A Study of Visual Hallucination in Classical and Hellenistic Antiquity

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Contents

Note for the Reader (abbreviations, translations and conventions)

All abbreviations to ancient texts in footnotes follow the *Oxford Classical Dictionary*, with the exception of the Hippocratic texts, which follow the abbreviations in E. M. Craik's *The Hippocratic Corpus: Content and Context* (London, 2015: v-viii).

Ancient sources are cited by the name of the author, followed by the title of the work and line numbers/section where appropriate. The individual texts and translations used can be found in the Bibliography, under 'Primary Texts and Translations'.

All translations of the Hippocratic texts come from the Loeb Classical Library (LCL), unless otherwise stated, followed by the last name of the translator and page number(s) of the LCL volume consulted in square brackets, e.g. [Smith, 168-169]. Full bibliographic details of the LCL vols. consulted appear in the Bibliography.

When quoting from the ancient texts, I have maintained the Greek original of some key terms and phrases. However, I have transliterated technical terms used frequently in my discussion e.g. '*φαντασία'* = '*phantasia'*.

Abbreviated titles employed in references and bibliography:

DSM V	*Diagnostic and Statistical Manual of Mental Disorders*. 5th ed. (2013) American Psychiatric Association. American Psychiatric Publishing. Arlington.
LCL	Loeb Classical Library
LS	*The Hellenistic Philosophers* (1987) 2 Vols. Long, A. A. & Sedley, D.N. (eds.) Cambridge University Press. Cambridge.
SVF	*Stoicorum veterum fragmenta* (1903-1905), 3 Vols. Von Arnim, J. (ed.) Teubner. Leipzig

Introduction

This dissertation will examine accounts of visual hallucination from the Classical and Hellenistic periods from a variety of perspectives to consider the relationship between visual misperceptions and madness.[1] To achieve this I adopt a thematic approach, drawing upon a range of primary textual sources – medical, philosophical and tragic – which describe or discuss the topic. As we will see, the various theories put forth by the writers on hallucination also offer insight into ideas on the workings of the mind and body in these periods, which in turn, inform the writers' understanding of why those experiencing madness may see things that others around them do not.

Earlier Approaches to Madness

The topic of madness in the Classical world has been approached from a variety of different perspectives, and the bibliography is extensive.[2] I consider here a selection of the most influential studies which have contributed greatly to our understanding of madness in antiquity and those which have informed my approach.

E. R. Dodds' 1951 seminal work *The Greeks and the Irrational* remains hugely influential in legitimising the academic study of madness and is lauded for its culturally sensitive approach to the 'irrational' aspects of Greek culture. Of particular interest is his chapter on the 'The Blessings of Madness', which emphasises the important role madness held in Greek religious experience.[3] This means we must consider that madness was sometimes viewed as a positive state, depending upon its context and manifestation. A roughly contemporary article by I. E. Drabkin (1955) entitled 'Ancient Psychopathology' sought to establish some general recommendations, which would contribute to developing the scientific study of madness in antiquity. Within the article Drabkin stresses the importance of identifying what constituted mental disease and how Graeco-Roman medicine explained, classified and sought to treat them.[4] This is a recommendation that has been enthusiastically taken up in later scholarship, and much has been written on the canonical

[1] I intentionally adopt the term 'madness', aware of its ambiguity, to cover a range of experiences in antiquity encompassing mental illness, irrational behaviours, prophetic madness and inspired states.
[2] I recommend Thumiger's (2017a) well-rounded bibliographic survey of the *status quaestionis* of the mind and mental health in the ancient world in her recent monograph on the subject.
[3] Dodds (1951: 64-101).
[4] Drabkin (1955: 224).

triad of psychic illness (mania, phrenitis and melancholy) and ancient ideas upon how mental well-being was created, maintained and destroyed.[5]

Other scholars have approached madness from a literary point of view;[6] most relevant to my approach is R. Padel's work on Greek tragedy, which explores Greek tragic notions of the mind and self (1992) and the vocabulary and imagery of tragic madness, with a focus on divine causation (1995). Both studies offer examples and analysis of metaphorical expressions of madness, supported by more technical sources, which are in my opinion, unsurpassed in their perceptiveness.[7] I also adopt the idea that fictional sources reflect and contribute to the conceptualisation of ideas such as madness in the cultural milieu for which they were created.

Finally, a recent collection of papers edited by V. W. Harris (2013c) in a volume entitled *Mental Disorders in the Classical World* is another important contribution in terms of its scope and the wide range of theoretical approaches it employs. The amalgamation of medical, philosophical and literary sources examined provides a far-reaching overview of madness in the ancient world by making use of source material from different areas of knowledge and performance. This approach has greatly influenced my methodology, which also incorporates a range of literary evidence in an attempt to reconstruct an understanding of hallucination in the Classical and Hellenistic periods.

Studying Hallucination

Studies of hallucination as a symptom of madness in antiquity, in contrast to studies of madness more generally, are few and far between. This lack of scholarly attention is perhaps surprising given that references to madness causing perceptual disturbances (illusion, hallucination, delirium and derangement) are certainly not absent from the ancient sources.

One reason for the apparent paucity of studies is perhaps linguistic, given that no cognate exists in ancient Greek. The term 'hallucination' is derived from the Latin word *[h]alucinari*, to wander in mind, and first appeared in a translation of a work by Swiss

[5] For instance, McDonald (2009) on phrenitis; Pigeaud (1987) on mania; see Jouanna (2012: 229-258) on melancholy in ancient Greek medicine, and van der Eijk (2005:139-168) for philosophical approaches to melancholy. See also, Temkin's (1971: 3-27) history of epilepsy which addresses the 'sacred disease'. On madness in philosophical writing see, Ahonen (2014).

[6] See O'Brien-Moore (1924), which despite its age, is perhaps the most comprehensive account of 'elevated representations of madness' (p.7) in literature and Hershkowitz (1998) on madness in epic.

[7] For further discussion of Padel's contribution, see Gill (1996).

theologian Ludwig Lavater in 1572.[8] Although this may pose some difficulties in identifying hallucinatory experiences in the ancient texts, I do not believe that this causes an insurmountable problem. There seems to be no doubt that the phenomena, as we understand it now, certainly existed in antiquity. As Harris asserts, '[t]he Greek vocabulary of hallucinatory experiences is characteristically rich, especially in the matter of things seen…'. [9] We will encounter various terms to describe the phenomenon in the course of this study, which will support this view.

For the purposes of identifying what we should interpret as a hallucination in ancient testimonies I follow the current standard definition of hallucination as set out in the most recent edition of the Diagnostic Statistical Manual of Mental Disorders: 'Hallucinations are perception-like experiences that occur without an external stimulus.'[10] It goes without saying that we cannot presuppose that ancient ideas which seem to indicate hallucinatory experiences are exactly the same as ours. I merely adopt this definition to impose some clear parameters of what will be included in this study and to mitigate any problems with vocabulary. In summary, I will include accounts or descriptions where an individual perceives something that others around them do not and for which no obvious physical object of perception exists. With this established, it will be useful now to discuss the main contributions to the study of hallucination in the Classical and Hellenistic world to date.

Earlier Approaches to Hallucination

In 1983 Jackie Pigeaud became the first to explore the issue of hallucination in any detail, with a particular focus on Stoic, Skeptic and Epicurean philosophy. Pigeaud's analysis identifies that distinguishing between illusion and hallucination was a key concern in ancient philosophical writings.[11] The words included in the title of the study '*Voir, imaginer, rêver, être fou…*' succinctly capture the other strand of Pigeaud's argument: that visions (illusions and hallucination), imagination, dreams and madness are all connected, which he explains via their relationship to *phantasia.*[12] I will trace the development of this term, in relation to hallucination specifically, in my chapter on philosophical sources below.

[8] Sarbin & Juhasz (1967: 345) and La Barre (1975: 9).
[9] Harris (2013a: 288).
[10] DSM V (2013: 87).
[11] A distinction which is commonly attributed to the French nineteenth century psychiatrist Jean-Étienne Dominique Esquirol (Sarbin & Juhasz, 1967: 349).
[12] Pigeaud (1987: 23).

On the topic of auditory hallucinations, Leueder and Thomas (2000) looked at the various meanings which have been applied to hearing voices from the classical period to the present day. Two chapters address hearing voices in antiquity; the first, on the communication between men and gods in the *Iliad* and the second on Socrates' daemon, which is reported as a disembodied voice that frequently spoke to him. The study focusses on the importance of the individual's experience in understanding hallucinations, which they see as fundamentally connected to personality, life experience and cultural setting. It is notable that both the ancient hallucinatory experiences discussed in this study are conceptualised as communications with the supernatural world. Similarly, Giulio Guidorizzi's (2010) *Ai confine dell'anima: I Greci e la follia* suggests that the appearance of gods to men in Homer gave poetic form to what was probably a common hallucinatory experience in pre-classical Greece.[13] Unfortunately, I do not believe that this claim can be substantiated without further evidence but it is, nonetheless, thought-provoking, and may be supported by other studies, which have hypothesised that hallucinations of gods are more common in societies with high levels of religiosity.[14] Guidorizzi's overall approach has much in common with Dodds' (1951) earlier approach to madness in the ancient world, particularly in its emphasis on Plato's ambivalent feelings towards the topic and its celebration of the irrational in Greek culture.

More recently, V. W. Harris approached the topic in a short study titled, 'Greek and Roman Hallucinations', which constitutes the most focused discussion on the topic to date, dealing with auditory and visual hallucinations from the fifth century to the age of Augustine.[15] Its inclusion in a volume on mental disorders in the Classical world predicates hallucination as a recognised symptom of madness in antiquity and establishes the importance and wider ramifications of studying hallucinations to better understand aspects of mental illness.[16] Harris' chapter shows that the idea that hallucinations were attributable to divine forces pervades throughout these periods, but philosophical and medical writers were beginning to challenge this notion with explanations, which gave precedence to the role of the human body. The approaches he advocates in considering hallucination in

[13] Guidorizzi (2010: 149).

[14] See, for instance, Herman (2011: 144): 'The content of visions, like dreams is culture[-]specific; people are culturally predisposed to behold certain visions more than others.'

[15] Harris (2013a).

[16] Harris (2013b: 13): 'It is a small step from specific syndromes to specific symptoms. If we want to gain an idea of how a wide range of Greeks and Romans regarded a particular class of symptoms of mental disorder, hallucinations are eminently worth investigating, all the more since, though they are not altogether easy to define, they were easier to recognize as symptoms than, say, mild delusions or mild behavioural disorders.'

antiquity (i.e. tracing connections and points of difference and considering variables such as religious versus secular understandings) are particularly helpful.

Overall, existing studies of hallucination have tended to simply highlight the opposition between sacred and secular views of the phenomenon in the ancient sources, without examining in any detail the individual theories which led towards these understandings. An exception to this is perhaps Thumiger's recent monograph (2017a) on *A History of the Mind and Mental Health in Classical Greek Medical Thought*, which pays close attention to the sensory aspects of mental illness in the Hippocratic texts, including misperception.[17] Thumiger establishes that both hallucinations and dreams in Hippocratic contexts are 'characterised as a seen image', fundamentally linked to sight rather than a psychological phenomenon.[18] However, she highlights that unlike dreams, '…hallucinations are always presented as a pathological, abnormal feature of mental life'.[19] With this in mind then, theories of hallucination in antiquity are intrinsically bound up with theories of the senses, now a well-established area of study in the Classics.[20]

The current scholarly discussions on *modern* philosophical theories of hallucination continue to raise fundamental questions about our understandings of epistemology, perception, human consciousness and our experience of reality. Increased philosophical interest in hallucination in recent years has also instigated fresh approaches to traditional understandings. New developments in this area, according to Macpherson and Platchias, have '…the potential to radically alter our approach and answers to traditional debates in philosophy concerning the nature of the mind, perception, and our knowledge of the world.'[21] Despite scientific advances in today's society, debates on how to account for the phenomenon are ongoing across various disciplines.[22] Whilst I do not suggest to further current understandings of hallucinations, a complete answer for which continues to evade us, I do contend that studying the topic in antiquity adds to this discussion.[23]

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[17] Thumiger (2017a) devotes an entire section to 'Sensory Perception and its Impairment' (275-334). On her discussion of 'Visual Hallucination and Dreams' specifically, see p.295-310.

[18] Thumiger (2017a: 296).

[19] Thumiger (2017a: 304).

[20] On vision (sight) specifically see, Squire (2015). On the senses in antiquity more generally, see Toner (2014).

[21] Macpherson & Platchias (2013: vii).

[22] See Macpherson (2013: 1-38) for an introduction to the current debates on hallucination in the fields of science, philosophy and psychology.

[23] Drabkin (1955: 223) also comments that the study of psychopathology in the ancient world goes beyond 'merely antiquarian interest' and has the potential to 'significantly deepen our understanding not only of ancient civilization but of our own.'

Misperception and Madness

Visual hallucinations are a phenomenon that have been associated with madness throughout human history.[24] Perhaps the earliest reference to the long-standing association in Greek literature can be found in the *Odyssey* (Book 20, lines 345-360) in a scene that narrates the horrifying vision of the prophet Theoclymenus and the collective insanity of the suitors.[25] There are very few instances of madness in Homer[26], however this rare example is worth brief consideration as it reflects some of the ideas about madness and hallucination that we will encounter in the later texts considered in this enquiry. The episode appears as follows:

> So spoke Telemachus, but among the suitors Pallas Athene
> aroused unquenchable laughter, and turned their wits awry.
> And now they laughed with lips that seemed not theirs,
> and all bedabbled with blood was the meat they ate, and their eyes
> were filled with tears, and in their own minds they seemed to be wailing.
> Then among them spoke godlike Theoclymenus:
> "Ah, wretched men, what evil is this that you suffer? Shrouded in night are
> your heads and your faces and your knees beneath you;
> kindled is the sound of wailing, bathed in tears are your cheeks,
> and sprinkled with blood are the walls and the fair panels.
> And full of ghosts is the porch, full also the court,
> ghosts hastening down to Erebus beneath the darkness,
> and the sun has perished out of heaven and an evil mist covers all."
> So he spoke, but they all laughed merrily at him.
> And among them Eurymachus, son of Polybus, was the first to speak:
> "Mad is the stranger newly come from abroad.
> Quick, you youths, convey him out of doors
> to go to the assembly place, since here he finds it like night."

My particular interest in this passage is that it presents two distinct forms of madness, which are connected to abnormalities in perception. We can understand Theoclymenus' vision as a hallucination as it seems that he is the only one in the crowded palace hall who sees it.[27]

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[24] Whilst hallucinations can occur due to a variety of circumstances, in modern Western culture they are still frequently (rightly or wrongly) associated with those suffering from severe mental illness. The DSM V (2013: 102 & 166), for example, cites hallucinations as one of the main diagnostic criteria for schizophrenia and psychotic disorders. See also, Sarbin & Juhasz (1967) for the historical background of hallucination and its links to insanity.

[25] For an overall treatment of this passage see Rutherford (1992: 231-234).

[26] Saïd (2013: 363). My decision to focus on hallucinations in the Classical and Hellenistic periods is in part necessitated by this lack of literary evidence from earlier periods.

[27] See also Thumiger (2017a: 306-307) and Harris (2013a: 291), who justify this as a hallucinatory experience.

His vision is undoubtedly linked to his status as a prophet, as he portends accurately the bloody fate of the suitors, and he is experiencing what the Greeks would understand as a form of prophetic madness.[28] The questions that this passage raises about perception and reality are extremely complex. The truthful visions of Theoclymenus, although hallucinatory, are presented as a privileged state of intensified perceptual awareness which allow him to access another world view.[29] The suitors, on the other hand, are experiencing a case of divinely inflicted laughing madness, aroused by the goddess Athena, which means that they are unable to apprehend the veracity of Theoclymenus' vision.[30] They respond to the prophet's vision with ridicule and, in a line dripping with irony, one of them concludes that the prophet's visions mean that he must be suffering from madness.

The portrayal of the suitors' madness reflects the common idea in ancient Greek society that conflated mental derangement and aberrant states with godly interventions.[31] Guidorizzi describes that we ought to view their madness as form of collective delirium akin to an 'ecstatic trance'.[32] Most significantly for this enquiry, one effect that the suitors' madness has is a visual detachment from reality, demonstrated by their unawareness that the meat they are consuming runs ominously with blood.[33] Interestingly, the description of their madness, which manifests in a total loss of control (displayed by the suitors' behaviour, which veers between uncontrolled laughter and tears), is an idea that will recur in later medical and philosophical discussions of hallucinatory madness.

Thus, in this Homeric example we have two different forms of madness, which are connected to abnormalities in visual perception. One which allows truthful visions which no-one else can corroborate, and one which obscures and limits man's capacity for visual comprehension. Thus, this passage establishes that seeing things that others could not was to be taken as a symptom of insanity, but also that madness could limit its subject's capacity for vision comprehension.

With this in mind, I will now establish the outline that this enquiry will take, which will show that the texts of the Classical and Hellenistic period, while they continue to

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[28] See Hershkowitz (1998: 149-150 and 158-159).

[29] Thumiger (2017a: 306-307). Compare Plato's discussion of divine madness in the *Phdr*. 244a-245c and Aeschylus' Cassandra *Ag.* 1220-1254.

[30] For the significance of the suitor's laughter as a sign of madness, see Halliwell (2008: 92-97).

[31] O'Brien Moore (1924: 11-15) on the Greek popular conception of madness as a form of possession or punishment.

[32] Guidorizzi (2001: 1).

[33] Furthermore the description of their head as shrouded in darkness may also allude to a degree of blindness.

encompass ideas of religious and prophetic madness evidence a shift towards more naturalistic portrayals and explanations.

An Outline of the Present Enquiry

In Chapter 1, I examine accounts of hallucination in medical texts to show that visual hallucinations were understood as a product of madness for which the medical authors propose several naturalistic accounts. I will present the differing aetiologies of hallucination offered, some of which are presumably accounts of real hallucinations recounted by patients and observed by physicians, rather than simply theoretical or hypothetical discussions.

In Chapter 2, I turn to philosophical conceptions of hallucination, which are closely allied with medical discussions in antiquity, and which discuss at length theories of perception and why disturbances may occur. The philosophical discussions focus on the problems that misperceptions pose for an epistemic view of the senses, which I argue are largely attributed to madness and explained by the concept of *phantasia*.

In Chapter 3, I turn to some of the most memorable figures associated with hallucinations in antiquity that come to us from literary sources. The tragedians frequently incorporated hallucinations into the madness of their characters and showed a sensitivity toward the implications on an individual level. Furthermore, the examination of tragedy has the advantage of considering how hallucinations were portrayed to a non-specialist audience, perhaps offering a glimpse into how madness was understood by the layperson.

The overall aim is to bring together evidence which shows how the different writers explained the causes of hallucination and how this intersects with their understanding of madness. This will allow me to construct an idea of how hallucination as a symptom of madness was conceptualised in these periods. I conclude my enquiry with some general reflections upon the similarities which emerge from these discussions and upon the individual contributions of each source. Overall, the texts of the Classical and Hellenistic period express a shared proclivity for naturalistic explanations for hallucination, which consider physiology, psychology and the processes involved in visual perception.

Chapter 1

Medical Accounts of Hallucination

In this chapter, I will consider medical accounts of hallucination and their connection to madness. I concentrate this enquiry on the 'Hippocratic' texts, a large collection of medical works mostly belonging to the Classical period.[34] Unfortunately, there is very little surviving evidence relevant to this discussion from the Hellenistic period, as the medical texts from this time only survive in fragments, none of which pertain to hallucination. For this reason I do include some reference to later authors who express opinions which may show influences from this period.[35]

The texts I have established as most important for developing an understanding of how hallucinations were explained in medical contexts are: *On the Sacred Disease*; *On Diseases of Girls*; *On Glands*; *On Places in Man*; *Internal Affections;* and *On Regimen*. These texts each describe hallucination as a symptom of madness and provide various physiological explanations for the phenomenon. I organise my discussion around the various parts of the body connected to their production to illustrate the ways in which the medical authors sought to explain them. These various explanations are linked to the individual author's understandings of madness and the effect it could have on their patient's cognitive and sensory functioning.

Overall, I argue that the various theories for hallucination in medical contexts are inextricably linked to ancient ideas of the effects of excess or noxious moistures in the body. As such, the various explanations for hallucination postulated in these sources are entirely reflective of the overall spirit of medical theory in this period, which sought rational accounts for all forms of illness and aberrancy, including madness and hallucination.

1.1 The Hippocratic Corpus

The Hippocratic corpus reflects at length on the nature of the human body and conditions that may cause disease.[36] It is clear that this large collection is not the work of the historical physician Hippocrates of Cos alone, after which the collection is named, but attributable to a group of physicians working broadly in the Hippocratic tradition.[37] As such, the texts

[34] For the dating of the individual texts, I rely mainly upon Craik (2015).
[35] See Nutton (2013: 142-159) for an overview of Hellenistic medicine and the issues of survival.
[36] For an overview of Hippocratic aetiology see, Hankinson (2018: 89-118).
[37] On the question of authorship see, Jouanna (1999: 56-71).

represent a variety of author's opinions and theories, united by their rational approach to matters of health and disease.[38]

The Hippocratic treatise *The Sacred Disease* is perhaps one of the earliest examples we have that captures the rationalising impulse of the Hippocratic writers, in contrast to earlier beliefs which tended towards the notion that disease was to be understood as a punishment from the gods, and which sought cure through their appeasement.[39] The author challenges the idea that the so-called 'sacred' disease, generally recognised as epilepsy, ought to be viewed in these terms and proposes a rational account of its aetiology.[40] The 'sacred' disease, he describes, is particularly prevalent in those who are 'phlegmatic' in nature, which is hereditarily determined, and manifests when a build-up of this phlegm accumulates in the brain and blocks the flow of air around the body.[41] This explanation introduces the predominant theory which emerges from the Corpus as a whole which ascribes illness to the imbalance of fluids or humours (χυμοί) thought to reside in the body.[42] It is held that the late fifth-century treatise *The Nature of Man* is the first to express the humoral theory of phlegm, black bile, yellow bile and blood that would prevail in later medical doctrine.[43] The author of this late fifth-century work contends: 'The body of man has in itself blood, phlegm, yellow bile and black bile, and through these he feels pain or enjoys health.'[44] The author further relates these humours to the conditions of coldness, heat, moisture and dryness which can affect these constituents and engender disease.[45] It should be stated that there is no overall consensus in the Hippocratic texts on the exact nature and number of these fluids, which is perhaps why in some texts we find the more generic description of moisture (ὑγρά) in the body causing disease.[46] However, what is clear is that regardless of which humoral theory the individual Hippocratic author subscribed to, the

[38] It should be noted that the boundaries between medical and philosophical approaches in this period are not clearly defined; and the development of rational medicine was undoubtedly encouraged by the development of rational discourse in allied disciplines such as natural philosophy.
[39] See Longrigg (2013: 6-25) for an overview on Greek 'irrational' medicine.
[40] *Morb. Sacr.* 1 [Jones, 139-140]: 'It is not, in my opinion, any more divine or more sacred than any other diseases, but has a natural cause, and its supposed divine origin is due to men's inexperience, and to their wonder at its peculiar character'
[41] *Morb Sacr.* 8-10 [Jones, 158-159]. I think it is worth noting that although this formulates a naturalistic account of illness, the author does not negate the role of the divine in human affairs entirely and still recognises that the gods have a hand in by bringing about environmental conditions that may precipitate the physiological reactions that lead to disease. See also, *Aer.* 22 [Jones, 155ff.], which expresses the same idea.
[42] Craik (2009: 110).
[43] On legacy of this treatise, see Jouanna (2012: 335-359).
[44] *Nat. Hom*. 4.1-3 [Jones, 11].
[45] *Nat. Hom*. 2.18-20 [Jones, 7].
[46] van der Eijk (2001: 48).

moistures of the body (which could be determined by a range of factors including lifestyle, diet, environment and natural constitution) were thought to play a fundamental role in both the maintenance and breakdown of human health. The differing opinions on the importance and character of the bodily fluids will be reflected in the various explanations for hallucinatory madness I address below.

1.2 Hippocratic Approaches to Madness

The Hippocratic writers' rational approaches to human health also extend to their discussions on madness. Drabkin's remarks on Greek psychopathology reveal that, 'Greek medicine from first to last holds that obvious mental abnormality is a disease or else the symptom of a disease, and like any other disease or symptom requires a naturalistic explanation'.[47] In other words, the texts we will encounter in this chapter do not demarcate mental from physical illness and as such various somatic explanations are offered.

It is also generally understood that in early medical writing madness is not usually discussed in terms of distinct disorders; most of the descriptions of madness focus on identifying recognisable symptoms.[48] This view is supported by the linguistic evidence which shows that terms related to *mania* are frequently employed by Hippocratic authors to discuss symptoms and cases of mental aberrancy without necessarily implying a clinical definition.[49] The observable symptoms of madness in the Corpus include obvious loss of reason, alterations in a person's normal behaviour, consideration of a patient's emotional state, the speech and testimony of the patient and, of particular importance for this discussion, sensory disturbances such as hallucination.[50]

Madness and its symptoms are most frequently attributed to the effect that imbalances in the body can have on the psychic functioning of the individual. It is probably for this reason that we find several disparate theories for hallucination, dependent upon where the physician fell within this debate. A number of competing theories for the location and functioning of the psychic faculties are recorded in the corpus including the brain, *pneuma*, the diaphragm, the blood, the heart and the soul (ψυχή),[51] which I will now go on to discuss.

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[47] Drabkin (1955: 224).
[48] Eidinow (2014: 485).
[49] For an excellent survey of the early Greek vocabulary of madness, see Thumiger (2013a: 61-95).
[50] Thumiger (2017b: 56).
[51] Jouanna (2012: 200).

1.3 Hallucination and the Body

1.3.1 The Brain

The idea that the brain is to be regarded as the source of mental activity is perhaps most clearly presented in *The Sacred Disease*, where the health of the brain is presented as a necessary precondition to normal sensory functioning and cognition. The passage in question is worth quoting in full for discussion:

> Men ought to know that from the brain, and from the brain only, arise our pleasures, joys, laughter and jests, as well as our sorrows, pains, griefs and tears. Through it, in particular, we think, see, hear, and distinguish the ugly from the beautiful, the bad from the good, the pleasant from the unpleasant, in some cases using custom as a test, in others perceiving them from their utility. It is the same thing which makes us mad or delirious (μαινόμεθα καὶ παραφρονέομεν), inspires us with dread and fear, whether by night or by day, brings sleeplessness, inopportune mistakes, aimless anxieties, absent-mindedness, and acts that are contrary to habit. These things that we suffer all come from the brain, when it is not healthy, but becomes abnormally hot, cold, moist, or dry, or suffers any other unnatural affection to which it was not accustomed. Madness comes from its moistness. When the brain is abnormally moist (ὑγρότερος), of necessity it moves, and when it moves (κινεῖσθαι) neither sight nor hearing are still, but we see or hear now one thing and now another, and the tongue speaks in accordance with the things seen and heard on any occasion.[52]

The brain is seen as responsible for various experiences and functions which we would describe as psychological (thinking and making judgements) and sensorial (seeing and hearing) in nature. However, the writer asserts that if the brain is abnormally affected by the hot, cold, wet and dry qualities of the body, or any other affection to which it is not accustomed, a variety of adverse psychological responses can manifest including feelings of dread, fear, anxiety, absent-mindedness, abnormal behaviour, delirium and madness. According to this author madness is attributed to moistness caused by a flux of either heated bile or phlegm, which reaches the brain via the blood vessels.[53] The author specifies that, depending upon whether phlegm or bile is the instigator, different types of madness manifest, with a hyperactive madness on the one hand and a depressive and withdrawn

[52] *Morb. Sacr.* 18 [Jones, 175ff.].
[53] *Morb. Sacr*. 18. 9-13 [Jones, 177].

madness on the other.[54] This text explains various types of madness by drawing upon the fundamental idea in ancient medicine that different forms and amounts of 'moisture' can cause different illnesses.

The significance of this text in terms of hallucination is that it postulates that moistness can precipitate a movement in the brain which can agitate both sight and hearing; the sufferer is described as speaking of 'things seen or heard on any occasion'. It is not explicit what exactly the author implies here, and sadly it is not clarified elsewhere in this text. However, we are told that the agitation of sight can cause the person to vocalise a recollection of events which is no longer concurrent with their present surroundings, strongly suggesting a hallucinatory experience.

The issue is complicated by the fact that in some medical contexts speech itself was considered a sensory capacity. In *Regimen I* the senses are linked to the seven 'figures' (or vowels) in a discussion which relates various crafts, in this case writing, to the nature of the body.[55] If this is the case then the author may simply be adding the symptom of confused speech to his list of sensory aberrances caused by the moistness of madness, without necessarily implying a connection to vision. However, there are a few reasons why I believe that this can be interpreted as a visual hallucination.[56]

Firstly, the fact that the vocalisation of the maddened individual is said to describe 'things seen and heard', I believe, relates this to a sensory experience, rather than simply describing rambling or incoherent speech. Secondly, we find evidence elsewhere in the Corpus (in fifth-century treatise *On the Diseases of Girls*) which explicitly refers to the 'sacred disease' causing people to 'think they see' something which does not exist, which in this case is fundamentally connected to sight (ὄψιος).[57] Finally, the event described is related to the conditions of 'dread and fear', which also indicates that this could denote a hallucinatory experience, as these emotions are described in other works which involve instances of misperception.[58] Overall, this implies that the moistness of madness may affect

[54] On this binary classification of madness in ancient medicine and philosophy see Jouanna (2013: 97-118).
[55] *Vict. 1*. XII-XXIV [Jones, 251ff].
[56] That the composition of *Vict. 1* is decidedly later also calls this into question, see Craik (2015: 275).
[57] *Virg*. [Potter, 359].
[58] *ibid*. Moreover, although a different aetiology is offered, those who exhibit loss of reason and do not perceive the world rationally are also described as fearing 'what is not dreadful' in *Vict.* 1.35 [Jones, 281ff.]; in this treatise different forms of perceptual activity are ascribed to the soul's unique blend of fire and water.

the brain in such a way that the maddened individual sees and hears things which others do not.

A final point of interest is that the *Sacred Disease* also states that the psychological symptoms of the illness can occur during both night and day which, on the basis that dreams (visons whilst asleep) and hallucination (visions whilst awake) were considered homogeneous in this period, also strongly suggest a hallucinatory quality.[59] The importance of dreams as a diagnostic tool and as a way of understanding the state of the body is a common Hippocratic idea, most clearly expressed in *Regimen IV*.[60] It was thought that the content of dreams could provide important signs to the Hippocratic doctor. For instance, if the dreamer reports, 'Crossing rivers, enemy men-at-arms and strange monsters' this was viewed as a sign of disease or indeed madness (μανίην).[61] Incubation rituals associated with the god Asclepius also used dreams as the primary way of diagnosing and proposing treatment.[62] Perhaps surprisingly, I have not found any evidence in the sources that indicate that the *content* of hallucinations was utilised as a diagnostic tool in quite the same way. What is notable is that dreams, when discussed as a feature of madness, tend to be described as more intense and frightening (monsters, ghosts, malevolent spirits), which seems consistent with the descriptions above, relating fear to madness in waking contexts.[63] However, the analysis of the form and content of hallucinations, mundane or otherwise, does not seem to have been an issue of importance in medical contexts in quite the same way that dreams appear to have been.

Another account of hallucination that is complimentary to the theory put forth by the *Sacred Disease* is the treatise *On Glands.* Some scholars propose that this treatise may belong to the Hellenistic period, perhaps offering us a rare account of hallucination from this era.[64] Again, an opinion is expressed that a flux of fluid to the brain, here conceptualised as a gland, may induce hallucinations. According to this text the overall function of the glands is to regulate the moisture of the body; for this reason, glands are most prominent in parts of the body that are high in moisture (the areas around the kidneys and intestines are cited as

[59] See also *Virg.* 1.9-10 [Potter, 359] 'people think they see malevolent spirits, sometimes by night, sometimes by day, and sometimes at both hours.' On the homogeneity of dreams and hallucinations in Hippocratic sources, see Thumiger (2017a: 304-306).
[60] See also *Hum*. IV.15-16 [Jones, 69]. On diagnostic dreams in Hippocratic medicine see Holowchak (2002: 129-138).
[61] *Vict*. 4.93.30-35 [Jones, 447].
[62] Temkin (1971: 14).
[63] 'The dreams of patients with phrenitis are vivid', *Prorrh.* 1.5 [Potter, 171].
[64] Jouanna (1999: 393).

examples).[65] The brain itself is described as functioning in this way: 'For whatever moisture occupies the head in the manner I have described, the brain helps by drawing off, and it sends away to the extremities most of what arises from fluxes.'[66] However, if this fails the brain can become inflamed by the moisture, provoking diseases that are described as more severe than those found in other glands.[67]

A movement similar to that described in the *Sacred Disease* is discussed, in which the brain moves and convulses the person, when subjected to a sharp flux of moisture, causing impairment of the mind, delirium and even apoplexy.[68] In other cases, the flux of moisture is less sharp (δριμύ) but greater in quantity, and in these instance the flux affects the patient's reasoning abilities and sensory experience of the world: '…the reason (φρονῶν) is disturbed and the victim goes about thinking and seeing alien things; one bears this kind of disease with grinning laughter and grotesque visions (φαντάσμασιν)'.[69] The associations between madness and laughter expressed here have a long history in Greek culture.[70] One could think, for instance, of the suitor's maniacal laughter in the *Odyssey,* discussed in my introduction.[71] We also find instances of laughter as a sign of feverish delirium elsewhere in the Hippocratic texts; a patient named Silenus in one of the *Epidemics'* case studies is described as suffering from acute fever which has driven him 'out of his mind' and he is described as exhibiting 'much rambling, laughter, singing; [and] no power of restraining himself.'[72] *On Glands*, therefore, constitutes another example that connects disturbances, caused by moisture in the brain, with hallucinations and symptoms associated with madness.

1.3.2 The Eyes

Other accounts consider the eye itself in the formation of veridical and non-veridical images. The fifth-century Hippocratic treatise *Places in Man* articulates a theory of the sensory capacities, which outlines how sensory data is received by the brain. The text postulates that vision is made possible by a form of 'purest' moisture within the brain which is delivered to the eyes through a series of narrow vessels.[73] The author conceives that there is a link

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[65] *Gland*. 5-6 [Potter, 111].
[66] *Gland.* 10. [Potter, 115].
[67] *Gland*. 10-11. [Potter, 115-117].
[68] *ibid*.
[69] *Gland*. 12, [Potter, 119].
[70] See Halliwell (2008: 16-17) on the dichotomy of laughter as both a sign of health and as a symptom of madness in Greek culture.
[71] Quoted on p. 12.
[72] *Epid,* 1. case 2 [Jones, 189].
[73] Craik (1998: 105) identifies this may be an early reference to the optic nerves.

between the brain's moisture and the formation of images *in* the eyes, as without this moisture the eyes would be incapable of seeing.[74] Furthermore, the author contends that if anything other than this purest moisture reaches the eye, disturbances may occur,

> The pupil is nourished by moisture from the brain; if it takes up anything from the vessels, it is disturbed by this afflux, and the image does not appear normally in it, but something seems to dance before it, sometimes like the image of birds and sometimes like black specks, and otherwise it is not able to see anything clearly according to reality.[75]

That the eye is described as receiving an image that does not appear normally implies that a real object of perception does exist which is simply misinterpreted, suggesting an illusion rather than a hallucination. However, it is interesting to consider that we now recognise that hallucinations can vary greatly in intensity, from simple patterns and dots to complex scenes and forms, which means what is described may denote a hallucination by modern standards.[76] Although the eye is considered here, it is still ultimately the brain that is viewed as responsible for supplying the eye with a particular form of moisture. This idea is therefore complimentary to the first explanations for hallucination I examined, as it indicates that the health and correct functioning of the brain is necessary for reliable perception. That this description of sensory disturbance is not directly linked to madness suggests that the non-veridical visions connected to madness tend to be more spectacular in nature.

Galen rearticulates the idea that the eye itself is linked to the formation of nonveridical vision in the second century AD. In *On Diseases and Symptoms* he discusses a thin fluid in the eyes, which he terms the 'aqueous humour' that seems to be consistent with the 'purest moisture' described in the Hippocratic example. He elaborates that this can cause a condensation of sorts in a chamber of the eye which obstructs the cornea giving rise to false visions.[77] We can expect that Galen's knowledge of the eye's physiology was assisted by the Hellenistic advancements in understanding the human body through dissection.[78]

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[74] *Loc. Hom.* 2-3 [Potter, 23-27].
[75] *Loc. Hom.* 3 [Potter, 25].
[76] Sacks (2012: 35-36).
[77] *Caus. Symp I*, II.9 [Johnston, 212].
[78] Hankinson (1991: 208).

1.3.3 The Heart and Diaphragm

Let us return to the aforementioned treatise *On Diseases of Girls* to examine a different physiological explanation for hallucinatory madness linked to the heart and diaphragm. This short treatise describes a disease which is said to affect young girls during a certain stage of puberty (before *menarche*) which subsides when the girl menstruates or becomes pregnant.[79] The author describes that the illness begins with numbness and lethargy, followed by a wandering fever which progresses towards madness, frightening hallucinations and sometimes suicide. The author's acknowledgement that experiencing such visions could lead to suicide indicates an understanding that hallucinatory experiences could be extremely traumatic and have a severe psychological impact.

In this account it is the bad state of the blood that is said to affect the mind (θυμός), which according to this author is placed in the region of the diaphragm and heart in contrast to the theories above, which placed the psychic faculties in the brain.[80] The fourth-century BC physicians Praxagoras and Diocles of Carystus are also reported to have connected the effects of blood and bile on the heart with madness, showing that this text is not anomalous in this regard.[81]

The Hippocratic author explains that the illness occurs when menstrual blood becomes trapped in the womb; the blood, having nowhere to go is forced towards the heart and the diaphragm, which causes 'derangement and raging'. It is specified that the deranged girl alone sees the 'hostile spirits' described, establishing this as a hallucination. The effects of blood on the region of the heart and diaphragm cause the female to describe, 'strange and frightful things, which urge (κελεύουσιν) the women to take a leap and to throw themselves down wells, or to hang themselves'.[82] The use of κελεύουσιν indicates that these strange and fearful things communicate with the sufferer, meaning that this could represent both an auditory and visual hallucination; towards the end of this treatise a single term to denote these visions is used, i.e. φαντασμάτων, establishing the experience as linked to the formation of visual images.

The identification of the diaphragm as the locus of the mind and of madness is complemented by the Hippocratic author of *Internal Affections*, which gives a long and detailed account of diseases known to the author grouped according to where they originate

[79] King (2002: 78-79).
[80] *Virg*. [Potter, 359-363].
[81] *Anon. Par.* Fr. 72; 74 [van der Eijk, 143 and 147].
[82] *Virg.* [Potter, 361].

in the body.[83] The passage in question is framed within a discussion of so-called 'Thick ([π]αχέα) diseases',[84] one of which is attributed to an excess of bile as it causes the liver to swell and press against the diaphragm. In such cases, the physician observes both diminished sight and hearing and the patient is described as plucking wool from his bedclothes, thinking that they are lice.[85] As the illness progresses, and the liver continues to expand against the diaphragm, visual hallucinations manifest,

> When his liver expands even more against the diaphragm, the patient becomes deranged; there seem to appear before his eye reptiles and every other sort of beasts, and fighting soldiers, he imagines himself to be fighting among them; he speaks out as if he is seeing such things, and he attacks and threatens … when he goes to bed, he starts up out of his sleep on seeing fearful dreams…[86]

This illustrates that as the swelling increases, so do the intensity of the patient's symptoms of sensory aberrancy; from mistaking wool for lice (an illusion perhaps, but terrifying nonetheless), towards seeming to see figures, animals, monsters and complex scenes.[87] The patient's reaction to these visions indicates an unawareness that his perceptions are hallucinations, as he is described as responding physically and verbally to them as if they are a reality. The later suggestion by the physician that this disease usually happens if a person is abroad and travelling a lonely road is interesting and could indicate that sensory deprivation was understood to be a contributor to sensory disturbances[88] or, that the disease is triggered by environmental factors to which the individual is unaccustomed, which could upset the internal balance of the body.[89]

The plucking described in the passage above may relate to the symptoms of *karphologia* and *krokydismos,* most commonly associated with another acute and often deadly disease, phrenitis. [90] This illness takes its name from the part of the body thought to cause the illness, the *phrēn.* From as early as Homer the *phrēn* was conceptualised as the

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[83] Unfortunately, what is lacking from the text is an account of affections which originate in the head. Craik (2015: 136) comments that the text which begins with the lungs and works downwards may indicate that this treatise has not survived intact.
[84] *Int.* 47-50 [Potter, 197-211].
[85] This symptom may be indicative of phrenitis, which I address below.
[86] *Int.* 48 [Potter, 201-207].
[87] Note that again we see the recurring trend that hallucinations and dreams are treated together.
[88] See similarly, Thumiger (2017a: 305) and Sacks (2012: 34).
[89] See, n. 41 above.
[90] The Greek terms refer to the plucking at straw or specks on the wall and the plucking of wool and threads from bedding respectively, see Ahonen (2014: 23).

part of the human body responsible for rational thinking and seems to have been situated in the chest.[91] In Hippocratic texts however, phrenitis is more readily understood as an inflammation of the diaphragm, which could also affect the mind.[92] Others, such as Diocles and Praxagoras, contended that phrenitis was an inflammation in the heart, reflecting their stance that intelligence resides in this organ.[93] This establishes another illness which may produce a hallucination as a symptom, again linked to the diaphragmatic region of the body (the abdomen, chest and heart).

It should perhaps be noted that in the Classical period phrenitis was not necessarily classified as a form of madness;[94] it is only in later medical doctrine that phrenitis is accepted into the official canon of madness.[95] *On Disease* 1.30 is the only example I have found in the corpus that directly equates the symptoms of phrenitis with madness (μαίνονται) which is attributed to the effects of bile in the blood which heats up the body.[96] Interestingly, this Hippocratic author draws a comparison with the madness of melancholy, stating that phrenitis is caused by a similar process but occurs when the bile is less powerful. This suggests that this author may have viewed phrenitis as a diluted form of madness, or at least believed it shared some common characteristics.

One of the rare first-hand accounts of phrenitis comes to us from later antiquity in a passage from Galen, who recounts his own experience of the illness, which included the characteristic symptoms of *karphologia* and *krokydismos*. Galen, due to his knowledge of pathology, was able to recognise the symptoms as a product of the illness and quickly realised that he was hallucinating.[97] Interestingly, Galen also relates that his illness caused him to experience nightmares, again reinforcing the supposed connection between states of dreaming and hallucination. Furthermore, in the same account Galen ascribes phrenitis to either an inflammation of the brain or the diaphragm.[98] The first could produce the characteristic symptom of plucking invisible objects and the latter more intense hallucinations.[99] Thus, extreme cases of hallucinations as a result of phrenitis only come to

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[91] McDonald (2009: 1, n.3).
[92] Ahonen, (2014: 23).
[93] See McDonald (2009) on the concept of phrenitis in Diocles (p.59-70) and Praxagoras (p.71-78).
[94] McDonald's (2009: 32) analysis of phrenitis in the Hippocratic Corpus establishes that fever and delirium were the only consistent symptoms of the illness. However, the effects of the illness on the mind are attested, see for instance *Epid*. 7.112 [Smith, 383]: 'παρέκρουσε τρόπον φρενιτικόν'.
[95] Harris (2013b: 8) notes that Celsus is the first to discuss this tripartite classification of madness in any detail but acknowledges that this may be indebted to Hellenistic doctors.
[96] *Morb* 1.30 [Potter, 159], this treatise views blood as the source of intelligence.
[97] *De Loc Aff.* 4.2 (Siegel, 108).
[98] For a discussion of Galen's views on phrenitis see, Ahonen (2014: 156-158).
[99] *ibid.*

us from later authors, writing at a time when phrenitis has become a classified form of madness. Galen's attribution of more intense hallucinations to the diaphragm, rather than the effects of bile on the brain, seems consistent with the Hippocratic evidence; the Hippocratic explanations for hallucination that centre on this region appear to me to be much more descriptive and dramatic in nature than those described elsewhere.

The accounts of hallucination covered in this section, although offering different physiological explanations, are still congruent with the overall Hippocratic view that the pathology of diseases was connected to imbalances of the body's moistures. In the first example, hallucinations arise when an excess of menstrual blood creates pressure around the heart and diaphragm where, in this text, the mind is situated. In the second, hallucinations are ascribed to the swelling effects of black bile on the liver and diaphragm. In the third, phrenitis, which is conceptualised as an affection of the heart or diaphragm in our period of interest, can also produce misperceptions, but it seems only later to have been more directly linked to hallucination, when the condition becomes a classified from of madness.

1.3.4 The Soul

Madness as a disease of the soul does not emerge clearly from the Hippocratic medical works in the same way as it does in philosophical writings, as we will see in the next chapter. However, the Hippocratic text *On Regimen* 1, relevant to the discussion of hallucination, does give the soul (ψυχή) considerable attention.

Here, the soul is cast as the locus of emotion, intelligence, and sensation and was viewed as a composite blend of fire (hot and dry) and water (cold and moist) of which six variations are described.[100] According to the amount of fire and water, the author outlines a theory in which a person's intelligence and sensitivity to perceptual stimuli is determined. These descriptions are interesting as they equate both extremes in the constitution of the soul with hallucination and different forms of madness. Those with more water than fire exhibit a dullness in their senses, as it is understood to slow down the capacities of the soul. At the extreme end of this scale, the dominance of water over fire is said to cause a 'senseless' madness characterised by irrational fears and sadness. The author describes the sensory experiences of these individuals as meaning that 'their sensations are really not at all those

[100] *Vict.* 1.35 [Jones, 281ff.].

that sensible persons should feel.'[101] The suggestion that these people are irrational does point towards a loss of reason, which is indicative of madness.[102]

On the other hand, if the individual is dominated by fire the soul is quicker, which although more rapidly able to receive sensations, also 'more rapidly passes judgement on the things presented to it, and on account of its speed rushes onto too many objects'.[103] If this imbalance is not addressed through regimen (consuming more water and fish, abstinence from sex and vomiting are all suggested) then the blood of the person can become inflamed, leading to madness. These fiery souls are also described as experiencing dream visions and as 'half-mad' (ὑπομαινομένους) by the author. A person with this constitution, according to Jouanna's analysis of this treatise, is distinguishable by their state of, 'excited madness characterized by hallucinations.'[104] This text, therefore, shows another theory for hallucination related to an imbalance within the body, in this case conceptualised as a disequilibrium between water and fire, linked to the individual nature of the person's soul.

1.4 Concluding Remarks

The examples I have discussed in this chapter have shown that hallucinations in medical sources are described as a symptom of several different disorders with a mental quality, generally ascribed to humoral imbalances in various parts of the body.

In the first section, I established that one such view was that changes in the brain, linked to moisture, could produce hallucinatory symptoms associated with madness. Following the humoral theory of health and illness, the *Sacred Disease* and *Glands* attribute hallucination and madness to the effects of excess moisture on the brain. The moistness is described as producing an abnormal movement in the brain, which could give rise to visions which were not representative of reality.

Secondly, I presented evidence that the moisture of the brain was also viewed as important to the formation of images in the eye, which could become subject to inaccurate visions if the brain was not in a state of optimal health. The idea that disruptions to the processes of vision may play a role in the production of hallucination is an idea that will be more fully explored in my following chapter on philosophical sources, where the discussions of hallucination focalise the issues that madness poses for perception.

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[101] *Vict* 1.35. 80-85 [Jones, 287].
[102] See Thumiger (2017a: 280) who interprets that the sensations are in opposition to those experienced by '*sensible* persons' indicates insanity.
[103] *Vict*. 1.35.107-110 [Jones, 289].
[104] Jouanna (2012: 201).

Thirdly, I looked at ideas which considered how the mind could be affected by pressure or inflammation in the region of the heart and diaphragm. In these cases, we find perhaps the most evocative descriptions of hallucination in the corpus, which emphasise the terrifying nature that a detachment from so-called reality and false perceptions can engender. Within this category of affections of the diaphragm I also considered phrenitis which became associated with specific hallucinatory symptoms (*karphologia* and *krokydismos*), particularly in later medical writings.

Finally, I looked at the theory put forth by the Hippocratic text *Regimen I*, where the author presented two forms of madness linked to an excess of fire or water, both of which could produce hallucinations, which considered that the composition of the soul could impact on sensory experiences and the individual's ability to make rational judgements. The idea that the soul is to be understood as the locus of perceptual experience will also resurface in the philosophical discussions of vision, which I address in the following chapter.

We can see overall that medical writers sought to provide naturalistic explanations for the symptom of hallucinations, which they connected to varying degrees of mental disturbance, including madness. Although the Hippocratic texts offer some vivid descriptions of hallucinations, there is no clear consensus as to why or how they occurred.

Hallucinations seem to be one of many indicators of madness for which the medical writers sought to provide naturalistic accounts. In this way, they sought to gain control over the chaos of madness by rationalising its origin, presenting it as physiological event and seeking regimen. The discussions of hallucinations as a symptom of madness are thus entirely complimentary to the overall approaches to health and illness in these periods, most readily attributed to the various mixtures of the body and their imbalance.

With that in mind I now I turn to the philosophical conceptions of hallucination, which are closely allied with medical discussions in antiquity. However, as we will see, they also offer some novel reflections upon hallucinations, framed with debates upon perception, which consider why such visual disturbances may occur.

Chapter 2

Philosophical Explanations for Visual Hallucination

This chapter examines theories for hallucination in Classical and Hellenistic philosophy and considers their connection to madness.

I begin by establishing that although philosophy recognises that madness could come from diseases of the body, as we saw in the previous chapter, they also develop an approach that considers madness as an ethical or moral flaw, understood as a disease of the soul. Both forms of madness, as we will see, could affect perception.

Secondly, I outline some of the main philosophical theories for the faculty of sight from the Classical and Hellenistic periods. An understanding of how the philosophers explain the physical act of vision will be crucial to this enquiry. I will demonstrate how the different models articulated also inform understandings of hallucination.

Thirdly, I discuss the connections between the processes of hallucination and dreaming in Plato and Aristotle, which they attribute to the faculty of *phantasia*. This will set the scene for my discussion of the concept of *phantasia* which holds a special place in the philosophy of perception in antiquity, and which the philosophers' use to account for various misperceptions.

Overall, I will show that philosophical approaches to hallucination connect visual hallucination with madness, but also that they consider madness as a more general condition, which means that true perception is not always possible for those who lack proper philosophical training, to allow correct judgements on the information received by the senses.

2.1 Madness and Misperception

The philosophers recognised madness as one of the conditions that could make perceptions fallible, due to its associations with loss of reason. The pseudo-Aristotelian text *On Things Heard* provides a particularly arresting example which recounts the tale of a man who, suffering from an unspecified madness, experiences complex and vivid hallucinations: 'It is said that at Abydus a man who was mad went into the theatre and watched for many days, as if there were people acting, and showed his approval; and when he recovered from

his madness, he said that he had enjoyed the best time of his life.'[105] The lack of any explanation or elaboration suggest that it was generally accepted that madness could cause sensory misperceptions which led to false beliefs. The enjoyable hallucinations that the man experiences are directly connected to his madness, which presumably cease when he is no longer in that state.

Plato's *Theaetetus,* a treatise on the nature and definition of knowledge also connects madness, in this case pathological, with sensory error, in a passage where Socrates challenges the validity of interlocutor Theaetetus' claim that 'knowledge is nothing else than perception'.[106] Socrates proceeds to present a counter argument in which this idea proves defective:

> The defect is found in connection with dreams and diseases, including insanity (μανίας), and everything else that is said to cause illusions of sight and hearing and the other senses. For of course you know that in all of these the doctrine we were just presenting seems admittedly to be refuted, because in them we certainly have false perceptions[107]

Thus, Plato recognised insanity, along with dreams and other diseases, as a condition which may cause erroneous perceptions. It is clear that there are some instances where information attained through the senses cannot be trusted. As Ahonen asserts madness has the implication of rendering its subject incapable of recognising that they may be interpreting sensory information incorrectly and furthermore, unaware of their madness, they form opinions based on their erroneous perceptions.[108]

Such possibilities for misperception make the distrust of the senses a prominent trope in ancient epistemological discussions, which recognised that, although the senses play a crucial part in understanding the world around us, they are not unerring. The philosophers thus separated the cognitive abilities of perception and reason from early on, recognising that both were required for the attainment of knowledge.[109] From Heraclitus we have perhaps the earliest example of the enduring idea that the ability to sense must be coupled with reason and understanding to avoid misconceptions.[110] Those incapable of understanding the

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[105] *Mir. ausc.* 31.
[106] *Tht*. 151e.3
[107] *Tht*. 157e.
[108] Ahonen (2014: 36).
[109] Caston (2015: 30).
[110] *Against the Logicians*, 1.126-127.

'language of the senses' he claims, are prone to error,[111] to which Heraclitus introduces an evaluative dimension in his conviction that '[b]ad witnesses for humans are the eyes and ears of those who have barbarian souls'.[112] To fully comprehend information delivered through the senses, he suggests that the sensations received through the sensory organs must be interpreted and understood correctly by the soul.[113] This idea that the uncultivated or uneducated soul will be prone to sensory error becomes central to the philosophers' ideas of why madness may give rise to false perceptions, as they begin to conceptualise madness in ways which suggest a moral degeneracy or failing.

In the *Timaeus* (86b-c), for instance, Plato discusses ἄνοια (usually translated as 'folly'), as a disease of the soul (τὰ περὶ ψυχήν), the description of which Sassi asserts, is left intentionally broad so as to 'include any immoral behaviour resulting from psychic conflict…'.[114] Plato describes that this affliction of the soul can take the form of either 'ignorance' or 'madness', the causality of which he relates to the condition of the body and to the effects of excessive pain or pleasure, surely alluding to states of mania and depression. As a result the individual is, 'unable to either see or to hear anything correctly, and he is at such a time distraught and wholly incapable of reason.'[115] This idea of madness as a condition of the soul permeates philosophical discussions of the topic, and takes on a particular significance in discussions of madness, which are viewed as a condition related to uncontrolled passions (emotions).[116]

In the *Nicomachean Ethics* Aristotle expresses the view that passions can actually alter the state of the body and produce madness (1147a 16-18). This continuity between the body and soul is solidified in a passage from the [*Physiognomics*] with Aristotle's comments on treatment:

> It seems to me that soul and body react on each other; Madness appears to be an affection of the soul, and yet physicians by purging the body with drugs, and in addition to these by prescribing certain modes of life can free the soul

[111] Graham (2013: 28).
[112] *Against the Logicians*, 1.126
[113] Graham (2013: 28).
[114] Sassi (2013: 413) who also asserts that this idea 'is all but new in Plato's work'. See also, Jouanna (2013: 104) who similarly identifies the idea of the diseased soul in the context of madness may well have been a Platonic innovation.
[115] *Ti*. 86c.
[116] See, for instance, Arist. *Eth. Nic.* VII.3 (7) and Pl. *Res Pub.* 571c-572b.

> from madness. By treatment of the body the form of the body is released, and the soul is freed from its madness. [117]

This indicates that madness of the soul could manifest in ways that are more familiar in medical contexts. That is to say, sicknesses of the soul could be alleviated by medical means. However, we also find evidence which places the treatment of the soul firmly in the hands of the philosophers, for instance Democritus claims that 'Medicine heals diseases of the body, while wisdom frees the soul from passions'.[118]

The classical philosophers' ideas that madness could arise from both a condition of the body (understood in physiological terms)[119] and of the soul (conceptualised as a moral or ethical flaw), is also taken up by the Hellenistic philosophers. Here discussions of madness as a result of uncontrolled passions, or lack of self-restraint, become particularly prominent.[120] The Stoics' contention that anyone other than the hypothetical Stoic sage is considered insane is perhaps the most extreme example of what is known as a 'general madness', characterised by false beliefs based on misperceptions, which was supposedly commonplace.[121] I think we can read this as reflecting an agenda of the philosophers which sought to develop a distinct form of philosophical medicine, that proposed that philosophical education was the best way to nurture the soul and achieve mental wellbeing.[122] However, the Stoics' also still recognised that the functioning of the soul could be affected by bodily imbalances which could precipitate disturbances of the soul, leading towards madness.[123]

A final, important contribution to the connections between madness and non-typical perception is Plato's conception of divine madness in the *Phaedrus*, which includes what we may term religious 'visions'.[124] Plato presents this form of madness as a positive phenomenon connected to creative and prophetic inspiration, which demonstrates that in certain contexts the ability to see things other could not was viewed as a privileged state, rather than a negative by-product of a mental illness.[125] Thus, madness and hallucination in certain contexts may have been actively encouraged and revered. Archaeological studies

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[117] [*Phgn.*] 808b.
[118] Democritus D30 (Taylor, 15).
[119] *Phdr*. 265a 9-10.
[120] Jouanna (2013: 105 n. 20).
[121] Thumiger (2017b: 53).
[122] See Gill (2013: 342-348) on the Hellenistic developments of a form of therapeutic writing which addressed harmful emotions, which he describes as a form of preventative psychological therapy.
[123] Ahonen (2018: 358).
[124] *Phdr*. 244c. See, Dodds (1951: 70) on the connection between the terms μάντις (seer) μαίνομαι (madness).
[125] *Phdr*. 244a-245c.

have even suggested that the prophetic visions of the Delphic oracle may have been induced through the use of psychoactive substances and, although this theory has been met with much criticism, if accepted it means that hallucinations may have been an important part of religious ritual.[126] This shows that the philosophers, unlike the medical texts we encountered in the last chapter, also allow space for theological understandings, which includes madness as an inspired state, bestowed upon prophets, poets, lovers, and those in states of religious transcendence.[127]

To summarise, in this section I have shown that philosophers recognised madness could arise from diseases of the body, but also from the soul, introducing ethical and moral reflections to the condition. It is clear that the philosophers recognised that both forms of madness could produce visions which did not coincide with objective reality; either by disrupting the process of perception, by leaving the mad man devoid of the reasoning powers required to distinguish real from erroneous sensations, or by opening up a realm of perception only available to a select and divinely chosen few.

2.2 Ancient Theories of Vision

In this section I turn to consider the philosophical theories of vision. Although I can only offer a general account here, it should provide sufficient evidence to examine how the philosophers understood that visual misperceptions, or the belief of a perceptual experience in the absence of an obvious external stimuli (vis-à-vis hallucination), could manifest in cases of madness.

Michael Squire's recent study of sight in antiquity establishes that visual perception is the sense that writers in Greaco-Roman antiquity 'theorized above all others'.[128] By our period of interest, discussions on the topic take on an increasingly technical character which include various theories upon how the individual senses function, the characteristics of perceptible objects and, most importantly for this enquiry, the problems that hallucination, illusion and misperception pose for an epistemic view of the senses.[129]

Democritus' account of vision is fundamentally informed by his materialist view of the world, which argued that the universe consists entirely of atoms which move constantly

[126] Lehoux (2007) provides an overview and critique of the theory.
[127] This is akin to the madness of the Homeric prophet Theoclymenus, which I employed in my introduction.
[128] Squire (2015: 1).
[129] Caston (2015: 29).

through the air colliding with one another, and what he terms 'void'.[130] Physical objects give off atomic effluences which retain qualities of the object from which they have been emitted. These effluences travel through the air, where a compression of sorts occurs, which creates an 'impression' of the perceivable object.[131] The 'impression' once received by the eye is transmitted throughout the body where it is recognised and understood by the soul.[132] This represents an intro-mission theory of vision, which explains it as a process that occurs when something, in this case effluences from objects, enter the eye.

Plato, on the other hand, in the *Timaeus* (45b-46a) presents an extra-missionist theory of vision (the idea that vision is possible by rays or light emitted from the eyes which meet with objects of perception), framed within a wider discussion on the formation of man's intellectual powers. According to Plato, pure fire within the body, 'akin to that light of every day', streams out from the pupil of the eye in a continuous flow.[133] Visual perception occurs when this stream interacts with a perceivable object, which also emits a fire of sorts; both blend together to produce a single stream which is transmitted back into the eye, through the body, to the soul. It is also within the soul then, according to Plato, that the process of visual perception is made complete.[134]

Whilst Aristotle agreed that the soul, which he places in the heart, was the locus of perception he argued that, 'it is unreasonable to suppose that seeing occurs from something issuing from the eye'.[135] For Aristotle, visual perception is ultimately brought about when the colour of an object acts upon the eye and becomes *like* the object of perception.[136]

The Hellenistic models of vision function along broadly similar lines to those articulated in the Classical period. The Stoic position is captured succinctly by Greek doxographer Aëtius, writing in the first or second century AD:

> The Stoics say that the commanding-faculty (ἡγεμονικόν) is the soul's highest part, which produces impressions (φαντασιῶν), assents, perceptions (αἰσθήσεις) and impulses. They also call it the reasoning faculty. From the

[130] Democritus' views on vision are preserved by Theophrastus (*De Sensibus,* 50-56) who, although critiquing Democritus' theory, offers us an account of its main components. For discussion of the relevant passages and overall discussion of vision according to Democritus see, Rudolph (2011) and Burkert (1977).
[131] Burkert (1977: 98).
[132] Burkert (1977: 101).
[133] *Ti*. 45c.
[134] *Ti*. 45d
[135] Arist. *Parv. Nat.* 438a.26-27.
[136] For a detailed account of Aristotle's theory of the sense organs see, Johansen (1997).

> commanding-faculty there are seven parts of the soul which grow out and stretch out into the body like the tentacles of an octopus… Sight is breath (πνεῦμα) which extends from the commanding-faculty to the eyes…[137]

Aëtius' description explicates the Stoic belief that the eye emanates a continuous flow of *pneuma*, or breath, which as it collides with objects, is directed back into the eye and registered by the brain, or rational part of the soul. The centre of cognition for the Stoics was the *hegemonikon* (ruling part of the soul), which the Stoics also believed consisted of *pneuma*, the very mixture they associated with perception. [138]

In contrast, the Epicurean approach to vision was firmly rooted in their atomist theory of matter. Following Democritus, they conceived that perceptible objects give off atomic films, which flew through the air and took the form of images (*eidola*, or *simulacra*) which penetrated the eye directly.[139] The soul again is viewed as central to the process, an inscription which preserves the teaching of Epicurus dating to the second century AD reads: 'What is viewed by the eyesight is inherited by the soul.'[140]

Despite the differing views amongst the philosophers on how exactly the perceptible quality of objects are received by the sensory organs, what is consistent is the idea that the soul was fundamental to the process of perceiving and understanding perceptions. As I have already established, mental illness in this period was often conceptualised as a sickness of the soul, which goes some way to explaining why madness may impact upon an individual's perception of the world. With this in mind, I now turn to examine sources which elaborate on how hallucinations as a result of madness were enacted; I begin with a discussion of their supposed parallels with dreaming.

2.3 Dreaming as non-veridical perception

We have already seen that Plato equates madness and dreaming as two of the conditions that could produce illusions of sight in the *Timaeus*. The idea that hallucinations and dreams were viewed as homogenous, and fundamentally viewed as a visual process, has already been persuasively argued by Thumiger, who takes into account the shared vocabulary of

[137] Aët. 4.21.1-4 (LS, 53.H = SVF 2.863).
[138] Ahonen (2018: 358).
[139] Epicurus, *Ep. Hdt*. 49-50 (LS, 15.A).
[140] Diog. of Oinoanda, *fr.* 5.3.3-14 (LS 15.E).

both events.[141] This indicates experiences that we may attribute to the mind and imagination were, in antiquity, largely explained as visual experiences. Moreover, this similitude means that a consideration of the philosophers' understandings of dreaming may also illuminate their views of hallucination.

Plato's views of dreams are fundamentally linked to his theory of vision; in the *Timaeus* 45b-46a*,* he explains that dreaming occurs when the fire of the eyes is confined to the body during sleep. Having nowhere to go, the trapped fire is dispersed throughout the body which, if of a calm nature, results in sleep with mild dreaming. However, when the fire dispersed is of a more active character, increasingly vivid visions are produced, 'when some greater motions remain, visions (*phantasmata*) corresponding in quality and number to the type and location of the remaining motions are formed internally, and are remembered as external when we wake.'[142] It is worth noting that the term *phantasmata* is frequently used to describe visions or apparitions seen in waking contexts as well as sleeping, which I return to below.[143] Although the *Timaeus* does not shed any light on the physiology of hallucination specifically, it does at least firmly establish that dreams are fundamentally connected to the Platonic theory of vision, which is made possible by the fiery nature of the eyes. This conceptualisation of dreams as somehow linked to visual perception is reinforced by Democritus who, according to Plutarch, imagines that dreams constitute perceptions absorbed by the pores of the body whilst asleep which 'rise up' to appear in the sleeper's mind.[144] This also evidences an explicit link with his theory of vision, which he believes occurs through the souls' recognition of the perceptible atomic effluences given off by objects.

According to Aristotle, dreams occur when residual images received by the sense organs during waking hours stimulate a movement in the heart (the locus of perception for Aristotle) during sleep.[145] Like Plato, Aristotle uses the term *phantasmata* to describe the images enacted in dream states.[146] The term that Aristotle uses to describe the process through which these images arise is an action called *phantasia*. In *Parva Naturalia*, Aristotle

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[141] Thumiger (2017a: 295-310; 284ff.) argues that the vocabulary used to describe dreams and hallucinations are often interchangeable..

[142] *Ti*. 45e-46a the translation of this particular passage is taken from Harris' discussion of dreams in antiquity (2009: 252), all other translations of Plato from the LCL edition (trans. Bury) as listed in the bibliography.

[143] For example, in Plato's description of seeing ghosts in *Phd.* 81d he uses the φαντάσματα and εἴδωλα.

[144] Plut. *Quaest. conv.* 735a-b.

[145] *Parv. Nat.* 461a.

[146] For example *Parv. Nat.* 460b.18.

claims that residual sense-impressions in 'the melancholic, the feverish and the intoxicated' can produce visions that appear 'confused and monstrous', thereby evidencing that physical and mental illness, in this case melancholy, may affect the vividness of nonveridical perceptions.[147] This is also conducive with the Hippocratic idea that dream visions for those in states of madness are likely to take on a frightening quality.

Aristotle explicitly compares the mechanisms of dreaming with the deceptions that occur in illness, at 458b. 27-28: 'the same faculty by which we are deceived in illness when we are awake causes affection in sleep also', surely suggesting illnesses of a mental quality. In addition, he also proposes that the same residual images that produce dreams can reside (un-sensed) in the body during waking hours. They are not normally recognised by the soul as they are usually eclipsed by the more immediate sensations received by the senses in its active waking state. However, Aristotle's suggestion that, 'the sensation still remains perceptible even after the external object perceived has gone' does provide an explanation as to why misperceptions might occur.[148] This is interesting, as it indicates that if the conditions of visual perception are not fully actualised at the time of the initial sensory contact they may reappear later, whilst awake or sleeping, giving rise to perceptions which no-one else would be able to corroborate.

These examples show that philosophical explanations for dreaming tend to understand the process as a semi-sensory event, linked to the faculty of *phantasia*.[149] I believe that this capacity is crucial to the philosopher's explanations for how hallucinations may occur. With this in mind, I now turn to examine the concept of *phantasia*, tracing its development from Plato to the Hellenistic philosophers, who give this concept significant attention.

2.4 Perceptual Error and *phantasia*

2.4.1 Plato and Aristotle

In Plato the concept of *phantasia* is not discussed in relation to hallucination, but it is perhaps in his work that the word first appears.[150] Notomi's analysis of Plato's use of the term in the *Sophist* (264a), the only text in which he offers an explicit definition, advocates that we ought to understand his use of the term as 'perceptual judgement' and further, that, 'it must

[147] *Parv. Nat.* 461a.
[148] *Parv. Nat*. 460b 4-5.
[149] For a discussion of 'Why Aristotle needs Imagination [*phantasia*]' see Caston (1996).
[150] Watson (1988: 1).

mean 'perceptual (mainly visual) appearance'.[151] I also believe that Plato' use of αἴσθησις (sensation) in relation to the concept reinforces that this ought to be read as relating to the senses, the judgement of which Plato describes as sometimes false.[152] In the *Republic*, the related term *phantasmata* is employed by Plato amidst a discussion of imitative arts, as he considers that the artistic rendering of real objects can only create an appearance or likeness of the object, in other words it is simply an imitation of the real thing.[153] The allusion that *phantasmata* are to be understood as an appearance establishes that they can denote an image of something which is in opposition to direct reality. For instance, we have already seen that Plato employed the term *phantasmata* to describe the images that people experience in dream states.

Rees' treatment of *phantasia* in Aristotle establishes that his conception goes far beyond anything found in Plato.'[154] For Aristotle, *phantasia* is a faculty of the soul, which is distinguished from straightforward perception and thinking. However, I suggest that the common translation of the term in Aristotle as 'imagination' fails to capture the sensorial qualities of its functioning and conception.[155] Lycos' translation of *phantasia* as 'the faculty of presentation' and *phantasma* as the actual 'presentation' is, in my opinion, a far more appropriate interpretation of this concept.[156] Let us see what Aristotle has to say on the topic of definition (*De An*. 429a 4-9):

> Since sight is the chief sense, the name *φαντασία* is derived from *φάος* (light), because without light it is impossible to see. Again, because [*φαντασία*] persist in us and resemble sensations, living creatures frequently act in accordance with them, some, *viz*., the brutes, because they have no mind, and some, *vis*., men, because the mind is temporarily clouded over by emotion, or disease, or sleep.

His explanation of the term which he relates to light, a precondition of seeing, makes it clear that Aristotle clearly related *phantasia* to the physical act of vision and the production of mental images.[157] He also clearly cites emotion, disease and sleep as conditions which cause men to think that the images of *phantasia,* which resemble sense impressions, are real. As

[151] Notomi (1999: 252).
[152] *Soph*. 264b.3
[153] *Rep*. 598a-b.
[154] Rees (1971: 491).
[155] On the common translation of *phantasia* as 'imagination' in Aristotle see, Sheppard (2014: 7).
[156] Lycos (1964: 496)
[157] Pigeaud (1983: 23).

we have established, Aristotle viewed uncontrolled emotion as one of the conditions which could alter the body and induce madness.

The term *phantasmata* in Aristotle denotes the appearances that arise when *phantasia* is enacted.[158] The *phantasmata* of *phantasia* are connected to visuality, both in how they come about and how they are experienced.[159] As we have seen, Aristotle contends that the images of *phantasia* are felt as a sensory-like experience informed by real perceptions, which may give rise to perceptions that are no longer representative of present surroundings or objects, as they are produced by past stimuli.[160] In other words, the capacity of *phantasia* means that people can experience certain perceptions (*phantasmata*) of absent stimuli (i.e. hallucinations), which no one else will be able to see, as they are informed by prior perceptual experiences.[161]

2.4.2 The Stoics

The Stoics, Skeptics and Epicureans offer some novel ideas about hallucination, which are also connected to their discussions of *phantasia*, or 'impressions', as they are commonly translated in Stoic and Epicurean contexts.

The Stoic interest in the concept centres around their belief that humans are endowed with the means to attain knowledge through, what they term, *cataleptic phantasia* (or, cognitive impressions). According to Diogenes Laertius, following the Stoic idea that impressions are stamped upon the soul,[162] he explicates that cognitive impressions will always provide a true representation of reality, whereas non-cataleptic (non-cognitive) impressions will not:

> Of impressions, one kind is cognitive, the other incognitive. The cognitive, which they [the Stoics] say is the criterion of things, is that which arises from what is and is stamped and impressed exactly in accordance with what is. (3) The incognitive is either that which does not arise from what is, or from that which is but not exactly in accordance with what is: one which is not clear or distinct.[163]

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[158] Arist. *De. An.* (428a1-2).
[159] Johansen (2012: 199).
[160] See Modrak (2016: 16-17) who emphasises that *phantasia*, unlike perception proper is prone to error as it is based on information retained from sensory information, rather than a perception itself.
[161] See Moss (2012: 100).
[162] Frede (1983: 65-67).
[163] Diog. Laert. 7.46 (LS 40.C.1-3 = SVF 2.53).

This indicates that sensory impressions can be categorised as non-cataleptic if an error occurs in its perception, or if it arises from anything which is not based in reality. Any deviation from the normal functioning of the sensory process (for example, a change to the state of the *pneuma*, an interruption in its communication back towards the eye, or anything that impairs or affects the functioning of the rational part of the soul) could affect this process and give rise to perceptions which will not provide an accurate representation of the world around us. The Stoic's analogy of the sensory faculties extending throughout the body like tentacles also indicates that the health and functioning of the body overall could have a bearing.[164] Indeed, Ahonen, in his analysis of Stoic madness, argues that both the body's senses and a healthy mind were a precondition for the production of cataleptic impressions.[165] This shows a continuum with the ideas articulated in the Hippocratic texts that we encountered in the previous chapter, in that physical illnesses could result in disruptions to normal sensory functioning.

We have now established that it is possible for impressions to arise from what is not, and that they can arise in a way that does not accurately represent what is. The second century AD physician and Skeptic philosopher Sextus Empiricus, writing about the Stoics, gives an example of such a circumstance:

> Of true impressions, some are cataleptic and some are not. Those [which] are not cataleptic befall people because of illness. Innumerable people suffering from phrenitis or melancholy receive an impression that is true but not cataleptic, as it is produced accidently and fortuitously, and therefore they often are not convinced by it and do not assent to it.[166]

This passage shows that illness, specifically phrenitis and melancholy, were accepted as conditions which could cause non-cataleptic *phantasia*. This is not an isolated instance and elsewhere in a discussion of why non-cognitive impressions occur Sextus turns again to madness, claiming that non-cataleptic impressions, 'strike us from what is not real, as in the case of crazy people' and when impressions received 'do not resemble just that real thing … [as is] the case of Orestes in his madness.'[167] That Sextus chooses to give the figure of the infamous Orestes as an example exemplifies that madness was seen as a common

[164] The relevant passage is quoted on p.34 above.
[165] Ahonen (2014: 119).
[166] *Against the Logicians.* 1.244-245, translation here as given by Ahonen (2014: 119) in his discussion of this passage, with minor changes. All other translation of Sextus Empiricus rely on (Bett, 2005).
[167] *Against the Logicians*, 1.249.

explanation for seeing things which do not exist in reality. It is worth noting Sextus' suggestion, in the quote above, that not all those suffering from a mental illness will succumb to non-cataleptic impressions, and assent to them. This suggests that even those experiencing misperceptions as a result of madness will still sometimes be capable of discerning cognitive from non-cognitive *phantasia*.[168]

To understand Sextus' claim that true impressions are not necessarily cataleptic, we must consider the criteria for the truth and falsity of impressions. One of the examples he offers of a false impression is the phenomenon of optical illusions; he gives several examples (a straight oar can appear bent when viewed in water or a colonnade appears to narrow as it extends into the distance).[169] These are not hallucinations but illusions, which do not fully represent reality. However, Sextus goes on to describe that impressions can be both true and false, again employing the figure of Orestes who sees his sister Electra as a Fury. Electra is real, as she is present and exists, but, Orestes' impression that the figure he sees before him is a Fury is false.[170] That Orestes' impression is described as non-cataleptic, but also true and false, further complicates the matter. His false interpretation of Electra as a Fury is harder to assign to the sphere of optical illusion, or merely a slightly distorted view of reality. It seems clear that Sextus is not discussing hallucination, in the sense of seeing things in the absence of external stimuli, but it raises questions about the validity of some impressions, even those which do have a 'true' external stimulus. Therefore, I suggest that the Stoics' idea of illusory impressions may have been understood as varying in its degree of distortion, with hallucinations at the far end of the spectrum. The impressions of those in states of illness and madness may thus be true but not cataleptic, and individuals in states of madness are unable to judge them as such.

A final form of impression described by the Stoics, which is connected to madness, arguably falls into the non-sensory category, in that it is not received through the sensory organs. Aëtius' presents that Chrysippus' conceived of four different types of impression (*phantasia*, *phantaston*, *phantastikon* and *phantasma*). *Phantasma* here denotes a figment of the imagination (*phantastikon*), described as an affection of the soul, which arises without an 'impresser' i.e. a perceptible stimulus. He continues that, 'it occurs in people who are

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[168] Frede (1983: 66-67).

[169] *Against the Logicians,* 1.244.

[170] *ibid.* 1.244-245. Interestingly the close parallels between dreams and seeing things which do not exists in reality also seems to continue in this period as Sextus also includes within this discussion the 'false and vacuous' impressions of dreamers.

melancholic and mad'.[171] The *phantasmata* of madness described here have no basis in reality unlike the explanations for Orestes' misinterpretation of Electra as a Fury. In this case a *phantasma* is formed purely from the imagination, with no external stimuli and is therefore closer to more modern understandings of hallucination as an entirely mental process.

2.4.3 The Skeptics

The Skeptics base their critique of the Stoic idea that knowledge can be attained through cataleptic *phantasia* on the difficulties of distinguishing true impressions from false ones.[172] They propose that non-cataleptic impressions can be as clear and distinct as cataleptic ones, which causes a problem for the Stoic idea that it is possible to distinguish between them. The Skeptics contend that, 'The apprehensive [cataleptic] appearance, then, does not have any peculiarity by which it differs from false and non-apprehensive [non-cataleptic] appearances.'[173] If we imagine that hallucinations often appear to their subject as a distinct, clear, and convincing, this presents a difficulty for the idea that one ought to be capable of judging their veracity infallibly. Therefore, the Skeptics reject the Stoic idea that cataleptic impressions are to be viewed as the criterion of knowledge.[174]

Furthermore, although the Skeptics consider that the mental and physical state of an individual at the moment of perception may have an impact on the quality of their impressions,[175] they also stress the subjectivity of sensory experience in a way that implies neither truth nor falsity, for instance, 'the same coat which seems of a bright yellow colour to men with blood-shot eyes does not appear so to me'[176] Moreover, the Skeptics' challenge ideas which assign the production of 'improper impressions' to illness or an internal imbalance of the body. Their stance is that as men naturally differ in their humoral compositions, even in healthy states, there is no way of establishing an all-embracing concept of a 'normal' or the 'natural'; a state of sickness is natural to the sick man, health would be unnatural, and vice versa.[177]

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[171] Aëtius states that Chrysippus says that *phantasma* occur in people who are melancholic and mad, again employing the figure of Orestes to elucidate what he describes, Aët. 4.12.1-5 (LS 39B = SVF 2.54).
[172] Prentice (1968: 343).
[173] Sext. Emp. *Against the Logicians,* 1.411.
[174] For a detailed analysis of the Skeptic attack of Stoic epistemology, see Frede (1983:65-93).
[175] Sext. Emp. *Pyr*. 1.101.
[176] *ibid*.
[177] *ibid*. 1.102.

2.4.4 The Epicureans

The Epicureans, like the Stoics, also saw sensation (*aisthesis*) as the standard of truth.[178] However, the Epicureans unlike the Stoics, argued that every *aisthesis* is true.[179] As I described in this chapter's opening section, visual perception according to the Epicureans is the stimulation of the sensory faculties by *eidola* that fly through the air. If these *eidola* reach the eye intact, and have not undergone any changes, the impression will accord directly with reality, which as we have seen, the Stoics would term a cataleptic impression. In Epicurean thought *phantasia*, 'is the appearance made by the content of a sensation, in this case it is the immediate object of perception.'[180] For the Epicureans, as all sensations are true so are all *phantasia,* as they must be born from sensory contact with existent things.[181]

One Epicurean view of hallucination is that these *eidola,* if of a particularly fine nature, are able to enter the mind directly, where they are perceived without the requirement of passing through the sensory organs. These impressions may be entirely consistent with reality if they have emanated from an object and have gone directly into the mind without undergoing any changes; this can be understood as a way of seeing without the use of the eyes as a receptor.[182] At other times the *eidola* intermingle in mid-air before flowing into the mind thus creating a distorted vision; it is by this process that the late Epicurean poet Lucretius describes that humans have seen mythical animals such as centaurs, where the atoms of a horse and man are combined and produce the image of a half-man, half-horse in the mind.[183] Following this logic Epicureans assert that all impressions, even hallucinations, are true.

Thus, the Epicureans contend that hallucinations and dreams, although they can misrepresent reality, are in fact informed by a composite blend of atomic effluences from *real* things. This gives some context to Diogenes' account of Epicurus' claims that even the *phantasmata* of madness and sleep are true.[184] Sextus Empiricus' account of Epicurus again employs the hallucinations of Orestes to elucidate his explanation of why hallucinations ought to be judged as 'true': 'In the case of Orestes, anyway, when he thought he was looking at Furies, the sensation that was activated by the images was true (for the images did exist),

[178] Taylor (1980: 105), this idea is attributed to Epicureanism's founding figure, Epicurus.
[179] Taylor (1980: 115).
[180] See, Güremon (2017: 187-188) who provides a helpful analysis on the vocabulary linked to Epicurean ideas of perception.
[181] Pigeaud (1983: 35-36) and Taylor (1980: 115).
[182] Lucr. 4.724-756 (LS, 15D).
[183] Lucr. 4.722-822 (LS, 15D).
[184] Diog. Laert. 10.31-32 (LS, 16B).

but the intellect in thinking that they were solid Furies was false opinion'.[185] This explanation opposes the Stoic view that hallucinations may merely be figments of the imagination which do not find their origin in reality. The hallucinations of the mythical madman are stimulated by real sensory information, but the effects of his madness to his overall cognitive capacities, leads him to the false opinion that the Furies are real and solid, perceptible beings. The Epicureans' thesis that all perceptions are true, even hallucinations, finds its basis in the idea that hallucinations occur when the *eidola* penetrate the mind directly, often in a confused and mixed state, and crucially for this argument these *eidola* are real, perceptible atoms.

In summary, *phantasia* seems to be one of the primary theories that the philosophers' employed to account for misperceptions. In Aristotle, for instance, we saw that the capacity of *phantasia* meant that people could experience perceptions of absent stimuli, which he explained were informed by earlier visual perceptions – following the very same principles he used to explain dreaming.

The Hellenistic philosophers also largely understood hallucinations as a perceptual experience. The Epicureans' view of hallucination is also informed by their theories of vision. Here we saw the contention that all *phantasia*, even hallucinations, are, in a sense, true as they are informed by real perceptible stimuli. Hallucinations could arise when *eidola* were received directly by locus of perception in a confused state, rather than through the sensory organs. The Stoic's contended, only 'cataleptic' and 'true' *phantasia* provided infallible perceptions of the world. Non-cataleptic impressions – those which pertain to hallucination – could be instigated by a variety of different factors, including disruptions to the functioning of the senses in states of madness.

2.5 Concluding Remarks

That perception is a central component in ancient theories of knowledge explains why the philosophers give the subject of hallucination (the most extreme example of the fallibility of the senses) such careful attention. If we are capable of misperceptions, which we surely are, how do we know that what we perceive is a true representation of the world around us?

One explanation given for hallucinations, which addresses the problem that they pose for the epistemic authority of the senses was madness. Madness was understood to have the potential to disrupt the processes of vision and the ability to make reasonable judgements

[185] Sext. Emp. *Against the Logicians*, 2.63.

about the impressions received by the sensory organs, and to give rise to false beliefs. Therefore, madness could be viewed as a catalyst for hallucinations, illusions and misperceptions, which did not entirely undermine the epistemic nature of the senses. That madness according to the philosophers is viewed as both a sickness of the body and of the soul introduces an ethical and moral aspect to their views of the misperceptions of madness, as they suggest that only those who are capable of controlling their emotions and always acting according to reason are capable of correctly understanding information attained by the senses. In other words, only when not in a state of madness are we likely to understand sensory information correctly and experience only veridical perceptions.

The philosophers' differing theories of vision clearly inform their understandings of how hallucinations may occur. The phenomena of hallucination and dreaming within which, in the words of Plato, 'we certainly have false perceptions' are both fundamentally informed by their understanding of how visual processes occurs. A further explanation for hallucinations is offered which attributes their existence to a faculty involved in the production of images, called *phantasia*. The philosophers offer various explanations for the production of *phantasmata* with the common feature that, although loosely informed by real sensory stimuli, they are more prone to error.

As we have seen, the later philosophers frequently drew upon the tragic figure Orestes to elucidate their arguments and ideas on *phantasia*. Therefore, we can assume that they expected that most would be familiar with his story and hold the view that hallucinations and madness were reciprocal. It is the representation of hallucination in tragedy that I turn my attention to in the next chapter.

Chapter 3

Hallucination in Athenian Tragedy

> For the term *phantasia* … has now come to be used predominantly of passages where, inspired by strong emotion, you seem to see what you describe and bring it vividly before the eyes of your audience.
>
> Longinus, *On the Sublime*, 15.1-2

One of the ways in which the concept of *phantasia*, which we met in the last chapter in an epistemological and perceptual context, is developed in later thought is illustrated by the quote above from the literary critic ps. Longinus, writing in the first-century AD.[186] Here we see a semantic shift in the use of the term to represent a process of visualisation, aroused by an emotional stimulus, which lends itself to sublime literary expression.[187] In this context *phantasia* becomes the ability to formulate visions internally, the inception of which need not, as we have already seen, be directly stimulated or informed by sensation.[188] *Phantasia* is thus an important part of the playwright's process of bringing his visions alive for an audience. In this way, the very creation and experience of tragedy is aligned with the faculty that the philosophers of the Classical and Hellenistic periods connected to the production of dreams and hallucinations.[189]

Furthermore, in his discussion of *phantasia* Longinus immediately calls upon Athenian tragedy, citing Euripides' conception of the mad Orestes' visions, '[i]n these passages the poet himself saw (εἶδεν) Furies and compelled the audience almost to see what he had visualised' (15.3).[190] Longinus' choice to employ an instance of madness from Greek

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[186] On the issues of date and attribution see, Russell (1964: xxii-xxx) and Heath (2012: 15-16).

[187] Watson (1988: 66-68) stresses the importance of Longinus' discussion of the term to the transformation in meaning, describing it as an early conceptualisation of the imagination.

[188] Doran (2018 :70) '…*phantasia* not only makes absent things present; it also creates things no mind has seen in actual perception'.

[189] O'Connell (2017: 229-230) highlights the relationship between the concept of *phantasia* and *enargeia* (vividness), which has a long history as a critical term, describing *phantasia* as the 'cognitive process of visualisation' which makes *enargeia* possible. For more on the relationship between these terms see, Webb, 2009: 93-97.

[190] Compare Quin. *Inst*. 6.2.29 who pushes the perceptual aspect of this idea further still in his discussion of oratory, asserting that *phantasia* allows us to 'actually see them [absent things] with our own eyes and have them physically present to us'.

tragedy highlights that the emotive power of Orestes' hallucinations had clearly lost none of its potency centuries later.[191]

In this chapter, I consider the treatment of hallucination as a symptom of madness in Athenian tragedy.[192] My decision to focus my literary enquiry of hallucination on tragic examples is instigated by the fact that issues of seeing and visual misunderstanding become an important thematic concern in the tragedies of the Classical Period; Harris' survey of instances of hallucination in tragedy connects madness to ten of the eleven plays which feature hallucination, a notable proportion.[193] As Thumiger describes, '[h]allucination can almost be called a genre-specific tool and is a pervasive motif in ancient drama, where it stages themes of ethical transgressions and misjudgements.'[194] Furthermore, it is from tragedy that perhaps some of the most memorable accounts of hallucinatory madness have been transmitted. We have already seen, for instance, that the philosophers drew upon tragic hallucinations to elucidate their understanding of the phenomenon.[195]

I begin this discussion by outlining some of the main characteristics of madness in tragedy, which I will argue shows a partiality for the visual aspects of madness in both its aetiology and symptomatology. I will argue that the dramatisation of hallucination provides an effective tool for exploring the effects of madness, which are often central to the play's plot development. This will lay the groundwork for a close consideration of two plays I have selected which use hallucination in the embodiment of their character's madness: (1) Io's hallucinations in Aeschylus' *Prometheus Bound* and (2) the aforementioned depiction of Orestes' visions in Euripides' *Orestes*. These plays, in particular, will allow me to demonstrate that the tragedians exhibited a remarkable awareness that hallucinations could be highly individualised and connected to personal experience and psychology, a consideration which is mainly absent from the medical and philosophical texts considered in the chapters above.[196] Overall, I will show that the playwrights adopt a pluralistic stance

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[191] It should be noted that Longinus distinguishes between rhetorical and poetical *phantasia* (at 15.2 and 15.8-11). Rhetoric aims at 'ἐνάργεια' (vividness), whereas the aim of poetic *phantasia* is to 'ἔκπληξις' (surprise), see Zanker (1981: 304).

[192] Harris (2013a: 292) identifies that: 'hallucinatory visions are usually in tragedy signs of madness'. See also, Most (2013: 404) who identifies that visual hallucinations specifically are most common.

[193] Harris (2013a: 292).

[194] Thumiger (2017a: 307-308).

[195] On the idea that this dialogue goes both ways see Thumiger (2013b) who connects the motif of vision in tragedy to contemporary epistemological debates in philosophical writing.

[196] To what extent the tragedians develop the psychology and 'inner life' of their characters is disputed. See, for instance, Gill (1990) who frames the argument in terms of 'character' vs. 'personality' (i.e. with the latter incorporating notions of psychology and the 'self') which builds on an earlier article (1986) on the same topic. See also, Gould (1978: 45) who argues that there is little evidence of 'the workings of a complex inner personality' in Greek tragic characterisation, in contrast to later drama. Therefore, my

to the causes of hallucination, which focalise physiological, supernatural and psychological origins.

3.1 The Visuality of Tragic Madness: Cause and Effect

It should be stated that when it comes to the causes of madness, tragedy maintains the overarching notion that illness (physical and mental) is caused by the gods, often in the form of a divine punishment or familial curse.[197] However, even a cursory reading shows that the writers engaged with the complexities of madness from early on, which took them far beyond a simply divine view.[198] Take, for instance, Phaedra's madness in Euripides' *Hippolytus* which takes the form of an intense erotic desire for her stepson (39). Phaedra's condition is clearly attributed to the god Aphrodite, which the god herself confirms in the prologue (28-29) and Phaedra also seems aware that her madness comes from a divine source, 'I have gone mad, a god possessed me and I fell' (240-241). This idea of divine origin is reiterated by the Chorus who initially presume that her illness is the work of some divinity (141-148). However, they go on to postulate that the cause of her madness may be the result of a psychological or physiological response. They suppose firstly that Phaedra's madness takes the form of an intense state of emotionality, a sentiment that shows parallels with the philosophers' views of madness resulting from the passions; perhaps, they suggest, she has learned of her husband's infidelity or received bad news from her homeland, which has resulted in a maddening jealousy or grief (151-159)?[199] Secondly, the Chorus consider whether her sex means that she may be predisposed to depressive states, '[w]omen's nature is an uneasy harmony, and with it is wont to dwell the painful unhappy helplessness of birth pangs and their delirium' (161-163). Thus, the Chorus convey to the audience that madness can come from a divine source, take the form of an acute emotional reaction, or even be related to gender and physiology. Therefore, we have additional explanations for her state of madness, which go beyond divine causation.

The symptoms of tragic madness emphasise overall the perceptual disturbances it can produce. Madness in tragedy can produce nonveridical visions, distort reality and make one see things that are not really there. Ruth Padel's work on tragic madness argues that

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discussion, which develops an idea that the tragedians show an awareness, to some extent, of personal and psychological factors challenges this notion.

[197] Padel (1995: 149-150).

[198] Saïd (2013: 373) traces the concept of 'mental illness' as distinct from god-given madness back to Aeschylus.

[199] See Segal (1988) for a discussion of the ways in which Euripides connects misperception to the effects of harmful passions in this play.

madness is bound up with vision in a particularly strong way; she explores metaphors of madness which present sanity and insanity in terms of light and dark, seeing and non-seeing and notes that madness darkens and confuses perception which leads to gross errors in visual understanding.[200]

Several plays suggest that madness has its genesis in the eyes of the individual. Ajax's madness, for instance, is brought about by Athena as she alters the power and functioning of his eyes: 'I shall place his eyes in darkness, even though they see' (Soph. *Aj*. 86).[201] That a visual stimulus can effect a madness of sorts is also presented in defence of Helen's irrational behaviour in Eurpides' *Trojan Women* who, after seeing (εἰσιδοῦσα) Paris, was (ἐξεμαργώθης φρένας) driven mad with *eros* (991-992). The eroticised madness of Phaedra is also exercised by Aphrodite through the power of vision (Eur. *Hipp*. 24-33).[202] Abnormalities in the appearance and condition of the eyes, which I return to below, are an important signifier of mental disturbance.

The importance of vision as a theme can be linked directly to the theatrical medium, which in its essence is a visual spectacle. Most's analysis of madness in tragedy theorises that the use of hallucination could constitute a metatheatrical comment, showing a self-conscious awareness that the visuals being created are not real.[203] This explanation echoes the view of Longinus, quoted in the opening of this chapter, in the sense that it allies the experience of the construction of tragedy with the visuals it creates.

Most also offers a practical explanation for why visual hallucinations, in particular, are most common, arguing that they could be more easily staged than their auditory, olfactory or tactile counterparts.[204] Following this idea, I propose that such considerations in staging can also be extended to explain why hallucination is more readily adopted in theatrical representations of madness than other recognised symptoms, such as depressive states, internal imbalances, general delirium or neurotic behaviour, which would be harder to communicate in a theatrical setting. We may suppose that the use of hallucination to represent madness also has its roots in clinical observations, supported by scholars who have

[200] Padel (1995: 47ff.)
[201] See also (69-70): 'I shall divert the rays of his eyes'.
[202] Segal (1988: 279; 281).
[203] Most (2013: 405-406). See Vernant (1990: 187-188) for the classic treatment of the idea that the tragic spectator was entirely conscious of the illusory nature of theatre, which should be understood as an essential component of the dramatic spectacle.
[204] Most (2013: 404).

established that the tragedians frequently incorporated medical terminology in depictions of suffering.[205]

The hallucinations of tragic characters are often of central importance to the play's plot development and in effecting their dramatic climax. Hallucination can be viewed as providing plausible explanations for the catastrophic errors in judgement shown by certain characters, which were often of central importance. It is Ajax's delusions, sent by the god Athena, which cause Ajax to slaughter a herd of cattle in the belief that he is attacking his enemies (Soph. *Aj,* 51-53).[206] His resulting suicide, the dramatic pivot of the play, is directly linked to this error in judgement and the shame he feels. Another case of divinely induced madness, which causes catastrophic errors as a result of disrupted visual perception is seen in the character of Heracles, who kills his own wife and children in the belief that they are that of his enemies (Eur. *Heracl.* 830-842). These examples reflect the conventions of tragic storytelling, which Aristotle believed ought to depict the downfall of the protagonist brought about by an error (*hamartia*) in judgement.[207] Hallucinations act as a device to propel the characters to act in a way that results in long-lasting suffering and anguish.

Finally, I suggest that another use of hallucination in drama is that they are an effective way of communicating a character's internal state of mind. The medium of theatre requires the vocalisation of a character's thoughts, feelings and motivations. It is this aspect that makes tragedy a particularly interesting source in the pursuit of constructing an understanding of hallucination as it offers us introspective accounts of the experience of madness unlike any other source from the Classical and Hellenistic periods. Whilst these accounts are of course fictional, we can imagine that the writers were drawing upon their own worldly knowledge to create presentations of their character's internal states, motivations and influences, while also demonstrating their own understanding of madness and hallucination.

So far then, we have established that the tragic poets used hallucination as a dramatic device to signify a character's madness to the audience, as a means of explaining the actions of mad characters and as a device to communicate their inner workings. The causes of hallucination in tragedy are always linked back to madness, which was seen primarily as a divinely imposed state. However, the playwrights also considered other factors which took them beyond this traditional divine view of the origins of madness. With this in mind, I now

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[205] Jouanna (2012: 71-74).

[206] It should be noted that Ajax's madness primarily affects his vision, not his actions, as he has already resolved to commit his hubristic act before Athena's intervention.

[207] *Poet*. 1453a.7-10.

turn to my selected case studies to examine some of the ways in which the tragedians portrayed hallucinations which, I believe, show and express a variety of different influences and explanations.

3.2 Aeschylus' Io

Aeschylus' presentation of Io in *Prometheus Bound* is one of the earliest examples of hallucination being used to represent a character's madness in tragedy.[208] In this section I discuss some of the ways in which Aeschylus presents her character and reflect upon his portrayal of her visions.

Many have noted that the brief inclusion of Io in the story of Prometheus is surprising; nowhere previously were the two myths combined.[209] Her appearance is most readily explained by Io and Prometheus' shared connection to Heracles. Heracles, a future descendant of Io, is ultimately responsible for releasing Prometheus from his punishment at the hands of Zeus.[210] However, a further connection is made by Aeschylus who emphasises Zeus's role in instigating her sufferings. Io attributes her misery to Zeus at lines 577-80 and again at 759, only mentioning Hera once at line 600, in contrast to other portrayals which place Io's suffering firmly in the goddess' hands.[211] Therefore, in Aeschylus' presentation the suffering of Prometheus and Io has a common source. However, unlike Prometheus, whose suffering takes the form of largely physical endurance, Io is subjected to torture of a more psychological kind.[212]

Aeschylus' introduction of Io to the stage immediately establishes her state of disorientation, 'What land? What people? Whom should I say I see…' (562). Visual uncertainty of this sort is repeated elsewhere in later tragic depictions of mad characters, for instance when Agave's madness subsides following the frenzied murder of her son, she

[208] For the sake of convenience, I assume Aeschylean authorship; for the issues of authenticity and dating see Griffith (1977: 8-18). Perhaps earlier is Aeschylus' depiction of Cassandra, which I discuss below, p. 54.
[209] Griffith (1983: 189) and Taplin (1977: 265-267).
[210] On the weaving of Prometheus and Io's past, present and future in the play see, Griffith (1983: 188-19).
[211] See Montiglio (2005: 19-20) who argues that the traditional role that Hera's plays in Io's wandering madness is glossed over in this play.
[212] One may of course argue that Io's (suggested) transformation can be read as a physical affliction, but O'Brien Moore (1924: 88) notes that it is only Io herself who mentions her cow-state in this play, suggesting that this may be related to her hallucinations.

stresses a return to the brightness and clarity of her vision.[213] Once Agave's visual perception is no longer distorted by her madness Cadmus urges her to look properly (σκέψαι νυν ὀρθῶς) at the 'lion's' head she holds in her hands and she is able to see for the first time the truth of what she has done (Eur. *Bacch*. 1279ff.). Similarly, Io's opening lines show that she is experiencing visual uncertainty, which coincides with her obvious mental distress.[214]

The traditional version of the Io myth is that Hera caught her husband Zeus in the act of seducing the young Io.[215] Hera then transformed Io into a cow and enlisted the many-eyed beast Argos to keep guard of Io.[216] It follows that Argos is killed by Hermes under Zeus' instruction and this prompts Hera to send a gadfly to torment Io.[217] The sting of the gadfly caused her to wander the world in her attempt to escape it. However, it is interesting that in Aeschylus' presentation he tends to focus the cause of Io's flight not only on the gadfly, as the traditional myth relates, but chiefly on her fear of Argos (566-560):

> Some gadfly (οἶστρος) is again stinging me in my misery –
> I am fleeing from the spectre (εἴδωλον) of Earth's son, Argos I am afraid
> To look upon (εἰσορῶσα) the herdsman with ten thousand eyes,
> But he comes with his shifty gaze –
> He's dead, but not even earth cover him over.

Io's admission that although she knows that Argos is dead he remains visible (and audible) to her is striking, particularly as the presentation of Argos as an εἴδωλον has no known antecedent.[218] Therefore, we may assume that this is an innovation by Aeschylus which deserves some attention.

Identifying whether this εἴδωλον denotes a ghost or a false vision is difficult, as the term is ambiguous in this regard. Io's contention at line 571, that Argos has crossed over from the dead, may suggest that we are to understand this as the ghost of Argos. However, Aeschylus has already established that Io is disorientated and experiencing visual uncertainty, which suggests that her perception of Argos may not be all it seems. Podlecki's commentary of the passage highlights that Io's acknowledgement of Argos' death means

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[213] Eur. *Bacch*. 1266: 'It is brighter than before and clearer'. We may compare Pentheus hallucinations in this play which are also connected to Dionysus and thus have a divine origin (618-622; 630ff. and 922ff.).
[214] Podlecki (2005: 180) notes Io's use of dochmiacs in this scene, which in tragedy are usually a sign of mental aberrancy.
[215] Gantz (1993: 198ff.)
[216] See, Aesch. *Supp*. 299-308.
[217] Griffith (1983: 210).
[218] See Gantz (1993: 198-203).

that she shows an awareness that she is hallucinating.[219] I think that this can be supported by some of the other aspects of Io's portrayal in this play, which seem to suggest that her perceptions of Argos could be psychological rather than simply supernatural. For instance, it is notable that Aeschylus presents fear as a defining feature of Io's character.[220] Medical descriptions often identified fearfulness in cases of hallucination connected to madness.[221] In this regard, it also seems notable that Io is frequently described by the characters in the play as suffering from a sickness (lines 597, 606 and 631). Rather than call upon the gods to call off her pursuers Io appeals to the Chorus for a medical cure, 'What medicine is there for my illness (νόσου)' (606). Surely a further indication that Io recognises that her visions may now be the result of some psychological or physical disorder, rather than god-sent persecutions. Furthermore, Io's contemplation of suicide to escape her unwanted visions (583-585 and again at 746-751) shows Aeschylus has an awareness that hallucinations could have a severe psychological impact on those who experience them, which again reflects clinical observations of the symptom.[222]

This leads me to believe that Aeschylus' introduction of Argos' εἴδωλον is invented to call into question the physicality of Io's torment, in opposition to the traditional telling where both the gadfly and Argos are certainly material, even if only on a divine level. I think that Aeschylus is suggesting that Io's earlier encounter with the beast Argos has produced a lasting psychological impact and she cannot shake him from her thoughts. By describing that the dead Argos is still tormenting her, Aeschylus again draws attention to the idea that Io's pursuers may be created internally. This seems to be supported by other textual traditions that use the gadfly as a metaphor for frenzy and wandering madness, which may find its origin here.[223] Although we must recognise, as the myth goes, that her suffering originated from a 'real' gadfly and the 'real' Argos sent by Hera, Aeschylus presentation seems to be offering the opportunity to interpret her perceptions as immaterial, and as a result of earlier traumatic experience.

Aeschylus may also be alluding to the connections between dream images and hallucinations, highlighted in other sources, in his characterisation. Io recalls that she resisted a series of dream-like visions 'ὄψεις ἔννυχοι' which were sent to encourage her out

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[219] Podlecki (2005: 180).

[220] For example, lines 566-568 and (677-680) where Io again mentions her fear of Argos. The effects that fear can have on the mind (φρένας) have already been established earlier in the play by the Chorus of Oceanids, when they first encounter Prometheus bound to his rock (181).

[221] For example, Hipp. *Virg,* [Potter, 538] which highlights the young female's state as 'frightened and afraid', which are followed by strange hallucinations.

[222] See *Virg*. [Potter, 359-363].

[223] Padel (1995: 15).

of her quarters and into the meadows to make love to Zeus (645-654). Her anxiety about these visions is made clear, as she divulges their content to her father who consulted various oracles in an attempt to understand their meaning. This provokes questions about the reliability and veracity of Io's visions more generally, as her father seeks help to establish their truthfulness and exact meaning. At the oracle's command, Io's father casts her out of the household, resigning her to her fate of wandering madness. Aeschylus' telling of the Io myth focalises these dream visions as the very instigator of her troubles, particularly significant when we consider that her madness is characterised by the visual perceptions of her earlier tormentors. This seems all the more significant when we consider that this differs from other accounts of how Zeus and Io came first together. In Aeschylus' *Suppliants* (290-296), for instance, Io is described as a key-holder of Hera's temple and it is here that Zeus seduces Io; there is no mention of him communicating with her through dreams.

The Io episode is nearing its end when Prometheus offers a prophetic account of Io's future (introduced at 705-706). To anyone familiar with the myth, Prometheus' words would be recognised as entirely truthful; Io will travel to Egypt where she will bear Zeus a child (848).[224] However, in her state of madness Io is unable to understand that Prometheus is offering her a true account of what lies ahead. Aeschylus has Prometheus ascribe Io's failure to respond to his mantic account as a result of her suffering (823-824), which has engendered a detachment from reality. This scene has obvious echoes of the hallucination scene in the Odyssey (20. 345-360), which you will remember meant that the suitors failed to see the truth of the prophet Theoclymenus' vision, as their comprehension was affected by their madness.[225]

The crescendo of Io's madness, before her departure from the stage, directly follows a state of withdrawal which contrasts with her earlier willingness to communicate with Prometheus and the Chorus. It is worth noting that withdrawal and unresponsiveness is a prelude to hallucinatory madness in another of Aeschylus' plays, *Agamemnon*, which relates the prophetic visions of Cassandra (1045-1070).[226] Perhaps the most striking portrayal of

[224] See also, Aesch. *Supp*. 313.

[225] The relevant passage is quoted on p. 12 above.

[226] The Chorus' use of '*φρενομανής*' here denotes that Cassandra's visions are achieved in a state of inspired madness. Cassandra's madness grants her accurate visions of the future that only she is able to see, as she accesses another layer of temporal reality. However, I believe that it is appropriate to understand her prophetic power as a description of a hallucination as there is no immediate perceptible stimulus for her visions. Her prophetic powers are described in terms which indicate a visual experience by her words 'What is this I see?' (τί τόδε φαίνεται;), rather than simply an innate god-given knowledge or premonition of the future.

Io's madness as a somatic condition comes from Io's own words just before she exits (881-886):

> My heart kicks at my ribs in fear!
> My eyes are wheeling and rolling!
> I am blown off course by a raging
> Wind of frenzy. My tongue is out of control.
> My words churn and strike at random
> Against waves of foul disaster.

These final words, which express her madness in terms of its violent physical symptoms, are sure to have left an impression on the audience. The terminology is clearly influenced by medical descriptions of illness. The description of her eyes as 'wheeling and rolling', for instance, although a common representation of tragic madness, also appear in medical observations of madness which include hallucination as a symptom.[227]

This analysis has shown that Aeschylus incorporates medical and psychological considerations into his presentation of Io's visions and madness, with the suggestion that her visions may have a naturalistic origin. Although we must not forget that overall the main explanation for Io's torment is the gods[228] we can see that Aeschylus, by way of some meaningful departures from the traditional accounts of Io's story, succeeds in introducing some contemporary and worldly reflections upon the cause and progression of her visions.

3.3 Orestes' Visions of the Furies

Perhaps the earliest portrayal of Orestes' madness and resulting visions on the Athenian stage comes to us from Aeschylus' *Oresteia* trilogy at the very end of the *Choephoroi.* In this portrayal, having acted upon Apollo's instruction to kill his mother, we see Orestes struggle to come to terms with what he has done. In his final moments of sanity, during a speech in which he tries to justify his actions,[229] Orestes expresses an understanding that (as

[227] Thumiger (2017a: 95).
[228] Aeschylus portrays that they are the cause of Io's original torment and ultimately it is the influence of a god (848-849) that will calm her mind (the physical touch of Zeus).
[229] *Cho*. (1025-1026), 'But while I still have my wits (ἔμφρων), I make proclamation to my friends and say that it was not without justice that I killed my mother'. See, Harris (2013a: 293) and Garvie (1986: 338) who also identify these lines as Orestes' final moments of lucidity.

a consequence of his deed) he will soon lose control of his mind (*φρένες*) and senses.[230] This sets the scene for his first vision of the Erinyes, which is concurrent with acute feelings of fear (Φόβος).[231] The intangible nature of the Erinyes is made clear by the Chorus, who believe that Orestes' perceptions are born from his imagination, or else result from his confused state (indicated by *δόξαι* at lines 1051 and again at 1053). Aeschylus makes it plain that Orestes interprets his visions as real entities which the Chorus fail to recognise, 'You don't see these creatures, I do! I'm being driven, driven away! I can't stay here!'.[232] Frustratingly, for this enquiry, the matter of whether this represents a hallucination is complicated by the fact that Aeschylus confirms the reality of the Erinyes by bringing them onstage as the Chorus in the *Eumenides*, the final part of the trilogy, where they are now recognised by the other characters and the audience.[233]

A differing account of Orestes' visions comes from Euripides' *Iphigeneia in Tauris* where a herdsman relates the story of Orestes madness, as he mistakes cattle for the Erinyes and violently attacks them (280-335). This treatment is similar to that of Ajax and Heracles who mistake real objects for something else, rather than see something which does not exist. It is in Euripides' *Orestes*, however, that we find, in my opinion, one of the most interesting accounts of his visions in the extant tragedies. By the time that Euripides' is writing the *Orestes,* the protagonist has already earned his status as the iconic madman who sees things around him that others do not.[234] In this play his visions of the Erinyes are linked to pathological madness, the condition of his eyes and to his feelings of guilt, suggesting that his hallucinations could be caused by physical and emotional factors.[235]

The play is set six days after the murder of Clytemnestra, during which time Electra describes that Orestes has been overcome by madness which is conceptualised as a terrible disease (34-45):

> Ever since then poor Orestes here, his body wasting away with a cruel disease, has taken to his bed, whirled in madness (μανίασιν) by the blood of his mother… During

[230] At lines 1022-1024 Orestes, employing the metaphor of a charioteer veering off track announces, 'my mind is almost out of control and carrying me along half-powered (φέρουσι γὰρ νικώμενονφρένες δύσαρκτοι)'.
[231] *Cho*. 1024 and 1047. We may draw a parallel here with Io's state of fear which, as I argued above, informs her visions (see, p. 53-56).
[232] *Cho*. 1061-62.
[233] Foley (2009: 205).
[234] As evidenced by the philosophers' discussions of hallucination and madness which frequently refer to Orestes as their exemplar.
[235] Saïd (2013: 391).

> this time he has neither swallowed food nor bathed. He lies covered in a blanket, and when his body finds relief from his malady (νόσον), he is sane and weeps, while at other times he leaps from the bedding and runs about like an unyoked colt.

Similar symptoms are presented throughout the play; he refuses food, foams at the mouth and eyes, is unkempt and corpse-like in appearance and he is weakened and made frail by his illness.[236] These descriptions demonstrate some key similarities with contemporary medical descriptions of illness, including those of a psychic nature. However, the most persistent observation made throughout the play of Orestes' appearance involves the movement and functioning of his eyes. Almost every character in the play has something to say on this matter:

> (1) Menelaus comments: 'How terrible the glance you shoot from parched eyes!' (389).
>
> (2) Tyndareus observes 'sickness in his darting glance' (480).
>
> (3) Orestes himself claims that in his illness, 'I cannot see clearly' (224).
>
> (4) The chorus note his 'darting eyes rolling in fear' (836-7).
>
> (5) Electra notes a disturbance (ταράσσεται) in his eyes as his hallucinations manifest (253-254).

Electra's observation is of particular significance as it coincides with Orestes' vision of the Erinyes. Electra sees that his madness and the onset of his visions are about to occur, indicating that she is familiar with this sign (253-254):

> Ah, ah, your eyes are becoming disturbed, brother! How quickly you have fallen into madness, though you were just now sane! (οἴμοι, κασίγνητ', ὄμμα σὸν ταράσσεται, | ταχὺς δὲ μετέθου λύσσαν, ἄρτι σωφρονῶν).

As I established in my second chapter, the Hippocratic texts also relate madness to disturbances in the eyes indicating that Euripides may be drawing upon contemporary

[236] See lines 83-84; 223; 228; and 385-387.

medical understandings to portray Orestes' madness.[237] Theodorou comments on the use of ταράσσεται and its relationship to ταραχή, which is often associated with the φρένες, indicating that Euripides means to establish that Orestes' eyes display some form of inner disturbance.[238] Furthermore, Theodorou notes how this contrasts with the typical descriptors of madness in tragedy that describe 'rolling eyes' which we have seen elsewhere. In other tragic representations, the eyes are acted upon by the god, and therefore subject to an external force. For instance, the rays of Ajax's eyes are cast astray by Athena, which results in his misperception. This departure in Euripides' seems intended to suggest that Orestes' madness is both corporeal and internal, rather than born from an external force.[239] Euripides seems to be introducing medical understandings of madness and visual disturbance into his characterisation of Orestes. In other words, he seems to be suggesting that Orestes' madness is in part a somatic disease which has caused hallucinations.

Whether this disturbance in the eyes is simply an indication of his madness or in fact the cause of his hallucinations is not clear. It seems significant that the change in his eyes (described as an agitation of sorts) leads into his experience of non-veridical visions. The resulting visions of the Erinyes appear only to him, evidenced by Electra's attempts to restrain her brother and temper his reactions. She appeals to him to realise that his visions are not real, 'You don't actually see anything you think you see! (ὁρᾷς γὰρ οὐδὲν ὧν δοκεῖς σάφ' εἰδέναι)' (559). Her words and physical attempts to placate Orestes have no effect; Orestes is clearly experiencing a complex hallucination as he jumps out of his sickbed to fight the figures he believes are advancing. His perception of the Erinyes (255-276) are both tactile and audial, but the visual nature of his experience is stressed. When his madness subsides, he explicitly states that this experience is visual as he exclaims (279): 'After the storm waves I once more see calm (ἐκ κυμάτων γὰρ αὖθις αὖ γαλήν' ὁρῶ)'.[240]

Other scholars have suggested psychological readings, which contends that Orestes' madness is an acute emotional response to his act of matricide.[241] That Euripides chooses to present his hallucinations on stage in this play allows us to examine the circumstances that lead up to the event, its onset and aftermath. It is significant that our first reference to Orestes' madness in the play is ascribed to 'the blood of his mother' (36 and again at 88). Indeed, Harris suggests that Orestes' attack of madness is a response to Electra's very

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[237] See Willink (1986: 127) who comments on the use ταράσσεται and notes that the related terms ταράσσειω and τάραξις are often found in medical discussions.
[238] Theodorou (1993: 35).
[239] *ibid.*
[240] Compare the account in Hipp. *Int* discussed on p. 24 above.
[241] For example, Theodorou (1993: 37); Porter (1993: 298-313); and Dodds (1951: 42) who asserts, 'it is only Euripides [of the tragedians] who psychologise them [the Erinyes] as pangs of conscience.'

mention of her.[242] Notably, the first word he calls on stage in his madness is 'Mother' which shows that she is at the forefront of his mind as his madness manifests (255). I would support the view that Euripides' portrayal of Orestes indicates that the deed of killing his mother is the cause of his hallucinations. The crucial passage that supports such a reading is his conversation with Menelaus, in which he explicitly connects his visions with this traumatic event.

Menelaus enters the stage at line 348 and is shocked at the corpse like figure of Orestes who presents himself as a suppliant. Menelaus enquires, 'What sort of visions (φαντασμάτων) cause you this malady (νόσος)?' to which Orestes responds: 'Understanding: the awareness that I have done dreadful things' and 'grief' (396). Therefore, his inner turmoil, caused by his decision to kill his own mother to avenge the death of his father, is arguably the true cause of his madness and hallucinations. The Chorus also (831-835) shift the focus of their understanding from a physical disease (which is emphasised in the opening of the play) to Orestes' deed and resulting guilt, 'What malady, what tears, what pitiful fate is greater in the world | Than to take a mother's blood upon one's hand? From doing such a deed he has been driven wild with fits of madness.' In doing so Euripides begins to construct Orestes as someone who is plagued by his actions, rather than simply suffering from a disease as the other characters have identified thus far.

This shows a sensitive consideration of the inner workings of his character, and undoubtedly incorporates notions of the emotional and psychological impact that trauma can have on the individual. As Saïd explains Menelaus, 'puts emphasis on the effect of the crime on the (ἡ σύνεσις) and emotions (λύπη) of the murderer' and links Orestes' madness to a mental awareness and not the Erinyes'.[243] In this way, Euripides' presentation need not deny the existence of the Erinyes as a divine source of madness, but it seems that the playwright may be suggesting that Orestes' very awareness of these deities as a concept means that, in his state of intense guilt, he begins to imagine that they are pursuing him. Unlike Aeschylus' *Oresteia,* where the Erinyes are established as real divinities which others can see, and which express a vengeful intent against Orestes, in this play they are only present as persecutory hallucinations in Orestes' mind.

Padel, on the other hand, suggests that Orestes' visions are in fact entirely truthful, arguing that Orestes' status as a kin-murderer means that a realm of perception, unavailable to those who have not incurred the wrath of the Erinyes, has been opened up to him.[244] If we

[242] Harris (2013a: 293).
[243] Saïd (2013: 392-393).
[244] Padel (1992: 181).

accept this, it seems that Orestes' murder of his mother allows him to see these vengeful figures. This is in line with the ideas I articulated in my second chapter on philosophical sources, where it was considered that certain individuals may exhibit perceptual awareness of things that others cannot see, but far from being false, they are in fact being given access to a higher truth. However, the fact that Euripides' chooses to insert other misperceptions, and not just those of the Erinyes, makes this reading problematic. For instance, Euripides has Orestes mistake Electra for one of the attacking Erinyes. This implies that Orestes is not simply having truthful visions of events that no-one else has access to. His understanding of reality is also affected by his madness and this cannot be so easily assigned to Orestes' ability to see the Erinyes as a result of his deeds. His visions of the Erinyes, real or otherwise, are interlaced with other non-veridical perceptions which cannot be described as accessing a higher truth (Electra is not a Fury).

Overall, Euripides offers his audience the opportunity to interpret Orestes' visions in a number of different ways: are the Erinyes real entities that only he can see, having committed the crime of killing his mother; are they hallucinations that are related to pathological illness and madness; or are they purely psychological, a visual manifestation of his guilt, borne from his dreadful deed?

3.4 Concluding Remarks

In conclusion, hallucination in tragedy is almost always a sign of madness, whether god-given (as a punishment or in the form of prophesy) or conceptualised as a result of an illness or psychological state. We have cases of madness that cause errors in perception such as the delusions and mistaken beliefs of Heracles and Ajax, which produce a distorted view of reality. We also have examples of misperceptions which we can assign to hallucinatory experiences proper. The frequency of hallucination as a symptom of madness in tragedy means that we can conclude that visual misperceptions were widely understood as an indicator of insanity in Greek culture. In other words, to portray a character experiencing hallucinations would immediately signal to the audience that they were experiencing madness in some form or another. The tragedians also connect vision with madness in a particularly strong way, emphasising the effects of madness on vision and the eyes role in its manifestation.

In the first part of this chapter I outlined some of the reasons why hallucination as a symptom of madness may have been taken up so enthusiastically by the tragic playwrights. I suggested that hallucinations became a primary symptom because they were an effective

way of communicating madness in a theatrical setting and explaining character's seemingly irrational acts, which were often integral to the plot. I also argued that using hallucination as a feature of tragic madness had the advantage of allowing the playwright to externalise the internal world and emotions of their characters, which has both descriptive and narrative potential. In this sense, we must be cautious in using tragedy as a source for understandings of hallucination in antiquity as it may simply have served as a storytelling device. Hallucination in tragedy focalises the disastrous consequences that the misperceptions of madness can have and are employed to great dramatic effect. The senses clearly cannot always be trusted and this often leads to catastrophic errors.

My selected case studies of Io and Orestes show that the playwrights combined naturalistic and divine understandings of madness and hallucinations into their narrative. Io's represents a particularly interesting early figure in terms of the study of hallucination, as Aeschylus calls into question whether her madness is instigated by god-sent tormentors, or whether her perceptions are created internally as a result of her fear of the gods. The visions of Euripides' Orestes' also exhibit a tension between hallucinations ascribed to the gods and those which are manifested internally. Euripides seems to be advocating an interpretation in this play that the Furies may simply be figments of Orestes' imagination which take on a perceptible quality; a projection of his acute feelings of guilt.

Overall, these examples show that although madness and hallucination continue to be portrayed in tragedy as linked to divine interventions the playwrights also offer other plausible explanations, clearly informed by naturalistic understandings of madness. Whilst a divine aetiology for hallucinations and madness is always present, overall they express a pluralist interpretation, which recognise both naturalistic and supernatural causes of the phenomenon.

Conclusion

The aim of this dissertation was to offer an assessment of Classical and Hellenistic ideas about hallucination in medical, philosophical and tragic texts. Overall, the texts have shown that the inability to distinguish ordinary visual perceptions from hallucinatory experiences was viewed as a sign of madness, and therefore a key concern for writers who engaged with the topic. Furthermore, the relationship between hallucination and madness is reciprocal; hallucinations could be caused by madness (which could affect the cognitive and sensory functioning of its subject) and they could also be the cause of madness (for instance, when leading to false beliefs based on erroneous perceptions). Although the discourses which consider hallucination as a product of madness contain some key similarities, they also develop some interesting points of difference, which I believe can be accounted for by the writer's individual influences and intentions in addressing the topic. In this concluding section I draw out some of the main intersections and differences and offer some general reflections on my findings.

Naturalistic Approaches

The first pattern which emerges from the discussions of hallucination across the sources is the attempt to formulate rational views of the phenomenon, in contrast to earlier ideas which had largely ascribed supernatural origins. The medical texts represent the clearest example of this as they develop views of madness which reflect their practice of developing naturalistic accounts for all matters of human health, based on clinical observations.[245] In this context, hallucination was observed as a symptom of several different disorders with a mental quality, which could affect cognitive and sensory functioning. My examination of the Hippocratic sources showed that they believed hallucinations could arise from various affections of different body parts, generally ascribed to humoral imbalances. In other words, they understood the event in entirely physiological terms.

The idea that madness could arise from a disease of the body is also reflected in the philosophical sources. However, the philosophers also viewed madness as a condition of the soul, associated with uncontrolled passions and moral ignorance. Madness of this kind was characterised by misperceptions of the world and the inability to discern between veridical and non-veridical impressions. This reflected an attempt to establish a distinct approach to

[245] As exemplified in *Morb. Sacr*. which attacks those who view illness in superstitious terms, surely in an attempt to establish a position of superiority and establish expertise, see p. 18 above.

madness that advocated philosophical education as the best path to achieve mental well-being and avoid misperceptions and madness.[246] As Temkin asserts, by late antiquity it was commonplace to view that, 'medicine is the philosophy of the body and philosophy the medicine of the soul.'[247]

An important exception to the naturalistic explanations in philosophy was Plato's view of god-given madness, where madness and the visions that accompany it were accepted as a positive phenomenon. This indicates that opinions on hallucination varied depending upon the context and conditions surrounding their manifestation from the perspective of different theoretical points of view.

It is worth noting, however, that I found a surprising lack of evidence in the texts I examined which recount visions of gods. This is surprising in the sense that anthropological studies have suggested that people in societies which exhibit strong religious beliefs are more likely to hallucinate divine figures.[248] I concede that this may be due to my focus on hallucination as a result of madness specifically, and the particular sources I have examined. Nonetheless, my conclusions here differ from other scholars who emphasise this aspect of hallucination in antiquity.[249] Although the ancient Greeks frequently report seeing and communicating with gods in waking visions and dreams in other contexts, it seems that this was a phenomenon that did not attract the attention of writers who engaged with madness, as presumably this was an accepted part of religiosity.[250]

We do, of course, have instances of characters seeing and speaking to gods in tragedy, but again, not as many as we might expect.[251] Whilst hallucinations in the tragic texts maintains, to an extent, a divine origin of madness and its symptoms, I suggest that this may have been dictated by the conventions of the genre, rather than reflecting the individual tragedian's views on the topic, which instead showed a pluralistic understanding of the causes and consequences of madness. Representations of madness in the extant tragedies incorporate naturalistic explanations into the staging and descriptions of their character's

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[246] For a discussion of philosophy as a form of preventative psychological medicine see Gill (2013).
[247] Temkin (1991: 8).
[248] Surprising in the sense that other scholars have suggested that people in religious cultures are more likely to hallucinate divine figures, see p. 10 n. 14 above.
[249] For instance, Guidorizzi (2010: 149); Harris (2013a); and Leuder and Thomas (2000).
[250] For a modern parallel see the DSM V (2013: 88) acknowledges that hallucination can be a normal aspect of religious experience.
[251] Hallucinations in tragedy, by and large, do not involve communications with gods but misperceptions of the subject's temporal surroundings. Think for example of Ajax mistaking cattle for his enemies, or Heracles seeing his enemies children in place of his own. Of course, Orestes' visions of the Furies may represent contact with the divine, but only if we accept his visions as veridical rather than hallucinatory, which is not the view that I advocated.

hallucinations, which are clearly influenced by pathological conditions. Furthermore, in the case studies I analysed, the playwrights showed a nuanced awareness of possible psychological causes, representing a more humanistic understanding. The tragedies of the classical period used hallucination as a motif of madness and exploited it as a dramatic device in formulating and communicating the psychology of their characters, with the content of their hallucinations reflecting inner anxieties and turmoil.

Hallucination as a Sensory Event

Another common theme which emerges is that hallucination was understood as sensory in nature, which is interesting when we consider the fact that it is now generally recognised that, 'biologically speaking, dreams and visual hallucinations are not, in point of fact, exclusively – perhaps not even primarily – a visual experience.'[252] I proposed that the philosophers' ideas about visual perception are absolutely central to their understanding of how hallucinations might occur, evidenced by their explanations which incorporated the mechanics of vision. This included the idea that misperceptions could arise if the process of vision was interrupted or circumvented in some way, or the qualities of a perceptible object were received by the body in a way that was contrary to the norm. That the overall view of the Classical and Hellenistic schools was that the soul was the centre of perceptual recognition, and that madness was an affection of the soul, no doubt led them towards this conclusion. Overall, the philosophical sources view hallucination as a sensory event, with madness disrupting the cognitive processes that would otherwise be able to discern true impressions from false impressions.

I believe that the philosophers marked interest in the topic can be explained by the problem that hallucination posed for an epistemic view of the senses, as they sought to understand the phenomenon in a way which did not undermine vision as a source of knowledge. As a result, they develop perhaps the most technically refined theory for hallucination that we met in the sources. The concept of *phantasia*, presented as a faculty of the soul distinguished from thinking and judgement, offered a solution to how the phenomenon of dreaming and hallucination may occur. *Phantasia* and the resulting *phantasmata* involved the perception of residual, or former, sensations which could reside in the body and later be recognised (or sensed) by the soul. This could produce visions of objects and scenes which were no longer congruent with the subject's spatial and temporal surroundings. In was in this way that the philosophers accounted for the visuals of dreams,

[252] Thumiger (2017a: 295).

which were often discussed together with hallucinations in medical and philosophical contexts.

The Hippocratic writers also considered misperceptions in relation to the physiology of sight, adopting a view that clearly reflects their preoccupation with the body's fluids; they contended that if the 'purest moisture' which makes vision possible is contaminated, non-veridical images may arise. It stands to reason that madness' associations with morbid humours in the medical discourses makes this a possible scenario. Furthermore, they also connect madness with the 'visions of night and day' and highlight that the images in dreams are more vivid in patients who exhibit madness.

Even in tragedy, where we may not expect an interest in the technicalities of vision, we find evidence that connects hallucination to the eyes' functioning. My discussion emphasised the tragedians' view that madness often had its genesis in the eyes, most notably in Electra's acknowledgement of an obvious alteration in Orestes' eyes directly before his hallucination of the Furies, indicating a disturbance to the physical act of vision. There is also the example of Ajax, whose misperceptions occur when the 'rays' of his eyes are cast astray by Athena, which represents an extramissionist approach to vision and pre-dates even Plato's account. It is entirely possible that audiences of tragedy would also accept hallucination as a sensory experience, although this of course remains indeterminable.

In summary, these similarities show a shared interest in the processes of vision amongst the writers, which are utilised and reworked to explain why errors in perception, or mistakes in recognising true from false sensations, may transpire in cases of madness.

Emotional Considerations

Another common feature of the discussion of hallucination is the mention of intense emotion, most notably, fear. The medical writers frequently observe fear in their patients, who also show symptoms of madness and experience hallucination. However, whether fear is viewed as a condition which may induce hallucination or the emotional response to the experience itself, is often ambiguous in this context.

The philosophers too, recognised intense emotion as a contributor to madness, suggesting that they also had a certain awareness of the psychological aspects of mental states. The philosophers believed that extreme emotions could affect the condition of the body, producing madness and also causing people to think that the images of *phantasia*, which resemble sense impressions, were real.

It is in the tragic texts, above all, that we find evidence of an understanding of the fear and disorientation that hallucinations may elicit.[253] Aeschylus makes fear a defining feature of Io's madness and hallucinations, suggesting that her visions are connected to her psychological suffering and linked to the fact that visions (in the form of her dreams) were the origin of her torment. The tragic texts reflect upon the implication of madness and hallucination for the individual, which although surely influenced by the need to effect the tragic downfall of their characters, also acknowledge the distress that a detachment from reality may engender. In this way, the tragedians demonstrate a nuanced awareness of the personal experience of madness through their character's hallucinatory experiences, which is largely absent from the medical and philosophical texts.

Hallucination and Hyperactivity

This leads me to my final reflection; the sources all seem in agreement that hallucination result from madness of a manic, rather than depressive nature. Although I recognise that madness in these periods was not strictly classified, hallucination appears to be connected to a form of madness linked to excess emotion and energy. For example, the Hippocratic *On Regimen* that I discussed developed an idea that certain people are naturally predisposed to hyperactivity and madness, receive sensations more rapidly than others and make quick judgements which can result in hallucinations. The terminology used to describe instances of madness, which feature hallucination as a symptom, also lead towards this conclusion. Some of the descriptions we met included: 'whirling', 'leaping', 'jumping', 'grinning laughter', 'raging', 'fighting' and 'frenzy', all suggestive of a loss of control and energy. Furthermore, the transition from withdrawal and unresponsiveness (depressive states) to hyperactivity and kinetic energy, often accompanies the onset of hallucination in tragedy.[254] We can imagine that even Plato's conception of divine madness, which involves possession and states of ecstasy, implies a sense of energy and excitement.

Final Remarks

To conclude, this study has shown that the medical, philosophical and tragic sources of the Classical and Hellenistic period provide a rich resource for the study of hallucination in

[253] However, the Hippocratic reference to suicide in *Virg. Morb*., discussed on p. 23 above, may be an empathetic consideration on the writer's part.

[254] Orestes' is described a leaping and jumping from his bed when he experiences his hallucination, in contrast to his earlier subdued disposition.

antiquity, which I believe could benefit from further research. For instance, it could prove interesting to examine how ideas about the phenomenon will develop in later periods; we have already seen how the concept of *phantasia,* which was so central to the Hellenistic philosophers' understanding of hallucination, had transformed by the first-century AD.[255] Furthermore, I believe that extending the study of hallucination beyond the visual sphere to examine how the ancient Greeks accounted for misperceptions in relation to the other sensory faculties could also add to this discussion.

I have demonstrated that using a wide variety of literary evidence, can be particularly rewarding in developing an overall understanding of complex and somewhat elusive phenomena, such as hallucination. In light of this I would recommend this methodology for further research into the subject, which would contribute to the ongoing discussions of hallucinations across disciplines, in the context of mental health and wellbeing, an area that continues to evade a complete understanding.

[255] Long. *On the Sublime*, 15.1-2.

Bibliography

Primary Texts and Translations:

Aeschylus, *Agamemnon* (2009) Sommerstein, A. H. (trans.) LCL Aeschylus, Vol. 2. Harvard University Press: Cambridge, MA.

Aeschylus, *Choephoroi* (2009) Sommerstein, A. H. (trans.) LCL Aeschylus, Vol. 2. Harvard University Press: Cambridge, MA.

Aeschylus, *Eumenides* (2009) Sommerstein, A. H. (trans.) LCL Aeschylus, Vol. 2. Harvard University Press: Cambridge, MA.

Aeschylus, *Prometheus Bound* (2005) Podlecki, A. J. (trans. and commentary) Aris & Phillips: Oxford.

Aeschylus, *Suppliants* (2009) Sommerstein, A. H. (trans.) LCL Aeschylus, Vol. 1. Harvard University Press: Cambridge, MA.

Aëtius, *The Hellenistic Philosophers* (1987) Long, A. A. & Sedley, D. N. (ed. & trans.) 2 Vols. Cambridge University Press. Cambridge.

Anonymous of Paris, *On Acute and Chronic Diseases* (2001) van der Eijk, P. J. (trans. and commentary) in *Diocles of Carystus: A Collection of the Fragments with Translation and Commentary*. 2 Vols. Brill: Leiden.

Aristotle, *Nicomachean Ethics* (1926) Rackham, J. (trans.) LCL Aristotle, Vol. 19. Harvard University Press: Cambridge, MA.

Aristotle, *On the Soul* (1957) Hett, W. S. (trans.) LCL Aristotle, Vol. 8. Harvard University Press: Cambridge, MA.

Aristotle, *Parva Naturalia* (1957) Hett, W. S. (trans.) LCL Aristotle, Vol. 8. Harvard University Press: Cambridge, MA.

Aristotle, *Poetics* (1995) Halliwell, S. (trans.) LCL Aristotle, Vol. 23. Harvard University Press: Cambridge, MA.

[Aristotle], *On Things Heard* (1936) Hett, W. S. (trans.) LCL Aristotle, Vol. 14. Harvard University Press: Cambridge, MA.

[Aristotle], *Physiognomics* (1936) Hett, W. S. (trans.) LCL Aristotle, Vol. 14. Harvard University Press: Cambridge, MA.

Democritus, *The Atomists, Leucippus and Democritus: Fragments: a Text and Translation with Commentary*. (2010) Taylor, C. C. W. (trans.) University of Toronto Press. Toronto.

Diogenes Laertius, *The Hellenistic Philosophers* (1987) Long, A. A. & Sedley, D. N. (ed. & trans.) 2 Vols. Cambridge University Press. Cambridge.

Diogenes of Oinoanda, *The Hellenistic Philosophers* (1987) Long, A. A. & Sedley, D. N. (ed. & trans.) 2 Vols. Cambridge University Press. Cambridge.

Epicurus, *The Hellenistic Philosophers* (1987) Long, A. A. & Sedley, D. N. (ed. & trans.) 2 Vols. Cambridge University Press. Cambridge.

Euripides, *Bacchae* (2003) Kovacs, D. (ed. and trans.) LCL Euripides, Vol. 6. Harvard University Press: Cambridge, MA.

Euripides, *Heracles* (1998) Kovacs, D. (ed. and trans.) LCL Euripides, Vol. 3. Harvard University Press: Cambridge, MA.

Euripides, *Hippolytus* (1995) Kovacs, D. (ed. and trans.) LCL Euripides, Vol. 2. Harvard University Press: Cambridge, MA.

Euripides, *Iphigenia Among the* Taurians (1999) Kovacs, D. (ed. and trans.) LCL Euripides, Vol. 4. Harvard University Press: Cambridge, MA.

Euripides, *Orestes* (2002) Kovacs, D. (ed. and trans.) LCL Euripides, Vol. 5. Harvard University Press: Cambridge, MA.

Euripides, *Trojan Women* (1999) Kovacs, D. (ed. and trans.) LCL Euripides, Vol. 4. Harvard University Press: Cambridge, MA.

Galen, *On Diseases and Symptoms* (2006) Johnston, I. (ed. and trans.) Cambridge University Press: Cambridge.

Galen, *On the Affected Parts* (1976) Siegel, R. E. S. (trans.) Karger: Basel.

Hippocrates, *Airs, Waters, Places* (*Aer*.) (1923) Jones, W. H. S. (trans.) LCL Hippocrates, Vol. 1. Harvard University Press: Cambridge, MA.

Hippocrates, *Epidemics 7 (Epid. 7)* (1994) Smith, W. D. (trans.) LCL Hippocrates, Vol. 7. Harvard University Press: Cambridge, MA.

Hippocrates, *Epidemics 1* (*Epid*. 1) (1923) Jones, W. H. S. (trans.) LCL Hippocrates, Vol. 1. Harvard University Press: Cambridge, MA.

Hippocrates, *Internal Affections (Int.)* (1988) Potter, P. (trans.) LCL Hippocrates Vol. 6. Harvard University Press: Cambridge, MA.

Hippocrates, *On Diseases 1 (Morb. 1)* (1988) Potter, P. (trans.) LCL Hippocrates Vol. 5. Harvard University Press: Cambridge, MA.

Hippocrates, *On Diseases of Girls (Virg.)* (2010) Vol. 9. Potter, P. (trans.) LCL Hippocrates, Vol. 9. Harvard University Press: Cambridge, MA.

Hippocrates, *On Glands (Gland.)* (1995) Potter, P. (trans.) LCL Hippocrates, Vol. 8. Harvard University Press: Cambridge, MA.

Hippocrates, *On Humours (Hum.)* (1931) Jones, W. H. S. (trans.) LCL Hippocrates, Vol. 4. Harvard University Press: Cambridge, MA.

Hippocrates, *On Places on Man (Loc. Hom.)* (1995) Potter, P. (trans.) LCL Hippocrates, Vol. 8. Harvard University Press: Cambridge, MA.

Hippocrates, *On Regimen (Vict.)* (1931) Jones, W. H. S. (trans.) LCL Hippocrates, Vol. 4. Harvard University Press: Cambridge, MA.

Hippocrates, *On the Nature of Man (Nat. Hom.)* (1931) Jones, W. H. S. (trans.) LCL Hippocrates, Vol. 4. Harvard University Press: Cambridge, MA.

Hippocrates, *On the Sacred Disease* (*Morb. Sacr*.) (1923) Jones, W.H.S. (trans.) LCL Hippocrates, Vol. 2. Harvard University Press: Cambridge, MA.

Hippocrates, *Prorrhetic I (Prorrh. I)* (1995) Potter, P. (trans.) LCL Hippocrates, Vol. 8. Harvard University Press: Cambridge: MA.

Homer *Odyssey* (1919) Vol. 2. Murray, A. T. & Dimock, G. E. (trans.). LCL 105. Harvard University Press. Cambridge, MA.

Longinus, *On the Sublime* (1995) Fyfe, W. H. & Russell, D. A. (trans.). LCL 199. Harvard University Press: Cambridge, MA.

Lucretius, *The Hellenistic Philosophers* (1987) Long, A. A. & Sedley, D. N. (ed. & trans.) 2 Vols. Cambridge University Press: Cambridge.

Plato, *Phaedo* (2017) Emlyn-Jones, C. & Preddy, W. (trans.) LCL Plato, Vol. 1. Harvard University Press: Cambridge, MA.

Plato, *Phaedrus* (2002) Waterfield, R. (trans.) Oxford University Press. Oxford.

Plato, *Republic* (2013) Emlyn-Jones, C. & Preddy, W. (trans.) LCL Plato, Vol. 6. Harvard University Press: Cambridge: MA.

Plato, *Sophist* (1921) Fowler, H. N. (trans.) LCL Plato, Vol. 7. Harvard University Press: Cambridge, MA.

Plato, *Theaetetus* (1921) Fowler, H. N. (trans.) LCL Plato, Vol. 7. Harvard University Press: Cambridge, MA.

Plato, *Timaeus* (1929) Bury, R. G. (trans.) LCL Plato, Vol. 9. Harvard University Press: Cambridge, MA.

Plutarch, *Moralia (Quaestiones Convivales)* (1961) Minar, Jr., Sandbach, F. H. , Helmbold, W.C. (trans.) LCL Plutarch Vol. 9. Harvard University Press: Cambridge, MA.

Quintilian, *The Orator's Education*. (2002) Russell, D. A. (trans. & ed.) LCL Quintilian, Vol. 3. Books 6-8. Harvard University Press: Cambridge, MA.

Sextus Empiricus, *Against the Logicians* (2005) Bett, R. (trans. & ed.) Cambridge University Press: Cambridge.

Sextus Empiricus, *Outlines of Pyrrhonism* (1933) Bury, R. G. (trans.) LCL Sextus Empiricus, Vol. 1. Harvard University Press: Cambridge, MA.

Sophocles, *Ajax* (2008) in Raeburn, D. (trans. and ed.) *Electra and Other Plays.* Penguin Classics: London.

Stoicorum veterum fragmenta (1903-1905) 3 Vols. Von Arnim, J. (ed.) Teubner: Leipzig

Theophrastus, *De Sensibus* (2016) *Early Greek Philosophy: Later Ionian and Athenian Thinkers II* (2016) Laks, A. & Most, G. W. (ed. and trans.) LCL Early Greek Philosophy, Vol. 7. Harvard University Press: Cambridge, MA.

Editions and Commentaries Used:

Garvie, A. F. (1986) *Aeschylus: Choephori.* Clarendon Press. Oxford.

Griffith, M. (ed.) (1983) *Aeschylus: Prometheus Bound*. Cambridge University Press. Cambridge.

Podlecki, A. J. (2005) *Aeschylus: Prometheus Bound*. Aris & Phillips. Oxford.

Russell, D. A. (1964) *On the Sublime 'Longinus'* Clarendon Press. Oxford.

Rutherford, R. B. (1992) *Homer: Odyssey Books XIX and XX*. Cambridge University Press. Cambridge.

van der Eijk, P. J. (2001) *Diocles of Carystus: A Collection of the Fragments with Translation and Commentary*. Vol 2. Brill. Leiden.

Secondary Sources:

Ahonen, M. (2014) *Mental Disorders in Ancient Philosophy*. Springer. Cham.

Ahonen, M. (2018) 'Making the Distinction: The Stoic View of Mental Illness' in Thumiger, C. & Singer, P. *Mental Illness in Ancient Medicine: From Celsus to Paul of Aegina.* Brill. Leiden: 343-364.

Burkert, W. (1977) 'Air-Imprints or Eidola: Democritus' Aetiology of Vision' *Illinois Classical Studies* 2: 97-109.

Caston, V. (1996) 'Why Aristotle needs Imagination' *Phronesis* 41.1: 20–55.

Caston, V. (2015) 'Perception in Ancient Greek Philosophy' in Matthen, M. (ed.) *The Oxford Handbook of Philosophy of Perception*. Oxford University Press. Oxford: 29-50.

Craik, E. M. (1998) *Places in Man, Hippocrates*. Clarendon. Oxford.

Craik, E. M . (2009) 'Hippocratic Bodily "Channels" and Oriental Parallels' *Medical History* Vol. 53.1: 105-116.

Craik, E. M. (2015) *The 'Hippocratic' Corpus: Content and Context*. Routledge. London.

Dodds, E. R. (1951) *The Greeks and the Irrational*. University of California Press. Berkeley.

Doran, R. (2018) *The Theory of the Sublime from Longinus to Kant.* Cambridge University Press. Cambridge.

Drabkin, I. E. (1955) 'Remarks on Ancient Psychopathology' *Isis* Vol. 46. 3: 223-234.

Eidinow, E. (2014) 'Madness' in Hornblower, S., Spawforth, A., Eidinow, E. (eds.). *The Oxford Companion to Classical Civilization.* Oxford. Oxford University Press: 484-486.

Foley, H. P. (2009) *Female Acts in Greek Tragedy*. Princeton University Press. Princeton.

Frede, M. (1983) 'Stoics and Skeptics on Clear and Distinct Impressions' in Burnyeat, M. (ed.) *The Skeptical Tradition.* University of California Press. Berkeley: 65-93.

Gantz, T. (1993) *Early Greek Myth: A Guide to Literary and Artistic Sources*, Vol. 2. John Hopkins University Press. Baltimore.

Gill, C. (1986) 'The Question of Character and Personality in Greek Tragedy' *Poetics Today*. Vol. 7.2: 251-273.

Gill, C. (1990) 'The Character-Personality Distinction' in Pelling, C. (ed.) *Characterization and Individuality in Greek Literature.* Clarendon Press. Oxford.

Gill, C. (1996) 'Mind and Madness in Greek Tragedy' *Apeiron* 29.3: 249-268.

Gill, C. (2013) 'Philosophical Therapy as Preventative Psychological Medicine' in Harris, V. W. (ed.). *Mental Disorders in the Classical World*. Brill. Leiden: 339-360.

Gould, J. (1978) 'Dramatic Character and 'Human Intelligibility' in Greek Tragedy' *Proceedings of the Cambridge Philological Society,* 204: 43-67.

Graham, D. W. (2013) 'The Early Ionian Philosophers' in Sheffield, F. & Warren, J. (eds.). *The Routledge Companion to Ancient Philosophy.* Routledge. London: 18-33.

Griffith, M. (1977) *The Authenticity of 'Prometheus Bound'* Cambridge University Press. Cambridge.

Guidorizzi, G. (2001) 'The Laughter of the Suitors: A Case of Collective Madness in the Odyssey' in Edmunds, L. & Wallace, R. W. (eds.). *Poet, Public, and Performance in Ancient Greece*. John Hopkins University Press. Baltimore: 1- 7.

Guidorizzi, G. (2010) *Ai confine dell'anima: i Grecie la follia*. Cortini Raffaello. Milan.

Güremon, R. (2017) 'Diogenes of Oinoanda and the Epicurean Epistemology of Dreams' in Hammerstaedt, J., Morel, P. & Güremon, R. (eds.) *Diogenes of Oinoanda: Epicureanism and Philosophical Debates.* Leuven University Press. Leuven: 187-206.

Halliwell, S. (2008) *Greek Laughter: A Study of Cultural Psychology from Homer to Early Christianity.* Cambridge University Press. Cambridge.

Hankinson, J. (2018) 'Aetiology' in Pormann, P. E. (ed.). *The Cambridge Companion to Hippocrates.* Cambridge University Press. Cambridge: 89-118.

Hankinson, R. J. (1991) 'Greek Medical Models of Mind' in Everson, S. (ed.) *Psychology*. Cambridge University Press. Cambridge: 194-217.

Harris, V. W. (2009) *Dreams and Experience in Classical Antiquity.* Harvard University Press: Cambridge, MA.

Harris, V. W. (2013a) 'Greek and Roman Hallucinations' in Harris, V. W. (ed.). *Mental Disorders in the Classical World*. Brill. Leiden: 285-306.

Harris, V. W. (2013b) 'Thinking About Mental Disorders in the Classical World' in Harris, V. W. (ed.). *Mental Disorders in the Classical World*. Brill. Leiden: 1-23.

Harris, V. W. (ed.) (2013c) *Mental Disorders in the Classical World.* Brill. Leiden.

Heath, M. (2012) 'Longinus and the Ancient Sublime' in Costelloe, M. (ed.) *The Sublime: From Antiquity to the Present*. Cambridge University Press. Cambridge: 7-11.

Herman, G. (2011) 'Greek Epiphanies and the Sensed Presence' *Historia* 60.2: 127-157.

Hershkowitz, D. (1998) *The Madness of Epic: Reading Insanity from Homer to Statius*. Clarendon Press. Oxford.

Holowchak, M. (2002) *Ancient Science and Dreams: Oneirology in Greco-Roman Antiquity*. University Press of America. Lanham.

Johansen, T. K. (1997) *Aristotle on the Sense-Organs*. Cambridge University Press. Cambridge.

Johansen, T. K. (2012) *The Powers of Aristotle's Soul*. Oxford University Press. Oxford.

Jouanna, J. (1999) *Hippocrates*. DeBevoise, M. B. (trans.) John Hopkins University Press. Baltimore.

Jouanna, J. (2012) *Greek Medicine from Hippocrates to Galen: Selected Papers*. Brill. Leiden.

Jouanna, J. (2013) 'The Typology and Aetiology of Madness in Ancient Greek and Medical and Philosophical Writing' in Harris, V. W. (ed.). *Mental Disorders in the Classical World*. Brill. Leiden: 97-118.

King, H. (2002) *Hippocrates' Women: Reading the Female Body in Ancient Greece*. Routledge. London.

La Barre, R. W. (1975) 'Anthropological Perspectives on Hallucination and Hallucinogens' in Siegel, R. K. & West, L. J. (eds.). *Hallucinations: Behavior, Experience and Theory*. John Wiley & Sons. New York: 9-52.

Lehoux, D. (2007) 'Drugs and the Delphic Oracle' *Classical World* 101.1: 41-56.

Leuder, I. & Thomas, P. (2000) *Voices of Reason, Voices of Insanity: Studies of Verbal Hallucinations*. Routledge. London.

Longrigg, J. (2013) *Greek Rational Medicine: Philosophy and Medicine from Alcmaeon to the Alexandrians.* Routledge. London.

Lycos, K. (1964) 'Aristotle and Plato on Appearing' *Mind* 73 (292): 496-514.

Macpherson, F. (2013) 'The Philosophy and Psychology of Hallucination: An Introduction' in Macpherson, F. & Plachis, D. (eds.). *Hallucination: Philosophy and Psychology*. MIT Press. Cambridge: 1-38.

Macpherson, F. & Plachis, D. (eds.) (2013) *Hallucination: Philosophy and Psychology*. MIT Press. Cambridge.

McDonald, G. C. (2009) *Concepts and Treatments of Phrenitis in Ancient Medicine*. PhD Dissertation. University of Newcastle. [https://theses.ncl.ac.uk/dspace/handle/10443/1760]. Accessed 10 August 2018.

Modrak, D. K. W. (2016) 'Aristotle on *Phantasia'* in Kind, A. (ed.) *The Routledge Handbook of Philosophy of Imagination*. Routledge. London: 15-26.

Montiglio, S. (2005) *Wandering in Ancient Greek Culture*. University of Chicago Press. Chigaco.

Moss, J. D. (2012) *Aristotle on the Apparent Good: Perception, Phantasia, Thought, and Desire*. Oxford University Press. Oxford.

Most, G. 'The Madness of Tragedy' in Harris, V. W. (ed.). *Mental Disorders in the Classical World*. Brill: 395-410.

Notomi, N. (1999) *The Unity of Plato's Sophist: Between the Sophist and the Philosopher*. Cambridge University Press. Cambridge.

Nutton, V. (2013) *Ancient Medicine*. Routledge. London.

O'Brien-Moore, A. (1924) *Madness in Ancient Literature*. PhD Dissertation. Princeton University. R. Wagner Sohn. Weimer.

O'Connell, P. A. (2017) 'Enargeia, Persuasion, and the Vividness Effect in Athenian Forensic Oratory' *Advances in the History of Rhetoric*, 20.3: 225-251.

Padel, R. (1993) *In and Out of Mind: Greek Images of the Tragic Self*. Princeton University Press. Princeton.

Padel, R. (1995) *Whom Gods Destroy: Elements of Greek Tragic Madness*. Princeton University Press. Princeton.

Pigeaud, J. (1983) 'Voir, imaginer, rêver, être fou. Quelques remarques sur l'hallucination et l'illusion dans la philosophie stoïcienne, épicurienne, sceptique, et la médecine antique' *Littérature, Médecine, Société* 5: 23-53.

Pigeaud, J. (1987) *Folie et cures de la folie chez les médecins de l'Antiquité gréco-romaine: La Manie*. Les Belles Lettres. Paris.

Porter, J. R. (1993) *Studies in Euripides' Orestes*. Brill. Leiden.

Prentice, A. M. Jr. (1968) 'Skeptic Theory of Perception: A Philosophical Antecedent of Ciceronian Probability' *Quarterly Journal of Speech* 54.4: 340-351.

Rees, D. A. (1971) Aristotle's treatment of φαντασία' in Anton, P. J & Kustas, G. L (eds.). *Essays in Ancient Greek Philosophy.* University of New York Press. Albany: 491-504.

Rudolph, K. (2011) 'Democritus' Perspectival Theory of Vision' *Journal of Hellenic Studies* 131: 67-83.

Sacks, O. (2012) *Hallucinations*. Picador. London.

Saïd, S. (2013) 'From Homeric Ate to Tragic Madness' in Harris, V. W. (ed.). *Mental Disorders in the Classical World.* Brill. Leiden: 363-394.

Sarbin, T. R. & Juhasz, J. B. (1967) 'The Historical Background of the Concept of Hallucination' *History of the Behavioral Sciences* 3.4: 339-358.

Sassi, M. M. (2013) 'Mental Illness, Moral Error, and Responsibility in Late Plato' in Harris, V. W. (ed.). *Mental Disorders in the Classical World.* Brill. Leiden: 413-426.

Segal, C. (1988) 'Confusion and Concealment in Euripides' Hippolytus. Vision, Hope, and Tragic Knowledge' *Mètis. Anthropologie des mondes grecs anciens*, vol. 3.1-2: 263-282.

Sheppard, A. (2014) *The Poetics of Phantasia: Imagination in Ancient Aesthetics*. Bloomsbury. London.

Squire, M. (ed.) (2015) *Sight and the Ancient Senses*. Routledge. London.

Taplin, O. (1977) *The Stagecraft of Aeschylus: The Dramatic use of exits and entrances in Greek Tragedy*. Clarendon Press. Oxford.

Taylor, C. C. W. (1980) 'All Perceptions are True' in Schofield, M., Burnyeat, M. & Barnes, J. (eds.). *Doubt and Dogmatism: Studies in Hellenistic Epistemology*. Clarendon Press. Oxford: 105-124.

Temkin, O. (1971) *The Falling Sickness: A History of Epilepsy from the Greeks to the Beginnings of Modern Neurology*. John Hopkins Press. Baltimore.

Temkin, O. (1991) *Hippocrates in a World of Pagans*. John Hopkins University Press. Baltimore.

Theodorou, Z. (1993) 'Subject to Emotion: Exploring Madness in Orestes' *Classical Quarterly* 43: 32-46.

Thumiger, C. (2013a) 'The Early Greek Medical Vocabulary of Insanity' in Harris, V. W. (ed.). *Mental Disorders in the Classical World*. Brill. Leiden: 61-98.

Thumiger, C. (2013b) 'Vision and Knowledge in Greek Tragedy' *Helios* 40.1-2: 223-245.

Thumiger, C. (2017a) *A History of the Mind and Mental Health in Classical Greek Medical Thought*. Cambridge University Press. Cambridge.

Thumiger, C. (2017b) 'Greek and Roman Traditions' in Eghigian, G. (ed.). *The Routledge History of Madness.* Routledge. London: 42-61.

Toner, J. (2014) *A Cultural History of the Senses in Antiquity*. Bloomsbury. London.

van der Eijk, P.J. (ed.) (2005) *Medicine and Philosophy in Classical Antiquity.* Cambridge University Press. Cambridge.

Vernant, J. (1990) 'The God of Tragic Fiction' in Vernant, J. & Vidal-Naquet, P. *Myth and Tragedy in Ancient Greece*. Zone Books. New York: 181-188.

Watson, G. (1988) *Phantasia in Classical Thought*. Galway University Press. Galway.

Webb, R. (2009) *Ekphrasis, Imagination and Persuasion in Ancient Rhetorical Theory and Practice*. Ashgate. Farnham.

Zanker, G. (1981) 'Enargeia in Ancient Criticism of Poetry' *Rheinisches Museum für Philologie*, 124: 297-311.