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I.—The Concept of the Divine in *De Morbo Sacro*

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The attempt of the author of the "Hippocratic" work, *De Morbo Sacro*, to destroy the popular belief in the supernatural causation of the "sacred" disease has long, and justly, been regarded as one of the earliest and most significant expressions of the self-consciously rational spirit in early Greek medical thought. In the first four chapters of this work, the author advances purely logical arguments, sometimes highly ironic, aimed at the alleged supernatural origin of this disease. He shrewdly analyzes the claim of exceptional intervention by a god as the cause of epilepsy, and demonstrates, on a number of grounds, its own inner inconsistency. With much logical acumen, he argues that the very method of healing employed by the quacks and charlatans — the use of incantations and purifications — destroys the validity of their own assertion of supernatural causation.¹ He insists, further, that the concept of the Divine on which such supernatural causation and the use of purifications and incantations for healing depends really involves not piety, as the charlatans believe, but rather impiety and the belief that the gods do not exist; and he undertakes to demonstrate that the charlatans' "piety" and conception of "the divine" are, in reality, impious and unholy.² His thought is here extremely penetrating. Basically, it is the particular conception of the Divine — the popular conception

¹ *Morb. Sacr.* 1.9–10, 2.41–46, and chapter 3. References are to chapter and line of the edition of W. H. S. Jones, *Hippocrates* 2 ("Loeb Classical Library," 1923).

² *Morb. Sacr.* 3.12 ff., and chapter 4.

of the anthropomorphic gods of traditional religion — and the idea of exceptional intervention by a god characteristic of that conception, which the author in these introductory chapters vigorously attacks.³ The result of his whole discussion, thus far, is to reveal that the explanation of this disease based on the popular conception of the Divine is, on its own terms, rationally unacceptable.

Then the author goes on in the rest of his work to offer his own rational and natural explanation of epilepsy and other diseases — an explanation which has been carefully elaborated from the point of view of medical observation and hypothesis. The most remarkable aspect of his positive contribution is the insistence that all diseases, including epilepsy, are divine, and none either more or less divine than any other. This principle, repeated by the author several times, has elicited much comment from scholars, and its meaning has been variously interpreted.⁴ Its significance lies not

³ The author does not, it should be noted, reject the existence of and a belief in the Divine, nor does he merely rationalize away the idea of the Divine. On the contrary, after he has finished condemning the charlatans' misuse of purifications and their misconception of the Divine, he continues (4.48 ff.): οὐ μέντοι ἔγωγε ἀξίω ὑπὸ θεοῦ ἀνθρώπου σῶμα μαινεσθαι, τὸ ἐπικηρότατον ὑπὸ τοῦ ἀγνοήτου. Even if, he adds, man is polluted or suffers anything from another source, he would be cleansed and purified by God rather than polluted: for it is the Divine that cleanses and purifies us of our greatest and most unholy sins. This passage, as well as the following remarks concerning the true meaning of the use of purifications, suggests that the author would not refuse to accept and conform to the rituals of temple and civic religion — as would hardly be expected. His remarks reflect, indeed, a genuine belief in the Divine, but, as perhaps in the case of a Socrates or a Euripides, it is not simply a belief in the gods as traditionally and popularly conceived.

⁴ For earlier discussions of the meaning of the Divine for Greek medical writers, cf. Th. Gomperz, *Greek Thinkers* 1.311–12; W. A. Heidel, *Περὶ Φύσεως*, *Proc. Amer. Acad. of Arts and Sciences* (1910) 92–95. More recently, cf. L. Edelstein, "Greek Medicine in its Relation to Religion and Magic," *Bulletin of the Institute of the History of Medicine* 5 (1937) 201–46, especially 204–16. He discusses the concept of the Divine with reference to several treatises of the *Corpus*. The view of many Hippocratic physicians, Edelstein thinks, was that "nature cannot be thought otherwise than as created and permeated by God" (210), so that nature and natural processes must be conceived as more than merely material and mechanical, completely devoid of God. Some physicians identified God with nature, and thus they as scientists "embraced a supernatural dogma" (211); others recognized "the divine as a factor apart from nature" (214). Hence, Greek rationalism and empiricism "is influenced by religious ideas. God and His actions are powers reckoned with by the physicians in their theory and in their practice" (245). W. Nestle, "Hippocratica," *Hermes* 73 (1938) 1 ff., concludes that (speaking of the author of *De Aere Aquis Locis*) "Das Goettliche ist ihm der Naturvorgang selbst" (8), while in *De Morbo Sacro* only "die atmosphaerischen Vorgaenge" are divine (3). M. Pohlenz, *Hippokrates und die Begründung der wissenschaftlichen Medizin* (Berlin 1938) 39, believes (rightly, I think) that the author of *De Morbo Sacro* has been influenced greatly in his views of the Divine by Diogenes of Apollonia. He

just in its explicit rejection of an irrational supernatural causation for a particular disease or for all diseases, but rather in that the principle advanced by the author involves and underlies his whole basic conception of disease and of Nature, and this conception is apparently a new and unusual one, at least to the generality of people, even though it may not have been unknown to a segment, possibly large, of the medical and scientific thought of the period. So far as medicine is concerned, the unusual element in his principle revolves around the concept of "the Divine."⁵ The ultimate question is, therefore, what the author means by "the Divine," since he seems to be using the term in some different and much profounder sense than that ordinarily attached to the concept of God at the time.⁶ While the author does not himself directly describe or reveal his conception of the Divine, some insight into what the concept meant for him can, I think, be gained from the principles on which he bases his medical thought and the conception of Nature which it implies, and from the probable interconnections of his thought with the philosophical system of another thinker of the same general period.

The rejection of a distinctively divine nature for epilepsy is introduced immediately by the author. This disease, he says, is no more divine or sacred than any other disease, but has a natural cause just as other diseases have.⁷ Then, after his series of logical arguments

concludes, without elaboration, that for our author "die Natur selber, aus der diese Krankheiten stammen, goettlich ist." G. Vlastos, "Ethics and Physics in Democritus," *Philosophical Review* 54 (1945) 581 and note 22, thinks the use of the concept in *De Morbo Sacro* is due to the "practice of Ionian rationalism to salvage religious terms so long as: (a) they can be adapted to the exigencies of naturalistic logic; and (b) they do not inhibit rationalistic criticism of magic." W. Jaeger, *The Theology of the Early Greek Philosophers* (Oxford 1947) 158, believes that the concept of the Divine in *De Morbo Sacro* can be understood only against the background of the "profoundly altered conception of the nature of the Divine for which philosophy had been preparing the way for a hundred years." Cf. also, C. Singer, *OCD s.v.* "Medicine" 2.11.3-5. The views expressed by these scholars range, generally speaking, from a strongly religious to a completely materialistic interpretation and solution.

⁵ The author characteristically uses the expression τὸ θεῖον. On the usage and connotation of the various terms for God, cf. G. F. Else, "God and Gods in Early Greek Thought," *TAPA* 80 (1949) 24-36.

⁶ *De Morbo Sacro* cannot, of course, be dated precisely, but it is placed generally in the last quarter of the fifth century B.C. This is the period in which the traditional beliefs of religion were most in decline. Cf. the discussion of F. Solmsen, *Plato's Theology* (Ithaca 1942) 15-35 and 38-57.

⁷ *Morb. Sacr.* 1.3. Jones' text simplifies the readings of the MSS, probably too greatly. It would be better to read, with *θ* and Littré: φύσιν μὲν ἔχει, ἣν καὶ τὰ λοιπὰ νοσήματα. ἔθεν· γίνεται κτλ.

against a peculiar supernatural causation, he begins his own rational explanation of the disease by repeating the same idea in somewhat different terms, possibly rather more significantly.⁸ He then continues in a more medical vein: epilepsy, like other diseases, has its origin in heredity,⁹ for if either parent has had the disease, it is possible for an offspring to suffer from it. The disease attacks those who have a naturally phlegmatic constitution,¹⁰ which is inheritable. The physical basis of causation is the brain, which is the cause of all the serious diseases.¹¹ To clarify and explain this, he adds a physiological description of the brain and the "veins" connected with it, in preparation for his elaboration of the genesis of the disease. For, according to his basic hypothesis, the normal physical functioning of the body depends upon the natural reception and distribution of the *pneuma* to the brain and thence to the "veins," the lung, and the cavity of the body. When, however, the brain is unnatural and imperfect because of heredity¹² or development, fluxes may, under certain circumstances, arise from the brain and, descending into the body, prevent the passage of *pneuma*, thereby interfering with the natural distribution and functioning of the *pneuma* and thus producing in the body the symptoms and effects which, taken

⁸ *Morb. Sacr.* 5.1-4. Believing the text of this passage much corrupted, Jones simplified the readings of the MSS (which differ only insignificantly), as did also Wilamowitz (*Griechisches Lesebuch* 2.273). Littré (6.364) follows the MSS closely, and reads as follows: ἀλλὰ φύσιν μὲν ἔχει ἣν καὶ τὰ ἄλλα νοσήματα, καὶ πρόφασιν δὲ ἐκαστα γίνεται· φύσιν δὲ τοῦτο καὶ πρόφασιν ἀπὸ ταύτου τὸ θεῖον γίνεσθαι ἀφ' οὗ καὶ τὰλλα πάντα. Littré translates: "mais elle a la nature qu'ont les autres maladies, et la cause dont chacune dérive. Cela (la nature et la cause) est le divin d'où provient tout le reste." Against Littré's interpretation, cf. W. A. Heidel, "Hippocratea I," *HSCP* 25 (1914) 165. It does not seem possible to restore the exact text with any confidence, but it is likely that the original statement of the author was an exceedingly significant one. If τὸ θεῖον of the MSS is only a gloss on ἀπὸ ταύτου still it probably interprets the phrase correctly.

⁹ *Morb. Sacr.* 5.7: ἀρχεται δὲ ὥσπερ καὶ τὰλλα νοσήματα κατὰ γένος. The author's view is justified by his theory of heredity, which he sketches immediately.

¹⁰ This hypothesis is used as evidence (cf. 5.16-21) against the possibility of supernatural causation: if the disease were supernatural in origin, people of bilious as well as of phlegmatic constitutions should be attacked, without distinction. But it does not attack people of a bilious constitution (cf. 8.1 ff.). Cf. the argument of exactly similar form in *De Aere Aquis Locis* (22.40 ff.), that a supernaturally-caused disease would not be restricted to one class only, but would attack all equally.

¹¹ *Morb. Sacr.* 6.1: αἷτιος ὁ ἐγκέφαλος κτλ. The substance of the author's reasoning in justification of this claim is given in the following note.

¹² Thus (8.2 ff.), epilepsy begins in the embryo, while it is still in the womb, when the brain must be purged if it is to develop properly and reach its natural and normal state. Because of heredity, this purging may not take place properly, thus leaving the brain in an unnatural physiological condition as a result of which the disease may occur.

together, constitute epilepsy.¹³ The same basic physiological causation is extended to explain the origin of other diseases as well.

The immediately exciting causes of the fluxes from the brain are, in the following discussion, detailed as cold, sun (and fire), and winds (*pneumata*), especially the last named, in their violent changes. It is the action of these natural forces or elements which affect the brain (already imperfect by reason of heredity or development) in various natural ways that causes the fluxes which descend and block the *pneuma*. This whole aetiology of the disease is elaborated with much detail, especially the physiological effects upon the brain of the winds and their changes. There is a careful attempt to explain, on rational and natural grounds, why and how the winds affect the brain precisely as they do.¹⁴ The north wind and the south wind, the author says, affect the brain most, because they are strongest and most opposite to each other in power. The north wind contracts the air and separates off the moist and damp, acting upon everything in the same manner, including man. The south wind melts and diffuses the thick and condensed air, and makes it dull, hot, and wet. It acts upon everything in the same way, upon earth, sea, rivers etc., upon everything that grows, upon inanimate objects, and even upon the sun, moon, and stars. All things feel the effects of these winds. Since, the author concludes, the winds thus master the great and powerful aspects of Nature, necessarily they affect and change the body: the south wind relaxes the brain, causes it to liquefy, and enlarges the "veins"; the north wind contracts the healthiest part of the brain, separates off the most dis-

¹³ As O. Temkin, "The Doctrine of Epilepsy in the Hippocratic Writings," *Bulletin of the Institute of the History of Medicine* 1 (1933) 277-322, puts it in modern terminology (295): "The anatomical-physiological substratum of epileptic attacks is formed of the brain, vessels, blood, phlegm, pneuma."

¹⁴ *Morb. Sacr.* 16 (cf. also chapters 12-14). This is, I think, a very significant chapter. For the *pneumata*, which the author is later to call "divine," function as purely natural, physical forces. The fact that they are "divine" does not, in the author's mind, conflict with the fact that they are natural forces, or endow them with any powers which render them in any degree incapable of rational explanation. It is worth mentioning, furthermore, that these forces affect animals in the same manner as men. In an earlier chapter (14), after describing the effect of the *pneumata* on the brain, the author remarks that the truth of his account may be shown by splitting the head of a goat, an animal especially attacked by the disease, and observing the condition of the brain. From this, he adds, one will know that it is not a god, but the disease which damages the body (14.17). This passage, along with his rational explanation of the "premonitory aura" of epilepsy (15), constitute further proofs of the rational nature of this disease.

eased and moist element, and washes it out, thus producing the fluxes at the changes of the winds. Throughout this passage, the idea of the uniform action of an element or force of Nature is expressed without qualification, and the explanation of the physiological effects of the winds upon the brain is conceived on a purely mechanistic, naturalistic basis.

It is at the end of this explanation of the cause of the fluxes that the author adds again that epilepsy is no more divine or difficult to cure than any other disease, and that it arises from "the things coming to the body and leaving it." This statement concerning the exciting causation of the disease is more fully elaborated in his final chapter (21), after he has described his theory of the normal and abnormal psychical functions in man: this disease called "sacred" arises from the same causes as others, ἀπὸ τῶν προσιόντων καὶ ἀπιόντων, καὶ ψύχεος καὶ ἡλίου καὶ πνευμάτων μεταβαλλομένων τε καὶ οὐδέποτε ἀτρεμιζόντων. ταῦτα δ' ἐστὶ θεῖα, ὥστε μηδὲν δεῖ ἀποκρίνοντα τὸ νόσημα θεϊότερον τῶν λοιπῶν νομίσαι, ἀλλὰ πάντα θεῖα καὶ πάντα ἀνθρώπινα· φύσιν δὲ ἕκαστον ἔχει καὶ δύναμιν ἐφ' ἑωυτοῦ. Thus, far from epilepsy being peculiarly divine in contrast to other diseases or more divine than other diseases, the author insists that all diseases are divine and all diseases are human,¹⁵ because they all arise from the same causes, from cold and sun and winds — and these things¹⁶ are divine. But, equally, each disease is natural. In this passage, the description of diseases as "divine," but also, at the same time, as "human" (and "natural"), even though "divine," makes it apparent that the term "divine" is being used in some extended and deeper sense than that ordinarily conveyed by the word. Of course, since diseases are called "divine" because they arise from cold and sun and winds, which are "divine," the basic question is why these forces or ele-

¹⁵ Cf. *De Aere Aquis Locis* 22.8 ff. and 53 ff., for a similar use of the principle that all diseases are both human and divine. No disease is more human or more divine than any other; all diseases are similar, all divine, and ἕκαστον δὲ αὐτῶν ἔχει φύσιν . . . καὶ οὐδὲν ἄνευ φύσιος γίνεται (cf. 22.55: γίνεται δὲ κατὰ φύσιν ἕκαστα). The principle is rather oddly introduced into the context by the author, without any real explanation or actual application to the causation of the "Scythian" disease, the peculiarly divine nature of which he is opposing. It is as if he were appealing to an accepted doctrine which there is no need to explain or defend.

¹⁶ It is to be observed that the author thinks of these forces as impersonal. Cf. also *Morb. Sacr.* 4.11–16: if, he says of the activity of the quacks and charlatans, man by magic and sacrifice shall bring down the moon, eclipse the sun, cause storm and fair weather, οὐκ ἂν ἔγωγέ τι θεῶν νομίσαιμι τούτων εἶναι οὐδέν, ἀλλ' ἀνθρώπων, εἰ δὴ τοῦ θεοῦ ἡ δύναμις ὑπὸ ἀνθρώπου γνώμης κρατεῖται.

ments of Nature are described as divine, and what conception of the Divine underlies and justifies this description. Is the author speaking from the viewpoint of traditional religion and the old, inherited belief in the divinity of sun and winds and other forces of Nature, or is his remark based upon a deeper conception of the Divine, and one deriving from some source other than traditional religious beliefs?

At this point we must note that the doctrine of *De Morbo Sacro* very strongly suggests that its author almost certainly conceived of another natural force or element as "divine," even though he does not anywhere in his work specifically describe it as such. This natural element is Air, that element on which his whole theory of man's life, of health and disease, depends. For it is not only the abnormal phenomena of the body that involve *pneuma*, which is, in fact, only Air which is drawn into the brain and distributed to the body. All the normal and natural functions of the body in health, also, are accomplished basically by means of Air. It is, in particular, the source of all the higher functions of the body, as the author's psychological theory clearly shows.¹⁷ It is not necessary to describe here this theory in detail; but it should be stressed that, despite the important function assigned to the brain as the "interpreter" τῶν ἀπὸ τοῦ ἥερος γινομένων, it is Air itself which contains intelligence and consciousness (*phronêsis*) and which alone furnishes consciousness to the organism,¹⁸ thus making the various parts of the body sensitive and intelligent to the degree that they participate in Air. This conception had, indeed, already been implied in the medical discussion of epilepsy, since loss of intelligence and consciousness, and death, was the consequence whenever fluxes prevented *pneuma* from performing its natural function. The author's explanation of motion (*kinêsis*) in man also depends upon Air.¹⁹ And as epilepsy and other diseases are rationally explained by the action of the winds, cold, and sun upon the imperfect brain, so mental aberrations and other diseases are in part explained, on the same general principle, by the action of Air upon the brain, whenever

¹⁷ Cf. *Morb. Sacr.* 17–20, and *TAPA* 79 (1948) 168–83, where I have given an analysis of this aspect of his theory of man's nature, and its relationship to the thought of Diogenes of Apollonia.

¹⁸ Cf. *Morb. Sacr.* 19.4: τὴν δὲ φρόνησιν ὁ ἀὴρ παρέχεται. In the lines following, Air is said to contain, besides *phronêsis*, γνώμη, τὸ φρόνιμον, and διάγνωσις; and γίνεται . . . ἐν ἅπαντι τῷ σώματι τῆς φρονήσιος ὡς ἂν μετέχη τοῦ ἥερος.

¹⁹ Cf. *Morb. Sacr.* 7.6 ff.; 10.24 ff.; 10.40 ff.

a violent change takes place in Air because of the seasons (20.29 ff.). The author does not, in fact, seem to make any basic or precise qualitative differentiation between Air, *pneuma*, and *pneumata*, though they are not identical in their action and function. Since, therefore, the author conceives of Air as the source and explanation of motion, intelligence and consciousness, and life in man, it seems reasonable to believe that *pneuma* and Air, also, no less than the *pneumata* and sun and cold, would be conceived by him to be "divine" in some sense. But, whatever else is to be implied by "divine" in such a view, to conceive of Air and *pneuma* as "divine" could not conflict with conceiving them as natural. If Air is "divine," it is nevertheless still natural.²⁰ In this conception, the "divine" and the "natural" would not be exclusive categories.

That Air is the source of motion, intelligence, and life in man, and that it is conceived as divine by the author, constitutes, I believe, the basic hypothesis by means of which he attempts to understand and explain the nature of man and the phenomena of the organism. Such an hypothesis would, however, be philosophical in scope, and hardly original with the author himself. It is, of course, immediately reminiscent of the theory of Nature propounded by Diogenes of Apollonia, probably before the last quarter of the fifth century B.C. His philosophical ideas seem to have become very prominent²¹ and to have had much influence on some contemporary thinkers.²² Some of his doctrines were utilized by the authors of some of the works of the *Corpus* as the philosophical basis of medical theory, among them the author of *De Morbo Sacro*.²³ Besides other points of similarity, the author's conception of the nature of Air, so far as he reveals it implicitly or explicitly in his medical and psychological theory, seems essentially the same as that of

²⁰ Air is a natural element, and its functions in the organism are natural and rational; if, however, one considers these functions and what they imply as to the intrinsic nature of Air, it is clear that for the author "natural" is not to be interpreted simply as "material" in the modern sense of the word.

²¹ This would be the logical inference especially from the parody of his doctrine in Aristophanes' *Nubes* in 423 B.C.

²² Cf., in general, W. Theiler, *Zur Geschichte der teleologischen Naturbetrachtung bis auf Aristoteles* (Zurich 1925) 6-36.

²³ Cf. F. Willerding, *Studia Hippocratica* (Goettingen 1914) esp. 18-24; Diels-Kranz, *Die Fragmente der Vorsokratiker*⁶, 64 C; K. Deichgraeber, "Die Epidemien und das Corpus Hippocraticum," *AbhBerl, Phil.-Hist. Kl.* (1933, no. 3) 127, thinks that even the description of veins in *Morb. Sacr.* resembles that of Diogenes.

Diogenes.²⁴ In the latter's speculations about Nature, it is Air, the primal substance, which contains intelligence (*noêsis*) within itself. It is by respiration of Air that men and other animals live; Air is *psychê* and *noêsis* in man, so that life and *noêsis* are destroyed, if Air is lacking. Equally, Air is the source and vehicle of all sensation in man,²⁵ as well as the source of *kinêsis*.²⁶ In all these respects, the conception of Air as it is worked out in *De Morbo Sacro* as the basis of motion, life, and intelligence, would seem certainly to have close affinity with the philosophical theory of Diogenes. But the latter's conception, being philosophical, transcends that of *De Morbo Sacro* in so far, at least, as the nature of Air is expressly revealed by the author. For Diogenes goes on to equate his primal substance, Air, with God, thus expressing a new conception of the Divine. What this conception means for Diogenes can be understood with some degree of clarity from the fragments of his work.

The most significant and novel aspect of Diogenes' view of Nature is that the primal substance must somehow be envisaged as intelligent, or as having intelligence or mind (*noêsis*) within itself. Whatever its source,²⁷ this apperception — that there is *noêsis* in the primal substance itself — seems in reality to have been his point of departure in reasoning about Nature. To Simplicius, who read his book and is the source of most of our fragments, it seemed that this principle was uppermost in Diogenes' mind.²⁸ Judging from the fragments, his work seems to have been written primarily with the purpose of demonstrating the presence of intelligence in Nature, by means of evidence drawn from Nature itself. It is not Air which is

²⁴ It is with reference to the intrinsic nature of Air that *De Morbo Sacro* shows the closest affinity with Diogenes' thought. The explanation of its utilization in the body exhibits much difference, especially in the importance assigned to the brain in *De Morbo Sacro*.

²⁵ Cf. *Vors.* 2.60.21; 61.4; 61.15; 62.8, and A 19, Theophrastus' account and criticism of Diogenes' theory of sensation and intelligence.

²⁶ Cf. *Vors.* 2.61.13, and A 20 (Aristotle, *De Anima* 405a22 ff.).

²⁷ Anaxagoras' concept of *Nous* has been thought, no doubt with much probability, to have influenced Diogenes' thought (cf. the remark of Simplicius, *Vors.* 2.52.31). But, further, Diogenes was deeply interested in the nature of Man, and it is not unlikely that a strong influence was exerted upon his reasoning by his study of the nature and functions of the body. It would be easy to believe that the new idea he expressed, i.e., the merging of mind and Air, developed largely from his medical investigation of the nature of man.

²⁸ Cf. his remarks, *Vors.* 2.59.14; 60.10; 17; and 62.11. That this is true is felt more strongly when Simplicius' account is read continuously.

of primary importance to Diogenes, but *noêsis*, which he later merges with Air.

After a formal introduction, Diogenes begins by insisting that everything which exists in the cosmos (fire, air, water, earth etc.) must be derived by differentiation from the same thing, and that all things must be the same: the primal substance must be one.²⁹ Then, there must be intelligence in the primal substance, for, without *noêsis*, it could not otherwise have been so apportioned as to have due measures of all things, of winter and summer, night and day, winds and rain and sunshine; and all other aspects of Nature, he concludes, are likewise ordered in the best possible manner (B 3). This evidence for *noêsis* drawn by reasoning and inference from external Nature is then supplemented by evidence drawn from the nature of man: man and animals live by respiration of Air, and this (*τοῦτο*, i.e., the primal substance) is *psychê* and *noêsis* for them (B 4). He thus discovers evidence for the existence and primacy of intelligence in both macrocosm and microcosm, and it was perhaps his reasoning from the latter which suggested the principle which he next states. It seems to me, Diogenes says, that *τὸ τὴν νόησιν ἔχον* is *ὁ ἀπὸ καλούμενος ὑπὸ τῶν ἀνθρώπων* (B 5). Although the whole nexus of Diogenes' reasoning about the nature of things is not available, his thought seems to be inspired throughout by his rational perception of the presence and working of intelligence in all of Nature, including man, and he concludes, from his observation of the efficacy of Air in man, that intelligence and Air are one, and that this is the primal substance. But this merging of intelligence and Air implies a deeper and more mysterious conception of the intrinsic nature of Air, and it is not thought of simply as material substance. This deeper conception of the nature of Air is easily understandable, since Diogenes' speculations belong to the period before the distinction between matter and mind has been established, so that both material and mental attributes and functions may be derived, without any logical difficulty, from the primal substance.³⁰

²⁹ *Vors.* 64 B 2. The reasoning by which Diogenes reaches this conclusion seems to be purely rational. Cf. the comment of Aristotle, *De Gen. et Corr.* 332B12.

³⁰ Although Anaxagoras had separated *Nous* from everything else, still *Nous* was probably conceived as substantial (cf. *Vors.* 59 B 12). For Diogenes, the nature of the primal substance is so conceived that all qualities and functions, material and mental, are inherent in it. In the differentiation of the primal substance, however, various

After Diogenes has thus merged intelligence and Air into one primal substance, he continues in the same fragment: *ὑπὸ τούτου πάντας καὶ κυβερνᾶσθαι καὶ πάντων κρατεῖν· αὐτὸ γάρ μοι τοῦτο θεὸς δοκεῖ εἶναι καὶ ἐπὶ πᾶν ἀφίχθαι καὶ πάντα διατιθέναι καὶ ἐν παντὶ ἐνεῖναι. καὶ ἔστιν οὐδὲ ἐν ὃ τι μὴ μετέχει τούτου* (B 5). Thus, it is the primal substance, as conceived by Diogenes, which is the origin of all things in the cosmos, and which guides and rules all. And this primal substance itself is, in Diogenes' view, God;³¹ it reaches everywhere, orders all things, and is present in everything. Obviously, this fragment introduces a new conception of God, and has rightly been called a theological fragment,³² in which all or many of the attributes of Divinity have been predicated for the primal substance. But it should perhaps be emphasized that this identification of the primal substance with God results primarily, at least, from Diogenes' rational study and analysis of Nature and the consequent perception by him of intelligence in Nature, and only secondarily from any influences of religious faith. It is not because his primal substance is *theos* that Diogenes discovers in the primal substance the attributes of Divinity. Rather, it is because his primal substance must have the attributes which he has established for it, by observation of Nature and rational speculation, that he is led to identify his primal substance with *theos*.³³ This does not, to be sure, vitiate in any degree the truth that Diogenes arrived at a real conception of the Divine.

tropoi of Air and *noësis* result (Vors. 2.61.10 ff.), and thus various gradations of the material and the mental would arise. The general similarity of Diogenes' primal substance to the modern idea of "mind-stuff" is rather clear.

³¹ Cf. also B 7 and B 8, and Diogenes' description of the "inner air" by which man perceives as a "small portion of God," as reported by Theophrastus (Vors. 2.56.3).

³² Cf. Jaeger (above, note 4) 204, who has analyzed Diogenes B 5 in a very illuminating manner. He stresses (following K. Deichgraeber, "Hymnische Elemente in der philosophischen Prosa der Vorsokratiker," *Philologus* 88 [1933] 347-61, esp. 353 ff.) the hymnodic elements in the form and language of the fragment. In his account of Diogenes' thought, Jaeger perhaps overstates the theological element. For instance, he suggests (166) that Diogenes' reversion from pluralism to monism was for primarily theological reasons. But Diogenes in B 2 gives what seems to be a thoroughly rational ground for positing one primal substance.

³³ It is, of course, impossible to estimate the degree to which Diogenes may have been influenced, in a very general way, by religious impulses or traditional religious concepts of God, or by the theological views of earlier Pre-Socratics most of whom, as Jaeger has shown, developed rational conceptions of the Divine. The latter influence is likely to have been rather strong; however, Diogenes' view has several unique features.

Diogenes' views thus constitute a rational, impersonal³⁴ conception of the Divine, differing quite drastically from older, religious conceptions of God, both in the source and nature of the conception, and in its implications for and effect upon man's thought. It is, perhaps, no exaggeration to describe it as a conception of a divine Mind immanent in Nature, though this description should probably not be interpreted with all the connotations which such a statement might convey to the modern theologian. The primal substance, the matrix of all existing things in the cosmos and the ground of all coming-to-be and passing-away (B 2), is the Divine. As material, the Divine is the substantial source of all *τὰ ὄντα* in the cosmos; as mental, the Divine is the source of intelligence and its manifestations in *τὰ ὄντα*. This does not mean, however, that Diogenes would think of all *τὰ ὄντα*, considered individually, as themselves wholly divine or equally divine; nor would he think of all *τὰ ὄντα* taken together as a whole and constituting the cosmos, as divine through and through, or as the Divine. It is the primal substance which is the Divine. But since all *τὰ ὄντα* in the cosmos have arisen, by modification and alteration, from the Divine, they participate in the Divine, and there must then be a divine element in all existing things.³⁵ It is in this rational and very realistic sense that all *τὰ ὄντα* and the processes and phenomena they exhibit may be conceived as "divine": they all originate from and participate in the Divine, and are ordered, guided, and ruled by the immanent Divine Mind, hence intelligently and in the best possible fashion.³⁶

There is considerable evidence that this conception of the Divine, along with the rest of Diogenes' doctrine, became extremely

³⁴ It is significant for the impersonality of his concept that Diogenes always uses the neuter gender in referring to the primal substance which he identifies with God. Cf. *Vors.* 2.60.21; 61.2; 4; 6; 15; 17. In B 7 the primal substance is described as an eternal, immortal *sôma*, and in B 8 as great and powerful and *polla eidos*.

³⁵ Cf. *Vors.* B 5 (2.61.8 ff.). There is nothing which does not have a share of the Divine, but the degree of participation is not the same for any two existent objects, not even in man himself. There are many *tropoi* of Air itself and of *noêsis*. In his criticism, Theophrastus (*De Sensu* 46) points out that Diogenes' views did not restrict *aisthêsis* or *phronêsis* to animate being; even inanimate being would participate in the Divine.

³⁶ That there was a strong teleological element in Diogenes' thought, developed further than can be demonstrated in the surviving fragments of his work, seems to have been established with some degree of certainty. Cf. Theiler (above, note 22) 13 ff., and Jaeger (above, note 4) 167 ff.

well-known in the last quarter of the fifth century B.C.,³⁷ and, for the more intellectual, formed the basis of a kind of rational and philosophic religion.³⁸ It is not difficult to believe that the theological aspects of the thought of Diogenes, who was, perhaps, a physician³⁹ as well as natural philosopher, should have influenced those physicians who utilized some of his principles in their medical theory.⁴⁰ At any rate, such physicians could hardly have been unacquainted with his theological views, since they are so inextricably interwoven with all his basic doctrines and conception of Nature. It would therefore seem not unnatural for Diogenes' concept of the Divine to be reflected in *De Morbo Sacro*.

It is, indeed, only if one assumes for the author of this work basically the same rational, intellectual concept of the Divine as that of Diogenes that the rationale of all the author's thought becomes really susceptible of full understanding. His utilization of Air as the ultimate ground and basic explanation of all the functions and phenomena of the organism, including the psychical, becomes easily capable of rational acceptance. For Air, if it were conceived as "divine" in the sense in which it was by Diogenes, would logically be of such inherent nature as to be the ground of those physiological and psychical functions which he assigns to it, considered as *pneuma* — the peculiar efficacy of which, as the source of *phronêsis* and *kinêsis*, he seems to feel no need of justifying or explaining specifically. Such a view would illuminate his conception of the *pneumata*, and of the sun (i.e., the sun's heat), and of "cold," for it is not very

³⁷ It is really Diogenes' conception of the Divine which is satirized and attacked by Aristophanes in the *Nubes*, though he ridicules only the most obvious aspects, as one would expect. In the famous passage of the *Troades* (884–88), Euripides crystallizes the several aspects of the Divine of Diogenes and Pre-Socratic thought.

³⁸ Cf. Solmsen (above, note 6) 51–53, and W. K. C. Guthrie, *The Greeks and their Gods* (London 1950) 136–43. Both writers suggest plausibly how this new way of thinking of the nature of the Divine, springing ultimately from Ionian rationalism, as elaborated especially by Diogenes, succeeded in satisfying the religious needs of the more intellectually inclined during this period.

³⁹ Unfortunately, the references to Diogenes as a physician in R. Walzer's edition and translation of the Arabic version of Galen's *On Medical Experience* (Oxford 1944) 13.4 and 22.3 may not be conclusive. Cf. L. Edelstein, *Philosophical Review* 56 (1947) 217.

⁴⁰ A good example of such "theological" influence is to be found in the work *De Flatibus*, chapter 3 (*Vors.* 64 C 2). K. Deichgraeber (above, note 32) 356, suggests that in two passages of *De Morbo Sacro* (16.13–32 and 17.1–14) the style reflects in some degree the hymnodic element which he discovered in the language of the Pre-Socratics.

probable that he distinguished these forces as being essentially different in nature from Air,⁴¹ as was true also in the case of Diogenes.⁴² These elements or forces of Nature could, then, quite rationally and realistically be conceived and termed "divine" by the author. And epilepsy, as well as all other diseases, being caused by natural forces which are "divine," could properly be conceived and termed "divine," and, at the same time, "human"⁴³ (and "natural"). Since the author's purpose in the work is restricted to the explanation of epilepsy and disease, he does not apply this principle of the Divine more broadly. But there is no reason to doubt that he could conceive any "natural" event, as being grounded in the Divine, to be at the same time a "divine" event. The terms "natural" (or, "human," when man is involved) and "divine" would describe, without any essential distinction in meaning, the same event.⁴⁴ There would be no contradiction or exclusion in the two terms. They would have the same denotation,⁴⁵ though not the same connotation.

⁴¹ The author's view of their relationship may perhaps be illustrated in a general way by *De Flatibus* 3. There, Air is celebrated as the omnipotent power in all things: winds are a strong current and flowing of Air, which is also the cause of winter and summer. Air is nourishment for the sun and for fire. By "cold," the author of *Morb. Sacr.* probably means nothing more than the cold air of winter (cf. 13.25 ff.) or of the north wind.

⁴² In Diogenes' view, Air, winds, and sun are all closely connected, as being various alterations of the primal substance. For the genesis of winds from Air, cf. Diog. A 9. For the nature of sun and its heat, cf. Diog. A 6, 12, 13, 14: the sun is a pumice-like body; its heat is from the *aithēr*, the Air near the sun being very hot (cf. *Vors.* B 5 [2.61.17]).

⁴³ Man is, of course, in the author's view, a part of Nature, so that diseases arising in his body are both "natural" and "human." I think that the author thus sharply juxtaposes the terms "divine" and "human," terms traditionally considered to be direct opposites, to stress by the very contrast the extended content of meaning in the usage of the term "divine." But there is no dichotomy, no mutual exclusion, in his use of the terms. Any "human" event, because it is "natural," must also be "divine," because it arises from the Divine. Edelstein (above, note 4) 212-13, seeks to interpret the use of the terms as necessitating a restriction and fundamental separation of the sphere of the Divine and of the natural in *De Morbo Sacro*, an interpretation which seems totally inharmonious with the author's thought and general outlook, and unjustified by anything said in the work.

⁴⁴ For the author, to say that a disease was "natural" (and "human") was at the same time to say also that it was "divine," and vice versa. He would mean that the disease, usually conceived by the average person to be merely human, or merely natural, would, if its real nature were more deeply perceived, be seen to be really "divine." He has infused a deeper meaning into all three terms.

⁴⁵ Cf. G. Vlastos, *The Review of Religion* 13 (1949) 283.

Such a rational conception of the Divine as that which was so vital to the thought of Diogenes would seem to be of the highest consequence for the development of medicine. The principle of regularity and uniformity in the phenomena of Nature had doubtless been evolving slowly and independently in medicine on a purely empirical basis, from observation of Nature on the part of physicians. Yet, in such conceptions of the Divine as that of Diogenes, and of earlier Pre-Socratics as well, empirical medicine could discover the rational and theoretical basis for the understanding of the regularity and uniformity of natural phenomena. The conception of a cosmos which had arisen from a Divine primal substance would assure and enforce the uniformity and rationality of Nature, and exclude any possibility of irrationality or of supernatural activity in Nature — or, indeed, even the existence of the concept of the supernatural. Nature would manifest rationality and be just as it is because of the immanence of the Divine, which would be in actuality the source of rationality. Thus, the author of *De Morbo Sacro* would agree with a later medical writer⁴⁶ that πάντα γίνεται δι' ἀνάγκην θεῶν and that φύσιν . . . πάντων θεοὶ διεκόσμησαν. These statements reflect the essential importance of the rational conception of the Divine for medicine.⁴⁷ Such a conception of the Divine need be no less real, no less profoundly felt, because it is rational in origin.

⁴⁶ Cf. the "Hippocratic" *De Victu* 1.11.13 and 5.13 (Jones' edition, Loeb *Hippocrates* 4). I do not suggest that both authors necessarily have the same concept of the Divine, but only that their conceptions are basically rational and intellectual, and developed from Ionian rationalism.

⁴⁷ The concept of the Divine underlying the author's remarks in *De Aere Aquis Locis* 22 is, I believe, essentially the same as that of *De Morbo Sacro*. Since the two works do not seem to be by the same author (cf. the careful study and conclusion of F. Heinimann, *Nomos und Physis* [Basel 1945] 181–209), the basic views expressed must have had a common origin. The use of the same typical arguments (cf. notes 10 and 15, above) is sufficient proof of a common provenience of the principle. The fact that *De Aere Aquis Locis* makes no use of winds, sun etc. as causation of the Scythian disease, for which the author rejects the description "divine" as being peculiarly appropriate, is of no consequence. The principle he enunciates, "all diseases are divine and all are natural" (and human), must involve basically the same rational conception of the Divine as in *De Morbo Sacro*.