain other things similarly, in this way the Methodist doctor is led by the affection to corresponding things, by the stricture to relaxation...

ὡσπερ οὖν κατὰ τὴν ἀνάγκην τῶν παθῶν ὁ σκεπτικός ὑπὸ μὲν δίψους ἐπὶ ποτὸν ὁδηγεῖται, ὑπὸ δὲ λιμοῦ ἐπὶ τροφήν, καὶ ἐπὶ τι τῶν ἄλλων ὁμοίως, οὕτω καὶ ὁ μεθοδικὸς ἰατρὸς ὑπὸ τῶν παθῶν ἐπὶ τὰ κατάλληλα ὁδηγεῖται, ὑπὸ μὲν στεγνώσεως ἐπὶ τὴν χαύνωσιν...⁷

Like the thirsty person who knows instinctively to drink, a Methodist doctor, thanks to indication, will instinctively know exactly how to cure his patient of his illness. Relaxing treatments are indicated by the state of stricture, astringent treatments by the state of looseness, and a combination of both kinds of therapies whenever the mixed state is present.

This connection between the common state and its appropriate treatment is the reason why Thessalus was apparently able to claim that he could teach all of Methodist medical knowledge in only six months.⁸ It is not necessary to have observational experience in order to know how to treat all the different diseases that the doctor may encounter, as is the case in Empiricism, nor is there a need to learn

⁷ Sextus Empiricus, *Pyrrhoniae hypotyposes* 1.238, as cited in Mates, 1996: 123.

⁸ Galen, *MM* 1.1 (10.4-5 Kühn).

difficult Rationalist theories about hidden processes and states.⁹ Methodist medicine is focused on identifying and treating the common states, and puts little emphasis on aspects such as symptoms or antecedent causes. These features have no effect on the treatment of the common states, and are therefore left to the realm of medical theory – physicians may speculate on these aspects, but they should not allow them to alter their methods of treatment.

The Methodists base this approach on the argument that medicine should be founded only on factors that can be proven through physical observation. Any substances that are internal cannot be seen, and are therefore considered as ambiguous, and insufficient grounds upon which to build a theory of treatment. Disease theories based on anatomical structures are viewed in a similar manner. While Methodists do not deny the existence of these physical structures, they do not let the knowledge of these parts affect their belief that diseases are affections of the entire body, not of individual parts.

Despite their avoidance of all things speculative, the surviving Methodist sources – most of which survive only as fragments – do not explain the nature of the common states *per se*, or the processes by which these states arise inside the body. The sources are equally silent regarding the connection between the common states and the individual diseases. The state of stricture, for example, is said to produce a number of different diseases, including phrenitis, lethargy, peripneumonia, and epilepsy; the Methodists do not explain how this state of stricture may develop into one of these diseases.

⁹ Frede 1987: 265.

Signs and Symptoms of Phrenitis

Caelius defines phrenitis as acute derangement of the mind, accompanied by acute fever, the actions of *carphologia* and *crocydismos*, and a small, rapid pulse.¹⁰ In referring to this description as a ‘definition’, Caelius appears to be contradicting his own Methodist beliefs: he tells us several times throughout his work that Methodists usually avoid giving definitions.¹¹ As Michael Frede points out in his review of Methodist doctrine, Methodists dislike definitions because they require a commitment to specific theories and theoretical entities, aspects which do not fit into the Methodist approach to medicine.¹² He therefore believes that Methodists use the terms ‘definition’ and ‘description’ interchangeably; in offering a ‘definition’ they really provide only ‘descriptions’ of the various diseases.¹³

Although this explanation is satisfactory in the case of Caelius’ definition of phrenitis, Philip van der Eijk has correctly pointed out that it will not suffice for all the forms of definition that we encounter in Caelius’ work.¹⁴ He offers the more likely suggestion that in refusing to give definitions, Caelius is not rejecting the use of definitions *per se*; he is simply protesting the practice of trying to contain the entire essence of a disease in only a few short lines.¹⁵ Caelius appears to believe that definitions are to be used as an aid to identifying or explaining a disease, but are not

¹⁰ Caelius, *Acut.* 1.preface.21 (32.22-26 Bendz): nos igitur manifeste atque breviter, quantum res patiuntur, intelligentiam sive diffinitionem passionis trademus, dicente phrenitim esse alienationem mentis celerem cum febris acuta atque manuum vano errore, ut aliquid suis digitis atrectare videantur, quod Graeci crocydismon sive carphologian vocant, et parvo pulsu ac denso. *We, therefore, as clearly and briefly as things will allow, will set down our understanding or definition of the disease, by saying that phrenitis is acute derangement of the mind with acute fever and vacant motions of the hands, appearing as if to touch something with their fingers, which the Greeks call crocydismos or carphologia, and a small, dense pulse.*

¹¹ Caelius, *Acut.* 2.26.142 (228.3 Bendz): diffinire Methodici iuxta Sorani iudicium declinant. *Methodists, in like manner to the judgment of Soranus, avoid defining [diseases].* See also: Caelius, *Acut.* 2.31.163.

¹² Frede, 1987: 273.

¹³ Frede, 1987: 273-274. See also: Gourevitch, 1991: 67.

¹⁴ van der Eijk, 1999a: 68-75.

¹⁵ van der Eijk, 1999a: 74-75.

meant to serve as our complete understanding of the illness. Michael Frede summarizes this concept admirably:

*Methodist definition, and Methodist language quite generally, does not pretend to be more than a pragmatic attempt to draw our attention to the phenomena, to help us become aware of them in our own experience. This familiarity with the phenomena is what counts; it can never be replaced by the mere possession of a phrase; however appropriate and precise the phrase may be, it will never quite capture the phenomenon.*¹⁶

Caelius has taken great pains to ensure that his definition of phrenitis avoids the mistakes found in the definitions suggested by other physicians, mistakes which he reviews in great detail in the preface to his book on phrenitis.¹⁷ Caelius' primary objections to these definitions revolve around the different authors' use of language in describing phrenitis, and their tendency to include in their definitions aspects of phrenitis that are either not definite, or not always present. In response to these criticisms, Caelius does not include the cause of phrenitis in his definition, or any reference to the eventual outcome of the disease. Since these aspects are greatly debated by the various medical sects, Caelius believes that it is best to avoid including them in a definition. This will make the definition accessible to all physicians, regardless of their theoretical understanding of disease. In a similar manner, Caelius includes in his definition only those signs of the disease that are present in every case of phrenitis: as he explains in another section of this text, Caelius believes that a diagnosis of phrenitis cannot be made if any of these signs are not present.

¹⁶ Frede, 1987: 274

¹⁷ Caelius, *Acut.* 1.preface.1-21 (22.3-32.26 Bendz). Caelius briefly critiques the definition of Demetrius, a Herophilian, before moving on to a long attack on definitions offered by Asclepiades and his followers. Caelius greatly dislikes Asclepiades, and expends a good deal of effort in criticizing his opinions. This will be explained in more detail in the section on Caelius' Doxography.

Caelius believes that phrenitis is to be diagnosed by the concurrence of the four *signs* of the disease that are outlined in his definition: derangement of the mind (*alienatio mentis*), fever, *carphologia* and *crocydismos*, and a small, rapid pulse. The derangement is contrasted with *furiosus*, the term Caelius uses to refer to mania.¹⁸ Caelius makes a point of differentiating between *signs*, permanent aspects of the disease that are present throughout the course of the illness, and *symptoms*, characteristics of the disease that may or may not appear during the diseases, and are usually only temporary.¹⁹ A disease cannot be properly diagnosed until all of the signs are present; should any one of them disappear, Caelius will say that the disease has changed into something else.²⁰ By contrast, symptoms of a disease will come and go throughout its course, and are not integral to the identification of a disease. Caelius uses symptoms of a disease to indicate the severity of individual cases. The greater the number and variety of symptoms that appear, the more severe the case of phrenitis.²¹ Symptoms may also indicate particular aspects of each case of phrenitis, such as the potential for the current disease to develop into another.²²

Caelius does not give many details regarding the signs of phrenitis. With regard to the fever, for example, Caelius says only that it is acute, and that it can be felt all

¹⁸ It should be noted, however, that in his description of mania, Caelius describes the disease as chronic impairment of the mind, without fever: *est autem alienation tardans sine febribus...* (Caelius, *Chron.* 1.5.146 [Bendz]).

¹⁹ Caelius, *Acut.* 2.33.176 (250.11-13 Bendz): *nam signum neque recedit, et semper significato coniunctum est, accidens autem, quod Graeci symptoma uocant, nunc aduenit, nunc recedit... A sign does not recede, but is always joined with the thing it signifies; but concurrent aspects, which the Greeks call 'symptoms', at one time increases, and at another time is disappearing...*

²⁰ Caelius, *Acut.* 1.3.34 (40.15-22 Bendz); and Caelius, *Acut.* 1.48 (48.23-33 Bendz). This will be discussed in more detail below, in the context of the differential diagnosis of phrenitis.

²¹ Caelius, *Acut.* 1.3.35: (40.23-24 Bendz): *Magnitudinis uero atque proprietatis differentiam plurima atque alia sunt, quae designant, a Graecis symptomata apellata... Indeed there are many different other signs which designate the severity and indeed even the peculiarities [of a case of phrenitis], which the Greeks call 'symptoms'...*; and Caelius, *Acut.* 1.3.39 (44.3-5 Bendz): *Grauis autem ac perniciose affici dicimus eos, quos ut supradictos plurima atque uaria fuerint secuta et iugi<ter> et sine ulla indulg<ent>ia laxamenti. We say that those people are seriously and destructively affected, those who are attended with many different symptoms, as described above, continuously and without any relaxing remission.*

²² Caelius, *Acut.* 1.3.39 (44.3-8 Bendz).

over the body.²³ His description of the pulse mentions only the faintness and quick speed of its beats, and the fact that it appears to remain this way for the duration of the illness.²⁴ References to the movement of the hands suggest only that phrenitis patients appear to be picking at threads from the covers, or pieces of straw from the walls, and that these motions are known as *crocydismos* and *carphologia* respectively.²⁵

Caelius provides detailed descriptions of the manifestation of phrenitis in a discussion of the symptoms of phrenitis. He offers an extensive list of these symptoms of phrenitis, roughly grouped into subject-based categories: types of fever, manifestations of delirium, physical descriptions of the patient's expression and complexion, and characteristics such as excretions, pulse, and sweating.²⁶ In terms of fever, for example, Caelius explains that it can be continuous, semi-tertian, or irregular. He says that mental derangement can appear before the end of the first three days, or after this time; the later the onset of the derangement, the more severe the case of phrenitis.²⁷ In contrast to Galen, Caelius believes the derangement of phrenitis can be either continuous or interrupted, and can cause quiet or loud laughter, singing, or sadness.²⁸ Patients may be seen to tear their clothes and hair, speak to

²³ Acute: Caelius, *Acut.* 1.5.46 (48.9-10 Bendz): *sed phrenitici acutis uel celeribus... but in phrenitis [the fever] is acute or swift...*; felt all over the body: Caelius, *Acut.* 1.8.55 (1.29-30 Bendz): *Nos igitur communiter totum corpus pati accipimus. etenim totum febre iactatur. Therefore we accept that the whole body suffers generally. For the whole body is shaken by fever.*

²⁴ Caelius, *Acut.* 1.5.47 (48.21-22 Bendz): *...quia in phreniticis etiam tunc paruus atque densus perseverat... ...because in phrenitis even [during a remission] the pulse remains small and quickly beating...* See also: Caelius, *Acut.* 1.preface.21 (32.22-26 Bendz), Caelius, *Acut.* 1.3.34 (40.15-22 Bendz).

²⁵ Caelius, *Acut.* 1.5.48. (48.24-25 Bendz). See also Caelius, *Acut.* 1.preface.21 (32.22-26 Bendz); and *Acut.* 1.3.34. (40.15-22 Bendz).

²⁶ Caelius, *Acut.* 1.3.35-38 (40.23-44.2 Bendz).

²⁷ Caelius, *Acut.* 1.3.39 (40.5-6 Bendz): *peius etiam laborare dicimus eos, qui post primam diatriton fuerint hac affecti passione, quam qui ante ipasm. Indeed, we say that those who are affected by this disease after the first diatriton suffer more gravely than those who are affected before this time. The diatriton is discussed below; see also Leith, 2008.*

²⁸ Caelius, *Acut.* 1.3.35 (40.26-28 Bendz): *...alienatio intra diatriti uel post diatriti tempus iugis aut intercapedinata cum risu tacito aut cum cachinno et cantilena uel certe maestitudine... ...derangement*

invisible and/or dead people, gulp down food un-chewed, or refuse it altogether.²⁹

The patients' eyes may become bloodshot; they may have trouble sleeping; and their faces can become drawn, red, or very pale.³⁰ They may also suffer from severe sweating or convulsions, or fall into a state of stupor so severe as to indicate the potential onset of lethargy.³¹

Many of the symptoms described in this section are reminiscent of those that were identified by Caelius' predecessors. By including these suggested symptoms in his own description of phrenitis, Caelius is enabling followers of these other sects to read their own accounts of phrenitis into his discussion. Caelius can thereby demonstrate the validity of his approach to phrenitis, despite his different opinions on the exact role of symptoms in disease. In terms of his own Methodist understanding of phrenitis, this explanation allows Caelius to show how these varied manifestations can be accounted for by his explanation of the typology of phrenitis (based on the common states), and how they are relevant to his means of differentiating between phrenitis and other similar diseases (accomplished through the concurrence of signs of the disease).

Caelius believes that the mental derangement of phrenitis can resemble the derangement caused by mania or melancholia, by paroxysms of diseases such as peripneumonia and pleuritis, and by the drinking of poisonous drugs such as henbane or mandragora.³² He differentiates between these alternate forms of derangement

within the first three days or after the three-day period, either continual or interrupted, with quiet laughter or with immoderately loud laughter and singing or very extreme continual sadness...

²⁹ Caelius, *Acut.* 1.3.35-36 (40.23-42.14 Bendz).

³⁰ Caelius, *Acut.* 1.3.37 (42.15-22 Bendz).

³¹ Caelius, *Acut.* 1.3.38 (42.23-44.2 Bendz).

³² Caelius, *Acut.* 1.4.42 (44.28-31 Bendz): *Similes sunt atque uicinae phreniticae passioni ex ipsa alienatione furor, quam uulgo insaniam uocant, melancholia, pleuritis atque peripneumonia, quae saepissime accessionis tempore alienationem faciunt, item mentis alienatio in his, qui mandragoram aut altercum biberint. Diseases similar to, and of the same nature as phrenitis, in respect to the derangement itself, are mania, which is commonly called insania, melancholia, pleuritis, and*

based on the different signs of each condition, and on the timing and duration of these various signs. The presence of fever is the most significant sign for this purpose: if the patient has a fever, Caelius can immediately eliminate mania and melancholia from the list of possible options, since neither of these diseases is accompanied by a fever.³³ Caelius also points out that *carphologia* and *crocydismos* do not appear in cases of melancholia or mania, and that melancholia is marked by the vomiting of black bile that accompanies it, due to the involvement of the esophagus in this disease.³⁴ For the diseases that produce madness during their paroxysms, Caelius relies on the timing and duration of the madness: he believes that diseases such as pleuritis and peripneumonia cause loss of reason (*alienatione*) only during exacerbations of the disease, as a side effect of the extreme pain. For this reason, the derangement is only temporary, and comes and goes along with the attacks and remissions of the illness.³⁵ To diagnose phrenitic derangement from that which is caused by the drinking of poisonous substances, Caelius suggests that the physician should look for the four main signs of phrenitis; it is not sufficient to ask if the patient has consumed any drugs, since consumption of these substances can also be antecedent causes of phrenitis or other similar diseases.³⁶

peripneumonia, which most often during times of increase cause derangement, also [similar to phrenitis is] derangement of the mind in those who drink mandragora or henbane.

³³ Caelius, *Acut.* 1.4.42 (46.1-3 Bendz): Internoscuntur autem furentes atque melancholici a phreniticis, siquidem alienatio sine febricula atque crocidismo uel carphologia esse uideatur... *Mania and melancholia are distinguished from phrenitis, since they appear as derangement of the mind without fever and crocydismos or carphologia...*

³⁴ Caelius, *Acut.* 1.4.42 (46.1-6 Bendz).

³⁵ Caelius, *Acut.* 1.4.43 (46.9-13 Bendz): ...primo, quod, cum dolores asperantur, extenditur atque consurgit alienatio et eorum indulgentia minuitur, quippe levis atque solubilis deliratio. nam phreniticorum si ex consensu fuerit facta, tamen et non semper accessionibus aucta aut demissionibus minuta, sed magis intardans atque perseuerans perspicitur. ...*first [they differ] because when the pain becomes stronger, the derangement is increased and breaks out, but with the yielding of these pains the derangement diminishes; clearly the delirium is not heavy and dissolves easily. But derangement of phrenitis, even if it comes with concurrent symptoms, yet it does not always increase during attacks, or decrease during remissions, but it is perceived as being more constant and persevering.*

³⁶ Caelius, *Acut.* 1.4.44 (46.14-23 Bendz).

While mania can generally be differentiated from phrenitis by its lack of both fever and the plucking at pieces of wool and straw, Caelius believes that there are occasions when mania is also accompanied by a fever, due to some supervening cause.³⁷ Since many physicians have failed to note this occurrence, Caelius takes the time to explain exactly how to make this differentiation. Not, as Caelius reminds us, for the purpose of changing the treatment of the patient – for all acute and chronic diseases require a relaxing treatment when at the height of an attack – but so that he may show us the correct way of differentiating between similar diseases.³⁸ Caelius also believes that it is useful to apply certain remedies to the parts most affected by a particular disease; one must be able to identify the particular disease in order to know which part of the body is most affected by that disease.³⁹

There are three parts to Caelius' explanation of how to separate cases of phrenitis from cases of mania that are accompanied by fever. He begins by examining the order in which the fever and the mental aberration first appear in the patient. In phrenitis, the fever comes before the loss of reason, whereas in mania, they appear in the opposite order.⁴⁰ If the fever and mental derangement arrive at the same time, however, this first part of this diagnosis process cannot be used. Caelius then considers the pulse of the patient: in phrenitis the pulse is always small and rapid, while in mania, the pulse is small and rapid only at the start of the disease and during

³⁷ Caelius, *Acut.* 1.5.45 (46.25-48.3 Bendz).

³⁸ Caelius, *Acut.* 1.5.45 (46.29-48.4 Bendz): ...non quidem mutandae curationis causa - omnes etenim passiones celeres supradictae atque tardae, sed in superpositione constitutae, quam Graeci epithesim uocant, laxatiua atque mitigatiua indigent curatione -, sed ad demonstationem, quo probemus etiam specialium uti discretion, haec posuimus. *We set this down, not, indeed, for the cause of changing the remedies, for all the aforementioned acute diseases, and even chronic diseases, if they are not in a condition of paroxysm – which the Greeks call epithesis – require relaxing and diminishing remedies, but to demonstrate how we think it is right to distinguish individual diseases.* See also: Caelius, *Chron.* 1.5.153 (520.21-30 Bendz).

³⁹ Caelius, *Acut.* 1.5.46 (48.4-6 Bendz).

⁴⁰ Caelius, *Acut.* 1.5.47 (48.13-15 Bendz): praecedit enim febrem in furiosis alienatio, in phreniticis uero febricula alienationem. *In mania the derangement precedes the fever, in phrenitis the fever precedes the derangement.*

the increasing stages of its attacks. It becomes slower and larger during remissions.⁴¹ In the case of an unremitting fever during mania, however, this change in pulse will not occur, and the pulse will remain small and rapid. If this should happen, the doctor must move to the final step in the diagnosis process, and look for the signs of *carphologia* and/or *crocydismos*: Caelius insists that these signs are never present in cases of mania.⁴² If they appear in what was originally diagnosed as mania, Caelius takes this as proof that the patient's case of mania has turned into a case of phrenitis.⁴³

Caelius ends his discussion of the signs of phrenitis by explaining the difference between patients with phrenitis who are asleep, and those who have passed from phrenitis into a state of lethargy.⁴⁴ He believes that this is an important differentiation to be able to make, since the physician must be ready to apply proper treatment to the patient as soon as his disease changes into lethargy.⁴⁵ To make this differentiation, the doctor must look at physical characteristics: complexion, expression, respiration, pulse, reaction to touch, position in bed, and the degree of fever.⁴⁶ When a patient has passed into lethargy, he will have a pale, leaden complexion; a sad expression; a slow breathing rate; a full, large, yet empty pulse; and a high fever. The patient will likely

⁴¹ Caelius, *Acut.* 1.5.47 (48.17-22 Bendz).

⁴² Caelius, *Acut.* 1.5.48 (48.24-28 Bendz). It is likely that Caelius is simply being dogmatic in emphasizing this point. Despite his insistence that this sign is a key feature in the separation of phrenitis and mania, he makes no reference to *carphologia* or *crocydismos* in his chapter on mania, even when discussing the differences between the two diseases. *Chron.* 1.5.146 (516.19-24 Bendz).

⁴³ Caelius, *Acut.* 1.5.48 (48.28-31 Bendz): *quae denique si furiosis aduenerint in febribus constitutis, in phreniticam passionem ex insania uenisse pronuntiamus, tamquam rursus ex phrenitica passione cedentibus propriis signis, hoc est supradictis, in furorem transeant... thereupon, if these signs appear in a case of mania that occurs with fever, we pronounce that the disease has passed from mania into phrenitis; just as the disease can change from phrenitis back into mania, with the removal of the proper signs, those that are discussed above.*

⁴⁴ Caelius, *Acut.* 1.6.49. (50.4-5 Bendz). See also: Caelius, *Acut.* 1.5.48 (48.31-33 Bendz).

⁴⁵ Caelius, *Acut.* 1.6.49 (50.6-9 Bendz): *...atque multos inexercitos medicos errore fefellerunt, ut dormientes tamquam depressos excitarent aut oppressos tamquam dormientes sine adiutorio passionem traditos reliquissent, utilem ducimus eorum discretionem faciendam. ...and many inexperienced physicians have been deceived by the mistake, so that they rouse sleeping patients, thinking that they are weighed down by lethargy, or, thinking that the patient is only sleeping, they relinquish patients who have lethargy, without treating the disease; for this reason, we determine that it is useful to make a distinction between these diseases.*

⁴⁶ Caelius, *Acut.* 1.6.49 (50.1-9 Bendz).

be lying toward the foot of the bed in an unnatural position, and his hypochondria will be very firm to the touch.⁴⁷ If these factors are present, it is necessary to wake the patient up, and begin treating him for lethargy; if not, it is sufficient to let him remain sleeping.⁴⁸

Causes of Phrenitis

In accordance with his Methodist background, Caelius tells us that phrenitis arises either from the common state of stricture, or from the mixed state, in which stricture is accompanied by looseness.⁴⁹ The fact that phrenitis can arise from two different states means that there are two types of this disease. Caelius explains that while some physicians choose to differentiate the types of phrenitis based on the way it manifests itself in the patient – for example, from the overall happiness or despondency of the patient’s behaviour – it is more appropriate to make this distinction according to the common states that causes them:

In truth we say that one type [of phrenitis] is from stricture, another from the combination of stricture and looseness. For indeed it is proper to determine in such a way, so that the different forms of disease are revealed not from the diverse symptoms of the disease, but from certain general and necessary signs, which will come, as we have said above, from the principle types of affection, and we base our treatment on this rationale also.

nos uero aliam dicimus esse ex strictura, aliam ex complexionem
stricturae atque solutionis. est enim uerum ita discernere, ut non

⁴⁷ Caelius, *Acut.* 1.6.50 (50.11-21 Bendz).

⁴⁸ Caelius, *Acut.* 1.6.49 (50.1-9 Bendz).

⁴⁹ Caelius, *Acut.* 1.7.52 (52.6-7 Bendz): nos uero aliam dicimus esse ex strictura, aliam ex complexionem stricturae atque solutionis. *In truth we say that one type [of phrenitis] is from stricture, another from the combination of stricture and looseness.*

accidentium diuersitas passionis differentias ostendat, sed generalis quaedam ac necessaria designatio, quae fiet ut supra diximus ex principalibus passionibus, unde etiam curationum ratio sumatur.⁵⁰

Caelius believes that the symptoms of phrenitis are too changeable and temporary to be used as a means of distinguishing between the two types of phrenitis. As we saw earlier, Caelius believes that symptoms indicate the severity of a case of phrenitis, but are otherwise not necessary to the diagnosis or treatment of phrenitis. It is for this reason that they do not serve as a useful criteria for the identification of the different types of phrenitis.

Caelius does not provide a direct explanation of how the common states are to be identified in the body. He seems to take it for granted that the readers of this text will already be trained in this basic Methodist skill. There is some evidence, however, which suggests that Caelius wanted to make his work accessible to non-Methodist readers as well as Methodist ones. While he does not explain the Methodists' way of identifying the common states, a careful reading of Caelius' text provides sufficient information to enable an indirect diagnosis of the type of phrenitis that is affecting a patient. We have already seen that Caelius provides a detailed description of the identifying signs of phrenitis, and the ways in which one can clearly differentiate between phrenitis and other similar diseases. Once this diagnosis has been made, there are certain clues in Caelius' section on treatment which can assist a physician in determining whether the patient's case of phrenitis has arisen from stricture or from the mixed state. Caelius suggests, for example, that loose bowels and sweating occur

⁵⁰ Caelius, *Acut.* 1.7.52 (52.6-10 Bendz).

when looseness is predominant in the body.⁵¹ If the looseness becomes more severe, he believes that the body will appear to be wasting away through excessive sweating.⁵² These are perhaps not the most precise signs of a case of phrenitis caused by looseness, but they at least provide a basic indication of this type of the disease. This may not be the proper Methodist way of making this distinction, but it can be effective nonetheless. The inclusion of this information suggests that Caelius expected non-Methodists physicians to read his text, and wanted to make his material accessible to them.

Despite his insistence that diseases arise from the common states, Caelius does not offer an explanation of this process. According to Methodist doctrine, he is justified in omitting this explanation, since this kind of information is not considered relevant to Methodist concepts of disease. It is not necessary to know *how* a disease – or even a common state – arises in the body in order to know how to treat it: one need only know that the common state does, in fact, exist. Caelius' text breaks from this, however, by indicating that the common states can arise from certain antecedent causes. He refers to these antecedent causes when describing how one can differentiate between the mental derangement of phrenitis, and that which is brought about by other diseases.⁵³ Here, Caelius explains that it is possible for phrenitis to emerge from the drinking of a drug, since 'the antecedent causes of phrenitis are not necessarily preordained or even determined.'⁵⁴ In a later chapter, Caelius indicates

⁵¹ Caelius, *Acut*, 1.9.68 (60.18-19 Bendz): At si adiuncta fuerit stricturae solutio, ut aut uenter fluens aut sudores esse uideantur, caput supradicto modo... *But if the stricture is joined with looseness, so that either loose bowels or sweating is visible, treat the head in the aforementioned manner...*

⁵² Caelius, *Acut*, 1.9.69 (60.26-27 Bendz): at si plus fuerit extensus, ut integros solui uideamus, etiam flabris utimur... *but if [the looseness] is more spread out, so that we see the whole body dissolving...* See also: Caelius *Chron.* 1.6.183 (1.538-540 Bendz).

⁵³ Caelius, *Acut.* 1.4.44 (46.14-23 Bendz).

⁵⁴ Caelius, *Acut.* 1.4.44 (46.15-17 Bendz): sed quia etiam de medicamine potu potest phrenitis euenire - non enim praordinatae atque fixae sunt necessario eius antecedents causae... *But it is possible for phrenitis to arise from the drinking of a drug, for the antecedent causes of this disease are not preordained or even determined*

that phrenitis can also arise from antecedent causes such as exposure to intense heat and the consumption of too much wine.⁵⁵

In another passage, Caelius suggests that the antecedent causes actually give rise to the common states, and not to individual diseases themselves. This approach is presented in the first chapter of Caelius' book on phrenitis, as part of a discussion about the existence of signs that indicate the future onset of phrenitis.⁵⁶ He presents this information in the form of a debate between the followers of Thessalus, who represent the Methodist approach to this concept, and the followers of Asclepiades, on the opposing side. Through the hypothetical words of Thessalus, Caelius explains that Methodists do not believe that there are signs which unquestionably indicate the future onset of phrenitis:

We, however, do not perceive that there are signs of the future onset of phrenitis, nor, therefore, do we believe that it is possible for there to be signs of the future onset of phrenitis. But neither does any one of the antecedent causes distinguish this, such as excessive heat, overeating, intoxication from wine, and even exercise after eating, from living or sleeping in caves, or new plaster on the walls of the sleeping rooms. These also apply to other diseases in general, such as lethargy, apoplexy, and epilepsy.

nullius autem futurae passionis signa esse perspicimus, neque igitur phreniticae passionis esse posse signa credamus. sed neque praestantius quicquam antecedentium causarum, ut adustio, cruditas, uinolentia, atque exercitium post cibum, uel mansio siue somnus in

⁵⁵ Caelius, *Acut.* 1.12.102-103 (78.25-80.2 Bendz): atque ita etiam ex uinolentia in phreniticam passionem uenientes conuenit plerumque non phlebotomari, cum forte etiam solutio affuerit. alios etiam, hoc est ex aliis causis phreniticos effectos, ut est adustio, saepe phlebotomari oportet. *And accordingly, it is generally not suitable to use venesection on patients suffering with phrenitis that comes from intoxication with wine, since looseness might perhaps be present. But often it is necessary to use venesection on other cases of phrenitis that have arisen from other causes, such as intense heat.*

⁵⁶ Caelius, *Acut.* 1.1.22-30 (34.1-38.11 Bendz).

speluncis confertur, aut noua politura in muris parietis cubiculorum.
 haec alias quoque passiones ingerunt generaliter, ut lethargiam,
 apoplexiam, epilepsiam.⁵⁷

The Methodist argument underlying this passage is that the antecedent causes cannot be assigned to phrenitis in particular, because the same antecedent causes can also precede diseases such as lethargy, apoplexy, or epilepsy. This statement is not a rejection of antecedent causes as a whole, but only of antecedent causes that lead to one specific disease. Each of the diseases listed in this argument results from stricture.⁵⁸ In saying that these antecedent causes can lead to any of these diseases, Caelius – in the guise of Thessalus and his followers – is pointing out that the antecedent causes actually bring about the common state of stricture, which then has the potential to develop into any one of these diseases.⁵⁹ When Caelius later explains that the antecedent causes of phrenitis are not fully determined, he is technically referring to the antecedent causes of stricture, which may or may not develop into a case of phrenitis. He does not explain how the common state of stricture can result in a disease. Similarly, Caelius cannot agree that the antecedent causes can act as signs of the future onset of phrenitis, since they can actually result in one of several possible diseases. It is not necessary to identify the exact antecedent causes of the common states, since these do not have a direct impact on treatment.

With the common states as the basis of his pathology, Caelius, like other Methodists, does not need to participate in the debate over the *locus affectus* of disease. The nature of the common states dictates that they are active in the entire

⁵⁷ Caelius, *Acut.* 1.1.23 (34.11-19 Bendz).

⁵⁸ Lethargy: Caelius, *Acut.* 2.1.2 (130.12-19 Bendz); apoplexy: Caelius, *Acut.* 3.5.52 (322.18-324.5 Bendz); epilepsy: Caelius, *Chron.* 1.4.72 (470.19-29 Bendz).

⁵⁹ Presumably, there are additional antecedent causes which have the potential to bring about the common state of looseness, which could then develop into one of the diseases thought to be caused by that state.

body at once; as a result, the diseases produced by the common states must also affect the whole body. As Caelius explains in his discussion of phrenitis, physical evidence of this universal affection can be seen in signs such as fever, which is palpable in all parts of the body.⁶⁰ The Methodists prefer this ‘universal affection’ approach because it is based on physically observable features. Much of their objection to more traditional theories of disease is based on the fact that these doctrines are often based on unobservable components – entities or processes that occur inside the body, and are therefore hidden from view – or on elemental qualities that are too small to be seen by the naked eye. The Methodists argue that if these internal factors cannot be seen, there is no way to prove their existence; it is therefore most inappropriate to use them as the basis of one’s explanation of disease. The idea that disease was located in a particular place in the body is equally tenuous, since any evidence of affection will also be internal, and therefore unobservable.

Caelius’ work on diseases directly discusses the *locus affectus* in relation to six acute diseases: phrenitis, lethargy, pleuritis, peripneumonia, cardiac disease, and hydrophobia.⁶¹ He uses these chapters to point out the places of affection that were identified by various other medical authors, and some of their motivations in choosing these locations. As is typical of Caelius’ doxography – a fact that will be explained later in this chapter – the goal of these passages is to point out the mistaken opinions of these authors, while also demonstrating their folly in wasting time debating issues

⁶⁰ Caelius, *Acut.* 1.8.55 (52.29-54.1 Bendz): Nos igitur communiter totum corpus pati accipimus. etenim totum febre iactatur. implet denique phreniticorum significatione<m> febrium signum, quapropter totum corpus curamus. *Therefore we accept that the whole body suffers generally. For the whole body is shaken by fever. Fever, therefore, serves as a significant sign of phrenitis, for which reason we apply remedies to the whole body.*

⁶¹ Phrenitis: Caelius, *Acut.* 1.8.53-57 (52.11-54.23 Bendz); lethargy: Caelius, *Acut.* 2.6.26 (144.21-146.2 Bendz); pleuritis: Caelius, *Acut.* 2.16.96-100 (194.1-196.26 Bendz); pneumonia: Caelius, *Acut.* 2.28.147-148 (230.27-232.20 Bendz); cardiac disease: Caelius, *Acut.* 2.34.180-183 (252.20-256.3 Bendz); hydrophobia: Caelius, *Acut.* 3.14.116-117 (360.26-362.10 Bendz).

that cannot be proven.⁶² In his discussion of the *locus affectus* of peripneumonia, for example, Caelius lists the places of affection that were identified by Diocles, Erasistratus, Praxagoras, Herophilus, Asclepiades, and Apollonius the Herophilian.⁶³ Caelius uses this wide variety of identified parts – which range from the veins and/or arteries of the lungs, to the passages that connect the lungs to the windpipe – to emphasize the fact that the *locus affectus* is both impossible to identify, and irrelevant to the treatment process. He follows this list of opposing opinions with the Methodist view of the issue, as it was explained by Soranus:

Soranus, however, whose most genuine understanding we are striving to describe in this Latin discourse, says that the whole body is suffering from this disease, but the lung more severely. But he judges this to be an estimation and not to be accepted as evident truth. It is even useless to treatment, indeed [even] if we neglect the judgment of the particular places [of affection], nothing hinders [our treatment], when we discern that the whole body suffers; and neither would the qualities of the remedies change on account of the affected part, but their general nature remains the same as long as the disease itself remains the same.

Soranus autem, cuius uerissimas apprehensiones Latino sermone describere laboramus, totum inquit corpus passione uexari, sed pulmonem uehementius; quod quidem aestimatum et non ad expressam

⁶² For a general discussion of Caelius' doxography, see van der Eijk, 1999b; and van der Eijk, 1998: 342-353.

⁶³ Caelius, *Acut.* 2.28.147 (1.230-232 Bendz). *Pati in peripneumoniacis Diocles uenas pulmonis inquit, Erasistratus uero arterias, Praxagoras eas inquit partes pulmonis pati quae sunt spinae coniunctae. etenim omnem inquit pulmonem pati Herophilus;... Asclepiades uero eas pulmonis partes pati, quae arteriae sunt adhaerentes, quas appellant bronchia. item Apollonius Herophilus inquit ipsius pulmonis uenas atque arterias pati. Diocles says that in peripneumonia the veins of the lung are affected, and Erasistratus says it is the arteries of the lung; Praxagoras says that those parts of the lung are affected which are joined to the spine. And Herophilus says that the entire lung is affected;... Asclepiades says that those parts of the lung are affected which are adjoined to the windpipe, which they call the bronchia, And likewise, Apollonius the Herophilian says that the veins and even the arteries of the lung are affected.* Philip van der Eijk discusses this passage in more detail in his study of Caelius' doxographic technique: van der Eijk, 1999b: 442-445.

fidem accipiendum iudicavit. est etiam inutile curationi, quippe cum nihil obstat locorum neglecta specialis apprehensio, ubi totum corpus laborare senserimus, et neque mutabilis sit adiutoriorum qualitas pro patientibus locis, sed talis perseueret in genere, donec passio ipsa perseuerat.⁶⁴

As Philip van der Eijk points out in his discussion of this passage, this section provides a concise summary of the Methodists' overall opposition to the concept of the *locus affectus*.⁶⁵ They believe that the affected part cannot be identified conclusively, and even if it could, the issue is pointless because it does not affect the treatment of the disease. Furthermore, by accepting the notion that one part might be slightly more affected than the rest of the body, Methodists are able to respond to the argument about the symptoms of a disease indicating its place of affection, without having to go against their overall medical doctrine.

Caelius' discussion of a possible *locus affectus* in phrenitis demonstrates another aspect of the Methodist objection to the concept.⁶⁶ He uses this chapter to point out that, for many authors, the *locus affectus* that they identify for phrenitis is the same part of the body in which they believe the rational powers are located:

For this reason, some say the brain is affected; others its fundus, or base, which we are able to call sessio; others say it is the membranes of the brain; others the brain and its membranes; others the heart; others the top most part of the heart; others the membrane which surrounds the heart; others the artery itself, which the Greeks call ἄορτήν; others say the thick veins, which they call φλέβα παχέϊαν; others the diaphragm. But why stretch this out further when we are easily able to explain this, if we say what they had in mind? For each

⁶⁴ Caelius, *Acut.* 2.28.147-148 (232.6-232.13 Bendz):

⁶⁵ van der Eijk, 1999b: 443.

⁶⁶ Caelius, *Acut.* 1.8.53-57 (52.11-54.23 Bendz).

one says that the affected place in phrenitis is the same one in which they suspect the ruling part of the soul to be located.

aliqui igitur cerebrum pati dixerunt, alii eius fundum siue basin, quam nos sessionem dicere poterimus, alii membranas, alii et cerebrum et eius membranas, alii cor, alii cordis summitatem, alii membranum quae cor circumtegit, alii arteriarum eam quam Graeci aorten appellant, alii uenam crassam, quam iidem phleba pachian uocauerunt, alii diaphragma. et quid ultra tendimus quod facile explicare possumus, si id, quod senserunt dixerimus? nam singuli eum locum in phreniticis pati dixerunt, in quo animae regimen esse suspicati sunt.⁶⁷

In listing these various locations, Caelius neglects to offer any indication of the particular author who suggested each location, and the theoretical context in which they posited their arguments. He appears to do this deliberately, as a means of emphasizing the disparity of opinions offered by his rival physicians. The order in which he lists these locations highlights the fact that they are only variations on two key areas – the head, or the heart. Caelius is thus demonstrating how futile these debates are, since the authors are arguing over minor details. Since Caelius believes that it is not possible – or necessary – to identify a *locus affectus* in disease, he considers these debates worthless. While some authors may say that the head should be indicated as the location of the rational powers, based on the type and quantity of symptoms of phrenitis which appear in this part, the Methodists admit only that the head is *more* affected than any other part, not that it is the *only* part affected. In

⁶⁷ Caelius, *Acut.* 1.8.53-54 (52.12-28 Bendz).

regards to the question of the location of the rational powers, Caelius explains that the Methodists believe this to be undetermined.⁶⁸

Treatment of Phrenitis

The theory of the common states provides the basis of Caelius' approach to the treatment of phrenitis. Through the concept of *endeixis*, Methodist physicians need only identify the common state that is causing the disease in order to know how to treat it. Each state needs to be treated through the application of remedies that contain opposite properties: a case of stricture requires relaxing treatments, flux requires astringent remedies, and the mixed state requires either relaxing or astringent therapies, according to the state that is most predominant at any given time. In accordance with the Methodist doctrine that the common states affect the whole body, treatments must therefore be applied to the whole body. Nevertheless, Caelius recognizes that with phrenitis, the head is the most affected part, as indicated by the prevalence of symptoms occurring there, and focuses certain treatments appropriately.⁶⁹ Caelius believes that these curative properties can be found in a wide range of treatments, including pharmaceuticals, physical entities such as heat and light, and by the application of treatments such as venesection and cupping. When outlining the proper approach to the treatment of phrenitis, Caelius selects mostly those treatments which he considers as relaxing remedies. He is careful to highlight when these treatments cannot be used on patients with phrenitis caused by the mixed

⁶⁸ Caelius, *Acut.* 1.8.56 (54.11-13 Bendz): ...ita expugnamus, ut primo regale locum incertum remanserit, sed nos uarietas atque multitudo accidentium in capite signorum plus a cetero corpore docuit pati. ...*accordingly, we refute that in the first place, the ruling place remains uncertain. But the variety and great number of signs occurring in the head show us that it suffers more than the other parts of the body.*

⁶⁹ Caelius, *Acut.* 1.8.55 (52.29-54.7 Bendz), and Caelius, *Acut.* 1.8.57 (54.14-21 Bendz).

state, or when it is necessary to alter the regular approach to treatment, in order to suit the individual needs of each patient.

Like Aretaeus, Caelius begins his discussion of phrenitis treatment with a description of the proper sickroom for a phrenitis patient. The instructions for this room focus on keeping the patient safe, comfortable, and calm. Caelius seeks to remove any aspects that might stimulate the patient's delirium; he therefore suggests that the walls and bedding be plain-coloured and free of unnecessary embellishment, aspects which might induce false visions.⁷⁰ The patient's visitors should be limited in number, and restricted to only those people whom the patient likes or respects.⁷¹ Caelius also cautions that the deranged mind of the patient may cause him to toss about in bed, or even to try to jump out the windows; it is therefore necessary to ensure that the bed is well secured, and that any windows in the room are too high to be accessed.⁷² Caelius also provides instructions on how to restrain the patient physically, should this become necessary.⁷³

These basic instructions create an environment that is both safe and comfortable for the patient. Caelius also seeks to make this room therapeutic, through the proper application of heat and light. Caelius believes light has a relaxing property and darkness an astringent one; similarly, heat is thought to be relaxing, and cold constrictive.⁷⁴ In order to ensure that phrenitis patients are not negatively affected by their environment, Caelius explains that patients with stricture are to be kept in a bright, warm room, while those with the combined state require a dark, cool room.⁷⁵

⁷⁰ Caelius, *Acut.* 1.9.60 (56.13-21 Bendz).

⁷¹ Caelius, *Acut.* 1.9.59 (56.4-12 Bendz), and Caelius, *Acut.* 1.9.65 (58.22-31 Bendz).

⁷² Caelius, *Acut.* 1.9.58 (54.25-56.3 Bendz), and Caelius, *Acut.* 1.9.60 (56.13-21 Bendz).

⁷³ Caelius, *Acut.* 1.9.65 (58.22-31 Bendz).

⁷⁴ Drabkin, 1950: 39 note 1. This can also be inferred from the overall intention of Caelius' instructions.

⁷⁵ Caelius, *Acut.* 1.9.58 (54.29-56.1 Bendz): dehinc ob [obs]curationis proprietatem strictura laborantes in <loco> lucido atque tepido et amplo mediocriter locamus. *Henceforth, on account of the properties*

In neither case should the light or the temperature be too extreme. Excessive heat will increase the patient's fever, while too bright a light will harm the membranes of the brain.⁷⁶ As for extreme darkness and cold, Caelius reminds us that these are equally unnecessary, since 'extreme cold and darkness cannot reduce the acuteness of the disease'.⁷⁷ A very cold room will likely do little more than make the patient extremely uncomfortable. Caelius also believes that the warmth provided by bedding must be regulated by its relaxing or restricting properties. He specifies that patients with looseness should be given only lightweight blankets, while heavier, warmer blankets should be reserved for patients with stricture.⁷⁸

Caelius believes that it is important to recognize each patient as an individual case, and not to treat every patient in exactly the same way. In some instances of phrenitis, for example, the patient's derangement may make him shun the treatment that is most suitable for his form of the disease. Patients who should be placed in darkness might crave the light, whereas those who should be in a light room might insist on staying in the dark.⁷⁹ Caelius makes special allowance for this problem, explaining that the doctor must somehow devise a means of satisfying the demands of the patient, while still providing him with the appropriate therapy. If a patient dislikes the light, for example, the patient can be given a mask to wear over his eyes. If he

of darkness, we place those suffering from stricture into a moderately bright, warm, and spacious room.

⁷⁶ Caelius, *Acut.* 1.9.58-59 (56.1-4 Bendz): *etenim ultra modum feruens naturaliter febricula caput candit et rursus frigidus constringit atque corporis auget densitatem. item nimium lucidus membranam percutiet cerebri immodici splendoris causa. For qualities of heat beyond this will by their nature burn the head with fever, and in return cold will constrict and increase the thickness of the body. Likewise, excessive light will damage the membrane of the brain with its immoderate brightness.*

⁷⁷ Caelius, *Acut.* 1.9.60 (56.14-15 Bendz): *neque enim nimium frigidus neque obscurus passionis mitigare celeritatem potest.*

⁷⁸ Caelius, *Acut.* 1.9.60 (56.14-21 Bendz).

⁷⁹ Caelius, *Acut.* 1.9.61 (56.22-30 Bendz).

dislikes darkness, the doctor must allow a small amount of light into the room, in such a way that only the patient's face is illuminated.⁸⁰

If these minor adjustments are not sufficient to put the patient at ease, Caelius permits the doctor to go one step further in his alterations. If a patient with stricture demands to be put into a completely dark room, the room must be kept warm instead of cool. Similarly, a patient with looseness may stay in a light room, provided that his room is kept cool.⁸¹ Since Caelius describes this situation as being counter to the standard treatment only in minor matters, we must conclude that temperature is a more important therapy than light.⁸²

Having outlined the requirements for a proper sickroom, Caelius moves on to the remainder of his treatment regime. He discusses his course of treatment in chronological order, starting from the moment the patient is diagnosed with phrenitis. Throughout this section, Caelius counts the passage of time in three-day intervals, starting from the point at which all the signs of phrenitis have appeared. He refers to each recurring third day as the *diatritus*.⁸³ As David Leith explains in his study of this concept, the concept of the *diatritus* appears to have been invented by Thessalus as a therapeutic tool.⁸⁴ It appears to be based on the theory that diseases have regular

⁸⁰ Caelius, *Acut.* 1.9.61 (56.22-30 Bendz).

⁸¹ Caelius, *Acut.* 1.9.62 (56.34-58.2 Bendz): Sed si ita fuerint alienatione commoti qua obscurari totum uel luminari uelint, erit coniciendum, ut, quibus obscurum aerem fecerimus, calidum tamen faciamus, quibus autem lucidum, e contrario uero frigidum faciamus... *But if the derangements makes the patient so disturbed that he wishes to be in complete darkness or bright light, we will bring it together so that in those cases where we make the room dark we also make it warm, and in like manner where we make it bright, we make it contrarily cold...*

⁸² Caelius, *Acut.* 1.9.63 (58.7-10 Bendz): stringitur enim magis solutio uel strictura laxatur, si grauioribus auersis parua contrarietate uexantur, <siue> strictura laborantibus obscurum siue solutione laborantibus lucidum adhibendum iudicamus locum. *For looseness is made tight or stricture made more relaxed, if, avoiding more serious matters, in opposition to small torments we decide to bring a person suffering from stricture to a dark place, and a person suffering from looseness in a bright place.*

⁸³ Like other ancients, Caelius counts the days inclusively, therefore the *diatriti* fall on the 3rd, 5th, 7th, 9th days, etc. Leith, 2008: 587.

⁸⁴ Leith, 2008: 583-586.

cycles of paroxysms, occurring every third day.⁸⁵ In his instructions for the treatment of phrenitis, Caelius uses the *diatritus* as a chronologic structure for the timing of certain remedies. In recommending venesection, for example, Caelius suggests that the procedure be carried out before the end of the first *diatritus*, or at the very end of this period. This should be followed by a clyster, which is to be administered at the end of the second *diatritus*.⁸⁶ Given that Caelius counts inclusively, he believes that the venesection should be carried out before the third day, or at the very end of that day; the clyster is then administered 48 hours later.

The first treatments that Caelius describes are to be used during attacks of the illness, namely, when the signs of phrenitis heighten due to an increase of stricture in the body. At these moments, Caelius thinks that a patient should be kept awake until the attack begins to decline.⁸⁷ This prescription is based on Methodist belief that sleep has astringent properties, which will increase the severity of an attack of phrenitis.⁸⁸ This suggestion has its limits, however, since Caelius is aware that lack of sleep will eventually weaken the patient's body. He therefore permits his patient to sleep if the attack continues for an unreasonable amount of time.⁸⁹ When an attack has ended, Caelius recommends that the patient's head be fomented with compresses of warm, sweet olive oil. He believes that the warmth and sweetness of the oil are relaxing properties, which will help to relieve the inflammation of the membranes of the brain, and relieve the patient's derangement.⁹⁰ If the patient is suffering from

⁸⁵ Leith, 2008: 587.

⁸⁶ Venesection: Caelius, *Acut.* 1.10.70 (62.5-6 Bendz): *atque, si passio cogit, intra diatriton, si minus, in ipsa prima diatrito, ultra numquam... And if the disease compels it, [perform venesection] within the first diatritus; if not, perform it within the first diatritus, but never beyond this time...* Clyster: Caelius, *Acut.* 1.10.74 (64.5-6 Bendz): *Secunda uero diatrito, si uenter suum non agnouerit officium, clysterem adhibebimus... Indeed on the second diatritus (ie: the second recurring third day/ the fifth day) if the bowels do not admit to their own duty, we apply a clyster...*

⁸⁷ Caelius, *Acut.* 1.9.64 (58.11-21 Bendz).

⁸⁸ Drabkin, 1950: 197 note 1, and 495 note 14.

⁸⁹ Caelius, *Acut.* 1.9.64 (58.11-21 Bendz).

⁹⁰ Caelius, *Acut.* 1.9.68 (60.18-25 Bendz).

looseness, a fact that will be indicated by sweating, the head should be fomented with cold sweet olive oil; the cooler temperature will reduce the sweats, while the sweetness continues to relieve the stricture in the head.⁹¹ Caelius also suggests that the abdomen should be anointed with pieces of wool that have been dipped in olive oil: warm oil for cases of stricture, and cold green oil for cases of looseness.⁹² These cloths should be placed over the hypochondria, the groin, and the region of the bladder.

Caelius seems to view these applications of soothing oil as a beneficial form of treatment at the end of each paroxysm of the disease, and after particularly taxing remedies. He repeats these anointments after venesection, and again after cupping.⁹³ Caelius believes that the same servants should perform these applications each time, so that the patient does not become unnecessarily aggravated by the constant change over of attendants.⁹⁴ After these anointings, Caelius allows the patient to rinse his mouth with water and then take some to drink if he is very thirsty.⁹⁵ Here again, we see the principles of indication at work, since the amount of water that can be consumed is limited by the state that is afflicting the patient. If the patient has stricture, he may drink as much warm water as he likes, since it will help to dilute the constriction in his body. A patient with looseness, on the other hand, may only drink a small amount; too much water would exacerbate his looseness. If the looseness is very severe, this water should also be cold, so as to increase its astringent properties.⁹⁶

⁹¹ Caelius, *Acut.* 1.9.68 (60.18-25 Bendz).

⁹² Caelius, *Acut.* 1.9.66 (58.32-60.8 Bendz); and Caelius, *Acut.* 1.9.68 (60.18-25 Bendz).

⁹³ Caelius, *Acut.* 1.10.71 (62.11-18 Bendz), Caelius, *Acut.* 1.10.74 (64.3-10 Bendz), Caelius, *Acut.* 1.11.80 (66.22-29 Bendz).

⁹⁴ Caelius, *Acut.* 1.11.80 (66.22-29 Bendz).

⁹⁵ Caelius, *Acut.* 1.9.69 (60.26-36 Bendz).

⁹⁶ Caelius, *Acut.* 1.9.69 (60.34-36 Bendz): ...sed strictura sola laboranti plurimum, ut densitas irrigetur, solutione laboranti paruum uel, si plurima cogit solutio, etiam frigidum. ...*but if the patient is suffering mostly from stricture, give a greater amount of water, so that it will diffuse the thickness; if the patient suffers from stricture, give less, or if the looseness compels more, it should be cold.*

The next remedy that Caelius describes is venesection. Caelius considers this procedure to be highly effective in the treatment of the state of stricture, because of its strongly relaxing properties.⁹⁷ Caelius believes that it is very dangerous to apply this treatment for cases of phrenitis in which looseness is present. Caelius is also aware of the taxing nature of venesection, and cautions that the procedure should not be carried out on a patient who is not physically strong enough to undergo this treatment: it is for this reason that Caelius insists that venesection not be performed after the end of the first *diatritus* of the disease.⁹⁸ Caelius believes that phrenitis attacks a patient's nerves and sinews, greatly weakening his bodily strength.⁹⁹ If venesection is performed when the patient is not strong, fainting may result; this occurrence is not a good sign in any disease, and even less so when it occurs in phrenitis.¹⁰⁰

Caelius' time restriction for venesection is based partly on his regard for the overall health of the patient. He is also aware, however, that venesection is less effective when it is performed at the wrong time. In his chapter on the treatment of spasm and tetanus, diseases that are also brought upon by a severe state of stricture, Caelius explains the proper timing for venesection:

And in the increasing phase, venesection has its place, in which time it is not proper to apply cupping; nor in the time of cupping is it good to apply venesection, which is harmful. And the time for venesection is that in which also other remedies involving removal are proper, which is during the remission in an increase of the disease as a whole. During the increasing phase we use remedies that are directly softening.

⁹⁷ Caelius, *Acut.* 1.10.70 (62.2-10 Bendz); see also: Caelius, *Acut.* 1.17.167 (114.21-116-2 Bendz).

⁹⁸ Caelius, *Acut.* 1.10.70 (62.2-10 Bendz) and Caelius, *Acut.* 1.12.102 (78.18-26 Bendz).

⁹⁹ Caelius, *Acut.* 1.10.70-71 (62.2-18 Bendz).

¹⁰⁰ Caelius, *Acut.* 1.10.70 (62.2-10 Bendz).

etenim in augmento phlebotomia locum habet, quo tempore cucurbitam adhibere non licet, <ut>neque cucurbitae tempore phlebotomiam, quo noxia probatur. tempus etiam phlebotomiae illud est, quod etiam aliorum amputantium adiutoriorum, ut est dimissionis in totius augmento passionis. in accessione enim simpliciter mitigantibus utemur adiutoriis.¹⁰¹

This passage suggests that Caelius restricts the use of venesection to the first three days of phrenitis, because he believes that the disease is still on the increase during this time. Toward the end of the third day there is a temporary break in the increasing phase, providing the opportune moment to carry out venesection. After this time, it becomes harmful to use such drastic treatments.

Although Caelius gives specific instructions about *when* to carry out venesection, he has very little to say about *how* it is to be performed, especially in the case of phrenitis. In his account of phrenitis, Caelius claims that he plans to write a specific text on this topic; there is, however, no evidence to indicate whether it ever existed.¹⁰² Based on Caelius' recommendations for venesection in other diseases it seems likely that Caelius would have withdrawn blood from the patient's arm.¹⁰³ He appears to prefer this location primarily because it is the easiest part of the body in which to open a vein. The arm can be pulled away from the patient and held firm while the incision is being made, thereby ensuring that the patient is not accidentally harmed by a scalpel that comes too close to the rest of his body. His decision also seems to be motivated by the belief that, in most cases, the arm is not likely to be harmed by the

¹⁰¹ Caelius, *Acut.* 3.8.94 (346.33-348.3 Bendz). Spasm and tetanus are described at Caelius, *Acut.* 3.8.63-65 (330.8-35 Bendz).

¹⁰² Caelius, *Acut.* 1.10.70 (62.2-10 Bendz).

¹⁰³ See, for example, Caelius' use of venesection in hydrophobia (Caelius, *Acut.* 3.19.127 [368.11-20 Bendz]), acute intestinal obstruction (Caelius, *Acut.* 3.17.161 [386.24-32 Bendz]), pleuritis (Caelius, *Acut.* 2.18.105 [200.20-31 Bendz]), and chronic headache (Caelius, *Chron.* 1.1.11 [434.23-30 Bendz]).

effects of the venesection. When blood is removed from the body, the part that is cut open becomes constricted as a result of the extra blood that flows to the open wound. The body part is then further constricted by the pressure of the bandage that is used to close the wound.¹⁰⁴ Since the arm is rarely damaged by the presence of stricture, this extra stricture does not harm it in any way. On the other hand, if blood were to be taken from a part of the body that is inflamed or constricted as a result of a disease, the beneficial effects of venesection would be negated.

There is evidence in Caelius' text that he may also prefer to take blood from the arm in order to be able to control the amount of blood that is removed. In Book 3 of *Acute Affections*, for example, Caelius criticizes Hippocrates' suggestion of performing venesection on the patient's arm and head, as a means of cooling the body.¹⁰⁵ Caelius believes that this dual extraction is too dangerous, because it will result in the removal of too much blood:

Furthermore, blood should be drawn from the arm, not from the head, nor from many parts at the same time, for the sudden outflow of blood, having caused a collapse, does not permit a suitable extraction of blood, or an amount that is in accord with the great size of the disease.

dehinc ex brachio, non ex capite neque simul ex multis partibus phlebotomare, etenim repentina sanguinis effusio defectum faciens non sinit congruam fieri detractioem uel quantum magnitudini passionis est conueniens.¹⁰⁶

¹⁰⁴ Caelius, *Acut.* 1.17.182 (124.1-3 Bendz): etenim magis patientes adimplet partes, primo ex antecedenti fasciolae constrictione, secundo ipsius coactae materiae concursu. *And indeed, greater suffering affects the parts [from which blood is taken], first from the preceding constriction of the bandage, second from the pressure of the collection of material [at the site of the withdrawal].*

¹⁰⁵ Caelius, *Acut.* 3.17.153-155 (382.17-384.11 Bendz). This chapter discusses treatment of acute intestinal obstruction.

¹⁰⁶ Caelius, *Acut.* 3.17.155 (384.8-11 Bendz).

This belief is echoed in Caelius' harsh criticism of Diocles' treatments of phrenitis.¹⁰⁷ Here, Caelius explains that the withdrawal of blood from under the tongue is a mistaken, superstitious practice, since the flow of blood both congests the head, and can only be stopped with difficulty.¹⁰⁸

At the end of the third *diatritus* of phrenitis, the ninth day of the disease, Caelius advises that the patient's hair should be cut short, in order to let the head 'breathe freely'.¹⁰⁹ Forty-eight hours later, at the end of the fourth *diatritus*, the back of the head should be shaved in order to allow for the placement of cupping glasses.¹¹⁰ Caelius recommends this treatment for all phrenitis patients. In this first application of the remedy, he suggests that heated cupping glasses be applied to the back of the head, and that leeches be placed at several points across the forehead, so as to create a circle. Caelius believes that this will refresh the heaviness in the head, by enabling it to breathe.¹¹¹ If necessary, this effect can be increased by shaving the whole head and using only cupping glasses to make a circle around the head. Although this method will provide the greatest relief from stricture, Caelius cautions that the cupping instruments can also aggravate the patient's mental illness if they are left on too long.¹¹²

¹⁰⁷ Caelius, *Acut.* 1.12.100-103 (78.2-80.8 Bendz).

¹⁰⁸ Caelius, *Acut.* 1.12.103 (80.6-8 Bendz): *falsa denique ac superstitiosa est etiam ex uenis sub lingua constitutus sanguinis detractio. etenim caput implet et eius fluor abstineri difficile potest. Furthermore, it is a mistake and a superstition to remove blood from the veins situated under the tongue. Indeed it fills the head and this flow can be stopped only with difficulty.*

¹⁰⁹ Caelius, *Acut.* 1.10.75 (64.14-15 Bendz): *Alia uero diatrito caput detondemus. etenim detractis capillis partes reflantur plurima grauatione liberatae. After another diatritus, clip [the hair from] the head: having taking away the hair, the parts breathe, being free of much weight.*

¹¹⁰ Caelius, *Acut.* 1.11.76 (64.18-28 Bendz).

¹¹¹ Caelius, *Acut.* 1.11.76 (64.20-23 Bendz): *...atque sub ipsa fronte sanguisugas facimus inhaerere quattuor uel quinque, ut non ex una parte detractio fieri sanguinis uideatur, sed ueluti circulatim, <ut> totum spiret atque releuetur caput. ...and even to this forehead we attach four or five leeches, so that not from one place blood appears to be withdrawn, but as if in a circle, so that the whole head will breathe and be refreshed.*

¹¹² Caelius, *Acut.* 1.11.76 (64.18-28 Bendz).

Caelius uses two forms of cupping. In this first example, the heated cups are used ‘dry’, that is, they are applied to unbroken skin. In most cases, however, Caelius recommends the use of cupping with scarification. In this process, the cupping instruments are applied to the skin for a short period of time, in order to draw excess skin, flesh, blood, and *pneuma* up to the surface of the skin.¹¹³ The reddened areas are then sliced open very lightly, and the re-heated cups are placed over the cuts. As the air inside the glass cools and contracts, a vacuum is created inside the glass, which works to suck the blood and *pneuma* out of the body.¹¹⁴ These substances are removed at a very slow rate, which is why this treatment can be used directly on the affected parts. Unlike in venesection, the flow of blood to the area of scarification is not so strong as to increase the constriction in the part on which the instruments are applied.

After the cupping glasses have been removed from the head, Caelius recommends that cupping with scarification be performed on the neck, shoulders, hypochondria, and the area around the bladder.¹¹⁵ This procedure should also be repeated at the end of the fifth *diatritis*.¹¹⁶ In both instances, each part is to be treated in sequence, one after the other. Caelius believes that drawing blood from all areas of the body at once would be far too taxing on the patient’s body. As Caelius explains, the withdrawal of blood from many parts at the same time would have the effect as venesection, which

¹¹³ Caelius, *Acut.* 3.4.37 (314.9-12 Bendz): in usu enim uidemus sine ullo impedimento in febricitantibus effectum cucurbitae prouenire atque eductam detrahi materiam. adducitur namque caro et spiritus et sanguis. *In practice, we observe that the cupping glasses produce effects without any impediment in cases of fever, and having brought up matter it removes it. For flesh and pneuma and blood are brought up.* This reference to *pneuma* is part of Caelius’ critique of Asclepiades’ theory of cupping. *Pneuma* is not part of Methodist doctrine.

¹¹⁴ Caelius, *Acut.* 1.11.78 (66.8-14 Bendz). See also: Caelius, *Acut.* 3.4.37 (314.8-15 Bendz).

¹¹⁵ Caelius, *Acut.* 1.11.77 (64.29-66.7 Bendz).

¹¹⁶ Caelius, *Acut.* 1.11.79 (66.15-21 Bendz).

exhausts the patients' strength.¹¹⁷ Cupping is also useful as a remedy against pain.¹¹⁸ As mentioned above, each round of cupping should be followed by the anointing of the patient's head and abdomen, with oils that are suited to the common state causing the patient's phrenitis.

If a case of phrenitis continues for a long period of time, Caelius suggests that a regimen of passive exercise be introduced during the intervals between attacks of the disease.¹¹⁹ Caelius believes that passive exercise is a relaxing therapy, since the motion causes 'dilution and thinning' of the body.¹²⁰ Passive exercise is therefore beneficial for the whole decline of the disease, and not just the remission of an individual attack.¹²¹ It is important to note, however, that Caelius does not use prescribe passive exercise for cases where looseness is predominant: he believes that the relaxing properties of the movement would be very harmful to the patient. In these cases, Caelius recommends cupping without scarification, which is to be applied during periods of remission.¹²²

As the overall case of phrenitis begins to decline, Caelius believes that special attention should be given to the patient's emission of bodily fluids, loss of substance, and the condition of the wrinkles and furrows of his skin.¹²³ He views these aspects as an important means of determining whether the patient is on his way to recovery, or is still suffering from phrenitis. If the pulse continues to be small and fast, it

¹¹⁷ Caelius, *Acut.* 1.11.78-79 (66.14-15 Bendz): erat enim eiusdem temporis multas per partes effecta sanguinis detractio phlebotomiae, quae necessario uires absumat. *For the withdrawal from many parts at the same time will be the effect of venesection, which by necessity exhausts the patient.*

¹¹⁸ Caelius, *Acut.* 1.11.85 (68.35-70.11 Bendz).

¹¹⁹ Caelius, *Acut.* 1.11.83 (68.18-24 Bendz).

¹²⁰ Caelius, *Acut.* 1.11.84 (68.32 Bendz): tenuat enim atque dirarat motus. *Motion dilutes and even thins [the body].*

¹²¹ Caelius, *Acut.* 1.11.84 (68.28-30 Bendz): non enim dimissio accessionis, sed totius passionis declinatio nunc curationem poscit. quapropter oportet aegros perseueranter mouere, sed leniter atque sensim et sine ulla nimietate. *For now this remedy is required not only for the remission of the attack, but for the decline of the whole disease. For which reason it is necessary to continually move the patient, but gently and gradually, and without any excess.*

¹²² Caelius, *Acut.* 1.11.85 (68.35-70.11 Bendz).

¹²³ Caelius, *Acut.* 1.11.86 (70.12-20 Bendz).

indicates that the patient's strength has been exhausted, and that he is still very ill.¹²⁴ In these instances, Caelius suggests that wine may be given to the patient as a restorative treatment. He is very cautious about this practice, however, and cautions that the patient's family should be warned about the dangers of giving wine before the beverage is actually given.¹²⁵

Throughout his instructions for the treatment of phrenitis, Caelius gives recommendations regarding the patient's diet: the kinds of foods he is allowed to eat, and the times at which he is to be fed. In explaining the proper foods for a patient with phrenitis, Caelius seems to consider the ease with which they will be digested. In the early stages of phrenitis, he also considers the laxative qualities of the food, presumably as a more natural means of counteracting constipation of the bowels. Caelius does recommend the use of a clyster or enema at the end of the second *diatrius*, but generally takes a very negative view of this kind of remedy.¹²⁶

Caelius recommends that a patient receive his first meal after the venesection has been completed. At this stage he recommends foods that are easily digestible, and laxative.¹²⁷ If the patient suffers from stricture, options include bread moistened with water, spelt groats soaked in water or hydromel, or a gruel made from spelt groats cooked in olive oil, honey, dill, and salt. A patient with looseness should be given thick porridge, soft eggs, or bread.¹²⁸ These same kinds of foods are also prescribed after cupping.¹²⁹ In recommending these foods, Caelius is aware that the patient may not be willing to accept the foods that he is given. In these cases, Caelius specifies

¹²⁴ Caelius, *Acut.* 1.11.87 (70.21-28 Bendz).

¹²⁵ Caelius, *Acut.* 1.11.87-88 (70.21-72.8 Bendz).

¹²⁶ The clyster is recommended at Caelius, *Acut.* 1.10.74 (64.3-10 Bendz). For Caelius' dislike of clysters as a remedy, see Caelius, *Acut.* 1.12.102 (78.18-26 Bendz).

¹²⁷ Caelius, *Acut.* 1.10.73 (62.28 Bendz): *Cibum dabimus simplicem, digestibilem, paruum, laxatiuum...* We give small amounts of food that is easily digested, and laxative.

¹²⁸ Caelius, *Acut.* 1.10.73 (62.28-64.2 Bendz).

¹²⁹ Caelius, *Acut.* 1.11.80-81 (66.29 Bendz).

that the physician should take advantage of the patient's mental state, and deceive him into accepting the food.¹³⁰ If the patient cannot be tricked into eating, Caelius permits certain allowances to be made – as with the example of sleep, he believes that is more harmful to let the patient starve than to simply allow him to eat foods that are more to his liking.¹³¹ Caelius' only restriction is to prohibit the use of wine, which will only increase the patient's delirium.¹³²

Throughout the early stages of treatment, and up to the mid-point of the patient's recovery, Caelius recommends that the patient be fed only on every second day.¹³³ During this time, the days of fasting coincide with the treatments of venesection and cupping; Caelius appears to believe that it is harmful to carry out these remedies when the patient has recently eaten. As the patient recovers, Caelius believes that the patient will require larger amounts of food, and more nourishing kinds of foods, in order to be able to rebuild his strength: he recommends that the patient's diet be increased in proportion to the degree of his recovery.¹³⁴ To begin with, Caelius advises that the patient should continue to eat the same simple foods as before, except that now he should be fed every day. On those days which were fasting days in the previous cycle, a little amount of food should be provided; on the 'feeding' days, comparatively more food can be given.¹³⁵

As the patient continues to improve, Caelius advocates the introduction of 'middle foods' to the patient's diet. These include such foods as rockfish, brain, and non-acrid

¹³⁰ Caelius, *Acut.* 1.11.81 (66.30-68.6 Bendz).

¹³¹ Caelius, *Acut.* 1.11.82 (68.7-9 Bendz): *dabit enim quiddam laxamenti atque indulgentiae asperitatibus animorum concupita oblatio, et non omnino sine cibo atque nutrimento perseuerabunt. Give certain offerings of things desired to relax and even indulge the troubles of the spirits.*

¹³² Caelius, *Acut.* 1.11.82 (68.7-17 Bendz).

¹³³ Caelius, *Acut.* 1.11.82 (68.7-17 Bendz).

¹³⁴ Caelius, *Acut.* 1.11.92 (72.31-74.6 Bendz).

¹³⁵ Caelius, *Acut.* 1.11.92 (72.31-74.6 Bendz).

vegetables like beets and mallows.¹³⁶ Later, preserved and pickled foods and olives may also be introduced. Caelius' general rule at this stage of the disease is that less nourishing foods may be given in larger quantities, and more nourishing foods in smaller quantities.¹³⁷ He specifies that it is important to ensure that all the food that is consumed will be digested by the middle of the remission, so that it will be gone from the stomach when a subsequent attack occurs. As the patient's strength continues to build, Caelius adds poultry to the list of acceptable foods; pork and pigs' feet may be added shortly after, and goat's meat once the patient's strength is fully restored.¹³⁸ Caelius is still concerned with digestion at this phase: he therefore recommends that simple foods be given as the first course, along with foods that do not have a pungent effect. This excludes items such as figs, honey, boiled mead, apples, and mulberries.¹³⁹ Poultry may be served as the second course, except for birds that are naturally fat or that have been force-fed so as to become plump. Caelius believes that tough meats such as pork and lamb should always be served last.¹⁴⁰

When the disease appears to be in full decline and the patient is on his way to recovery, Caelius suggests that the same regimen of treatments be continued for at least one *diatrius*. In this way, the physician can ensure that the disease is declining, and that this is not simply a momentary restoration of the patient's strength.¹⁴¹ Caelius uses the removal of a patient's derangement as a sign of the start of his recovery. When the patient's mental derangement is entirely gone, he recommends that all the above treatments should be used together, except for cupping and

¹³⁶ Caelius, *Acut.* 1.11.93 (74.7-13 Bendz).

¹³⁷ Caelius, *Acut.* 1.11.93 (74.7-13 Bendz).

¹³⁸ Caelius, *Acut.* 1.11.94 (74.14-21 Bendz).

¹³⁹ Caelius, *Acut.* 1.11.95 (74.22-28 Bendz).

¹⁴⁰ Caelius, *Acut.* 1.11.95 (74.22-28 Bendz).

¹⁴¹ Caelius, *Acut.* 1.11.89 (72.9-16 Bendz).

venesection.¹⁴² By continuing this regimen after the complete decline of the disease, the doctor can ensure that complete sanity is restored. It is often the case that sadness or hilarity may still persist toward the end of the disease, and Caelius cautions not to permit a relapse. Mental stimulation is also very important at this stage, since tedium and sadness can also cause a relapse.¹⁴³ Caelius ends his discussion of the Methodist treatment of phrenitis with a warning about the potential effects of derangement on the mental powers on the body:

If while in health people come into diseases of the body due to very great anxiety, doubtless even those who are not yet purged from disease may return to the same condition, when their quality of spirit, as it is said, bestowed a wound on the sickbed.

nam si sani homines plerique anxietate in passiones corporis deuenerunt, nimirum etiam, qui nondum sunt passione purgati, in eadem redeant, cum animae qualitas sua, ut ita dixerim, cubilia quadam uulneratione affecerit.¹⁴⁴

Caelius' Doxography

Roughly half of Caelius' work on phrenitis is devoted to a discussion of the treatments for phrenitis that were put forth by some of his most notable predecessors.¹⁴⁵ Caelius includes this section as a means of contrasting the Methodist system of treatment with those that were suggested by the leaders of the other medical sects. Throughout this section, Caelius claims to provide a thorough and systematic

¹⁴² Caelius, *Acut.* 1.11.92 (72.31-74.6 Bendz).

¹⁴³ Caelius, *Acut.* 1.11.98-99 (76.12-26 Bendz).

¹⁴⁴ Caelius, *Acut.* 1.11.99 (76.21-26 Bendz).

¹⁴⁵ Caelius, *Acut.* 1.11.99 (76.26 Bendz): dehinc aliarum sectarum principes quid ordinauerint prosequamur. *Hereupon let us describe in detail [the treatments] which the leaders of the other sects have set out.* Caelius' doxographic discussion runs from *Acut.* 1.12.100-183 (78.2-124.16 Bendz).

review of each author's account of treatment. As is clear from his style of presentation, however, Caelius does not hold much regard for his predecessors, or their medical ideas.¹⁴⁶ His remarks on the other authors' treatments are harsh and biting, and make no allowance for their differences in medical understanding. Rather than providing complete accounts of their treatments and recommendations, Caelius focuses only on those aspects which he feels to be most problematic. The critical manner in which Caelius discusses these aspects highlights the 'inconsistent' and 'erroneous' teachings of his 'ignorant' predecessors.¹⁴⁷

Caelius' doxographic section is too long to discuss in detail in the context of this dissertation. To gain a clear understanding of how Caelius has manipulated the presentation of each author's treatments, it would first be necessary – as it was in this dissertation – to examine the individual theoretical backgrounds of each author, and thereby gain a clear understanding of the justifications behind their treatment regimes. For the purposes of the current study, however, it is useful to examine Caelius' main points of contention with these authors, and the aspects of their treatments that he finds most problematic. Thus, this review will begin with a brief look at the authors included in this section, and then discuss some of the issues that lead Caelius to critique their opinions.

Caelius discusses eight physicians in this section, dividing them first by sect and then by chronology. He deals first with the Rationalist physicians, namely, Hippocrates, Praxagoras, Herophilus, Diocles, and Erasistratus. These physicians make up the more traditional approach to medicine that influenced the ideas and

¹⁴⁶ van der Eijk, 1999b: 397.

¹⁴⁷ Caelius points out these aspects repeatedly; for examples of inconsistency, see: Caelius, *Acut.* 1.15.124 (92.5-6 Bendz), Caelius, *Acut.* 1.15.139 (98.32-100.1 Bendz), and Caelius, *Acut.* 1.15.154 (108.5-7 Bendz); incorrect teachings: Caelius, *Acut.* 1.16.161 (112.3-5 Bendz), Caelius, *Acut.* 1.16.163 (112.16-19 Bendz), and Caelius, *Acut.* 1.17.173 (118.16-17 Bendz); physician's ignorance: Caelius, *Acut.* 1.12.101 (78.15-17 Bendz), and Caelius, *Acut.* 1.16.157 (108.24-28 Bendz).

theories of Aretaeus and Galen; their medical theory uses logic and reason to explain the causes of diseases, and to determine the appropriate form of treatment. As we have seen in the earlier chapters of this dissertation, the Rationalists believe each person has his own individual nature, or essence, which affects the way in which an illness attacks his body.¹⁴⁸ When diagnosing and treating an illness, Rationalist physicians take into account the differentiating factors of each individual case, factors such as age, gender, place, climate, time of year, habits of the patient, and antecedent causes.¹⁴⁹ These physicians also consider other non-manifest entities within the patient's body, such as humours or elemental qualities, and then use reason and logic to deduce the appropriate treatment for the patient. As a result, 'proper' medical treatment will never be identical for all patients.

Despite his inclusion of these five Rationalist authors, Caelius discusses only those treatments that were offered by Diocles and Erasistratus. He introduces Hippocrates, Praxagoras, and Herophilus for the sole purpose of telling us that these authors did not record any of their treatments for phrenitis.¹⁵⁰ In his study of Caelius' doxographic method, Philip van der Eijk points out that the inclusion of this type of comment reflects Caelius' attempts at producing a complete catalogue of his predecessors' treatments of phrenitis:

¹⁴⁸ See also Frede, 1987: 267.

¹⁴⁹ Frede 1987: 268.

¹⁵⁰ Caelius, *Acut.* 1.12.100 (78.3-6 Bendz): Hippocrates igitur solum nomen uidetur tetigisse passionis libro, quem De ptisana scripsit, item libro Praedictiuo, quem Prorrheticum appellauit; nam curationem nullam tradidit. sed neque Praxagoras neque Herophilus. *It appears, therefore, that Hippocrates only touched on the name of the disease. It is in the book which he wrote, De ptisana, and also in the prognostic book which he called Prorrhetic; but he did not record any remedies. But neither did Praxagoras, nor Herophilus.* The text *De ptisana* is now known as book 2 of *Regimen in Acute Diseases*. Drabkin, 1950: 62 note 1. For a collection of Herophilus' surviving fragments, see von Staden, 1989. Praxagoras' comments on phrenitis have already been noted in Chapter 1 of this study.

*It is as if Caelius is methodically going through a list of names and feels the need to mention the fact that, in a given case, the name on his list is not followed by an account of his views.*¹⁵¹

By recording that Hippocrates had nothing to say about the treatment of phrenitis, Caelius is emphasizing the completeness of his doxographic account. What is not clear, however, is why Caelius ignores all the other references to phrenitis that occur in the Hippocratic Corpus.

Of all the authors he discusses, Caelius objects most to Asclepiades and his theories of atoms and corpuscles. His critique of Asclepiades' works takes up slightly less than two-thirds of this doxographic section, and contains some of his most biting and sarcastic criticisms.¹⁵² Caelius dislikes Asclepiades' opinions to such an extent that he feels it is necessary to explain many of Asclepiades' theories, and point out all the ways in which they are mistaken; only then does Caelius undertake to point out Asclepiades' flawed treatments of phrenitis. It is not clear why Caelius takes such a strong dislike of Asclepiades, although it is possible that this is somehow connected to the link between Asclepiades and his student Themison, who eventually broke from Asclepiades' teachings and developed the origins of Methodist doctrine. It is possible that Caelius is reacting to suggestions of a connection between Asclepiades' theories and his own Methodist views, and is therefore seeking to disprove any such implications.

¹⁵¹ van der Eijk, 1999b: 435.

¹⁵² Caelius, *Acut.* 1.14.105-15.154 (80.19-108.7 Bendz). Caelius also includes a long critique of Asclepiades' definition of phrenitis in the preface to book 1 of *Acute and Chronic Affections: Caelius, Acut.* 1.preface.6-20 (32.13-21 Bendz).

This possibility is strengthened by Caelius' critique of Themison's treatments of phrenitis.¹⁵³ Caelius believes that Themison's treatments of phrenitis were written before Themison broke from his teachers' sect, and created the foundations of Methodist theory. They are therefore open to criticism, both because they are founded upon faulty theories of disease, and because they are not consistent with his later ideas. At the end of his critique, Caelius is careful to point out that later, as a member of the Methodist sect, Themison contributed many good things to medicine.¹⁵⁴

Heraclides is the final physician whose remedies Caelius criticizes; he is the only Empiric physician whom Caelius discusses.¹⁵⁵ Caelius tells us that he was the last great leader of the Empiricists, and the best of them all¹⁵⁶; clearly, Caelius believes that he is the only Empiric physician worthy of his notice. Empiricists believe that medicine should be based on phenomena which can be observed and recorded. They reject abstract and general theories of how diseases operated within the body, and focus instead on finding effective therapies for each disease.¹⁵⁷ In order to identify an illness and select its proper treatment, these physicians take detailed observations of the case at hand, and compare them with earlier examples from their own experience, or from case histories written by other Empiricists. The greater the similarities between the current case and a previous one, the more likely that the same treatments will be effective on this new patient. Although critics of this sect argue that this

¹⁵³ Caelius, *Acut.* 1.16.155-165.

¹⁵⁴ Caelius, *Acut.* 1.16.165: *haec nunc Themison phreniticis curandis ordinavit, sed post ex methodica secta multa bona contulit medicinae. These are the remedies of phrenitis that Themison recorded at one time, but later, as a physician from the Methodist sect, he contributed many good things to medicine.*

¹⁵⁵ Caelius, *Acut.* 1.17.166-183.

¹⁵⁶ Caelius, *Acut.* 1.17.166: *etenim eorum posterior, atque omnium probabilior apud suos invenitur.* Drabkin (1950: 106 n.1) points out that a qualifier such as *great* must be inserted here in order for this text to be retained, since Heraclides was not the last leader of the Empirical Sect.

¹⁵⁷ Nutton, 2004: 148.

turned medicine into a mere process of trial and error, especially for new conditions and circumstances, the Empiricists respond that swift, yet cautious action is more effective to the patient than a long process of rationalization and deduction.¹⁵⁸

These, then, are the authors whose treatments Caelius chooses to review. Despite his attempts to offer a thorough discussion of these treatment regimes, Caelius presents a very selective version of their treatments and theories. In many cases, Caelius only mentions a few pieces of information – all of which he is critical of, leading us to believe that he has purposely left out a good deal of information. In criticizing the authors' opinions, Caelius frequently neglects the impact of their personal theories of disease upon the treatments that they prescribe for phrenitis. This leads to one of Caelius' main complaints about their suggested remedies for phrenitis, namely, that they prescribe their treatments inappropriately, especially as regards the timing of the treatments, the patients for whom the remedies are recommended, and the places on which they apply the treatments. Caelius highlights instances where remedies are offered at the wrong times in the disease, so that venesection might be prescribed after the patient has become too weak, or bathing might be recommended too early, before the disease has reached its declining phase.¹⁵⁹ Times of feeding are also critiqued in this regard, since most other authors do not share Caelius' belief that patients should only be fed on alternate days. There are instances where Caelius also condemns an author's decision to use – or withhold the use of – a treatment on a particular patient. He criticises Diocles, for example, for performing venesection on patients who get phrenitis from drinking too much wine, and may therefore suffer from looseness. Similarly, Asclepiades is berated for withholding venesection from

¹⁵⁸ Nutton, 2004: 148.

¹⁵⁹ Diocles is accused of performing venesection too late: Caelius, *Acut.* 1.12.101 (78.11-17 Bendz). Diocles' prescription of bathing is criticized at Caelius, *Acut.* 1.12.102 (78.18-26 Bendz); Themison's recommendation is criticized at Caelius, *Acut.* 1.16.161-162 (112.3-15 Bendz).

all phrenitis patients.¹⁶⁰ Asclepiades makes this decision on the basis that this remedy is only useful for pain, something that is not a symptom of phrenitis; Caelius disagrees, of course, arguing that venesection is a very useful remedy against phrenitis. In pointing out this mistake, Caelius simply ignores the fact that other physicians do not use the concept of the common states as the basis of their pathological theory, and have likely determined the benefit or harm of this treatment according to their own logical system. Caelius believes that his is the ‘correct’ approach, and that everyone else is simply mistaken in their views.

Caelius also disapproves of the inconsistencies that some authors display in recommending treatments that go against their own theories of disease. Caelius believes that it is important for the explanation for each remedy to be grounded in the medical theories put forth by each physician, regardless of how faulty those theories might be. He is strict in his application of this theory, and finds fault with authors who do not express corresponding views in each of their various works. A particularly harsh example of this kind of attack can be seen in Caelius’ criticism of Heraclides’ use of scammony juice in a purge for phrenitis that arises after indigestion.¹⁶¹ Caelius believes that this remedy is very dangerous, and would cause the patient’s body to soften and liquefy.¹⁶² In this very elaborate passage, Caelius explains that this treatment cannot adhere to the Empiricist dismissal of the unobservable, since the purgative process is entirely based on a belief in internal – and therefore *hidden* – substances: according to Empiric doctrine, these unobservable substances should not even exist.¹⁶³ Caelius draws out this criticism by unsuccessfully trying to find a justification for this treatment in humoral medicine,

¹⁶⁰ Caelius, *Acut.* 1.15.119 (88.14-27 Bendz).

¹⁶¹ Caelius, *Acut.* 1.17.180-181 (122.10-31 Bendz).

¹⁶² Caelius, *Acut.* 1.17.180 (122.16-19 Bendz).

¹⁶³ Caelius, *Acut.* 1.17.181 (122.21-22 Bendz). See also von Staden, 1999: 103.

and then by questioning the logic that inspired Heraclides to recommend the scammony purge in the first place.¹⁶⁴ Caelius wonders where Heraclides believed undigested matter was stored within the body: in the bowels, the head, or perhaps the whole body? Caelius thinks that the bowels are the most probable of these options, but points out that a clyster would have been a more appropriate treatment for congested bowels than a purge.¹⁶⁵ In this way, Caelius seeks to demonstrate that even if Heraclides' vision of the illness is sound, his method of treating it is not. Rather than try and find Heraclides' real justification for this treatment, Caelius concludes this discussion with his own interpretation of Heraclides' logic:

But in dismissing these uncertain things, he appears to leave the judgment of his work to the treatment itself, so that it might work like a sentient animal, separating the foreign substances from the natural parts, such as these undigested foods, and remove only these.

sed cum haec incerta dimiserit, uidetur iudicium sui operis medicamini dimisisse, ut tamquam sentiens animal operetur, separando a naturalibus aliena, hoc est cruditate corrupta, atque sola detrahere.¹⁶⁶

The sarcasm displayed in this summation reminds us that Caelius is not trying to understand the medical theories of his predecessors. His goal is simply to prove that his own phrenitis treatments are far more appropriate than anything that came before it.

¹⁶⁴ Caelius, *Acut.* 1.17.181(122.20-31 Bendz).

¹⁶⁵ Caelius, *Acut.* I.17.181 (122.25-28 Bendz): quaerendum etiam, ubi esse cruditatem suspicetur, quam scammonia putaret detrahendam. in intestinis? sed sic fuerat melius atque facilius eam clystere purgare. an in capite? an uero in toto corpore? *And we may look for the place where the suspected undigested food is, from where he believed it to be brought out. In the intestines? But it would be better and even easier to purge this place with a clyster. Or in the head? Or in the whole body?*

¹⁶⁶ Caelius, *Acut.* 1.17.181 (122.28-31 Bendz).

A final area in which Caelius finds fault with the remedies of his predecessors is with regard to the important, but smaller, details of a treatment that would enable other physicians to repeat it. This includes aspects such as the exact kinds of foods that may or may not be acceptable, specific amounts of particular substances (for example in recipes for pharmaceutical remedies), and the precise times at which treatments should be given. We have seen that Caelius relies on the *diatri* of a disease to indicate the timing of certain remedies; he believes that this is a set indicator of time, which can be clearly followed by any physician. He is therefore very critical of treatments that do not come with specific indications of when they are to be administered to the patient. In some cases, Caelius appears to be overly judgemental about these aspects: at one point, he criticizes Asclepiades for not being specific enough with his instructions about when to give water to the patient: Asclepiades apparently says that it can be given two times a day, but Caelius wants to know *exactly* when those two times are.¹⁶⁷ In another passage, Caelius accuses Themison for not being specific enough in barring the use of certain substances.¹⁶⁸ Here, Caelius tells us that Themison disapproves of the use of ‘strong-smelling substances’ in a particular remedy (he does not say which remedy); Caelius believes that Themison should have specified the exact ‘strong-smelling substances’ to which he was referring.¹⁶⁹ In these and other cases, Caelius’ complaint appears to be based upon his belief that instructions for the treatments of disease should be set out clearly and in a straightforward manner, so that any physician can repeat them, regardless of their theoretical backgrounds.

¹⁶⁷ Caelius, *Acut.* 1.15.130 (94.24-25 Bendz): est etiam uanum sine disciplina temporis potum ordinare. ait enim bis dandum in singulos dies. *It is useless to prescribe drinks without instructions of the timing; for he only says to give drinks on two occasions each day.*

¹⁶⁸ Caelius, *Acut.* 1.16.159 (110.18-19 Bendz): peccat etiam et in reprobandis odoramentis, non docendo, quae illa sint... *He is mistaken also in his disapproval of strong-scented substances, by not instructing us which they are...*

¹⁶⁹ Caelius, *Acut.* 1.16.159 (110.14-23 Bendz).

Caelius' extensive doxography demonstrates that he is well informed about the theories and approaches to phrenitis put forth by his most notable predecessors. In discussing their opinions, however, Caelius does not seem to see the value of these ideas. Instead, his evaluation of their remedies is filtered by his Methodist understanding of the cause of phrenitis, and the 'correct' way in which to treat this disease. Caelius criticises any recommendations for treatment that do not correspond with his own opinions, or which go against the Methodist logic of when or where to perform certain remedies. Caelius is also very demanding about the detail involved in these treatments, insisting that physicians spell out every aspect of their treatment. At the same time, Caelius is quick to attack these authors for being inconsistent in prescribing their various remedies. Caelius' understanding of the common states forms the basis of his entire concept of phrenitis and its required treatments. Based on his criticism, it is clear that he expects the same level of thoroughness from the theories put forth by the other medical sects. In highlighting these authors' inconsistencies of doctrine, Caelius is calling attention to what he sees as the unnecessary complications that their doctrines create.

Summary

As a Methodist, Caelius Aurelianus seeks to distance himself from the theories of the Rationalist tradition. In place of the humoral doctrines, he upholds the belief that diseases result from the common states, observable conditions in the body that are easily identified by trained physicians. This simplified approach to medicine enables physicians to focus on the treatment of disease, and not become distracted by speculative theories about the internal, and therefore hidden, processes that have caused the disease in the first place. The concept of the common states does not

require such complicated theories: one need only identify the common state that is present, and treat the patient accordingly.

Caelius' concept of phrenitis is guided by this Methodist background. In seeking to define phrenitis, he offers a list of four signs of the disease, specifying that all of these distinguishing characteristics must be present in a patient in order to make a diagnosis of phrenitis. Perhaps in order to avoid complicated exceptions, Caelius does not elaborate on the specific details of these characteristics. Aspects such as the manifestation of the delirium and the regularity of the fever's paroxysms are relegated to the category of 'symptoms', temporary characteristics of phrenitis that may or may not occur in a given case of the disease. In terms of cause, Caelius refers only to the common states; while admitting that there may be certain antecedent causes of disease, these lead only to the common states, not to specific diseases. For phrenitis, it is the state of stricture and the mixed state which can produce this disease. Each state results in a different type of phrenitis; Caelius believes that this is the only true way of differentiating between types of phrenitis. The common states also provide Caelius with guidance on how to treat phrenitis, indicating the proper form of treatment required in each case.

The Methodists' reliance on the common states conveniently absolves them from having to explain certain complicated aspects of their concept of disease. This is particularly true in regards to the causes of disease: none of the surviving Methodist sources explain the exact nature of the common states, or the connection between the states and the individual diseases. In his discussion of phrenitis, Caelius clearly explains that one common state can develop into a number of different diseases, yet he does not specify how this can happen, or whether there are factors which might encourage the likelihood of one disease being produced in place of another. Caelius

gives no explanation for his silence. He does not need to do this, since Methodist doctrines simply do not require him to provide this kind of information. The processes that cause disease are not relevant to treatment, and therefore have no place in Methodist doctrine. Even the very act of differentiating between diseases is not essential; Caelius admits that it may be useful to know which part is most affected in a particular disease, but reminds us that this has very little effect on the overall process of treatment.

Given that Methodist doctrine is so focused on the treatment of disease, it is surprising that Caelius does not try to explain the actual effects of his treatments on the body. While suggesting that certain of his treatments are meant to diminish a patients' state of stricture, for example, he does not explain how this process actually works. If diseases are affections of the entire body, it would seem logical for the remedies to reduce the stricture in the body as a whole. But how is this accomplished? Are relaxing remedies meant to remove the common state of stricture, as if it were some kind of foreign substance that has settled in the body? Or is it a question of reducing the extreme state of stricture to return the body to some natural condition of internal balance? The Methodist response is silence: since they do not provide a description of the nature of the common states, they cannot provide an explanation for the overall effects of their treatment. Any such explanation would require reference to hidden processes, and thereby violate the rationale of Methodist doctrine. Perhaps it is this inability to provide a proper explanation that leads Caelius to be so dogmatic in the application of his Methodist beliefs. This could also account for his unsympathetic approach to doxography, in which his rejection of the more traditional forms of medicine often appears more like sheer hostility towards these early authors.

But what of Caelius' concept of phrenitis? With such a different set of theories underlying his explanation, we might expect Caelius to produce a vastly different concept of this disease. This, however, does not happen. We see in Caelius' account of phrenitis the same kinds of symptoms that were identified by Aretaeus and Galen. The treatments, too, are very similar, despite being prescribed according to a different set of cause-based criteria. Although he does not accept the concept of a *locus affectus*, Caelius nevertheless admits that phrenitis affects the head more than any other part of the body. While he does not comment on the location of the rational powers, this concession to a *more* affected part parallels the locations of phrenitis suggested by Aretaeus and Galen. It is only in respect to cause that we see a great variation in Caelius' concept of phrenitis.

Conclusions

What is phrenitis? From this study, we can see that, for Aretaeus, Galen, and Caelius Aurelianus, the term ‘phrenitis’ represents a relatively consistent concept: that of an acute disease of the physical body, with the common features of fever, delirium, and, in many cases, the plucking motions of the hands known as *crocydismos* and *carphologia*.

Looking a little deeper, we are able to examine the subtleties that appear in the different descriptions of this concept, variations of opinion which result from personal interpretation, and from the influence of the different medical backgrounds of each individual author. Regarding the symptoms of phrenitis, for example, these variations are in the details: while each author believes that phrenitis produces delirium, there is discrepancy among the exact explanations of the manifestations of that delirium. This discrepancy emerges from each author’s interpretation of this symptom, and his specific understanding of the structure of the mental powers.

Aretaeus’ delirium, ἡ παραφορή, is a derangement of the sensory powers, causing patients to see things that do not really exist. The rational powers of the mind are not directly affected in this disease: these powers are located in the heart, while phrenitis is located in the head, the starting point of the nerves, the transmitters of sensation. For Galen, ἡ παραφροσύνη is caused by affection of the brain, either through primary affections like phrenitis, or through secondary affections from other affected parts. Galen believes that all powers of the mind are located in the brain; depending on its particular form, a case of phrenitis can affect the rational powers, the sensory powers, or both. Galen recognizes that many other diseases can also result in delirium, and is therefore careful to identify the exact characteristics of phrenitis-

delirium, to assist in the diagnosis of this disease. Finally, for Caelius Aurelianus, the ‘delirium’ of phrenitis is acute mental derangement, *alienatio mentis*. Caelius’ explanation of phrenitis clearly demonstrates the ancient belief that so-called ‘mental diseases’ are actually diseases of the physical body: he argues that phrenitis is an affection of the entire body, which cannot be identified with one particular location. He concedes, however, that diseases can affect certain parts of the body more than others: in phrenitis the head suffers most, as indicated by the prevalence of minor symptoms that appear there. Regarding the powers of the mind, Caelius will not – nor does he see the need to – assign the rational powers to a particular part of the body: due to his Methodist background, Caelius does not think that such a location can be identified, nor does he believe that it is in any way relevant to the understanding of a disease.

The plucking motions of the hands known as *carphologia* and *crocydismos* demonstrate some of the changing attitudes about symptoms of phrenitis. While these symptoms are described by the Hippocratic authors, they appear in the Corpus as symptoms of a variety of different diseases, and are not seen to be particularly significant to phrenitis. For Aretaeus, these symptoms seem to be a regular part of phrenitis: the consideration of these symptoms in Aretaeus’ discussion of treatments indicates the frequency with which these symptoms are believed to appear in cases of this disease. Galen takes a slightly different approach, indicating that these symptoms occur only in certain cases of phrenitis, those which affect the sensory powers. With his more complex understanding of human anatomy, he explains that the symptoms arise when yellow bile combusts in the brain and sends smoky fumes into the blood vessels of the eyes. Of all the physicians, Caelius places the most significance on

carphologia and *crocydismos*, considering them as a requisite sign for the diagnosis of phrenitis.

There is considerably more variation in the different accounts of the secondary symptoms of phrenitis. Nevertheless, it is the significant symptoms of the disease that have the greatest influence on the concept of phrenitis: these are the symptoms which enable a physician to diagnose a case of phrenitis, and differentiate between it and other similar diseases. It is clear from the accounts of phrenitis examined in this dissertation that differential diagnosis of phrenitis becomes increasingly complicated over time, owing to the enhanced understanding of the body's structures and functions. In their discussions of phrenitis, Aretaeus, Galen, and Caelius each provide some indication of the features to look for when differentiating between phrenitis and other similar diseases. For all three of these authors, fever is the primary distinguishing sign of phrenitis: without fever, no instance of delirium can be considered a case of phrenitis. The specific characteristics of the delirium are also important, especially when distinguishing between phrenitis and other similar diseases. Depending on the physician in question, phrenitis is viewed as being comparable to mania, melancholia, and lethargy, as well as certain unnamed forms of delirium.

The influence of the different medical backgrounds of Aretaeus, Caelius, and Galen is most obvious in their individual discussions of the cause of phrenitis. Aretaeus' Pneumatic explanation of the disease is clearly influenced by the Rationalist tradition. Based on the comments in his chapter on treatments, it is clear that Aretaeus shares the Rationalist belief that phrenitis is caused by a *dyskrasia* of heat and dryness. Thanks to developments in medical science, Aretaeus can give a detailed anatomical explanation for this *dyskrasia*: the body has a natural system of

heat maintenance, involving the heart, lungs, and bowels. As this system breaks down, and the various parts cease to function normally, the body becomes unable to regulate its internal heat; eventually, the *dyskrasia* is created. What we are lacking, however, is Aretaeus' explanation of why this system might begin to break down.

Galen also claims to belong to the Rationalist tradition, yet his explanation of the causes of phrenitis is not as strongly influenced by these ideas. Galen's reliance on the hot, dry humour of yellow bile as the cause of phrenitis is clearly connected to the works of the Hippocratic Corpus; this, however, is roughly as far as the Rationalist influence extends. Galen's anatomical explanation for the cause of phrenitis is based on his own hands-on anatomical research. This enables him to locate both phrenitis and the rational powers in the brain; to justify his belief that phrenitis is a primary, not secondary affection; and to explain how the visions that result in *carphologia* and *crocydismos* come about. While Aretaeus' account of the cause of phrenitis is also influenced by anatomy, his explanation of cause is constrained by his reliance on the concept of *dyskrasiai* as the cause of disease. Galen's willingness to step away from the doctrines of the Rationalist tradition has enabled him to create a much more detailed explanation of the cause of phrenitis.

As a Methodist, Caelius Aurelianus believes that phrenitis arises from the state of stricture, or the combined state of stricture and looseness. As a result, his basic explanation of cause bears little resemblance to causal explanations that adhere to the Rationalist tradition. Caelius also pays little attention to anatomy. He does not reject anatomical knowledge entirely, but tries not to let it have a significant impact on his explanation of phrenitis. In spite of these attempts, however, Caelius' discussion of the cause of phrenitis does appear to be influenced by non-Methodist views of disease. He reports, for example, that phrenitis can have antecedent causes such as

the drinking of too much wine, or excessive exposure to heat, factors suggested by Rationalist, and other physicians. Similarly, Caelius' admission that certain diseases affect some parts more than others is evidence of his need to make concessions in his doctrines, if only to respond to the criticism of other physicians.

The final aspect of phrenitis, treatment of the disease, shows only minor differences between our three authors. Since treatments have to counteract the cause of a disease, it is not surprising that Aretaeus, Galen, and Caelius each offer different explanations of the goals they are trying to achieve in prescribing treatments for phrenitis. Aretaeus seeks to remove the *dyskrasia* of heat and dryness, and restore the body to its state of *eukrasia*. Galen's treatment is also based on the reduction of excess heat and dryness, as well as a removal of the yellow bile that has contaminated the brain. Caelius, following the inherent indication of the common states, seeks to relax the body against the astringent effects of the state of stricture; some element of astringency will also be required to counteract the mixed common state.

While each author has his own reasons for choosing the remedies that he recommends, there is a notable similarity in the overall approach that these authors take to the treatment of phrenitis. These authors each suggest bloodletting and/or purgation as one of the first treatments to counter the disease. Each author recognizes the potential dangers inherent in venesection, and is therefore careful to limit its application to only those patients who are strong enough to withstand the procedure. For Galen and Aretaeus, venesection empties the body of its contaminants, allowing later remedies to rebuild the body as necessary. For Caelius, it is simply the most effective way of relieving the stricture in the body.

These authors also employ a variety of pharmaceutical remedies, applied both topically and internally. The specific recipes for these treatments vary, since each

author is looking for a slightly different set of beneficial properties. Nevertheless, these are all chosen in consequence of the theory that the properties of a remedy should be the direct opposite of those that are causing the disease: cooling and moistening treatments heal excess heat and dryness, and relaxing remedies heal stricture. The differences in these remedies are only in the details – fundamentally, they are actually very similar. Diet is also a concern for these authors; they each provide lists of appropriate foods, which have been selected according to the beneficial properties of each substance. For Aretaeus, these are chosen on the principle of opposites for opposites; Caelius focuses on the digestive properties of the foods he prescribes, offering laxative foods for stricture, and more sticky foods for looseness. Despite Caelius' attempts to disassociate himself from the Rationalist tradition, this shared interest in diet as a means of treatment has its roots in the Hippocratic treatises on regimen.

The concept of phrenitis, however one chooses to explain or to treat it, cannot be separated from the question of the location of mental powers, and the connection between this location and that of phrenitis itself. With delirium as such a significant aspect of phrenitis, concepts of how this disease and its symptoms are caused must incorporate ideas about the rational mind. In the Hippocratic Corpus, authors were very creative in their suggestions, considering both physical places such as the heart or brain, and fluid entities, such as the blood, or breath. With the anatomical discoveries of the third century BC, however, these options changed. The discovery of the nerves placed sensation in the brain, offering physicians a physical conduit for sensation, and a more substantial justification for the possible location of the rational powers in the brain. At the same time, the clarification of internal structures in the

rest of the body gave physicians a new physical schematic upon which they could base their explanations of the body, and the functioning of its various parts. From a modern perspective, it would seem logical for these new discoveries to have an immediate effect on the understanding of the body, and of the rational powers. Nevertheless, several hundred years later, it is only Galen who permits these developments to alter his views on phrenitis, and on diseases in general. Aretacus' explanation of phrenitis still relies heavily on traditional concepts of disease causation; his acceptance of the nerves, and therefore sensation, in the base of the brain demonstrates only partial reliance on this new approach to the places of affection. Caelius, as the latest author in our study, could be expected to have the most advanced concept of phrenitis, influenced by Galen and his contemporaries. It is perhaps surprising, therefore, that Caelius seems to reject these anatomical discoveries entirely, refusing to comment both on the location of diseases in the body, and the part in which the rational powers are located. Caelius distils all diseases into effects of one of the three common states. The differentiation between diseases is, for Caelius, merely an exercise in discussion, having very little impact on the treatment of disease.

Of the three authors in this study, Caelius offers the most elaborate account of the differential diagnosis of phrenitis. His book on phrenitis contains three chapters addressing this issue: one that differentiates between phrenitis and cases of delirium that appear during paroxysms of diseases like pleuritis and peripneumonia; one that points out the differences between phrenitis and mania that is accompanied by fever; and a final chapter on how to distinguish between phrenitis patients who are asleep, and those who are suffering from lethargy. From these chapters, we see that, in

addition to the fever, Caelius bases his diagnosis of phrenitis on the characteristics of the delirium, the qualities of the pulse, and the presence of *carphologia* and *crocydismos*. The delirium must arrive after the fever; it must also be continuous, not increasing and decreasing in accordance with the attacks of the disease. The pulse must be small and rapid, and the patient must display *carphologia* and *crocydismos*. Caelius is also aware of the secondary symptoms that can accompany phrenitis, which include both behavioural and physical aspects. He does not use these for diagnosis, however, but simply as indicators of the severity of a case of phrenitis.

As it stands today, Aretaeus' explanation of how to distinguish phrenitis is the least detailed; it is not clear what additional information would have been included in the now missing chapter on causes and symptoms of this disease. Provided that a fever is present, Aretaeus diagnoses phrenitis according to the manifestation of the delirium, questioning whether the patient sees imaginary objects, or is simply misinterpreting otherwise normal sensory data. The former situation suggests phrenitis, the latter would be mania or melancholia. Like Caelius, Galen requires specific details about the nature of the delirium: is it continuous? When did it start? Does it come and go with the rise and fall of the fever, or has it remained through the entire course of the illness? All of these questions help Galen determine whether the delirium is caused by a primary, or a secondary affection of the brain; if it is the former, it is possible that the disease is phrenitis. Like Aretaeus, Galen also questions whether the patient shows damage to the rational powers or the sensory powers. In his opinion, however, both manifestations point to phrenitis, but to two different forms of the disease. In cases where delirium seems almost phrenitic, Galen relies on the secondary, preliminary symptoms of the disease in order to diagnose phrenitis.

It is interesting that Caelius provides such a detailed account of the differential diagnosis of phrenitis, since this information is largely irrelevant to his treatment of disease. Caelius' Methodist doctrines base treatment on the underlying common state that causes the disease, not on the disease itself. For this reason, Caelius justifies the need for these diagnostic chapters by explaining that it is a useful exercise to know how to distinguish between different diseases of the same general character. It is equally likely that Caelius' interest in this subject is due to the fact that all the other schools of medicine would have been participating in this debate, and Caelius wanted his own opportunity to contribute to the discussion. Caelius has had to be creative in his diagnostic scheme, however, since his doctrines restrict him from relating the differences in the diseases to the part of the body that they are thought to affect. His doctrines permit him to say only that certain parts are affected *slightly* more than others. Aretaeus and Galen are not limited by such a restriction, and are therefore easily able to define phrenitis based on the activities of the parts that they affect.

It is significant that phrenitis exists as a well-defined, clinical concept of disease from the time of the Hippocratic Corpus through to the 2nd century AD and beyond. It is even more significant that the descriptions of symptoms of, and treatments for this disease also remain relatively similar. The accounts of the causes of phrenitis do change considerably between authors. This is to be expected, however, given the various approaches to medicine that developed over time. Advances in medical research helped these physicians define the structure and functions of the various parts of the body, which, for some authors, led to a more consistent view of the body, and of the diseases which affect it. Aretaeus and Galen, for example, are clearly influenced by anatomical research, and the impact of this knowledge on their

understanding of the location and functioning of the rational powers. They apply this information to their explanations of phrenitis in different ways: Aretaeus works to incorporate anatomy into his more traditional beliefs about *dyskrasia* as the cause of phrenitis. Galen, on the other hand, is happy to develop a cause for the disease that relies mainly on anatomical evidence. Caelius takes a completely different approach. Seeing the disagreement caused by these advances in medical research, he suggests an approach to phrenitis that does not rely on such controversial aspects. As a Methodist, he tries to focus only on the main goal of medicine, namely, to cure patients of their diseases. Caelius is clearly aware of the debates regarding the locations of the mind and of the various mental diseases, yet continues to uphold the Methodist opinion that the place of the rational powers cannot be known. In regards to the location of the mental disease, Caelius acknowledges that phrenitis affects the head more than any other part of the body, yet insists that phrenitis, like all diseases, is an affection of the entire body which requires a holistic approach to treatment.

While ancient medicine does not separate mental diseases from physical diseases, it is evident that ancient physicians have a clear understanding of the various mental powers, and the different ways in which they could become affected by disease. Overall, the consistency and specificity with which these authors describe phrenitis provides an interesting look at the evolution of one particular mental disease, and the ways in which larger developments in medicine changed – or didn't change – each author's explanation of this disease. While one would expect that advances in anatomical knowledge would have a significant impact on the understanding of a disease, this is not always the case. For certain authors, a reliance on traditional approaches to medicine remains the preferred course; certain advances can be worked into this system as necessary, so long as the fundamental issues remain the same. For

others, the creation of an entirely new approach is the answer. In this study of concepts of phrenitis in the 1st/2nd century AD, Aretaeus is the author who clings to tradition. Galen and Caelius create new approaches to the cause of phrenitis, yet with completely different results. In all of these cases, these authors' explanations of how phrenitis is caused cannot change the basic facts, that the disease concept known as phrenitis continued to represent an acute form of mental derangement, always accompanied by fever.

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