1 Introduction

In *De divinatione per somnum*, Aristotle distinguishes between three types of prevision (*proorân*) through dreams (hereafter, dreams involving such prevision will be referred to as prohoratic dreams\(^1\)) in the mode of cause, sign, and coincidence. Even if Aristotle's use of prevision (*proorân*) may seem ambiguous, it is plausible to assume that it in no case implies a veridical apprehension of the future in the present. Roughly, some dreams may correspond to future events, yet such dreams do not constitute foreknowledge about the future, strictly speaking.\(^2\) In this paper I will pay special attention to prohoratic sign-dreams. I consider three questions in relation to Aristotle's account of signs in sleep. First, what conditions must be fulfilled in order for a dream, or a related experience in sleep, to qualify as a sign? Second, how does Aristotle's conception of signs in dreams relate to popular ancient views of prophetic signs, including those of the ancient medical tradition? Third, how does Aristotle's account of dream-interpretation relate to conventional ancient practices of dream-interpretation?

Aristotle's discussion of signs in sleep is important because it illuminates a set of unresolved issues in *De divinatione*, including the problem of how Aristotle's three modes of prevision relate to each other. The topic also sheds light on Aristotle's engagement with the medical tradition and how his view on signs relates to popular opinions about god-sent signs. I shall argue that Aristotle in *De divinatione* endorses a natural conception of signs that may be viewed as a particular version of the popular view that signs in sleep may convey hints about the future. As we shall see, Aristotle's conception of signs does

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\(^1\) “Prohoratic dreams” is a neologism that is derived from the Greek *proorân*. I prefer “prohoratic dreams” over related terms like “prevision,” “foresight,” and “prophetic dreams” because of its neutral ring, that is, its less obvious association with some form of knowledge.

not follow the traditional idea that signs signify real-world events by way of some more or less far-fetched resemblance that needs interpretation in order to be understood.

The popular ancient model of dream-interpretation is closely tied to the assumption that some dreams signify by means of a more or less obvious similarity between the dream and the signified event, and that dream-interpretation consists in explicating how the sign indicates an occurrence by means of some similarity-relation. Aristotle challenges this traditional view in which dream-interpretation mainly concerns the elucidation of obscure signs and provides an account in which signs signify by means of an underlying causal development that brings about both the sign and the signified event. Accordingly, since Aristotle does not characterise signs in terms of obscure riddles – dreams which dress up as metaphorical representations that require explication – there is no special connection between signs and dream-interpretation in Aristotle’s account. In fact, Aristotle discusses signs and dream-interpretation as two separate topics and does not even mention the popular view in which these two themes are intertwined.

Even if Aristotle pays no special attention to the interpretation of signs in dreams, he maintains that dreams sometimes require interpretation in order to be understood. He regards dream-interpretation as the disambiguation of manifest sensory dream-content in general, not necessarily the elucidation of what a dream-sign signifies. Dream-interpretation, according to Aristotle, aims to determine what real-world objects dreams correspond to (that is, from which real object a distorted dream derives) and takes the form of observing concrete similarities between the dream and real-world objects. Even so, Aristotle’s model of dream-interpretation may be conceived as a simplified version of the ancient practice that uses similarity in the broadest possible sense to interpret dreams.

Further, it is shown that Aristotle’s discussion of signs that signify states of the dreamer’s body merely superficially corresponds to the type of natural signs that are considered by the ancient medical tradition. Both the Hippocratic tradition and Galen, unlike Aristotle, consider natural signs that indicate conditions of the dreamer’s body through some kind of similarity with the signified state. This point marks an important difference in relation to Aristotle’s examples of natural signs in general.

Finally, I suggest how to understand Aristotle’s examples of medically significant signs, which he describes in terms of an awareness of bodily states during

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sleep. Aristotle’s discussion appears to be about dreams, yet his examples of experiences during sleep do not fit the characterisation of dreams given in De insomniis. The seemingly unwarranted digression in which Aristotle characterises signs as emerging through something like perceptual states in sleep, rather than proper dreams, has, I shall suggest, a quite simple explanation.

In sum, Aristotle endorses modified versions of the traditional ideas of signs in sleep and dream-interpretation that partly overlap with ancient mainstream views. His discussion of signs in sleep and dream-interpretation are likely to reflect two éndoxa, that is, generally accepted beliefs that deserve to be taken seriously, namely that dreams may convey hints about the future through signs and that dream-interpretation occasionally is required in the context of prophecy in sleep.

2 The Characterisation of Signs in De divinatione

According to Aristotle, signs in dreams, or more generally, signs in sleep, are one of the three modes in which experiences in sleep may turn out to be prophoratic dreams (the distinction between signs in dreams and signs in sleep will become significant below). Aristotle explains how the distinct modes of prevision (proorán) relate to each other. He writes:

Well then, it is necessary that the dreams are either causes, or signs of things that happen, or else coincidences; either all or some of these, or one only. By a cause, I mean, for example, the moon as a cause of the sun's being eclipsed, or fatigue as a cause of fever. By a sign, the star's entry into shadow as a sign of its eclipse, or roughness of the tongue as a sign of someone's having a fever. And by coincidence, the sun's being eclipsed when someone is taking a walk, since that is neither a sign nor a cause of its being eclipsed, nor is the eclipse of the walking. Hence no coincidence happens either always or for the most part.4

Roughly put, a sign is something that flags the occurrence of something beyond itself. For example, roughness of the tongue indicates fever, and the star’s entry into shadow is a sign of its eclipse. In these particular cases, the character of the sign (the roughness of the tongue and the darkness of the sky) marks a typical co-variance between the sign and the signified event or state. Further, Aristotle tells us that a person who happens to take a walk during the eclipse of the sun is not a sign of the eclipse, even if the two events happen to co-occur. Instead, the walking is coincidental in relation to the darkness of the sky.

Aristotle’s account of prohoratic dreams in the modes of sign and cause makes up the scientific part of his account of prophetic dreams. The remaining type of fulfilled dream, namely coincidence, has no scientific explanation. Coincidences are not causes strictly speaking but rather outcomes of separate causal developments that accidentally come together in time and place.\(^5\)

3 Signs in Sleep through Perception of Internal Bodily States

Aristotle gives further clues regarding the nature of signs when he considers dreams as probable signs of disease. Some dreams are assumed to signify conditions of the dreamer’s body. Aristotle writes:

Is it true, then, that some dreams are causes, while others are signs, e.g. of what is happening in the body? At all events, even medical experts say that one should pay extremely close attention to dreams. And that is a reasonable supposition even for those who are not practitioners, but are pursuing a theoretical inquiry. For movements occurring in the daytime, unless they are very big and powerful, pass unnoticed alongside those of the waking state, which are bigger. But during sleep the opposite happens. For then even slight movements seem to be big. This is clear from frequent occurrences in the course of sleep. People think it is lightning and thundering when faint echoes are sounding in their ears; or that they are enjoying honey and sweet flavours, when a tiny drop of phlegm is running down; or that they are walking through fire and feeling extremely hot, when a slight warmth is affecting certain parts. But as they wake up, it is obvious to them that those things have the above character. Thus, seeing that the beginnings of all things are small, so too, clearly, are those of illness and other affections imminent in our bodies.

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5 \textit{Metaph.} 5.30, 1025a14–19; \textit{Ph.} 2.8, 198b32–199a7.
Plainly, then, these must be more evident during periods of sleep than in the waking state.\(^6\)

This passage is puzzling for a number of reasons. First, note that Aristotle's discussion seems to concern dreams, yet the examples Aristotle discusses are not perceptions of internal bodily states that take place during sleep. Aristotle's examples of signs of disease do not fit the formal definition of dreaming in *De insomniis* as perceptual remnants that linger on and become apparent during sleep.\(^7\) Nevertheless, Aristotle's description of the case seems to suggest some kind of cognitive misidentification that goes beyond a purely perceptual

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\(^6\) ἀρ ό οὖν ἐστὶ τῶν ἐνυπνίων τὰ μὲν αἴτια, τὰ δὲ σημεία, οἷον τῶν περὶ τὸ σῶμα συμβαινόντων; λέγουσι γον καὶ τῶν ἰατρῶν οἱ χαριτείς ὅτι δει σφόδρα προσέχειν τοὺς ἐνυπνίων· εἰληφθὸν δὲ οὕτως ὑπολαβεῖν καὶ τοῖς μὴ θεχνίταις μὲν, σκοπούμενοι δὲ τι καὶ φιλοσοφοῦσιν, αἱ γὰρ μὲν ἡμέρα γίνονται κινήσεις, ἀν μὴ σφόδρα μεγάλαι ὡσι καὶ ἱσχυραί, λανθάνουσι παρὰ μείζους τὰς ἐγγεγραμμές κινήσεις, ἐν δὲ τῷ καθεύδειν τούναντι καὶ γὰρ αἱ μικραὶ μεγάλαι δοκοῦσιν εἰναι. δῆλον δὲ ἐπὶ τῶν συμβαίνοντων κατὰ τοὺς ὑπνίους πολλάκις ὁ λέγειν γάρ κεραυνοῦσθαι καὶ βρονταίσθαι μικρῶν ἥχων ἐν τοῖς ὑπνίοις γίνομεν, καὶ μέλιτος καὶ γλυκέων χυμοῦκακαίναι οἰκείας φλέγματος καταρρέοντος, καὶ διαίρος καὶ ἀνδριαίας σφόδρας μικρὰς βροντάς περὶ τῶν μέρη γίνομεν, ἐπεγειρομένοις δὲ ταῦτα φανερά τούτον ἑξοντα τὸν τρόπον ὡστ' ἐπεὶ μικραὶ πάντων αἱ ἀρχαι, δηλοὶ ὅτι καὶ τῶν ὑπνίων καὶ τῶν άλλων παθημάτων τῶν ἐν τοῖς σώματι μελλόντων γίνεσθαι. φανερὸν οὖν ὅτι ταῦτα ἀναγκαίοι ἐν τοῖς ὑπνίοις εἶναι καταφανῆ μᾶλλον ἢ ἐν τῷ ἐγγεγραμμένῳ. (Div.Somn. 1, 463a3–21; Aristotle, *On Sleep and Dreams*, 107–9.)

\(^7\) To complicate things even more, in *De insomniis* Aristotle also stresses that perception is shut down during sleep. However, Aristotle is not claiming that perceiving in any modified form is impossible during sleep. He is rather saying that it is impossible to be actively exercising perception in the "chief and unqualified sense," while sleeping (Somm.Vig. 1, 454b12–14). On the other hand, the example concerning signs of disease does not belong to the discussion in which Aristotle explicitly discusses cases of perception in sleep (cf. *Insomn. 3*, 462a19–31). Yet all cases of perception in the state of sleep seem to involve some degree of distortion. For example, in *De insomniis* occasional perception of external objects in sleep is characterised as dim and faint (i.e., perceived objects are somewhat indistinct) whereas the awareness of bodily states in *De divinatone* is described as amplified in relation to the corresponding sensory stimulus in waking, e.g., slight warmth in waking is experienced as burning fire during sleep. As noted above, it seems plausible to assume that the misidentification occurs at the doxastic level. Even so, I assume that the misapprehension occurs, in part, because this is how things seem to be. In both instances where Aristotle mentions perception in sleep, he adds that the perceived object was correctly identified upon awakening. See Philip van der Eijk, *Aristoteles, De insomniis, De divinatione per somnum: Übersetzt und erläutert* (Berlin: Akademie Verlag, 1994), 62–67, 245–48; id., *Medicine and Philosophy in Classical Antiquity: Doctors and Philosophers on Nature, Soul, Health and Disease* (Cambridge: Cambridge University Press, 2005), 178–79; and Gallop, *Aristotle on Sleep and Dreams*, 154, for further discussions of Aristotle's views on perception in sleep.
error. Slight warmth is perhaps judged or believed to be fire. At any rate, I shall assume that Aristotle suggests that the relevant misidentification is based on some sensory illusory element. A perceptual misidentification does not require a sensory illusion, but an illusion can contribute to such a misidentification.

So why does Aristotle discuss awareness of internal states of the body rather than dreams strictly speaking? The most likely explanation seems to be that De divinatione covers all cases of alleged prophecy in sleep, not only dreams in the narrow sense in which they are discussed in De insomniis. The title of the treatise (Περὶ τῆς καθ᾽ ὕπνον μαντικῆς, Peri tês kath’ hýpon mantikês, On prophecy through sleep), even if added by a later editor, hints that the scope includes any alleged prophetic experience that occurs in sleep. Note also Aristotle's wording in De divinatione 1, 462b12–13, where he introduces the topic in terms of “the divination that takes place during periods of sleep and is said to be based on dreams.”

Given a wider scope with the emphasis on sleep rather than on dreams, Aristotle's examples of a distorted awareness of bodily states do not appear that misplaced. However, Aristotle presents no explicit example of a sign-dream proper that matches his definition of dreaming in De insomniis, and except for the case of perception of bodily states in sleep, the examples of signs that are mentioned in De divinatione are not related to sleep at all.

4 Amplified Awareness of Sensory Features during Sleep

One of Aristotle’s main points in connection with signs in sleep is that increased noticeability comes with the state of sleep. First, there is the general case in which sensory awareness is more prominent during sleep due to the inactivity of external perception. The examples in De insomniis seem to
focus on the basic conditions for noticeability as such. For example, the stars are visible during the night but not during daytime, yet they are there in daytime but unnoticeable. Similarly, a greater fire next to a smaller fire obscures the smaller fire. In a similar way, sense-impressions that linger on from past perceptual states go unnoticed during daytime but become apparent during sleep. No distortion seems to be implied by this form of enhanced awareness of sensory remnants.

In De divinatione, on the other hand, we face a more clear-cut case of an awareness of amplification that takes the form of a distorted apprehension of bodily changes: slight warmth is mistaken for burning fire. In these cases, the amplified awareness distorts the nature of present bodily stimuli in addition to the general noticeability that is enhanced by the state of sleep.

In order to see the difference between the two kinds of magnification, consider the following: the first, which is described in De insomniis, is used to explain the appearance of dreams in the state of sleep and their non-appearance in waking – for example, the sound of a radio may temporarily be over-voiced by a louder sound but is hearable again as soon as the louder sound fades. This sort of relative noticeability applies to all experiences in sleep (not just dreams) due to the absence of competing external sensory activity during sleep. The second type of magnification is more like an excessive degree of amplification caused by some altered way of processing sensory stimuli. For example, think of a hearing aid of low quality that amplifies and distorts indistinct sounds in the environment. The idea seems to be that it is the state of sleep that alters the cognition of bodily sensations and makes these sensations stand out in a distorted way. Being a salient feature that draws attention to probable states or events that are presently not manifest is an important aspect of the sign that will be further discussed below.

5 Aristotle's Conception of Natural Signs

At this point it may be helpful to look at Aristotle's formal definition of signs in the Prior Analytics:

A probability and a sign are not identical, but a probability is a reputable proposition: what men know to happen or not to happen, to be or not to be, for the most part thus and thus, is a probability, e.g. envious men hate, those who are loved show affection. A sign is meant to be a demonstrative proposition either necessary or reputable; for anything such that

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13 Insomn. 3, 461a1–3.
when it is another thing is, or when it has come into being the other has come into being before or after, is a sign of the other's being or having come into being.\textsuperscript{14}

Generally speaking, a sign indicates that something beyond itself is the case. Signs follow the general formula “if P then Q” and range from expressing something necessary to something credible.\textsuperscript{15} For example, breast milk is a sign of pregnancy,\textsuperscript{16} or “sign” may be used in a looser sense as ‘evidence of x,’ not necessarily as ‘conclusive evidence.’\textsuperscript{17} In *Rhetoric* 1.2, 1357b1–21 Aristotle contrasts necessary signs from non-necessary signs. Necessary signs cannot be refuted because they provide conclusive proof. Aristotle illustrates with the examples of fever as a sign of illness and the fact that a certain woman is giving milk as a sign that she has lately borne a child. These signs are said to be irrefutable. On the other hand, non-necessary signs are like the fact that Socrates was wise and just as a sign that the wise also are just; this latter sign is refutable by a case in which a wise man happens to be unjust. In a similar vein, fast breathing in a non-necessary sign may be used in a looser sense as ‘evidence of x,’ not necessarily as ‘conclusive evidence.’

So, how are signs in sleep characterised in *De divinatione*? The text offers some substantial descriptions together with a set of subtle clues that together provide a general account of natural signs and the special case of signs in sleep. Roughly, the sign that occurs in sleep is a manifest, distinct feature that provides a general account of natural signs and the special case of signs in sleep. Generally speaking, a sign indicates that something beyond itself is the case. Signs follow the general formula “if P then Q” and range from expressing something necessary to something credible.\textsuperscript{15} For example, breast milk is a sign of pregnancy,\textsuperscript{16} or “sign” may be used in a looser sense as ‘evidence of x,’ not necessarily as ‘conclusive evidence.’\textsuperscript{17} In *Rhetoric* 1.2, 1357b1–21 Aristotle contrasts necessary signs from non-necessary signs. Necessary signs cannot be refuted because they provide conclusive proof. Aristotle illustrates with the examples of fever as a sign of illness and the fact that a certain woman is giving milk as a sign that she has lately borne a child. These signs are said to be irrefutable. On the other hand, non-necessary signs are like the fact that Socrates was wise and just as a sign that the wise also are just; this latter sign is refutable by a case in which a wise man happens to be unjust. In a similar vein, fast breathing in a man indicates fever yet it may be proved false in a particular case.

So, how are signs in sleep characterised in *De divinatione*? The text offers some substantial descriptions together with a set of subtle clues that together provide a general account of natural signs and the special case of signs in sleep. Roughly, the sign that occurs in sleep is a manifest, distinct feature that indicates the probability of a causal connection. The sign itself is an effect of a causal regularity which in turn indicates the predictability of the signified event in cases where the signified event has not yet occurred or has not yet come into being.

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\textsuperscript{16} Cf. *Ap.:* 2.27, 70a13–16.

\textsuperscript{17} Cf. *Div.Somn.* 2, 463b15. Gallop translates σημεῖον (sēmeion) in this passage as “proof.” “Proof,” however, does not necessarily imply conclusive proof.
been confirmed to have occurred. Below, I highlight a set of elements that are distinctive for Aristotle’s conception of natural signs.

(1) **Signification through causal regularities.** The sign indicates by way of a regularity between a cause and a typical effect. For example, consider smoke as a sign of fire. The sign in this case (the presence of smoke) indicates fire, since smoke, more often than not, is caused by fire. The sign may be understood as a kind of hint that something is or will be the case. However, not all hints about the future qualify as natural signs of the relevant kind. For example, if I dream about gold, my dream does not signify that I will become rich, even if I (for other reasons) happen to gain great wealth in the future. The case of dreaming of gold and later becoming wealthy could be construed as a case of prevision (prooràn) in the mode of coincidence, but not in the mode of sign. In order for a dream about gold to be a sign of future wealth there has to be some regular causal connection between this kind of dream and the alleged outcome, which my dream about gold apparently lacks.

By contrast, the traditional dream-sign, in divinatory contexts, typically signifies by means of similarity, broadly understood (see sections six, seven, and eight for a set of examples). The kind of dream-sign that Aristotle endorses does not require any resemblance between the sign and the signified event. Rather the important feature is the predictability that is established through regular underlying causal relations between the sign and the signified event. For example, the roughness of the tongue does not resemble fever just as low flying swallows do not resemble rain, yet roughness of the tongue and low flying swallows indicate certain events because they occur in a predictable way given the manifestation of the relevant signs. Thus, the signified event cannot be derived from the manifest properties of the sign itself, apart from the fairly reliable link between the sign and the signified event. Next, I highlight a closely related aspect.

(1b) **The sign and the signified event (if fulfilled) share a common cause.** Even if signs are not themselves causes they share a common cause with the event or state they signify.\(^\text{18}\) This applies to all cases in which signs indicate their causes (smoke as a sign of fire) as well as when signs indicate something other than their causes (low flying swallows indicate rain). Thus, the sign \(S\) and the signified event \(SE\) share a common cause \(C\) in the past or in the present; the sign and the signified event (given that the signified event occurs) are distinct effects of the same underlying causal development. These underlying causal aspects of signs should not be conflated with Aristotle’s conception of signs.

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\(^\text{18}\) I am indebted to Pavel Gregoric for making me aware of the shared causal origin of the sign and the signified event.
cause as a particular mode of prevision (proorân). As we shall see, cause qua a mode of prevision exclusively concerns dreams that later cause the dreamer to actually perform the actions that she performed in her dream.

(2) **The sign does not cause the event it signifies.** An important point in Aristotle’s discussion of natural signs is that signs are not themselves causes, although they are the effects of causes and also indicate regular causal connections. The roughness of tongue, as a sign of fever, is not a cause of fever, and a star’s entry into shadow is a sign of its eclipse, not a cause. As a clarifying contrast Aristotle mentions fatigue as a possible cause of fever. The sign is not a cause, strictly speaking, even in cases where the sign and the cause of the signified event co-occur and seemingly merge, as, for instance, in the case where dark clouds indicate rain.

(3) **The sign is a conspicuous feature that reveals probable yet non-manifest causal developments.** However, the mere regularity between a dream and a real-world event is not sufficient for it to qualify as a sign. A lot of events are regularly correlated with other things without signifying them, in the way that is distinctive for natural signs. For example, a dream in which I drink water does not signify that I will drink water in the future, no matter how predictable the occurrence of the future event is.¹⁹ Signs have a conspicuous element like for instance the dark clouds that are observed before rain and the smoke that indicates the presence of fire. The sign stands out as a particular manifest feature. Thus, signs, by and large, call attention to certain probable events that are presently not evident in plain sight. Aristotle’s example concerning a distorted awareness of internal bodily states can function as a sign because it stands out and provides information about a condition that otherwise would remain obscure.

(4) **The possibility of intervening causes.** Aristotle stresses the possibility that intervening causes may occur in causal developments in general. He writes:

That many dreams are not fulfilled is in no way surprising. The same holds for many signs of bodily events or of the weather, e.g. of rain or wind. For if another movement should take place, prevailing over the one from which (when it was going to happen) the sign occurred, then the latter movement does not occur. And many well-made plans for action needing to be carried out have been undone because of other causes that prevailed. For, in general, not everything that was going to happen actually does happen; nor is what will be the same as what is going to be. But even so, one should say that there are causes of a certain kind, from

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¹⁹ Cf. n24 on the view that some dreams may be characterised as both causes and signs.
which no fulfilment ensued, and these things are natural signs of certain things that failed to occur.20

So, there is a gap between things that were in the process of happening and things that really happened. The connection between the sign and the signified event is not arbitrary or unlikely, but the causal sequence that the sign and the signified event are part of leaves room for cases in which the expected effect did not occur. In other words, some signs signify the beginning of disease but the indication of the initial phases of illness does not inevitably imply that the disease will develop into a full-blown condition. There is always the possibility that other causes may intervene between a cause and a sign and its typical effect/the signified event, due to the non-necessary relation between the connected events, even if intervening causes are rare. In sum, signs in sleep, as special cases of natural signs, possess some degree of predictive force, but they are not completely reliable in the sense that they guarantee the occurrence of the signified event.

(5) The predictive force of signs vs. prevision (proorân). It is important to note that signs that indicate more or less likely occurrences in the future and the notion of prevision are fundamentally distinct concepts in Aristotle’s account. Even if signs in a sense anticipate likely future events, they do not constitute prevision until a fulfilling event makes them to do so, in retrospect. Thus, it is important to distinguish the predictive aspects of dream-signs from the notion of prevision, that is, dreams that come to pass in the mode of signs.21

Since signs reflect a typical causal regularity, it seems plausible to assume that the signified event probably will occur whenever the sign is present. Accordingly, a sign may indicate some future event regardless of whether the expected outcome occurs in a particular case.22 Hence, a sign retains its status of sign even in those cases where the signified event does not occur, unlike cases of prevision that require a fulfilling event. In sum, some but not all cases

20 ὅτι δ’ οὐκ ἀποβαίνει πολλά τῶν ἐνυπνίων, οὐδὲν ἄτοπον· οὐδὲ γὰρ τῶν ἐν τοῖς σώμασι σημείων καὶ τῶν οὐρανίων, σίδην τά τῶν ὑδάτων καὶ τά τῶν πνευμάτων (ἂν γὰρ ἄλλη κυριώτερα τάτης συμβῆ κίνησις, ἀφ’ ἢς μελλόσισθ’ ἐγένετο τὸ σημεῖον, οὐ γίνεται), καὶ πολλά βουλευθέντα καλῶς τῶν προχθῆναι δεόντων διελύθη δι’ ἄλλοις κυριώτερας ἀρχάς. ἤλως γὰρ οὐ πάν γίνεται τὸ μελλόσιν, οὐδὲ τὸ αὐτό τὸ ἐσόμενον καὶ τὸ μέλλον ἄλλ’ ὁμοίως ἀρχάς γέ τινας λεκτέον εἶναι ἀφ’ ἢν οὖς ἐπε- τελέσθη, καὶ σημεία πέρνει τούτα τινὸς ὑγείας γενομένων. (Div.Somn. 2, 463b22–31; Aristotle, On Sleep and Dreams, 111–13.)

21 It is also important to distinguish between (1) the predictive force of signs, (2) prevision in the sense endorsed by Aristotle, and (3) precognition or foreknowledge understood as veridical knowledge in the present about the future. For details, see Radovic, “Aristotle on Prevision,” 383–407. Cf. Van der Eijk, Medicine and Philosophy, 204.

22 I am indebted to Philip van der Eijk for pointing this out to me.
of signs in sleep constitute prevision. Prehoratic dreams on the other hand, regardless of their mode, require a fulfilling event. For that reason, the act of prediction or anticipation based on signs should not be conflated with prevision in the technical sense endorsed by Aristotle in *De divinatione*.

(6) Temporal aspects of signification. Signs may signify the occurrence of events in various temporal modes. For instance, roughness of the tongue signifies a present co-existing state, whereas the presence of water on the ground indicates that it rained in the recent past. As we have seen, a sign that signifies a future event or state cannot be the cause of its signified event. However, signs that indicate occurrences in the present or in the past may signify their causes, such as when smoke is the result of fire. This temporal variability of signs is one reason why it is difficult to capture the causal significance of signs by a simple formula. However, since Aristotle’s discussions of signs in sleep take place in the context of prophecy it seems reasonable to consider signs in their predictable forward-looking mode.

There is a temporal aspect that may be worth elaborating further in Aristotle’s discussion of signs as indicators of disease. Mor Segev argues that sign-dreams are not prophetic in the ordinary sense. He writes: “We are unable to predict an illness whose beginning has not yet arrived, but we are able to detect in a dream an illness in a preliminary stage.”23 Segev’s point seems to be that the sign does not really signify a future event but rather the initial stages of presently ongoing events. This seems plausible if we consider the particular examples of signs in sleep that are discussed by Aristotle. The state of sleep makes us able to notice diseases in an early stage before they become apparent in plain sight in waking, as it were. However, since the sign marks the beginning of disease, it may be described as future-oriented in the sense that it predicts the progression of a certain condition. Yet, the initial state of the disease, which also is the cause of the sign, does not necessarily have to develop into a more severe state of the disease since intervening causes may terminate the progressive course of the pathological condition. Thus, the sign may be said to signify two distinct but related aspects of disease, namely, (1) the initial phase of a disease, and (2) a developed stage of the same pathological process. Hence, a sign may reveal the initial phase of a disease in the present and at the same time predict an advanced state of the underlying pathology in the future.

To sum up, (1) the sign signifies by means of an underlying causal regularity between the sign and the signified event, not by any resemblance between them. (1b) The sign emerges from the same causal sequence that is likely to

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bring about the signified event. The manifestation of a sign reflects a deeper causal link between a cause, a sign, and the signified event, yet (2) the sign itself is not a cause. (3) The sign is a distinct observable feature that provides information about events that presently are not manifest or are difficult to notice. (4) The signified event may fail to occur since there is always a possibility of intervening causes. (5) Signs indicate a likely future even if the predicted events fail to occur, but do not count as prevision (proorân) until a fulfilling event makes them do so. (6) The sign may signify the likely presence of a past, present, or future state of affairs. The natural sign in its future-looking mode signifies a causal process that typically has some expected outcome in a later stage of development.  

6 The Traditional View of the Dream as a God-Sent Sign

The ancient popular conception of divinatory signs provides an interesting background to Aristotle's account of prevision in the mode of signs. I shall clarify how Aristotle challenges traditional views of divinatory signs and in what ways he stays close to tradition. It will be shown that he rejects the popular ancient idea that may be called “the doctrine of similarity” regarding how signs

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24 Even if Aristotle is quite clear that prohoratic dreams in the mode of coincidence exclude causes and signs, there is a passage in De divinatione that suggests that some cases of prevision (proorân) may be viewed as both causes and signs. See especially Dōs.Somn. 1, 463a21–31 where Aristotle concludes: οὕτω μὲν οὖν ἐνδέχεται τῶν ἐνυπνίων ἔνια καὶ σημεῖα καὶ ἀττικά εἶναι = "In these ways, then, it is possible for some of the dreams to be both signs and causes" (Aristotle, On Sleep and Dreams, 109). There are two opposing interpretations of this paragraph. One possibility is that the last sentence of the quote simply sums up Aristotle's previous discussion, namely, that some dreams are causes and other dreams are signs. Alternately, in this last sentence he considers dreams that may be viewed as both causes and signs. However, the sentence in the Greek is rather ambiguous – more so than Gallop's English translation suggests. Cf. David Ross who in a paraphrase seems to view "causes" and "signs" as separate dreams: “Thus some dreams may be signs, and others causes” (Aristotle, Parva naturalia, 280). For a similar stance see Paul Siwek's Latin translation: "Itaque omnino fieri potest, ut quaedam insomnia sint sive signa sive causae [eventuum]" (Aristotle, Parva naturalia graece et latine, ed. and trans. P. Siwek (Rome: Descleé, 1963), 241). For more non-committal views, see for instance John Isaac Beare: “Thus then it is quite conceivable that some dreams may be tokens and causes [of future events]” (in Aristotle, The Complete Works, 1737). See also Fred Miller's translation: "In this way it is possible that some dreams are indications and causes" (Aristotle, On the Soul and Other Psychological Works, trans. F. D. Miller Jr. (Oxford: Oxford University Press, 2018), 123). Cf. Van der Eijk, Aristoteles, De insomnii, 284. See Hulskamp, Sleep and Dreams, 337, for an interpretation that allows for cross-over cases. For further considerations regarding the possibility of cross-over cases, cf. Gallop, Aristotle on Sleep and Dreams, 158–59.
are supposed to indicate occurrences in the world. Further, there is no special connection between prohoratic signs and the practice of dream-interpretation in Aristotle's account. However, my objective is not to give a comprehensive account of mainstream views of prophecy through sleep or of medical views on signification. Rather, I will consider a set of common ancient examples of dreams as signs in order to illuminate correspondences and divergences in relation to Aristotle's conception of natural signs.

An influential ancient conception of dreams as signs roughly views the sign as an obscure hint that something is the case or will occur in the future. This type of dream often appears as a symbolic or allegorical representation of the signified event and frequently crops up in early sources on prophetic dreams. For example, consider Genesis 41, where Joseph interprets Pharaoh's dream involving seven fat cows eating seven skinny cows. Joseph interprets the dream as a premonition about seven good years and seven bad years. Giovanni Manetti observes that:

Divination forms the first homogeneous area of ancient Greek culture in which it is possible to talk about the use of signs. The term σημείον, which we encounter for the first time in this field, is a generic term which indicates a divinatory sign of any kind, including an oracular response, which is usually a verbal text.25

Manetti continues:

The verb σημαίνω thus does not have the simple meaning of “to mean,” in the sense of the establishment of a relationship between a plane of expression and a plane of content within the sign. Instead, it seems rather to refer to the very process of communication which the god activates with respect to humanity. In the passage from Timaeus, the verb seems to refer to the situation through which the god “indicates by means of (enigmatic) signs” something, as yet unknown, to a human individual. There is a long tradition going back at least to Heraclitus, in a well-known fragment 93 of the Diels–Kranz edition, which confirms the use of the verb σημαίνω in this sense in divinatory contexts.26

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25 Manetti, Theories of the Sign, 14.
26 Manetti, Theories of the Sign, 16–17.
However, even if Manetti’s claim regarding the origin of the word is debatable, the use reflects an ancient popular view of divine signification. The popular ancient belief that dreams on occasion convey obscure god-sent messages may be summarised as follows.

1. Gods communicate with mortals by sending them messages through dreams, presumably about things happening in distant lands or about events that will occur in the future.
2. The real-world events that are signified by such dreams are often represented in some obscure way (even if sometimes straightforwardly clear through a straightforward vision, cf. the *hórâma* below).
3. Interpretation is required in order to elucidate what real-world event the dream signifies.
4. The god-sent message or sign is in principle decipherable through some sort of code, or more or less rigorous rules of interpretation. The juxtaposition of similarities between sign and signified event, in the broadest possible sense, is a common method of dream-interpretation.

Note in particular that the traditional view of obscure divinatory signs is closely associated with efforts to interpret the significance of dreams. As we shall see, there is no such close link between the dream conceived as a sign and the practice of dream-interpretation in Aristotle’s account. His take on the traditional view is that all dreams with obscure content may be subject to dream-interpretation, regardless of the mode in which the dream becomes fulfilled by a future event.

6.1 **Natural and Technical Divination vs. Predictability Based on Causal Regularity**

At this point it might be illuminating to take a look at the ancient division between natural and technical (or artificial) divination. The term “natural” is here used in a quite counterintuitive way, as the form of divination that comes to the subject naturally, or unintentionally, as it were, as opposed to divination that requires a skill. For example, prophecy that occurs in states of inspiration or frenzy is considered to be natural, whereas the reading of entrails or the interpretation of dreams require certain skills.

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27 For example, the word σῆμα (*sêma*) goes back at least to Homer and includes all kinds of signs (significant marks, traces, signals).
28 Cf. Plato’s distinction between irrational and rational kinds of divination in *Timaeus* 71e–72a.
29 Aristotle’s distinction between the melancholic’s ability to patch up corrupted dreams, in a non-voluntary natural manner, and dream-interpretation as a skill (*Div.Somn.* 2, 464a27–b16) probably alludes to the well-known division between natural (irrational) ...
However, it is clear that Aristotle rejects certain forms of technical divination. Consider Cicero's characterisation of the distinction in question:

But those methods of divination which are dependent on conjecture, or on deductions from events previously observed and recorded, are, as I have said before, not natural, but artificial, and include the inspection of entrails, augury, and the interpretation of dreams. These are disapproved of by the Peripatetics and defended by the Stoics. Some are based upon records and usage, as is evident from the Etruscan books on divination by means of inspection of entrails and by means of thunder and lightning, and as is also evident from the books of your augural college; while others are dependent on conjecture made suddenly and on the spur of the moment. An instance of the latter kind is that of Calchas in Homer, prophesying the number of years of the Trojan War from the number of sparrows.  

Cicero's claim that artificial divination was disapproved of by the Peripatetics fits well with Aristotle's views on prophecy in general and his conception of the sign as an indicator of causal regularity. Cicero also notes the distinction between predictability that is based on obscure signification in dreams and natural signs (not to be conflated with the notion of “natural divination” above) that rely on causal regularities:

A married woman who was desirous of a child and was in doubt whether she was pregnant or not, dreamed that her womb had been sealed. She referred the dream to an interpreter. He told her that since her womb was sealed conception was impossible. But another interpreter said, “You are pregnant, for it is not customary to seal that which is empty.” Then what is the dream-interpreter’s art other than a means of using one's and technical (rational) divination. However, in Aristotle's version the distinction does not reflect forms of prophecy, strictly speaking, but rather two ways in which dream-content may be disambiguated in documented cases of prevision. See also the discussion on dream-interpretation below.

wits to deceive? And those incidents which I have given and the numberless ones collected by the Stoics prove nothing whatever except the shrewdness of men who employ slight analogies in order to draw now one inference and now another. There are certain indications from the condition of the pulse and breath and from many other symptoms in sickness by means of which physicians foretell the course of a disease. When pilots see cuttle-fish leaping or dolphins betaking themselves to a haven they believe that a storm is at hand. In such cases signs are given which are traceable to natural causes and explicable by reason, but that is far from true of the dreams spoken of a little while ago.31

The problem with the first type of signs is the murky relation between the sign and what it supposedly signifies. It seems as if the sign signifies whatever happens to occur, making predictions akin to wild conjectures rather than sober estimations based on records of real correspondences between events.32 As Cicero puts it, the latter type of sign is traceable to natural causes and explicable by reason whereas signs that dress up as riddles escape rational comprehension.

6.2 Artemidorus’ Semi-naturalistic View

Later, in the second century CE, Artemidorus employs a version of the traditional divinatory model but downplays the distinction between signs that have divine causes and ones that have natural causes. Yet Artemidorus assumes that some dreams display symbolic, metaphorical, or allegorical information and that there are interpretative rules that unveil the real-world events that are indicated by such dreams. The origin of dreams is not an important question for Artemidorus – even if dreams are assumed to have natural causes, they require dream-interpretation in order to be properly understood. Artemidorus writes:

31 “Parere quaedam matrona cupiens, dubitans esset ne praegnans, visa est in quiete obsignatam habere naturam. Rettulit. Negavit eam, quoniam obsignata fuisset, concipere potuisse. At alter praegnantem esse dixit; nam inane obsignari nihil solere. Quae est ars coniectoris eludentis ingenio? an ea, quae dixi, et innumerabilia, quae collecta habent Stoici, quicquam significant nisi acumen hominum ex similitudine aliqua coniecturam modo huc, modo illuc ducentium? Medici signa quaedam habent ex venis et spiritu aegroti multisque ex alis futura praesentium; gubernatores cum exsultantis lolligines viderunt aut delphinos se in portum conicientes, tempestatem significari putant. Haec ratione explicari et ad naturam revocari facile possunt, ea vero, quae paulo ante dixi, nullo modo.” (Cicero, De div. 2, 73, para. 145, 532–33.)

32 Cf. Aristotle’s remark on the diviner’s use of generality as a way of resisting outright falsification, that is, a prediction is more likely to be right if it says that a thing will happen, rather than when it will happen (Rh. 3.5, 1407b1–6).
And it is necessary to keep in mind that the things that appear to those who are worried about something and who have requested a dream from the gods will not resemble their worries [and signify something about the matters at hand] since dreams that are identical to the things one has on one’s mind are insignificant and have the quality of an enhypnion, as the previous section has shown. And they are called “anxiety” and “request” dreams by some. But those that come <to people> who are not worried about anything and reveal something to come, good or bad, are called “god-sent.” But I would not, as Aristotle does, raise the difficulty of whether the cause of dreaming is external to us, arising from a god, or if there is some internal cause, which disposes the soul within us and shapes it in accordance with natural processes. Rather, [they are] “god-sent” [insofar] as we customarily call all unexpected things “god-sent.”

It seems as if Artemidorus considers dreams as obscure signs regardless of whether the dreams are caused by a god or a natural process. He even suggests a deflationary interpretation of “god-sent” in terms of ‘unexpected.’

Artemidorus’ rather complicated and seemingly speculative and arbitrary rules for predicting outcomes appear to be a mishmash of rational interpretation, psychological observation, social considerations, and more or less valid assumptions about how the world operates. Yet Artemidorus endorses does not sharply distinguish between natural events narrowly construed, cultural factors, and more or less unfounded presuppositions about how the cosmos works. It seems as if the world-view that Artemidorus endorses does not sharply distinguish between natural events narrowly construed, cultural factors, and more or less unfounded presuppositions about how the world operates. Yet Artemidorus assumes that the link between the dream and its indicated outcome is connected by established regularities which sometimes are difficult to discern.

33 Εννοοῖσι δὲ χρῆ ὅτι τὰ μὲν τοῖς φροντίζονται περὶ τινός και αἰτησιμένοις ἀνειροῦν παρὰ θεῶν ἐπιφανεῖσθαι σού ὄνομα ταῖς φροντίσις [σημαίνοντα] δὲ τι περὶ τῶν προκειμένων γίνεται, ἐπεὶ τὰ γε ὄνομα ταῖς ἐννοιαῖς ἁσημαντά τὲ ἐστὶ καὶ ἐνυπνιώθη, ὡς ὁ πρότερος ἔδειξε λόγος μεριμνηστικά δὲ καὶ αἰτηματικά πρὸς τινῶν λέγεται: τὰ δὲ < τοῖς > περὶ μηδὲν ἄλλο φροντίζουσιν ἐφιστάμενα καὶ προαγορεύοντα τι τῶν ἐσομένων ἀγαθῶν ἢ κακῶν θεόπεμπτα χαλεῖται. οὐκ ἡμεῖς δὲ νῦν ἔγω ὡς Ἀριστοτέλης διαπορὰν πάτερον ἐξωθός ἤμιν ἄπτετο τού ἐνειρίσασθαι ή ἄπτετο ὑπὸ διδοκάρπων ἢ ἐνδοκάρπων τι, δ ἤμιν διατίθεν τὴν ψυχήν καὶ ποιεὶ φύσει συμβεβηκός αὐτή, ἀλλὰ θεόπεμπτα [ὡς] ἢδη καὶ ἐν τῇ συνήθεια πάντα τὰ ἀπροσδόκητα καλοῦμεν. (Artemidorus, Oneirocritica, 1.6, 59–61.)

34 Patricia Cox Miller writes: “In late antiquity, the interpreters of dreams, whether classifiers or allegorists, directed their attention less to theories of the source of dreams than to schemas for translating dream-images into useful bodies of knowledge. In their view, worlds were constructed in dreams – worlds of social, ethical, and exegetical import. Given their perspective that the oneiric image was bound up with the structure of reality, interpreters recognized the public intelligibility of their material.” (Patricia Cox Miller, Dreams in Late Antiquity: Studies in the Imagination of a Culture (Princeton, N. J.: Princeton University Press, 1994), 75.)
Aristotle’s rules of inference are considerably simpler than those presumed by Artemidorus. In contrast to those of Artemidorus, Aristotle’s conception of natural signs is based on empirical observation of robust causal regularities. Thus, many of the cases that Artemidorus believes are connected by law-like connections would not meet the conditions for natural signs in the sense advocated by Aristotle. Instead, many of the outcomes that Artemidorus reports on the basis of dream interpretation, would, if true, rather be cases of prevision in the mode of coincidence according to Aristotle’s account.35

7 Signs in Sleep in the Medical Tradition

As we have seen, Aristotle takes the medical tradition into consideration when he discusses the possibility of signs in sleep.36 The idea that dreams may be of prognostic value is well established in the ancient medical tradition. Eric Dodds provides an interesting observation in this context:

One fourth-century writer devoted a whole section of this treatise On Regimen (Περὶ διαίτης) to a discussion of precognitive dreams, though he

35 Consider a common classification of premonitory dream-types that was popular in antiquity and derives from Artemidorus and Macrobius. Eric Robertson Dodds writes: “In a classification which is transmitted by Artemidorus, Macrobius, and other late writers, but whose origin may lie much further back, three such types are distinguished. One is the symbolic dream, which ‘dresses up in metaphors, like a sort of riddles, a meaning which cannot be understood without interpretation.’ A second is the horama or ‘vision,’ which is a straightforward preënactment of a future event, like those dreams described in the book of the ingenious J. W. Dunne. The third is called a chrematismos or ‘oracle,’ and is to be recognised when in sleep the dreamer’s parent, or some other respected or impressive personage, perhaps a priest or even a god, reveals without symbolism what will or will not happen, or should or should not be done.” (Eric Robertson Dodds, The Greeks and the Irrational (Berkeley: University of California Press, 1951), 107); see also Antonius Hendrik Maria Kessels, “Ancient Systems of Dream-Classification,” Mnemosyne 22:4 (1969): 389–424. A notable feature of the traditional ancient classification of divinatory dreams is that it is based on how information about the future is transmitted. Foreseeing dreams are divided into (1) symbolic dreams, (2) “vision-dreams” that faithfully replicate a relevant scene as if perceived, and (3) dreams that involve some prominent figure who communicates prophetic information in plain language. By contrast, Aristotle’s classification of prevision through dreams (proorân) is based on the particular way the dream becomes fulfilled by a future event, i.e., cause, sign, or coincidence.

36 It is true that many physicians considered dreams for their alleged prognostic value, e.g., the author of Regimen IV, Herophilus, Rufus of Ephesus, and Galen. Nevertheless, some physicians did not accept the medical value of dreams, e.g., the Methodist school and individuals like Asclepiades and Soranus. See Steven Oberhelman, “Galen, On Diagnosis from Dreams,” Journal of the History of Medicine and Allied Sciences 38:1 (1983): 36–47.
does not attempt to cover the entire field; he leaves ‘godsent’ dreams to
the *oneirocrits*, and he also recognizes that most dreams are merely wish-
fulfilments. The dreams which interest him as a doctor are those which
express in symbolic form morbid physiological states, and thus have pre-
dictive value for the physician. These he attributes to a kind of medical
clairvoyance exercised by the soul during sleep, when it is able to survey
its bodily dwelling without distraction. And on this basis he proceeds to
justify many of the traditional interpretations with the help of more or
less fanciful analogies between the external world and the human body,
macrocosm and microcosm.37

It is important to note that various authors in the medical tradition not only
distinguished (1) between prophetic dreams, which were assumed to be
understandable by the mainstream dream-interpreters, and god-sent medi-
cally significant dreams, which were of interest to the physician, they also
distinguished (2) between divinatory dreams, which were assumed to require
dream-interpretation, and natural dreams, which were thought to be natural
expressions of bodily states. In the last group of purely natural dreams, we
may further distinguish (3) between dreams that signify through concrete or
abstract similarity and signs that signify by means of causal co-variation. As we
have seen, there is no reference to similarity in Aristotle's discussions of natu-
ral signs. So even if a sign happens to resemble the signified event for some
accidental reason, it does not signify in virtue of such resemblance according
to Aristotle.

By contrast, some alleged signs of the dreamer’s body that are mentioned
in the Hippocratic *Regimen IV*, which are believed to indicate health or dis-
ease, display elements of analogy. According to the author, dreams may signify
disease in some more or less far-fetched way. The text states that: “Crossing
rivers, enemy men-at-arms and strange monsters indicate disease or raving.”38
So it seems that Aristotle’s main point regarding the distorted awareness of
internal bodily states neither reflects the traditional view of obscure signs, nor
any element of symbolism, analogy, or other type of resemblance, but rather
highlights the conditions in which signs stand out and become recognisable in
an early phase of pathological development.39

37 Eric Robertson Dodds, “Supernormal Phenomena in Classical Antiquity,” *Proceedings of
38 Hippocrates, *Regimen IV*, 39. For a thorough discussion of dreams in the ancient medical
tradition, see Hulskamp, *Sleep and Dreams*.
39 Even Artemidorus acknowledges god-sent dreams with medical significance (cf. Steven
Oberhelman, “The Interpretation of Prescriptive Dreams in Ancient Greek Medicine,”
Steven Oberhelman explains how the sign-dream is assumed to signify a real-world event through similarity:

The principle of analogy is apparent also in the medical works, especially in the *Regimen IV*. The writer of this treatise perceives in the deficiencies, excess, and qualities of the bodily humors the origins of all diseases. He also believes that the symptoms of a disease can be depicted in the visual contents of a dream. The correct interpretation of such prognostic dreams depends upon a series of analogies between the dream’s contents, which represent the external world, and the internal workings of the dreamer’s body. For example, the earth is analogous to a dreamer’s flesh, a river to his blood, a tree to his penis, and so forth. Thus, the condition of a particular external object in a dream will be the analogous state of the bodily organ that corresponds to that object. If the dream indicates a disturbance in the body, the writer of the Hippocratic treatise prescribes specific treatments and regimens in order to restore the proper humoral balance.\textsuperscript{40}

In this context we face some superficial similarity with the examples that Aristotle uses in *De divinatione*. A characteristic feature of natural dreams, as described in medical contexts, is the presupposition that dreams indicate disease by means of some kind of resemblance represented through the content of the dream. Even if Galen accepts the possibility of god-sent dreams, he mostly discusses natural prognostic dreams.\textsuperscript{41} Yet Galen highlights the problem of how to distinguish between dreams that may be elucidated by traditional dream-interpreters and dreams that reflect states of the body.\textsuperscript{42}

\textit{Journal of the History of Medicine and Allied Sciences} 36:4 (1981): 417–18). Artemidorus calls the medical dream \textit{theópemptos}. A god-sent dream is a dream-vision sent by the gods, by love, or as an effect of offering or prayer. The god-sent dream is either the cure itself, or it is the vehicle for the cure by way of its visual or verbal characteristics. Artemidorus distinguishes between clear and obscure symbolic meaning, which seems to be a relative measure of how far-fetched the analogy between the dream and the signified event is supposed to be. For example, a dream of a physical copy of Aristophanes’ book *The Clouds* was reported to be followed by rain the next day (Oberhelman, “The Interpretation,” 421), and this is considered to be a dream with a clear symbolic meaning.

\textsuperscript{40} Oberhelman, “The Interpretation,” 422.

\textsuperscript{41} See Oberhelman, “Galen, On Diagnosis,” 36–47, for an English translation of Galen’s short text *Diagnosis from Dreams*.

\textsuperscript{42} Oberhelman, “Galen, On Diagnosis,” 44–45. Galen raises the problem of how to decide whether a dream signifies according to the rules of mainstream dream-interpretation or rather indicates a bodily malady. Galen reports that a man dreamed that one of his legs...
For example, it was presumed that if someone sees a conflagration in a dream he is affected by yellow bile. Oberhelman elaborates in a footnote: “Probably the conflagration occurs because of the warmth of the disease that yellow bile causes rather than because of the analogy between the colour of the fire and that of the bile.” The mentioned case shows some resemblance to Aristotle’s example in which the subject has the impression of being burned by fire, yet Aristotle’s example concerning temperature involves different degrees of intensity of the same sensation. But the similarity between slight warmth and the belief that one walks on fire does not involve any similarity between the sign and the signified state (the disease). The misapprehension of slight warmth as burning fire is merely a more noticeable variant of the original stimulus of warmth. However, the impression of fire stands out more than the sensation of slight warmth. So even if the experience of fire resembles the sensation of slight warmth, Aristotle does not suggest that neither slight warmth nor the impression of fire resembles the signified disease.

In sum, there seems to be a wide range of dreams that are assumed to have medical significance. Even if Aristotle might be said to follow the medical tradition in his discussion of signs, his examples, unlike the examples by medical authors, do not involve signification through concrete or abstract similarity.

Yet, as we shall see in the following section, Aristotle indeed follows tradition when he says that dream-interpreters retrieve information from dreams with ambiguous content by means of observing resemblances, but he means this in a highly restricted sense that does not presuppose abstract forms of similarity, such as dreams appearing in the form of allegorical riddles. In addition, dream-interpretation concerns any dream with obscure sensory appearances, not just sign-dreams.

had turned to stone, and that the traditional dream-interpreters judged that the dream concerned the dreamers’ slaves, since this is what traditional dream-interpretation suggests, but the man’s leg was unexpectedly paralyzed. (See Oberhelman, “Galen, On Diagnosis,” 45.) For the assumption that that dreams about ankles, feet, and toes concern slaves, see Artemidorus, *Oneirocritica*, 1.48/53.18–20, 54.21–22. See also George W. Pigna 111, *Conceptions of Dreaming from Homer to 1800* (London: Anthem Press, 2019), 41.

Oberhelman, “Galen, On Diagnosis,” 43.

Oberhelman, “Galen, On Diagnosis,” 43n49.
8 Aristotle on Dream-Interpretation

The idea that dreams convey messages from gods by way of enigmatic signs was ubiquitous in antiquity. Artemidorus’ view serves as an illustration of how dream-interpretation in the popular sense is supposed to work.

Aristotle introduces an alternative model of dream-interpretation that shares some superficial resemblance with the traditional practice of dream-interpretation. However, Aristotle does not share the view that dream-interpretation aims to unveil obscure dreams that supposedly dress up in symbols or metaphors. Yet, he does not deny that dreams may be obscure in the sense of being indeterminate or ambiguous appearances that need disambiguation. He writes:

But the most skilled interpreter of dreams is one who can observe resemblances. For anyone can interpret direct dream-visions. By resemblances, I mean that the appearances (phantasmata) are akin to images in water, as indeed we have said before. In that medium, if there is much disturbance, the reflection becomes in no way similar, nor do the images resemble real objects at all. Indeed, it would take a clever interpreter of reflections to be able to detect readily and to comprehend the scattered and distorted fragments of images as being those of a man, or a horse, or whatever. Likewise in the case before us, of grasping what this dream signifies. For direct dream-visions is erased by the movement.45

Dream-interpretation, according to Aristotle, is the skill of recognising real-world objects or events in distorted dreams. Aristotle grants that anyone can interpret undistorted dreams but maintains that a skilled interpreter of dreams is required in order to disambiguate obscure dream-content. On a superficial level, Aristotle seems to follow the traditional model of dream-interpretation by embracing two related popular opinions.

(1) Dream-interpretation elucidates obscure or ambiguous dreams that reflect real-world objects or events. Just like Artemidorus, Aristotle provides a model for

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45 τεχνικώτατος δ’ εστί κριτής ἐνυπνίων ὡστὶς δύναται τὰς ὁμοιότητας θεωρεῖν· τὰς γὰρ εὐθυνειρίας κρίνειν παντὸς ἄστιν. λέγω δὲ τὰς ὁμοιότητας, ὅτι παραπλῆσια συμβαίνει τὰ φαντάσματα τοῖς ἐν τοῖς ὀφθαλμοῖς, καθάπερ καὶ πρότερον εἴπομεν· ἐκεί δὲ, ἐν πολλῇ γίγνηται ἡ χίνησις, οὐδὲν ὡμοία γίνεται ἡ ἁμαρτία καὶ τὰ ἐνυθαλα τὸς ἄλθυνος. δεινὸς δὲ τὰς ἁμαρτίας κρίνειν εἰπὶ ἄν ὁ δυνάμενος ταχὺ διαπερισσόει καὶ συνοράν τὰ διαπερισσόμενα καὶ διασπαρμένα τῶν εἰδώλων, ὃτι ἐστὶν αὐτοῦ ἢ ἢπειρὸν ἢ ὀπτυδήποτε, κάκει δὲ ὡμοίως τί δύναται τὸ ἐνύπνιον τούτο. ἢ γάρ κίνησις ἔσωστε τὴν εὐθυνειρίαν. (Div.Somn. 2, 464b5–15; Aristotle, On Sleep and Dreams, 115.)
how to disambiguate dream-content in order to unveil what real-world objects or events a dream correspond to. The distortions that make dreams obscure have natural causes, according to Aristotle, and dreams may be corrupt in many different ways. Dreams may be fragmentary, deformed, and perhaps scrambled with other dreams (*Insomn.* 3, 461a8–25). In addition, related experiences in sleep may appear in an exaggerated form due to a distorted apprehension (*Div. Somn.* 1, 463a7–21).

(2) The skilled interpreter of dreams disambiguates dreams by observing resemblances. Moreover, Aristotle follows the traditional view that the practice of dream-interpretation is performed by observing similarities between dream-content and matching real-world objects or scenes. Yet Aristotle’s use of similarity exclusively concerns concrete sensory similarity which is considerably more restricted than Artemidorus’ sophisticated theory that exploits any far-fetched similarity, no matter how outlandish, in the form of puns, allegories, and other abstract resemblances. Consider Harris-McCoy’s remark on Artemidorus’ rather creative use of similarity as an interpretative tool:

The basic principle involved in the interpretation of allegorical ὄνειροι, which comprise the bulk of the *Oneirocritica*, is a doctrine of similarities. This principle is perhaps most clearly stated in Book 2 at the close of the section on dreams of trees. Here, Artemidorus provides instructions for interpreting unrecorded trees: “And, for the trees that remain, it is necessary to form one’s interpretations based on the aforementioned examples, always identifying properties that are similar to their outcomes. For in fact the interpretation of dreams is nothing other than the juxtaposition of similarities” (... καὶ γὰρ οὐδὲν ἄλλο ἔστιν ὀνειροκρισία ἤ ὤμοιον παράθεσις, 2.25). In the *Oneirocritica*, Artemidorus links dreams to outcomes on the basis of their similar appearance, action, or location, cultural association, etymologies of or puns on their names, appearance in proverbs and myths, or numerological value, to name a few possibilities.46

In this context, it may be illuminating to clarify a distinction in Aristotle’s model of dream-interpretation between (1) what real-world event an obscure dream represents, and (2) what real-world event is signified by the presence of a sign, in his technical use of “sign.” A familiar example may illuminate the relevant distinction. A skilled dream-interpreter may inform us that what we in sleep experience as thunder is in reality a faint ringing in the ears. However, the ringing in the ears, by way of an experience of thunder, may signify the beginning

46 Harris-McCoy, *Oneirocritica*, 15.
of disease. But it is not the dream interpreter’s responsibility to reveal this latter connection. Instead, it is the physician’s task to identify alleged signs of disease. Thus, dream interpretation according to Aristotle’s model reveals what uncorrupted sense impression the distorted dream derives from (for instance, the sound of thunder corresponds to ringing in the ears), but the condition that is signified by the sign (disease) provides supplementary information in relation to the mere awareness of a particular sound.  

In sum, dream-interpretation, according to Aristotle, reveals what real-world objects or situations the dreams derive from, but the interpretative act as such does not necessarily concern the elucidation of signs. Rather, dream-interpretation, in the sense explained by Aristotle, applies to all three modes of prophoratic dreams.

9 Conclusion

According to Aristotle, a sign involves a typical causal regularity. The natural sign is a noticeable feature that shares a cause with the signified event that is likely to occur, although not guaranteed to occur, due to the possible confluence of other causal chains. The sign signifies through a typical causal regularity as in the case where roughness of the tongue is likely to co-occur with fever.

In addition, there is no special connection between signs in sleep and dream-interpretation in De divinatione. Yet Aristotle follows tradition on two points. (1) Signs are characterised as noticeable items that hint about likely but not yet confirmed present or future events. (2) Dream-interpretation is explained as the skill of observing resemblances between dreams and real-world objects or events. However, Aristotle does not follow the traditional view of the sign as signifying through some kind of resemblance. Even if Aristotle’s model of dream-interpretation is based on resemblance, it concerns concrete sensory similarity, not abstract resemblance in the form of more or less far-fetched similarities. Thus, Aristotle has tweaked the traditional notions of divinatory sign and dream-interpretation, yet some elements that reflect traditional views of prophecy in sleep remain the same in a general sense (for instance, that signs may convey information about the future and the idea that dream-interpretation is based on observing similarities).

47 Consider Gallop’s translation of Div.Somn. 2, 464b15: “Likewise in the case before us, of grasping what this dream signifies” (On Sleep and Dreams, 115). The use of “signify” in this passage may misleadingly suggest that the interpretation of dreams aims to elucidate what real-world event a dream-sign signifies qua sign.
Even if natural signs may have predictive force they should be regarded as distinct from instances of prevision (proorân), which require a future fulfilling event that can never be guaranteed at the time the dream occurs. So, a sign may signify the occurrence of a future event without necessarily developing into a case of prevision. Conversely, a sign may signify a more or less likely future event and later develop into a case of prevision, if the signified event actually occurs. Finally, a sign is in no case the actual cause of the signified item.

Quite surprisingly, even if the conditions for natural signs are more or less clearly spelled out in De divinatione, there are no explicit examples of dreams as signs in the treatise. Aristotle's initial examples, that is, a star's entry into shadow and the roughness of the tongue, have no particular relation to sleep and dreams. However, some experiences in sleep are said to be signs of internal bodily conditions, but these instances do not qualify as dreams according to Aristotle's narrow definition of dreaming. Aristotle's discussion concerning a distorted awareness of internal bodily states in sleep mainly seems to concern the favourable conditions of sleep for observing early signs of disease. The main point seems to be that signs of bodily states are more noticeable in the state of sleep than in waking.

The absence of examples of proper sign-dreams in De divinatione is probably a result of the wider scope that is covered by Aristotle and that includes any alleged prophetic experience during sleep. If this is right, this explains the reference to perceptions of bodily states, rather than proper dreams.

The medical tradition distinguishes between god-sent dreams that have medical significance and natural dreams with medical significance. Nevertheless, the natural dreams, which are discussed by medical authors, reflect imbalances in the body by means of some kind resemblance generally understood. Aristotle's discussion of medically relevant signs in sleep do not reveal any such underlying assumptions concerning similarity and signification. Still, there is an element of similarity in Aristotle's examples of signs in sleep. For example, the ringing in the ears resembles thunder and the sensation of slight warmth resembles the experience of fire. But Aristotle does not seem to assume that the character of the sign (fire, thunder, etc.) resembles the indicated disease in some particular way.

Finally, Aristotle's model of dream-interpretation exhibits some superficial resemblance to the traditional ancient view of dream-interpretation. Aristotle argues that the interpreter of dreams disambiguates sensory dream-content, not abstract resemblances that go beyond concrete sensory similarity. Dream-interpretation consists in observing resemblances between features of the dreams and real-world objects. This implies that dream-interpretation applies to all modes of prevision, not only dreams that occur in the appearance of signs.
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