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PRIORESCHI Plinio, *Supernatural elements in Hippocratic medicine*: JHM .
XLVII 1992 389-404. | The author of the Prognostic believed that certain diseases had a divine component and that it was important to identify them because they could not be cured by medicine. Other passages in the Hippocratic

Corpus involving supernatural elements, far from being an aberration, are simply a consequence of the cultural paradigms of the time. [2326]

Supernatural Elements in Hippocratic Medicine

PLINIO PRIORESCHI



FEW passages of the *Corpus Hippocraticum* have caused as much anguish and wringing of hands among commentators¹ from antiquity to this day as the one, in the *Prognostic*, that includes the well-known expression *ama de kai ei ti theion enestin en tesi nousoisi* (if there is something divine in the diseases), with which the author seems to suggest a relation between some diseases and the supernatural. The passage in question has been translated by Adams:

It therefore becomes necessary to know the nature of such affections, how far they are above the powers of the constitution; and, moreover, if there be anything divine in the diseases, and to learn a foreknowledge of this also.²

Littre's translation of the same passage is similar:

It is important to recognize the nature of such ailments, to know to what extent they exceed the strength of the body, and at the same time to find out whether there is anything divine in the diseases so as to learn their prognosis.³

1. "Le premier chapitre du Prognostic contient deux mots courts, *ti theion*, qui pour les philologues ont constitué un scandale ou un casse-tête, mais en tout cas un problème" (The first chapter of the Prognostic contains two short words, *ti theion*, that have been a scandal or a puzzle for the philologists and in any case a problem). Pedro Lain-Entralgo, "Questiones Hippocraticae disputatae tres," in *La Collection hippocratique et son rôle dans l'histoire de la médecine*, Colloque de Strasbourg organisé par le Centre de Recherches sur la Grèce Antique (Leiden: E. J. Brill, 1975), pp. 305-19.

2. *Prognostic*, I, trans. F. Adams, in *The Genuine Works of Hippocrates* (Baltimore: Williams and Wilkins, 1939).

3. "Il importe de reconnaître la nature d'affections semblables, de savoir de combien elles dépassent la force de la constitution et en même temps de discerner s'il y a quelque chose de divin dans les maladies; car c'est encore un pronostic à apprendre" in *Oeuvres complètes d'Hippocrate. Traduction nouvelle avec le texte grec en regard, collationné sur les manuscrits et toutes les éditions; accompagnée d'une introduction, de commentaires médicaux, de variantes et de notes philologiques; suivie d'une table générale des matières*, 10 vols. Par E. Littré (Paris: J. B. Baillière, 1839-61), II, 113. Translation from the French of Littré, here and throughout this study, by P. Pioreschi.

The author expresses gratitude to Dr. Ernst J. Brehm for his help and suggestions.

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And so is that of Lanata:

Therefore it is necessary to know the nature of these diseases, to know to what extent they exceed the force of the body, to know at the same time if in them there is something divine, and to learn their prognosis.⁴

Others, however, do not translate *ama de kai ei ti theion enestin en tesi nousoisi*:

In view of this, an understanding of such diseases is needed. One must know to what extent they exceed the strength of the body and one must have a thorough acquaintance with their future course.⁵

Jones omits those words both in the Greek text and in the translation:

It is necessary, therefore, to learn the nature of such diseases, how much they exceed the strength of men's bodies, and to learn how to forecast them.⁶

In this case, a footnote informs us that, although the omitted sentence is found in all manuscripts, it is contrary to Hippocratic doctrine. This is, presumably, the reason for the omission.

The passage was first declared spurious by Kuehlewein in his authoritative edition of the works of Hippocrates of 1894–1902 in which, after recognizing that it was in all codices, he mentioned that the sentence in question had always been difficult to explain and that some had even suggested that, because of it, the whole book was spurious. Whereupon he exclaimed: "*Quid? Totum librum in suspicione vocare quam membrum leviter adiectum resecare malint?*"⁷ and proceeded to eliminate it.

All this because the passage in question indicates that the author believed there was a divine element in at least some diseases, an idea at odds not only with statements found in other parts of the Hippocratic Corpus but also with our perception of Hippocratic medicine as the standard-bearer of naturalistic medicine in the ancient world.

For these reasons, there have been many attempts⁸ to show either that

4. "Ne consegue che è necessario conoscere la natura di queste malattie, e sapere di quanto sorpassino la forza del corpo, e contemporaneamente sapere anche se in esse c'è qualche cosa di divino, a imparare via via a prevederle"; in Ippocrate, *Opere*, trans. Giuliana Lanata (Torino: Borin-ghieri, 1961). Translation from the Italian by P. Prioreshi.

5. *Prognostic I*, trans. J. Chadwick and W. N. Mann, in *Hippocratic Writings* (Harmondsworth: Penguin Books, 1986).

6. *Prognostic I*, trans. W.H.S. Jones, (Cambridge, Mass.: Harvard University Press, 1923).

7. "What? Distrust the whole book because they do not want to cut a part obviously interpolated?" Hippocrates, *Opera omnia*, 2 vols., ed. H. Kuehlewein, (Leipzig: B. G. Teubner, 1894–1902), I, 75.

8. Jeanne Ducatillon, "Le facteur divin dans les maladies d'après le *Pronostic*," in *La maladie et les maladies dans la collection hippocratique*, Actes du VI^e Colloque International Hippocratique, eds. Paul Potter et al., (Québec: Les Éditions du Sphinx, 1990), pp. 61–73.

the author, with the word *theion* (divine), could not possibly have meant “divine” in the usual sense or that there was some other explanation for the “mistake”:

1) According to Erotianus, the physician Xenophon of Cos, a disciple of Praxagoras, tried to explain the *theion* of the *Prognostic* by relating it to the doctrine of the critical days (see below). He considered the regularity of the *physis* (nature) proof of its “divine” character.⁹

2) Galen suggested that the divine influence should be understood in a meteorological sense, that is, in the sense that some diseases are produced by the climate and the weather, which are under the control of the gods.¹⁰ A similar interpretation has been advanced by Nestle, who thought that the word *theion* means the heavenly events (*ourania*) and what they cause, namely, the cold, the heat, the sun, the life style of a patient, etc., in other words all that is natural, including the causes of diseases.¹¹

3) *Theion*, rendered as *ex mundi ratione*¹² or *quid ex ratione mundi sit in morbis*¹³ in ancient Latin translations, was interpreted as meaning “what is out of the natural laws” or “what is not rational in diseases.”

4) The passage had been interpolated in spite of the unanimity of the manuscripts. This was the position of Kuehlewein as noted above.

5) The *Prognostic* was an early work and the author had subsequently changed his mind. This was the explanation offered by Littré in Volume II of his work.¹⁴

6) *Theion* referred to cosmic influences on diseases. This explanation was proposed by Littré in Volume VIII of his work, where he again discussed the problem of the *theion*. Replacing his earlier interpretation, he suggested that the word meant “the mysterious influences from heaven and earth, from fire and water, in other words, from eternal things, influences that sometimes invest diseases with a particular character.”¹⁵

7) *Theion* was to be understood in a figurative sense, as meaning the

9. Ernst Nachmanson, *Erotiani vocum hippocraticarum collectio* (Upsala: Appelbergs Boktryckeri-Aktiebolag, 1918), p. 108.

10. Galeni in Hippocratis prognosticum, *Corpus Medicorum Graecorum*, IX, 2, ed. Joseph Heeg (Leipzig and Berlin: B. G. Teubner, 1915), pp. 205–09.

11. W. Nestle, “Hippocratica,” *Hermes*, 1938, LXXIII, 1–38.

12. Bengt Alexanderson, *Die hippokratische Schrift Prognosticon* (Göteborg: Acta Universitatis Gothoburgensis, 1963), p. 194 (footnote).

13. Lain-Entralgo, (n. 1), pp. 305–19, p. 317 (footnote).

14. Littré, (n. 3), II, 99–100.

15. “les influences mystérieuses qui émanent du ciel et de la terre, du feu des eaux, des choses éternelles en un mot, influences qui donnent parfois un cachet particulier aux maladies.” Ibid. VIII, 531.

irrational,¹⁶ the mysterious, the unknown,^{17,18} what cannot be explained by medicine.¹⁹

8) *Theion* referred to untreatable²⁰ or mortal²¹ diseases.

9) The sentence in question was simply a traditional formula, the repetition of an ancient paradigm, long before abandoned, that physicians used to repeat at the beginning of a lecture or a discussion.²²

10) The expression meant that, as nature is divine and all diseases are natural, diseases are divine.²³

11) *Theion* referred to diseases that were the result of the divine *anagke* (necessity), mentioned in *Regimen I*,²⁴ which in the Middle Ages was translated as *fatum*.²⁵

12) The Hippocratic physician held at the same time two conceptions of truth that "to us appear very different but to him did not appear contradictory": as a physician he believed that diseases were strictly due to natural causes whereas as a citizen he believed in the ancestral religion and participated in the traditional cult of the sanctuaries.²⁶ In other words, he held, *ante tempus*, the double truth doctrine.²⁷

The purpose of this paper is to suggest that the author of the *Prognostic*

16. Ludwig Edelstein, "Greek medicine in its relation to religion and magic," *Bull. Inst. Hist. Med.*, 1937, 5, 201–46. "The physicians then make room for the gods in regard to the spontaneous reactions of the body, which are considered as an interference of divine character, since they cannot be mastered by the human being."

17. C. A. W. Berends, *Lectiones in Hippocratis aphorismos* (Berlin: G. Reimer, 1830), pp. 348–49.

18. Ludwig Edelstein, *Ancient Medicine*, trans. C. Lilian Temkin, ed. Owsei Temkin and C. Lilian Temkin (Baltimore: The Johns Hopkins Press, 1967), p. 107.

19. Hinz-Werner Nöremberg, *Das göttliche und die Natur in der Schrift über die heilige Krankheit* (Bonn: Rudolf Habelt Verlag, 1968), pp. 80–84.

20. Fridolf Kudlien, "Das Göttliche und die Natur im hippokratischen Prognostikon," *Hermes*, 1977, CV, 3, 268–74. According to Kudlien, the diseases which are referred to as "divine" are the untreatable ones. It has also been suggested that the divine origin of diseases was a disclaimer of responsibility on the part of the physicians for their therapeutic failures. See: Nöremberg, (n. 19) *Das göttliche und die Natur*, p. 82.

21. Lain-Entralgo, (n. 1), pp. 305–19.

22. Antoine Thivel, "Le divin dans la collection hippocratique," in *La Collection hippocratique et son rôle dans l'histoire de la médecine*, Colloque de Strasbourg organisé par le Centre de Recherches sur la Grèce Antique (Leiden: E. J. Brill, 1975), pp. 57–76.

23. Paul Decharme, *La critique des traditions religieuses chez les Grecs* (Paris: Picard et Fils, 1904), pp. 114–15.

24. *Regimen I*, V, trans. W. H. S. Jones (Cambridge, Mass.: Harvard University Press, 1931).

25. Lain-Entralgo, (n. 1), pp. 305–19.

26. Jacques Jouanna, "Hippocrate de Cos et le sacré," *Journal des Savants*, Janvier-Juin 1989, pp. 3–22.

27. The double truth (or twofold truth) doctrine was advocated by Averroes and stated that what is false in philosophy may be true in theology and vice-versa. See: C. G. Herbermann et al., eds., *The Catholic Encyclopedia*, 15 vols. (New York: Robert Appleton, 1907–14) I, 676b; II, 151a; VIII, 474a.

meant what he said. In other words, he simply believed that certain diseases had a divine component and that it was important to identify them because, if an illness was caused by a god, it could not be cured by medicine (and this, of course, influenced its prognosis). In addition, we propose that the other passages in the Hippocratic Corpus involving supernatural elements, far from being an aberration, are, like the one in the *Prognostic*, simply an expected consequence of the cultural paradigms of the time.

Difficulties in interpreting the *theion* passage of the *Prognostic* result from the common belief that the Hippocratic physician had very clear and rational concepts about diseases and their nature and was uninfluenced by traditional notions regarding the supernatural. In reality, of course, he, like all ancient physicians, was influenced by traditional ideas, and this is reflected in various degrees, depending on the individual author, in the various texts of the Hippocratic Corpus.

In the fifth and fourth centuries B.C., when the books of the Corpus were written, the belief in the existence of gods and of divine intervention in human affairs was widespread, although its negation was also common. Plato mentioned the conflicting points of view in the *Sophist*:

Must we not attribute the coming-into-being of those things [animals, plants, and inanimate objects] out of not-being to divine craftsmanship and nothing else? Or are we to fall in with the belief that is commonly expressed?²⁸

and in the *Laws*:

Athenian: . . . Your case for the existence of gods may not be much better than that of the other side, but persuade us that it is better in the one point of *truth*, and you may perhaps make converts of us

Clinias: Why, to begin with, think of the earth, and sun, and planets, and everything! And the wonderful and beautiful order of the seasons with its distinction of years and months! Besides, there is the fact that all mankind, Greeks and non-Greeks alike, believe in the existence of gods.²⁹

References to the divine are also found in Aristotle; for example, after stating that all insects, except the bees, reproduce by copulation and that hornets and wasps also reproduce by copulation, he says that in the latter,

28. Plato, *Sophist*, 265c, trans. F. M. Cornford, in *The Collected Dialogues of Plato* (Princeton: Princeton University Press, 1963).

29. Plato, *Laws*, X, 885e, 886a, trans. A. E. Taylor, in *The Collected Dialogues of Plato* (Princeton: Princeton University Press, 1963).

the extraordinary features [of bees] are lacking, and this is what we should expect, because they contain no divine ingredient as the tribe of bees does.³⁰

The Greek primitive legendary stock of magic and supernatural from ages anterior to Homer was kept alive in conventional religion, in the Orphic and Bacchic sects, and in the Eleusinian and Samothracian mysteries.³¹ The Presocratic philosophers dramatically shifted the emphasis from the supernatural to nature. Some of them, however, were not totally devoid of religious beliefs.³² The Milesians (Thales, Anaximander, Anaximenes) offered naturalistic explanations of phenomena (earthquakes, lightning, thunder, etc.) that had previously been ascribed to the gods; however, there is evidence that they considered the original cause—that is, the primordial origin of the world—to be divine. Thus, Aristotle suggested that Anaximander described the Boundless as immortal and imperishable;³³ Anaximenes, according to late sources, held that air, the principle of everything, was divine;³⁴ and Thales may have considered his principle, water, to be divine, although the precise meaning of his view, mentioned by Aristotle,³⁵ that “all things are full of gods,” is controversial. Although naturalistic, therefore, the world view of the Milesians seems not to exclude the divine but rather to make nature itself divine. The precise nature of Pythagoras’ religious teaching is disputed, but there is evidence that he held that the soul is immortal and transmigrates from one species of living being to another;³⁶ it was also said that he was inclined to magic practices³⁷ and that the Pythagoreans used incantations to treat physical diseases.³⁸ Later, Plato expressed disapproval of the beliefs that “fire and water, earth and air,” and “earth, sun,

30. Aristotle, *Generation of Animals*, III, X, 761a, 5, trans. A. L. Peck (Cambridge, Mass.: Harvard University Press, 1943).

31. George Grote, *A History of Greece*, 10 vols. (New York: AMS Press, 1971, reprint of 1888 edition), I, 389.

32. Gregory Vlastos, “Theology and philosophy in early Greek thought,” in *Studies in Presocratic Philosophy: The Beginning of Philosophy*, ed. David J. Furley and R. E. Allen (New York: Humanity Press, 1970), pp. 92–129.

33. Aristotle, *Physics* (Cambridge, Mass.: Harvard University Press, 1957), III, 203b. See also Anaximander’s fragments 2 and 3 in Hermann Diels and Walther Kranz, *Die Fragmente der Vorsokratiker*, 2 vols. (Zürich: Weidmann, 1985, reprint of 1951 sixth edition), I, 12 B, 89.

34. Ibid., I, 13 A, 7 and 10, pp. 92, 93.

35. Aristotle, *On the Soul*, (Cambridge, Mass.: Harvard University Press, 1957) 411a 8. See also Plato, (n. 29) *Laws*, X, 899b.

36. G. E. R. Lloyd, *Magic, Reason and Experience* (Cambridge: Cambridge University Press, 1979), p. 11.

37. Diogenes Laertius, *Lives of Eminent Philosophers*, 2 vols. (Cambridge, Mass.: Harvard University Press, 1925), II:VIII, 36.

38. See: Giuliana Lanata, *Medicina magica e religione popolare in Grecia fino all’età di Ippocrate* (Roma: Edizioni dell’Ateneo, 1967), pp. 43, 48.

moon, and stars" were due to "nature and chance" and not to the "agency of mind, or any god, or art."³⁹

In literature we find that the supernatural is ever present and that the gods constantly interfere with human actions. In Greek tragedy, in fact, the gods play an essential role in the development of pathos. Herodotus (c.485–c.425 B.C.), reporting beliefs and stories that invoke the supernatural, often expressed his own doubts or disbelief,⁴⁰ but on several occasions he endorsed the supernatural origin of misfortunes, including diseases.⁴¹ In addition, in the text where he mentioned the Scythian *Enareas* (no doubt the *Anaries* mentioned in the passage describing the Scythians' disease—see below), he reported that those who were affected by the "female sickness" were the men who pillaged the temple of Heavenly Aphrodite at Ascalon and their descendants. He mentioned that the story was from the Scythians themselves, but he did not indicate whether he rejected or accepted it.⁴²

Religion, magic, and the mysterious, therefore, were still very much present among the common people,⁴³ the literati, and the philosophers. At the same time, opposition to the skeptic view was strong, as underlined by the fact that the Athenians, about 432 B.C., passed a law (the Law of Diopeithes) against those who did not believe in the supernatural,⁴⁴ so that Anaxagoras had to leave the city.⁴⁵ In addition, Protagoras was condemned to death because he was not sure whether the gods existed,⁴⁶ and Diagoras, called the Atheist, fled Athens and a price was set upon his head.⁴⁷

39. Plato, (n.29) *Laws*, X, 889, 890a.

40. Herodotus, 9 books in 4 vols. (Cambridge, Mass.: Harvard University Press, 1920–25), II, 73; IV, 25; IV, 105; VII, 189; VII, 191.

41. *Ibid.*, IV, 205; VI, 61; VI, 75; VI, 84.

42. *Ibid.*, I, 105.

43. "If we analyze the intellectual acquisitions of a common Grecian townsman, from the rude communities of Arcadia or Phokis even up to the enlightened Athens, we shall find that, over and above the rules of art or capacities requisite for his daily wants, they consisted chiefly of the various myths connected with his gens, his city, his religious festivals and the mysteries in which he might have chosen to initiate himself, as well as with the works of art and the more striking natural objects which he may see around him—the whole set off and decorated by some knowledge of the epic and dramatic poets. Such was the intellectual and imaginative reach of an ordinary Greek, considered apart from the instructed few: it was an aggregate of religion, of social and patriotic retrospect, and of romantic fancy, blended onto one indivisible faith." Grote, (n.31) *History of Greece*, I, 408–09.

44. E. R. Dodds, *The Greeks and the Irrational* (Berkeley: University of California Press, 1968), p. 189.

45. Plutarch, *Lives*, 11 vols. (Cambridge, Mass.: Harvard University Press, 1914–22), III, *Pericles*, XXXII.

46. Sextus Empiricus, 4 vols. (Cambridge, Mass.: Harvard University Press, 1933–49), III, *Against the Physicists*, I, 55–56.

47. Aristophanes, *Birds* (Cambridge, Mass.: Harvard University Press, 1924), 1073–74.

References to the supernatural in Greek literature often focused on diseases, and the concept of the divine origin of disease, for example, is typical of the tragedy. In Euripides' *Hippolytus*, the nurse suggests to Phaedra incantations against her love for Hippolytus, which is described as a disease⁴⁸ and which the chorus had previously called "possession of Pan or of Hecate."⁴⁹ In Aeschylus' *The Libation-Bearers*, Orestes is told by the oracle of Loxias of the many plagues that malignant powers can inflict on mankind.⁵⁰ In Sophocles' *Philoctetes*, Neoptolemus considers the relation between the unhealing wound of Philoctetes and supernatural powers.⁵¹ In Euripides' *Orestes*, Electra mourns the madness of Orestes caused by the Eumenides (the Furies).⁵²

Literary references to the divine origin of diseases, however, are not limited to tragedy. Aristophanes, in the *Wasps*, refers to fevers popularly considered of demonic origin.⁵³ In Thucydides, we find that Pericles, trying to comfort the Athenians discouraged by war and by the pestilence says:

The right course is to bear with resignation the afflictions sent by heaven [*ta daimonia*] and with fortitude the hardships that come from the enemy.⁵⁴

Sometimes divine, magical, and naturalistic elements concerning drugs and diseases were invoked together, sometimes separately. Diogenes Laertius reported that Bion, a convinced atheist, when sick, not only sacrificed to the gods but submitted himself to the incantations of an old woman, put a charm around his neck, and performed other magical acts.⁵⁵ In the *Orestes* of Euripides, we find that the disappearance of Helen may have been due "to the action of drugs, to the arts of sorcerers, or to divine deceit."⁵⁶ In the initial part of the *Charmides* of Plato, the beautiful youth is ready to take note of the incantation that, with a medicinal herb

48. Euripides, *Hippolytus* (Cambridge, Mass.: Harvard University Press, 1912), 478–79.

49. Ibid., 141–42.

50. Aeschylus, *The Libation-Bearers* (Cambridge, Mass.: Harvard University Press, 1926), 279–90.

51. Sophocles, *Philoctetes* (Cambridge, Mass.: Harvard University Press, 1912), 192–200.

52. Euripides, *Orestes* (Cambridge, Mass.: Harvard University Press, 1912), 34–38.

53. Aristophanes, *Wasps* (Cambridge, Mass.: Harvard University Press, 1924), 1037–39.

54. Thucydides, *History of the Peloponnesian War*, 4 vols., trans. C. Foster Smith (Cambridge, Mass.: Harvard University Press, 1923), II, 64, 2. Wilamowitz links the *theion* of the *Prognostic* to the *daimon* of Thucydides and says that "it does not discredit the science of Hippocrates when he traced the incomprehensible and yet undeniable back to a power other than *physis* [nature], which allows itself to be known." U. von Wilamowitz-Moellendorf, "Lese Früchte," *Hermes*, 1929, LXIV, 458–90.

55. Diogenes Laertius, (n. 37), I: IV, 55–57.

56. Euripides, (n. 52), 1497–98.

(*phyllon*), will be able to take care of his headache.⁵⁷ Plutarch reported that Pericles, afflicted with the plague, wore an amulet around his neck.⁵⁸

The importance of the supernatural is further underlined by the fact that, in Hippocratic times, in addition to Aesculapian medicine, other supernaturalistic healing practices were also believed to be effective: Melampus (a priest of Apollo) healed the daughters of Proetus;⁵⁹ Thaletas liberated Sparta from an imminent pestilence with music;⁶⁰ and a passage of Euripides suggests that there was once a collection of healing recipes attributed to Orpheus.⁶¹

In view of this attitude toward the supernatural, it is not surprising that, in the Hippocratic Corpus, we find several references to the gods and to the divine, often in relation to diseases; the passage of the *Prognostic* is the most famous, but by no means the only one:

Using these means in the way I have described a man will live a healthy life: in fact I have discovered regimen, with the gods' help, as far as it is possible for mere man to discover it.⁶²

Prayer indeed is good, but while calling on the gods a man should himself lend a hand.⁶³

And what men work they know not, and what they work not they think that they know; and what they see they do not understand, but nevertheless all things take place for them through a divine necessity, both what they wish and what they do not wish. And as the things of the other world come to this, and those of this world go to that, they combine with one another, and each fulfills its allotted destiny, both unto the greater and unto the less.⁶⁴

Whatsoever a man seems to receive pure from a pure god is good for health . . . So with this knowledge about the heavenly bodies, precautions must be taken, with change of regimen and prayers to the gods; in the case of good signs, to the Sun, to Heavenly Zeus, to Zeus Protector of Home, to Athena Protectress of Home, to Hermes and to Apollo; in the case of adverse sign, to the Averter of evil, to Earth and to the Heroes, that all dangers may be averted.⁶⁵

57. Plato, *Charmides* (Cambridge, Mass.: Harvard University Press, 1927), 155e-156a.

58. Plutarch, (n.45) *Pericles*, XXXVIII, 2.

59. Gerardo Marengi, "Mito e Medicina: Melampo e la guarigione delle Pretidi," *Atene e Roma*, 1960, V, 8-16.

60. Plutarch, *Moralia*, 15 vols. in 16 (Cambridge, Mass.: Harvard University Press, 1927-69), XIV, 1146c (*On Music*, 42).

61. Euripides, *Alcestis* (Cambridge, Mass.: Harvard University Press, 1912), 966-72.

62. *Regimen IV (Dreams)*, XCIII, trans. W.H.S. Jones, (Cambridge, Mass.: Harvard University Press, 1931).

63. *Ibid.*, LXXXVII.

64. *Regimen I*, (n. 24), V.

65. *Regimen IV (Dreams)*, (n.62), LXXXIX, 110, 120-30.

This is what I say concerning the nature of women and their diseases: the divine is among mortals the main cause, then come the constitution of women and their complexion.⁶⁶

Now such dreams as are divine, and foretell to cities and to private persons things evil and things good . . .⁶⁷

However, I hold that a man's body is not defiled by a god, the one being utterly corrupt the other perfectly holy. Nay, even should it have been defiled . . . a god is more likely to purify and sanctify it than he is to cause defilement. At least it is godhead that purifies, sanctifies and cleanses us from the greatest and most impious of our sins.⁶⁸

In affections and symptoms in general, medicine is, in the majority of cases, full of reverence toward the gods. Before the gods, physicians bow; because medicine does not have power in excess. False physicians are very active, and many cases heal spontaneously in their hands. From there comes the force that is now in medicine.⁶⁹

Jones' translation of this last passage is quite different because of corruption of the Greek text.⁷⁰ The supernatural, however, is still prominent:

For in affections generally, and especially in accidents, medicine is found mostly to be held in honor by the Gods. Physicians have given place to the gods. For in medicine that which is powerful is not in excess. In fact, though physicians take many things in hand, many diseases are also overcome for them spontaneously. All that medicine has now mastered it will supply thence. The gods are the real physicians, though people do not think so. But the truth of this statement is shown by the phenomena of disease.⁷¹

We must also remember that, in the Hippocratic *Oath*, Apollo, Aesculapius, Hygieia, and Panacea are called as witnesses. Even if the *Oath* was not observed by all Greek doctors but only by a particular group of practitioners,⁷² many of its ideals were widely shared.⁷³

66. "Voici ce que je dis touchant la nature de la femme et ses maladies: le divin est chez les humains la principale cause; puis viennent les constitution des femmes et leur couleurs." *On the Nature of Women*, I, Littré, (n. 3), VII, 313.

67. *Regimen IV (Dreams)*, (n. 62), LXXXVII.

68. *The Sacred Disease*, IV, trans. W.H.S. Jones (Cambridge, Mass.: Harvard University Press, 1923).

69. *On Decorum*, VI, Littré, (n. 3), IX, 235.

70. See: *On Decorum*, VI, trans. W.H.S. Jones, (Cambridge, Mass.: Harvard University Press, 1923), pp. 288–89 (footnote).

71. *Ibid.*, p. 289.

72. Ludwig Edelstein, "The Hippocratic Oath: Text, translation and interpretation," *Suppl. Bull. Hist. Med.*, 1943.

73. Lloyd, (n. 36) *Magic, Reason and Experience*, p. 41 (footnote 162).

Often, in the Corpus, particular days or periods in which certain events took place are invested with an almost magical importance, as when it is stated that purgation on odd days is lethal:

It is in this matter that the ancient physicians were chiefly wrong; they would give purgation in the odd days [from the beginning of the disease] and would kill the patients without realizing what they were doing. In effect, the moist in the patient's body is very much in disorder in the odd days because of the humor that the body pours in the abdomen and if to this trouble one adds a new one in administering a laxative, it is no wonder if the patient succumbs to this complication.⁷⁴

Another example is found in the treatise *On Flesh*, in which the author discussed a doctrine according to which cycles of seven days played an essential role in the development of man, although he called the necessity that rules such development by septenaries natural (*tes de physios ten anagken*).⁷⁵ It has been pointed out that this emphasis on certain days and periods and on the idea that certain diseases get worse or better after a certain number of days (theory of the critical days),⁷⁶ although the latter may have been based on objective observations (e.g., on malaria), may have been influenced by numerology.^{77,78}

It is evident that at least some of the authors of the Hippocratic Corpus felt that the gods and the supernatural were not unrelated to health and medicine. If they felt, like the author of the *Prognostic*, that some diseases were directly related to the gods, we may expect that others would take an intermediate position, namely that nature and the gods were merged so that a divine nature would result. This is, in fact, the case. In *The Sacred Disease*, the text commonly quoted as proving the independence of Hippocratic medicine from supernaturalistic paradigms, one finds:

This disease styled sacred comes from the same cause as others, from the things that come to and go from the body, from cold, sun, and from the changing restlessness of winds. These things are divine. So that there is no need to put the

74. *On Diseases IV*, XLVII, Littré, (n. 3), VII, 577. For the importance of particular days, see also *On Critical Days*, XI.

75. *On Flesh*, XIX, Littré, (n. 3), VIII, 609–14. For the theory of septenary rhythms, see also *On Periods of Seven Days* (Littré, VIII, 634–73), *On the Seven-Months Embryo* (Littré, VII, 436–53), *On the Eight-Months Embryo* (Littré, VII, 452–61).

76. E.g., *Prognostic*, XV, XX, XXIV, Littré, (n. 3), II, 150, 168, 184.

77. Robert Joly, *Le niveau de la science hippocratique* (Paris: Les Belles Lettres, 1966), p. 234.

78. Paul Kucharski, "Sur la notion pythagoricienne du *kairos*," *Revue Philosophique de la France et de l'Étranger*, 1963, CLIII, 141–69.

disease in a special class and to consider it more divine than the others; they are all divine and all human.⁷⁹

The author has merged the natural and the supernatural (following the Milesian philosophers) and, as natural phenomena become divine, the divine becomes part of nature, as we also find in another passage:

But all things, both human and divine, are in a state of flux upwards and downwards by exchanges. Day and night, to the maximum and minimum; just as the moon has its maximum and minimum, the ascendancy of fire and of water, so the sun has its longest and its shortest course—all the same things and not the same things. Light for Zeus, darkness for Hades; light for Hades, darkness for Zeus—the things of the other world come to this, those of this world go to that, and during every season throughout every place the things of the other world do the work of this, and those of this world do the work of that.⁸⁰

It is of interest that the most famous passage of *The Sacred Disease*, the passage most quoted to show that the Hippocratic physician had a clear idea of the naturalistic nature of all illnesses including the sacred one, the passage in which the author seems to treat with contempt the idea of the divine origin of diseases, is apparently corrupt.⁸¹

Sometimes the possibility of a divine etiology may be seriously discussed before it is rejected, as in the well-known case of the Scythians' disease:

Moreover, the great majority among the Scythians become impotent, do women's work, live like women and converse accordingly. Such men they call Anaries. Now the natives put the blame on to Heaven . . . I too think that these diseases are divine, and so are all others, no one being more divine or more human than any other; all are alike, and all divine. Each of them has a nature of

79. *The Sacred Disease*, (n. 68), XXI.

80. *Regimen I*, (n. 24), V.

81. The passage in question is: "I am about to discuss the disease called 'sacred.' It is not, in my opinion, any more divine or more sacred than other diseases, but has a natural cause, and its supposed divine origin is due to men's inexperience and to their wonder at its particular character." *The Sacred Disease*, (n. 68), I. In a footnote to the passage, Jones states: "I am by no means satisfied that the text I have given is correct, but I am sure that the received text is wrong . . . whatever the correct reading may be, and this is uncertain, the sense of the passage is perfectly clear." Littré's translation is about the same, Littré, (n. 3), VI, 353. Even if corrupt, probably the general sense has not been changed, but, as this is the opening passage of the work, it was the most vulnerable to attempts to modify the meaning in favor of a more naturalistic interpretation. The passage continues: "Now while men continue to believe in its divine origin because they are at loss to understand it, they really disprove its divinity by the facile method of healing which they adopt, consisting as it does of purifications and incantations." *The Sacred Disease*, (n. 68), I.

its own, and none arises without its natural cause. How, in my opinion, this disease arises I will explain . . . [the author attributes their impotence to the Scythian practice of cutting certain veins behind the ear to cure the swelling of joints caused by riding]. This affliction affects the rich Scythians because of their riding, not the lower classes but the upper . . . the poor, who do not ride, suffer less. But if we suppose the disease to be more divine than any other, it ought to have attacked, not the highest and richest classes only of the Scythians, but all classes equally—or rather the poor especially, if indeed the gods are pleased to receive from men respect and worship, and repay these with favors. For naturally the rich, having great wealth, make many sacrifices to the gods, and offer many votive offerings, and honor them, all of which things the poor, owing to their poverty, are less able to do; besides, they blame the gods for not giving them wealth, so that the penalties for such sins are likely to be paid by the poor rather than by the rich. But the truth is, as I said before, these affections are neither more or less divine than any others, and all and each are natural.⁸²

It is evident that, in spite of the obvious prevalence of the naturalistic paradigm, supernatural elements are not unusual in the *Corpus Hippocraticum*. This is not surprising as the Hippocratic physician could not be totally independent from the milieu in which he lived, and, as mentioned above, the concept of the divine played an important role in the Greek culture of the fifth and fourth centuries B.C.

CONCLUSION

In Greece, a wide variety of magical and religious creeds and practices can be documented from the time of Homer to the end of antiquity and on to the Middle Ages. The common belief that science and reason supplanted magic and myth has tended to obscure the fact that Greek science and philosophy, in reality, developed in the continuing presence of traditional patterns of thought.⁸³

Although Hippocratic medicine was a milestone in the road toward a medicine free of supernatural elements, it was not itself totally devoid of them. We must expect that, as *natura non facit saltus*,⁸⁴ like all human

82. *Airs, Waters, Places*, XXII, trans. W.H.S. Jones, (Cambridge, Mass.: Harvard University Press, 1923).

83. Lloyd, (n.36) *Magic, Reason and Experience*, pp. 5, 6. The author also states (p. 49): "No straightforward account, in which 'science' and 'philosophy' together and in unison stand opposed to 'magic' and the 'irrational', can be sustained in the face of the evident complexities both *within* and *between* the theory and practice of medicine on the one hand and those of the investigation concerning nature on the other."

84. Nature does not proceed by jumps. An expression used by Linnaeus in his *Philosophia Botanica* (LXXVII, p. 27 of 1st ed.). See, Thomas Benfield Harbottle, *Anthology of Classical Quotations* (San Antonio: Scylax Press, 1984, reprint of 1902 edition), p. 142.

endeavors *medicina non facit saltum* either.⁸⁵ All ancient medical systems (Egyptian, Chinese, Hindu, Mesopotamian, Persian, Pre-Columbian), almost without exception, were based on a mixture of supernaturalistic and naturalistic paradigms;⁸⁶ the same was true in ancient Greece, where the two paradigms were the tenets of Aesculapian and Hippocratic medicine respectively.

In Hippocratic times, the exclusion of the supernatural explanations of the world, in other words, the concept that all natural events, including diseases, had wholly natural causes, was a belief of the intellectual elite. The people, the average men and women who had believed in gods, spirits, and demons for millennia (and who would continue to believe in them until our day⁸⁷) held a supernaturalistic view of diseases and of the external world. Even if we assume that physicians belonged to the intellectual elite, we cannot expect that all of them would be immune from the popular belief in the supernatural. In fact, there is ample evidence that Greek physicians regularly offered sacrifices to the gods⁸⁸ and staged processions and games in honor of Aesculapius, whom they considered the leader of the healing art, presiding over medicine.⁸⁹ In addition, although we refer to the "Hippocratic physician," we must remember that he is not a clearly defined entity but a composite figure, not very sharply focused, centered on a spectrum of beliefs with a degree of similarity. The assumption by the author of the *Prognostic* that certain diseases had divine elements was responsible for the controversial and seemingly inexplicable *ti theion*. The other quoted passages of the Hippocratic Corpus indicate that this belief was shared, in different degrees, by some of its other authors, although the majority of them undoubtedly had adopted a naturalistic paradigm.

85. In fact, other primitive elements, besides the religious ones, can be found in the Hippocratic Corpus. Here is an example of deceit clearly recognized as such: "If there is ear pain, roll some wool around a finger and put on it some warm fat; then, after putting the wool on the palm of the hand, place the hand under the patient's ear so that he thinks that something has come out of it. Then throw the wool in the fire; deceit." *Epidemics VI*, Littré, (n.3), V, 318.

This procedure is similar to the extraction of fictitious foreign objects from the body of the patient, as practiced by medicine men. See, Plinio Prioreschi, *A History of Medicine: Primitive and Ancient Medicine* (Lewiston: The Edwin Mellen Press, 1991), pp. 50–51. The explanation that it is a remnant of some ancient practice seems the most logical.

86. *Ibid.*, pp. 597ff. The exception is Biblical Medicine, *ibid.*, pp. 525ff.

87. *Ibid.*, pp. 46–54.

88. Luis Cohn-Haft, *The Public Physicians of Ancient Greece* (Northampton, Mass.: Smith College Studies in History, 1956), XLII, p. 29.

89. Emma J. Edelstein and Ludwig Edelstein, *Asclepius: A Collection and Interpretation of the Testimonies*, 2 vols. (Baltimore: The Johns Hopkins Press, 1945), II, 140.

Because many physicians did not believe in the supernatural origin of diseases, it has been affirmed that the public, that is, the patients, could not have believed in it either or they would not have consulted those physicians.⁹⁰ The argument stems from our desire to invest the ancient Greeks, the objects of our admiration and even veneration, with ideas that are characteristic of our time,⁹¹ in this case, the naturalistic explanation of diseases. The concepts of nature and of the gods themselves, in fact, varied according to different Greek authors,⁹² including those of the Corpus. Sometimes the gods would directly influence diseases, sometimes nature *included* the gods. In the latter case, diseases could be caused by wind, cold, gods, and other natural phenomena. In addition, if nature is divine (as some philosophers, for example, the Milesians, seemed to

90. Edelstein, (n. 16).

91. Our prejudice in considering Hippocratic medicine totally devoid of supernaturalistic elements is evident and common particularly in the less recent literature. For example, Bourgey says: "Par ailleurs, et la chose se trouve peut-être extraordinaire plus encore, on ne relève pas à travers les multiples courants de la médecine laïque aucune trace, fût-elle légère, de superstition ou de magie," that is, "On the other hand, and this is truly extraordinary, one cannot find, in the multiple currents of laic medicine, any trace, even so light, of magic and superstition." Louis Bourgey, *Observation et expérience chez les médecins de la Collection Hippocratique* (Paris: Librairie Philosophique J. Vrin, 1953), p. 9, translation by P. Prioreschi; he then continues by stating that things were worse at the time of Galen and in the Renaissance because Galen in *De libris propriis* mentions the healing of a mortal ulcer by Aesculapius. Claudii Galeni, *Opera Omnia*, ed. C. G. Kühn, 20 vols. in 22 (Leipzig: C. Knobloch, 1821–33). Reprinted (Hildesheim: G. Olms, 1964–1965), XIX, pp. 18–19. Pliny mentions several remedies of magical nature (Pliny, *Natural History*, 10 vols. (Cambridge, Mass.: Harvard University Press, 1938–63), VIII: XXVIII) and during the Renaissance magic practices were common. Nestle, referring to the concept of *theion*, states: "Es ist das Grosse an der hippokratischen Medizin, dass die sich durch ihren Glauben an das *theion* auch nicht um Haaresbreite von ihren Grundsatz der streng kausalen Erforschung der Natur abdrängen lässt," that is, "What is great about Hippocratic medicine is that in spite of its belief in the *theion*, it will not deviate, even by a hairbreadth from its principle of strictly causal investigation of nature." W. Nestle, "Hippocratica," *Hermes*, 1938, LXXIII, 1–38, trans. E. J. Brehm. Here is a recent example: "There is not, in the entire Corpus, the slightest hint that disease is traceable to causes beyond the powers of the physician to understand," and "the gods are not invoked as agents of diseases' etiology or treatment either here [in the Oath] or anywhere else in the Corpus. The separation of science from religion is complete." Sherwin B. Nuland, *Doctors: The Biography of Medicine* (New York: Alfred A. Knopf, 1988), pp. 4, 27.

92. "Deity in different Greek authors, sometimes in the same author, seems to operate at different levels: it guards the moral order, rewarding the good and punishing the bad; it upholds the formal rights of gods against men; as fate or the inscrutable divine will it makes occurrences inevitable; and it represents the random malicious elements in the universe that cause the good to suffer and the bad to prosper. These levels correspond to as many natural human attitudes: the demand that the natural order should conform to the moral order; the need for automatic sanctions guarding the restrictions that divide gods from mortals; fatalistic acceptance of events; and the discouraging perception of cosmic injustice. These four attitudes determine the Greeks' religious explanation of diseases. They seem to coexist at all periods, and it would be hard to detect a significant shift in emphasis between them. The choice of interpretation in a given case will be pragmatic." Robert Parker, *Miasma: Pollution and Purification in Early Greek Religion* (Oxford: Clarendon Press, 1983), pp. 255–56.

think), everything is divine, and all diseases are therefore natural and divine at the same time.⁹³

Probably the belief most generally held was that events, including diseases, could be determined by the gods or by natural causes; natural causes, in turn, could be the tools of the gods or could alone be responsible. Thucydides wrote of the plague of Athens:

Neither were physicians able to cope with the disease . . . nor did any other human art avail. And the supplications made at sanctuaries, or appeals to oracles and the like, were all futile.⁹⁴

It is evident that, as "supplications made at sanctuaries" and "appeals to oracles and the like" were tried in order to combat the disease, a supernatural etiology was either assumed or at least considered possible by many.

The belief in the supernatural (divine) origin of the body and its functions continued to be held by physicians in subsequent centuries. Galen, for example, discussing the function of anatomical structures, says:

Who could be so stupid, then, or could there be anyone so hostile and antagonistic to the works of Nature as not to recognize immediately . . . the skill of the Creator?⁹⁵

This was an aspect of a religiosity that was expressed in the famous passage:

. . . the sacred discourse which I am composing as a true hymn of praise to our Creator. And I consider that I am really showing him reverence not when I am offering him unnumbered hecatombs of bulls and burn incense of cassia worth ten thousand talents, but when I myself first learn to know his wisdom, power, and goodness, and then make them known to others.⁹⁶

In the Western World, the belief in a relation between the supernatural and the natural, and therefore between the supernatural and diseases, has continued until our day,⁹⁷ although it has become less and less frequent.

93. Some of these explanations, or similar ones, of the *theion* in diseases, have been advanced at different times by various authors and have been reviewed at the beginning of this discussion.

94. Thucydides, (n. 54), II, 47.

95. Galen, *On the Usefulness of the Parts of the Body*, trans. Margaret Tallmadge May, 2 vols. (Ithaca: Cornell University Press, 1968), II, XVII (Epode), 1, p. 729.

96. *Ibid.*, I, III (The Foot and Leg), 10, p. 189.

97. For a review of modern supernaturalistic medicine, see Pioreschi, (n. 85) *History of Medicine*, pp. 46–54.