

DEMOCRITUS AND EPICURUS: SOUL,  
THOUGHT, AND THEORY OF KNOWLEDGE

by

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## ABSTRACT

This thesis seeks to present a clear account of the teachings of Democritus and Epicurus on the soul (mind), thought, and the source of knowledge through an examination of the extant remains of their works and the reports of their teachings made by other authors.

Democritus believed that the soul was a substance like fire but not fire itself. He taught that the mind and the soul were identical. The soul (mind) was distributed throughout the whole body and was the seat of both thought and sensation. Thought was a "change" caused by idols entering the body and its nature was dependent upon the condition of the body itself.

Democritus believed that all sensible qualities had no objective existence; they were empty "affections" (πάθη) of the senses -- only the atoms and void existed in reality. Democritus postulated two forms of knowledge: "bastard" cognition which was equivalent to sensation; "genuine" cognition which could grasp the realities of the atoms and void. Although Democritus considered the evidence of the senses unreliable, he did use the senses as the starting point for gaining "genuine" knowledge. He also believed that the mind, by using sensible objects, could grasp the realities lying within the objects themselves but there is no clear evidence on how he thought this happened.

Epicurus taught that the soul was composed of four very subtle elements; one like air, one like fire, one like wind and a fourth nameless element. The soul had two parts, the animus located in the breast and the anima distributed throughout the body. All four elements of the soul were present in both the animus and anima. The fourth element present in the anima caused sensation to take place in the sense-organs themselves.

Epicurus believed that the mind was stirred in some way with each impression made upon the sense-organs. The mind was also struck directly by idols too fine to affect the senses. Epicurus taught that all sense-impressions were true; sensation was a criterion of truth. A second criterion of truth was the prolepsis. This was a general concept of a class of objects which was derived from sensation and stored within the mind. Epicurus believed that error arose not because the sense-impression was false, but because the mind formed an incorrect opinion of the nature of the sensible object. One had to pay attention to a "clear view" (ἐνάργημα) of the sensible object to determine the truth of any opinion formed by the mind. In the case of objects which could not be perceived close at hand, any opinion of their nature which was not contradicted by the senses could be accepted as true. Epicurus believed that all sense-impressions were true but the "clear" (ἐναργής) sensations were more valuable for determining the exact nature of the sensible object.

Besides the forms of thought caused by sensation, Epicurus believed that the mind was capable of reasoning. This activity of the mind played an important role in determining the nature of imperceptible things. Epicurus taught that the mind used "signs" provided by sensible objects to form



hypotheses about τὰ ἄδηλα and that it checked these hypotheses with the evidence of the senses. If the hypothesis was confirmed or not contradicted by sensation, it could be accepted as true. Epicurus believed it was by this method that a knowledge of the atoms and the void could be obtained. The ἐπιβολὴ τῆς διανοίας, which the later Epicureans added as a criterion of truth, appears to have been used by Epicurus to refer to the apprehension by the mind of idols too fine to affect the senses. There is also evidence that the ἐπιβολή of the mind signified the selection by the mind of concepts existing within it. The ἐπιβολή was important, not for any role in establishing the nature of τὰ ἄδηλα, but as a special form of sensation.

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## ABBREVIATIONS

- Adv. Col. : Plutarch, Adversus Colotem.
- AJP : American Journal of Philology.
- Contr. Epic. Beat. : Plutarch, "Non posse suaviter vivi secundum Epicurum," Moralia, 14.
- CQ : Classical Quarterly.
- CW : Classical Weekly.
- D.A. : "Lehre" (Democritus) in Diels and Kranz, Die Fragmente der Vorsokratiker. Fifth Edition. Berlin 1952. Reprinted Berlin 1959. Volume 2.
- D.B. : "Fragmente" (Democritus) in Diels and Kranz, Die Fragmente der Vorsokratiker. Fifth Edition. Berlin 1952. Reprinted Berlin 1959. Volume 2.
- De An. : Aristotle, De Anima.
- De Gen. et Corr.: Aristotle, De Generatione et Corruptione.
- De Nat. Deor.: Cicero, De Natura Deorum.
- De Sens. : Theophrastus, De Sensibus.
- Diogenes Laertius: "Epicurus," Vitae Philosophorum, Book 10.
- Dox. Gr. : H. Diels, Doxographi Graeci. Third Edition. Berlin 1879. Reprinted Berlin 1958.
- Ep. H. : Epicurus, Epistula ad Herodotum, Diogenes Laertius, Vitae Philosophorum, 10, 35-83.
- Ep. M. : Epicurus, Epistula ad Meno<sup>o</sup>ceum, Diogenes Laertius, Vitae Philosophorum, 10, 122-135.
- Ep. P. : Epicurus, Epistula ad Pythoclem, Diogenes Laertius, Vitae Philosophorum, 10, 84-116.
- Fr. : Epicurus, Fragmenta.
- K.D. : Epicurus, Kuriai Doxai, Diogenes Laertius, Vitae Philosophorum, 10, 139-154.

- Lucretius: De Rerum Natura.
- LSJ : Liddell, Scott, Jones, McKenzie, Greek-English  
Lexicon. Ninth Edition. Oxford 1940.
- Metaph. : Aristotle, Metaphysica.
- Pl. : Aetius, Placita.
- Sent. Vat.: Epicurus, Sententiae Vaticanae.
- Sextus Empiricus: Adversus Mathematicos.
- TAPA : Transactions and Proceedings of the American  
Philological Association.
- Usener : H. Usener, Epicurea. Leipzig 1887.

## PREFACE

In this thesis I have limited my topic to the teachings of Democritus and Epicurus on the nature of the mind and the manner in which the mind thinks and acquires knowledge, in particular a knowledge of what the Atomists regarded as the ultimate realities of the universe, the atoms and void. I have not discussed the role of the mind either as the seat of emotion or as the origin of the will.

I have not treated separately the teachings of the Atomist, Leucippus, since it is almost impossible to determine the exact nature of his teachings and how they differed from the views of his pupil Democritus. Most passages that do mention Leucippus link him with Democritus.<sup>1</sup> There is also the problem that many post-Theophrastean sources made no mention of Leucippus.<sup>2</sup> It is possible to suppose<sup>3</sup> that Leucippus laid the fundamental principles of atomism and that Democritus greatly elaborated these principles, but to distinguish the two Atomists more exactly poses a serious

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<sup>1</sup>See "Lehre" of Leucippus, Diels, Die Fragmente der Vorsokratiker, Vol. 2, #67, pp. 70-79.

<sup>2</sup>G. S. Kirk and J. E. Raven, The Presocratic Philosophers (Cambridge, 1957), p. 402.

<sup>3</sup>B. A. Fuller, History of Greek Philosophy, Thales to Democritus (New York, 1923), pp. 227-228; E. Zeller, A History of Greek Philosophy. Translated by G. Alleyne (London, 1881), Vol. 2, pp. 207-208; P. Natorp, Forschungen zur Geschichte des Erkenntnissproblems in Alterthum (Berlin, 1884), p. 170; Kirk and Raven, op.cit., p. 402; C. Bailey, The Greek Atomists and Epicurus (Oxford, 1928), p. 67. See especially Cicero, Academica Priora, 2, 37, 118.

problem, since they are not rigidly separated in the sources.<sup>4</sup>

In relation to Epicurus, I have adhered to the opinion of scholars<sup>5</sup> that the works of Epicurus recorded by Diogenes Laertius are genuine. No question of the authenticity of the Epistula ad Herodotum and Epistula ad Menoeceum has arisen.<sup>6</sup> The Epistula ad Pythoclem is not thought to be Epicurus' own composition but a compilation from one of his longer works made by some unknown Epicurean; the letter clearly contains teachings that are in strict accord with Epicurus' views.<sup>7</sup> The authenticity of the Kuriai Doxai has been questioned,<sup>8</sup> but the references to these sayings of Epicurus that appear in the ancient authors<sup>9</sup> make clear that the Kuriai Doxai were regarded in antiquity as an authentic work of Epicurus. Also in connection with Epicurus, I have followed the consensus of opinion among scholars<sup>10</sup> that Lucretius in the De Rerum Natura is presenting a

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<sup>4</sup>Bailey, (Greek Atomists, pp. 69-108) does attempt to distinguish the teachings of the two Atomists but often in the evidence he quotes for Leucippus, Democritus is also mentioned. See R. Philippson, "Review of C. Bailey, The Greek Atomists and Epicurus," Gnomon 6 (1930), pp. 460-462 and W. Guthrie, A History of Greek Philosophy (Cambridge, 1965), p. 382 n. 2.

<sup>5</sup>H. Usener, Epicurea (Leipzig, 1887), p. XXXVII ff.; R. D. Hicks, "Introduction," Lives of the Eminent Philosophers (Loeb Classical Library, London and Cambridge, Mass., 1925), Vol. 1, p. XX; C. Bailey, Epicurus, The Extant Remains (Oxford, 1926), p. 9.

<sup>6</sup>Bailey, Epicurus, pp. 173, 327-328.

<sup>7</sup>See Usener, op.cit., pp. XXXVII-XL and Bailey, Epicurus, p. 375.

<sup>8</sup>Usener, op.cit., pp. XLI - XLIII.

<sup>9</sup>Diogenes Laertius, 10, 138; Plutarch, Adv.Col., 31, 1125 e, Lucian, Alexandri, 47; Cicero, De Finibus, 2, 7, 20 and Cicero, De Nat.Deor., 1, 30, 85. See also Bailey, Epicurus, pp. 344-347.

<sup>10</sup>E.Zeller, Die Philosophie der Griechen (Leipzig, 1880), Vol.3, pp.378-80; Tohte, Epikurs Kriterien der Wahrheit (Clausthal, 1874), p. 9; R.Hirzel, Untersuchungen zu Ciceros Philosophischen Schriften (Leipzig, 1877, reprinted Hildesheim, 1964), Vol.1, p.98 n.1; P.W.Mewaldt in Pauly-Wissowa, Realencyclopädie der classischen Altertumswissenschaft (Stuttgart), Vol.13.2, 1670; Lucretius, De Rerum Natura, edited by W.Leonard and S.Smith (Madison, 1942), pp.36-41; Lucretius, De Rerum Natura, edited by C. Bailey (Oxford, 1947), Vol.1, pp.22-30; Bailey,

strictly accurate account of his master's teaching. In relation to Epicurus' teaching on the nature of reasoning, I have not entered into a discussion of the work of Philodemus, *Περὶ Σημειώσεων*, which discusses the "methods of inference" used in the Epicurean school. As Bailey<sup>11</sup> and Merbach<sup>12</sup> point out, this work clearly represents a development in the use of logic made by later Epicureans in order that they might oppose the "methods of inference" employed by the Stoics.<sup>13</sup> There is clear evidence<sup>14</sup> that Epicurus himself rejected all use of formal logic.

The Greek and Latin quotations that appear in this thesis are taken from the following sources.

Aristotle. *De Anima*: Edited and translated by W. S. Hett. Loeb Classical Library. London and Cambridge, Mass., 1936.

\_\_\_\_\_. *De Generatione et Corruptione*: Edited and translated by E. S. Forster. Loeb Classical Library. London and Cambridge, Mass., 1955.

\_\_\_\_\_. *Metaphysica*: Edited and translated by H. Tredennick. Loeb Classical Library. London and Cambridge, Mass., 1937. 2 volumes.

\_\_\_\_\_. *Physica*: Edited and translated by P. A. Wickstead and F. M. Cornford. Loeb Classical Library. London and Cambridge, 1929. 2 volumes.

Greek Atomists, pp. 10-11. See also J. Woltjer, Lucretii Philosophia Cum Fontibus Comparata (Groningen, 1877).

<sup>11</sup>Bailey, Greek Atomists, pp. 3, 229, 259 n. 1.

<sup>12</sup>F. Merbach, De Epicuri Canonica (Weida, 1909), p. 28.

<sup>13</sup>Cf. P. and E. De Lacy, Philodemus: On Methods of Inference (Philadelphia, 1941), p. 157 ff. For the fact that the opposition between Epicureans and Stoics arose after the time of Epicurus, see N. De Witt, Epicurus and His Philosophy (Minneapolis, 1954), pp. 6-7 and B. Farrington, The Faith of Epicurus (London, 1967), p. XI.

<sup>14</sup>Diogenes Laertius, 10, 31; Cicero, De Finibus, 1, 7, 22.



Cicero. Actio in Verrem: Edited and translated by L. H. Greenwood. Loeb Classical Library. London and Cambridge, Mass., 1935. 2 volumes.

\_\_\_\_\_. De Finibus: Edited and translated by H. Rackham. Loeb Classical Library. London and Cambridge, Mass., 1931.

\_\_\_\_\_. De Natura Deorum: Edited and translated by H. Rackham. Loeb Classical Library. London and Cambridge, Mass., 1933.

\_\_\_\_\_. Topica: Edited and translated by H. M. Hubbell. Loeb Classical Library. London and Cambridge, Mass., 1949.

\_\_\_\_\_. Tusculanae Disputationes: Edited and translated by J. E. King. Loeb Classical Library. London and Cambridge, Mass., 1945.

Diogenes Laertius. Vitae Philosophorum, Book 9: Edited and translated by R. D. Hicks. Loeb Classical Library. London and Cambridge, Mass., 1925.

Book 10: Edited and translated by C. Bailey. Oxford, 1926.

Epicurus. Epistulae, Kuriai Doxai, Sententiae Vaticanae, Fragmenta: Edited and translated by C. Bailey. Oxford, 1926.

Lucretius. De Rerum Natura. Edited by C. Bailey. Second Edition. Oxford, 1922.

Plutarch. Adversus Colotem and Non Posse Vivi Secundum Epicurum: Edited and translated by B. Einarson and P. De Lacy in Moralia, Volume 14. Loeb Classical Library. London and Cambridge, Mass., 1967.

Sextus Empiricus. Adversus Mathematicos: in Sextus Empiricus. Edited and translated by R. G. Bury. Loeb Classical Library. London and Cambridge, Mass., 1935. Volumes 2, 3, 4.

Pyrrhoniae Hypotypeses: in Sextus Empiricus. Edited and translated by R. G. Bury. Loeb Classical Library. London and Cambridge, Mass., 1935. Volume 1.

All other quotations are taken from H. Diels, Die Fragmente der Vorsokratiker, Fifth Edition, Berlin 1952, Reprinted Berlin 1959, and H. Usener, Epicurea, Leipzig 1887.

## CHAPTER ONE

### DEMOCRITUS: THE NATURE OF THE SOUL AND THOUGHT

As one would expect in the system of Democritus, which explained all phenomena in strictly material terms, the nature of the soul was corporeal; the soul was a "body within a body."<sup>1</sup> The atoms forming the soul were fine, smooth and spherical in shape. Diogenes Laertius says:

ἐκ τοιούτων λείων καὶ περιφερῶν ὀγκῶν συγκεκρίσθαι,  
καὶ τὴν ψυχὴν ὁμοίως.<sup>2</sup>

The fineness of the atoms of the soul is also attested by Cicero:

Democritum enim . . . levibus et rotundis corpusculis  
efficientem animum<sup>3</sup>

Illam (sc. animam) . . . individuorum corporum levium  
et rotundorum . . .<sup>4</sup>

Moreover Aetius describes the soul as follows:

Δημόκριτος πυρῶδες σύγκριμα ἐκ τῶν λόγῳ θεωρητῶν,  
σφαιρικὰς μὲν ἔχόντων τὰς ἰδέας, πυρίνην δὲ τὴν  
δύναμιν, ὅπερ σῶμα εἶναι.<sup>5</sup>

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<sup>1</sup>Aristotle, De An., 1, 5, 409a 32, D.A. 104a.

<sup>2</sup>Diogenes Laertius, 9, 44, D.A. 1.

<sup>3</sup>Cicero, Tusculanae Disputationes, 1, 11, 22.

<sup>4</sup>Ibid., 1, 18, 42.

<sup>5</sup>Aetius, Pl., 4, 3, 5, D.A. 102, Dox. Gr., p. 388.

The soul is "like fire;" the atoms forming the compound (σύγκριμα) of the soul are spherical in shape. From these passages we can conclude that the soul according to Democritus is a compound of spherical atoms, like in nature to fire but distinct from it. Spherical atoms form both the soul and fire but combine in such a way that the two substances are similar though not identical in nature. The point that the soul is "like fire" but not fire itself is an important one, since Democritus did not believe the soul could exist outside the body;<sup>6</sup> wherever there was fire in the external world, the Atomist did not conclude that soul was present in that spot but merely a substance to which the soul was similar.<sup>7</sup>

Aristotle, however, fails to maintain this distinction; he says that Democritus completely identified soul and fire:

[Δημόκριτος] λέγει δ' ὡς ἡ ψυχὴ καὶ τὸ θερμὸν ταύτόν, τὰ πρῶτα σχήματα τῶν σφαιροειδῶν.<sup>8</sup>

Aristotle states Democritus taught that soul and heat were the same, both being composed of atoms spherical in shape. Again Aristotle says:

Δημόκριτος μὲν πῦρ τι καὶ θερμόν φησιν αὐτὴν εἶναι [τὴν ψυχὴν]. ἀπείρων γὰρ ὄντων σχημάτων καὶ ἀτόμων τὰ σφαιροειδῆ πῦρ καὶ ψυχὴν λέγει εἶναι... τὰ σφαιροειδῆ ψυχὴν [λέγει].<sup>9</sup>

In this passage Democritus is said to have identified the spherical atom

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<sup>6</sup>See Aetius, *Pl.*, 4, 7, 4, D.A. 109, *Dox. Gr.*, p. 393. Cf. also Democritus' statement in D.B. 297.

<sup>7</sup>H. Cherniss, *Aristotle's Criticism of Presocratic Philosophy* (New York, 1935), p. 289.

<sup>8</sup>Aristotle, *De Respiratione*, 4, 472 a 4, D.A. 106.

<sup>9</sup>Aristotle, *De An.*, 1, 2, 404 a 1. I have followed the text of *Aristotelis Opera*, edited by Academia Regia Borussica (Berlin, 1870, reprinted Berlin, 1960), Second Edition, Vol. 1; Aristotle *De Anima*, edited by R. D. Hicks (Cambridge 1907, reprinted Amsterdam 1965); Aristotle, *On the Soul* edited by W. S. Hett (Loeb Classical Library, London and Cambridge, 1957); Aristotle, *De Anima*, edited by D. Ross (Oxford, 1961). Diels in (Leucippus) A 28 rejects the passage τὰ σφαιροειδῆ ... ὡν as a gloss of 404a 16. Hicks, however, (*op.cit.*, p. 213) notes that Themistius in his

with the nature of the substance it helps to form. Similarly Aristotle states:

[ἡ ψυχὴ] ἔδοξέ τισι πῦρ εἶναι· καὶ γὰρ τοῦτο λεπτομερέστατόν τε καὶ μάλιστα τῶν στοιχείων ἁσώματον, ἔτι δὲ κινεῖται τε καὶ κινεῖ τὰ ἄλλα πρῶτως. Δημόκριτος δὲ καὶ γλαφυρωτέρως εἴρηκεν ἀποφηνάμενος διὰ τί τούτων ἐκότερον· ψυχὴν μὲν γὰρ εἶναι ταῦτόν τε καὶ νοῦν, τοῦτο δ' εἶναι τῶν πρῶτων καὶ ἀδιαίρετων σωμάτων, κινητικὸν δὲ διὰ τὴν μικρομέρειαν καὶ τὸ σχῆμα· τῶν δὲ σχημάτων εὐκίνητότατον τὸ σφαιροειδὲς λέγει· τοιοῦτον δ' εἶναι τὸν τε νοῦν καὶ τὸ πῦρ.<sup>10</sup>

The reasoning behind this passage is something as follows: Democritus says that the soul consists of "primary and indivisible" atoms able to cause movement because of their fineness and their spherical shape. Like the soul, fire has the quality of being extremely easily moved and for this reason, fire, just like the soul, is to be thought to be composed of spherical atoms. Aristotle concludes from Democritus' statement that the Atomist taught that soul and fire were identical. Democritus' statement here, however, indicates only that he believed fire and soul were made of atoms of the same atomic shape, since both shared the qualities of extreme fineness and ease of movement.<sup>11</sup>

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paraphrase of this passage makes reference to the content of the words which Diels rejects; this seems to indicate that the Greek commentators had these words in their text in this passage on Democritus. Ross also points out (op.cit., pp. 174-75) that it is difficult to see how the words were inserted if they were not in the original text.

The force of the πῦρ τε seems to indicate that Aristotle believed Democritus taught the soul was a "type of fire" as distinct from fire itself. The rest of the passage, however, indicates that the force of the τε is very weak and that Aristotle thought Democritus identified soul with fire.

<sup>10</sup>Aristotle, De An., 1, 2, 405 a 5-13, D.A. 101.

<sup>11</sup>It is likely that Democritus, in reaching his conclusion that the soul was like fire, was also influenced by the fact that the soul provided the body with heat. See Aristotle, De An., 1, 2, 404 a 1-17, (Leucippus) 28.

Aristotle's statements concerning the identification of soul with fire must be taken in conjunction with his remark that:

ποῖον δὲ καὶ τί ἐκάστου τὸ σχῆμα τῶν στοιχείων οὐθὲν  
ἐπιδιώρισαν [Λεύκιππος καὶ Δημόκριτος], ἀλλὰ μόνον  
τῷ πυρὶ τὴν σφαῖραν ἀπέδωκαν.<sup>12</sup>

Since Aristotle thought Democritus taught that the spherical atom was limited to fire alone, he appears to have concluded that in the teaching of the Atomist, "spherical atoms" and "fire" were synonymous terms. Therefore, Democritus' statement that the soul was composed of spherical atoms<sup>13</sup> seems to have resulted in Aristotle's belief that the Atomist taught the mind was the same as fire. There is evidence, however, that Democritus did not limit the spherical atom to fire. A fragment of Aetius reads:

ὁ Δημόκριτος πάντα μετέχειν φησὶ ψυχῆς ποιᾶς<sup>14</sup>

Similarly Diogenes Laertius states:

τόν τε ἥλιον καὶ τὴν σελήνην ἐκ τοιούτων λείων  
καὶ περιφερῶν ὀγκῶν συγκεκρίσθαι, καὶ τὴν ψυχὴν  
ὁμοίως<sup>15</sup>

In all probability, these two passages indicate that Democritus thought that in each substance there was a number of spherical atoms of which the soul itself was composed. Aristotle's own account of Democritus' views on respiration<sup>16</sup> and its importance for preserving life both by preventing the

<sup>12</sup>Aristotle, *De Caelo*, 3, 4, 303 a 12 as quoted in G. Kirk and J. Raven, *The Presocratic Philosophers* (Cambridge, 1957), p. 421.

<sup>13</sup>Aristotle, *De Respiratione*, 4, 472 a 4, D.A. 106. See above p. 2.

<sup>14</sup>Aetius, *Pl.*, 4, 4, 7, D.A. 117, *Dox. Gr.*, p. 390.

<sup>15</sup>Diogenes Laertius, 9, 44, D.A. 1. Cf. Albertus Magnus, *De Lapidibus*, 1, 1, 4, D.A. 164, and Pseudo-Aristotle, *De Plantis*, 1, 815 b 16 in Ritter and Preller, *Historia Philosophiae Graecae* (Gotha, 1913), ninth edition, #201, a, p. 168.

<sup>16</sup>Aristotle, *De Respiratione*, 4, 471 b 30-472 a 18, D.A. 106; Aristotle, *De An.*, 1, 2, 404 a 1-17, D.A. (Leucippus) 28.

escape of soul atoms and by providing new ones shows that the air must have contained soul particles, that is, spherical atoms:

ἐν γὰρ τῷ ἀέρι πολὺν ἀριθμὸν εἶναι τῶν τοιούτων  
ἃ καλεῖ [Δημόκριτος] ἐκεῖνος νοῦν καὶ ψυχὴν.<sup>17</sup>

βοήθειαν γίγνεσθαι θύραθεν ἐπεισιόντων ἄλλων  
τοιούτων [σχημάτων] ἐν τῷ ἀναπνεῖν.<sup>18</sup>

Since Democritus taught that both fire and the soul were composed of spherical atoms, Aristotle inferred that the two were identical. In the system of Democritus, however, a spherical atom was merely a spherical atom; in combination with other spherical atoms or atoms of a different shape, it could form a part of a compound (σύγκριμα) whose nature would depend both on the type of atoms it contains and on the way these atoms are arranged.<sup>19</sup> Nemesis gives a true account of the role of the spherical atom in the formation of compounds:<sup>20</sup>

τὰ γὰρ σφαιροειδῆ σχήματα τῶν ἀτόμων συγκρινόμενα  
πῦρ τε καὶ ἄῃρ ψυχὴν ἀποτελεῖν.<sup>21</sup>

Fire is one compound, the soul another, distinct in nature though similar in composition.<sup>22</sup>

<sup>17</sup>Aristotle, De Respiratione, 4, 472 a 5, D.A. 106.

<sup>18</sup>Aristotle, De An., 1, 2, 404 a 13, D.A. (Leucippus) 28.

<sup>19</sup>Kirk and Raven, op. cit., p. 420 n. 1.

<sup>20</sup>Cherniss, op. cit., p. 290 n. 1. Nemesis also states (loc. cit.) that Democritus said the soul was fire, but this statement was due to the influence of Aristotle (Cherniss, loc. cit.).

<sup>21</sup>Nemesis, De Natura Hominum, 2, 28, Dox. Gr., p. 388.

<sup>22</sup>Cf. W. K. Guthrie, A History of Greek Philosophy (Cambridge, 1965), pp. 430-432.

One function the soul performed was to endow the body with motion. Aristotle says that the spherical atom was chosen by Democritus to explain why the soul causes motion:

τὰ σφαιροειδῆ ψυχὴν, διὰ τὸ μάλιστα διὰ παντὸς δύνασθαι  
διαδύνειν τοὺς τοιούτους ῥυσμούς, καὶ κινεῖν τὰ  
λοιπὰ κινούμενα καὶ αὐτά, ὑπολαμβάνοντες τὴν ψυχὴν  
εἶναι τὸ παρέχον τοῖς ζώοις τὴν κίνησιν.<sup>23</sup>

κινουμένας γάρ φησι τὰς ἀδιαιρέτους σφαίρας, διὰ  
τὸ πεφυκέναι μηδέποτε μένειν, συνεφέλκειν καὶ  
κινεῖν τὸ σῶμα πᾶν.<sup>24</sup>

The exact manner in which Democritus believed the soul moved the body is not made clear in our sources. Aristotle likens Democritus to Daedalus causing the wooden statue of Aphrodite to move by filling it with quick silver.<sup>25</sup> Thus it appears that Democritus taught it was the presence and very nature of the soul which imparted movement to the body.

The soul also was the cause of thought and sensation. Before we can discuss these functions, however, we must examine the question of where the soul was located in the body. There is evidence that Democritus taught the soul was distributed throughout the whole body. Aristotle in criticising Democritus' views says:

εἴπερ γὰρ ἔστιν ἡ ψυχὴ ἐν παντὶ τῷ ἀίσθανομένῳ  
σώματι ....<sup>26</sup>

Similarly the fact that Democritus considered the soul to be the cause of motion in the body is an indication that he believed it was distributed throughout the body:

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<sup>23</sup>Aristotle, De An., 1, 2, 404 a 6, D.A. (Leucippus) 28.

<sup>24</sup>Ibid., 1, 3, 406 b 20, D.A. 104.

<sup>25</sup>Ibid., 1, 3, 406 b 17.

<sup>26</sup>Ibid., 1, 5, 409 b 1, D.A. 104 a.

[Δημόκριτός] φησι τὰς ἀδιαιρέτους σφαίρας ... κινεῖν  
τὸ σῶμα πᾶν.<sup>27</sup>

Furthermore Lucretius states that Democritus taught the atoms of the soul alternated with those of the body:

Illud in his rebus nequaquam sumere possis,  
Democriti quod sancta viri sententia ponit,  
corporis atque animi primordia, singula privis  
apposita alternis variare, ac nectere membra.<sup>28</sup>

There is no confirmation elsewhere of this statement of Lucretius that Democritus believed the soul and body particles were juxtaposed one to one.<sup>29</sup> If this is a true statement of Democritus' teachings, it clearly shows that the soul was distributed throughout the body. Finally Proclus in his account of Democritus' teaching on the apparent coming to life of dead persons mentions that the τῆς δὲ ψυχῆς οἱ περὶ τὸν μυελὸν ἔμενον ἔτι δεσμοί.<sup>30</sup> the soul in the rest of the body had departed.

We can say, therefore, that Democritus taught the soul was spread throughout the whole body. What then did he say about the mind and how did he believe it was related to the soul? Diogenes Laertius says:

καὶ τὴν ψυχὴν ὁμοίως· ἦν καὶ νοῦν ταύτὸν εἶναι.<sup>31</sup>

Aristotle says:

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<sup>27</sup>Aristotle, De An., 1, 3, 406 b 18, D.A. 104.

<sup>28</sup>Lucretius 3, 370-374, D.A. 108.

<sup>29</sup>Cf. Lucretius, De Rerum Natura, edited by C. Bailey (Oxford, 1947), Vol. 2, p. 1056. Bailey quotes the statement of Alexander of Aphrodisias (De Mixtura, 2, D.A. 64) as support for Lucretius' statement, but Alexander is merely saying that in any compound the atoms were arranged in juxtaposition to one another; he is not referring to the relationship of the body and soul.

<sup>30</sup>Proclus, In Rempublica, 2, 113, 6, D.A. 1.

<sup>31</sup>Diogenes Laertius, 9, 44, D.A. 1.



ἀλλὰ ταῦτὸ λέγει ψυχὴν καὶ νοῦν.<sup>32</sup>

ψυχὴν μὲν γὰρ εἶναι ταῦτὸ καὶ νοῦν.<sup>33</sup>

Philoponus states that Democritus taught the ψυχή was "without parts," thought being a process identical to sensation:

ἀμερῇ γὰρ φησιν αὐτὴν [τὴν ψυχὴν] Δημόκριτος εἶναι  
καὶ οὐ πολυδύναμον, ταῦτὸν εἶναι λέγων τὸ νοεῖν  
τῷ αἰσθάνεσθαι καὶ ἀπὸ μιᾶς ταῦτα προέρχεσθαι  
δυνάμεως.<sup>34</sup>

"The mind and the soul are the same thing." The implications of this statement are clear: the soul and mind are identical in relation to composition, placement and function. The identity of soul and mind in relation to place is supported by the statement of Sextus Empiricus:

οἱ δὲ ἐν ὅλῳ τῷ σώματι [εἶναι τὴν διάνοιαν], καθάπερ  
τινὲς κατὰ Δημόκριτον.<sup>35</sup>

The mind is spread throughout the body just like the soul, the two being in fact the same thing. In relation to function, Theophrastus in describing Democritus' views on thought states that the Atomist believed the nature of thought was dependent upon the condition of the ψυχή.<sup>36</sup> That which thinks and that which perceives are one and the same. There is, however, evidence which conflicts with the assertion that Democritus taught the mind, being in fact identical to the soul, was spread throughout the body. A statement of Aetius runs as follows:

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<sup>32</sup>Aristotle, De An., 1, 2, 404 a 27, D.A. 101.

<sup>33</sup>Ibid., 1, 2, 405 a 9, D.A. 101. Cf. Philoponus, De Anima, 71, 19, D.A. 113.

<sup>34</sup>Philoponus, De Anima, 35, 12, D.A. 105.

<sup>35</sup>Sextus Empiricus, 7, 349, D.A. 107.

<sup>36</sup>Theophrastus, De Sens., 58, D.A. 135.

Δημόκριτος, 'Επίκουρος διμερῇ τὴν ψυχὴν, τὸ μὲν  
 λογικὸν ἔχουσιν ἐν τῷ θώρακι καθιδρύμενον, τὸ δὲ  
 ἄλογον καθ' ὅλην τὴν σύγκρισιν τοῦ σώματος διεσπαρμένον.<sup>37</sup>

Bailey<sup>38</sup> believes Aetius is correctly stating the teaching of Democritus, but Diels<sup>39</sup> and Goedeckemeyer<sup>40</sup> suggest that Aetius is confusing Democritus' views with those of Epicurus. In light of the other statements of Democritus' teaching, this does seem likely. Bailey says that Democritus' use of ψυχὴ and νοῦς implies a distinction "between a perceptive and a rational element."<sup>41</sup> Democritus' use of these two words does make clear that he distinguished between the processes of sensation and thought; the fragments quoted above, however, show that he assigned both processes to the soul which was in fact identical to the mind.<sup>42</sup> The soul (= the mind) is responsible for both thinking and sensation. Outside of the quotation of Aetius there is no evidence that Democritus believed there was a separate location in the body where the process of thought took place, that is, there is no evidence that he made the mind a separate concentration of soul atoms located in the breast that was responsible for thought. In relation to this problem, it seems best to accept the evidence

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<sup>37</sup>Aetius, Pl., 4, 4, 6, D.A. 105, Dox. Gr., p. 390.

<sup>38</sup>C. Bailey, The Greek Atomists and Epicurus (Oxford, 1928), pp. 160-61.

<sup>39</sup>Dox. Gr., p. 390.

<sup>40</sup>A. Goedeckemeyer, Epikurs Verhältnis zu Demokrit (Strassburg, 1897), p. 54. Cf. also H. Usener, Epicurea (Leipzig, 1887), #312, p. 217.

<sup>41</sup>Bailey, Greek Atomists, p. 161.

<sup>42</sup>Cherniss, op. cit., p. 83.

of Aristotle, Diogenes Laertius and Sextus Empiricus rather than that of Aetius.<sup>43</sup>

There are two other fragments concerning the placement of the mind in Democritus' teaching. Theodoretus states:

Ἰπποκράτης μὲν γὰρ καὶ Δημόκριτος καὶ Πλάτων  
ἐν ἐγκεφάλῳ τοῦτο [τὸ ἡγεμονικόν] ἰδρῦσθαι  
εἰρήκασιν.<sup>44</sup>

Diels<sup>45</sup> indicates that this is an excerpt from Aetius, Placita, 4, 5, 1; this statement of Aetius must be rejected just like his statement in 4, 4, 6<sup>46</sup> to which it is in marked contrast if τὸ ἡγεμονικόν and τὸ λογικόν are to be construed as having the same meaning, namely the "mind." It appears that Democritus has been mistakenly associated with Plato and the latter's tripartite division of the soul which attributes the intelligence to the brain.<sup>47</sup> A similar association has probably influenced the statement in the Pseudo-Hippocratic Letters that Democritus called the brain the φύλακα διανοίης.<sup>48</sup> Both Diels<sup>49</sup> and Mullach<sup>50</sup> reject the authenticity of these letters which were probably composed in

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<sup>43</sup>Cf. J. Beare, Greek Theories of Elementary Cognition (Oxford, 1906), p. 255.

<sup>44</sup>Theodoretus, Graecorum affectionum Curatio, 5, 22, Dox.Gr., p. 390.

<sup>45</sup>Dox. Gr., note on Placita 4, 5, 1, p. 391. See also Prolegomena, p. 45.

<sup>46</sup>See above p. 9 n. 37.

<sup>47</sup>Beare, op.cit., pp. 254-255; Bailey, Greek Atomists, p. 161 n. 1.

<sup>48</sup>Hippocrates, 23, 3, D.C. 6.

<sup>49</sup>Diels, Fragmente der Vorsokratiker, p. 225.

<sup>50</sup>G. A. Mullach, Fragmenta Philosophorum Graecorum (Paris, 1883), Vol. 1, p. 335.

the time of Tiberius by someone who was acquainted with the writings of Hippocrates, but not those of Democritus.<sup>51</sup> This description of Democritus' views on the placement of the mind, therefore, can be seriously held in question.<sup>52</sup>

We can now return to our discussion of the soul as the cause of sensation and thought. These two processes are distinct yet caused in the same fashion. Aetius says:

Λεύκιππος, Δημόκριτος τὰς αἰσθήσεις καὶ τὰς νοήσεις  
ἑτεροιώσεις εἶναι τοῦ σώματος.<sup>53</sup>

Both thought and sensation are some "change" that takes place in the body.

Similarly Aristotle says:

Ὅλως δὲ διὰ τὸ ὑπολαμβάνειν φρόνησιν μὲν τὴν αἴσθησιν,  
ταύτην δ' εἶναι ἀλλοιώσιν.<sup>54</sup>

Theophrastus also states:

[Δημόκριτος] εἶκε συνηκολουθηκέναι τοῖς ποιούσιν  
ὅλως τὸ φρονεῖν κατὰ τὴν ἀλλοιώσιν.<sup>55</sup>

The cause of this change is some agent outside the body itself. Aetius states:

Λεύκιππος, Δημόκριτος, Ἐπίκουρος τὴν αἴσθησιν καὶ  
τὴν νόησιν γίνεσθαι εἰδώλων ἔξωθεν προσιόντων· μηδενὶ  
γὰρ ἐπιβάλλειν μηδετέραν χωρὶς τοῦ προσπίπτοντος  
εἰδώλου.<sup>56</sup>

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<sup>51</sup>Diels, *loc.cit.*; K. Freeman, *The Pre-Socratic Philosophers, A Companion to Diels, Fragmente der Vorsokratiker*, (Oxford, 1949), p. 325.

<sup>52</sup>See also Goedeckemeyer, *op.cit.*, pp. 53-54 and Bailey, *Greek Atomists*, p. 161 n. 1.

<sup>53</sup>Aetius, *Pl.*, 4, 8, 5, D.A. (Leucippus) 30. *Dox.Gr.*, p. 395.

<sup>54</sup>Aristotle, *Metaph.*, 3, 5, 1009 b 12, D.A. 112.

<sup>55</sup>Theophrastus, *De Sens.*, 72, D.A. 135.

<sup>56</sup>Aetius, *Pl.*, 4, 8, 10, D.A. (Leucippus) 30. *Dox.Gr.*, p. 395.

Similarly Cicero says:

quae sequitur (sc. Epicurus) sunt tota Democriti . . .  
 imagines, quae εἰδῶλα nominant (sc. the Atomists),  
 quorum incursione non solum videamus sed etiam  
 cogitemus;<sup>57</sup>

These two statements support the observation of Aristotle that the Atomists πάντα γὰρ τὰ αἰσθητὰ ἀπὸ τοιοῦσιν.<sup>58</sup> Sensation and thought result when the soul-atoms are touched and some change takes place in the state of the atoms as a result of this touch. It appears that Democritus taught that the awareness of sense-perception took place in the sense-organ itself. Alexander in describing Democritus' explanation of sight says that the idols impinge upon the eyes and οὕτως τὸ ὁρᾶν γίνεσθαι.<sup>59</sup> Goedeckemeyer<sup>60</sup> and Zeller<sup>61</sup> maintain Democritus taught that sense-perception could only come into being, that is, one could only become aware of a particular sense-impression, after the idols affecting the particular sense-organ had travelled throughout the whole body and touched the whole soul. Theophrastus in chapter fifty-seven of the De Sensibus, the passage on which Goedeckemeyer rests his view, indicates that the whole body can be affected when one sense-organ is stimulated but he probably does not mean by this that the whole body must be stirred before a person can become aware of any particular sense-impression. There is no evidence that Democritus made the distinction

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<sup>57</sup>Cicero, De Finibus, 1, 6, 21.

<sup>58</sup>Aristotle, De Sensu, 4, 442 a 29, D.A. 119.

<sup>59</sup>Alexander, De Sensu, 24, 14, D.A. (Leucippus) 29.

<sup>60</sup>Goedeckemeyer, op.cit., p. 59.

<sup>61</sup>E. Zeller, A History of Greek Philosophy, translated by S. F. Alleyne (London, 1881), Vol. 2, p. 266 n. 3.

between "perceiving" and "being aware that one is perceiving;" it is best to assume that the Atomist, if he did in fact make this distinction, simply assigned both these processes to the particles of the soul that were present in whatever sense-organ that was being stimulated, since our sources give us no details on this point.

Concerning Democritus' views on thought as distinct from sensation, Theophrastus gives us some evidence.

περὶ δὲ τοῦ φρονεῖν ἐπὶ τοσοῦτον εἴρηκεν ὅτι γίνεταί  
 συμμέτρως ἐχούσης τῆς ψυχῆς κατὰ τὴν κρῆσιν· ἔαν  
 δὲ περίθερμός τις ἢ περίψυχρος γένηται, μεταλλάττειν  
 φησί. δι' ὃ τι καὶ τοὺς παλαιοὺς καλῶς τοῦθ' ὑπολαβεῖν  
 ὅτι ἐστὶν ἄλλοφρονεῖν. ὥστε φανερόν, ὅτι τῇ κράσει  
 τοῦ σώματος ποιεῖ τὸ φρονεῖν, ὅπερ ἴσως αὐτῷ καὶ  
 κατὰ λόγον ἐστὶ σῶμα ποιοῦντι τὴν ψυχὴν.<sup>62</sup>

If the soul is at a normal temperature, its thoughts will be correct; if the soul is too hot or too cold, its thoughts will be affected and be distorted in nature. We can take in conjunction with this statement of Theophrastus the saying of Aristotle:

τὸ γὰρ ἀληθὲς εἶναι τὸ φαινόμενον· διὸ καλῶς  
 ποιῆσαι τὸν Ὀμηρον ὡς "Ἐκτῶρ κείτ'  
 ἄλλοφρονέων."<sup>63</sup>

By this statement, Democritus does not mean, as Aristotle supposes, that sense-perceptions in themselves are always true but that thought depends upon the nature of the body itself;<sup>64</sup> ἄλλοφρονεῖν means "to think other

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<sup>62</sup>Theophrastus, De Sens., 58, D.A. 135.

<sup>63</sup>Aristotle, De An., 1, 2, 404 a 29, D.A. 101.

<sup>64</sup>Cherniss, op. cit., p. 292 n.9.

than normally."<sup>65</sup> The importance that Democritus attributed to the condition of the body in sensation and thought is shown also by the statement of Sextus Empiricus:

[Δημόκριτος] φησὶ γάρ· ἡμεῖς δὲ τῷ μὲν ἑόντι οὐδὲν ἀτρενὲς συνίεμεν, μεταπίπτον δὲ κατὰ τε σώματος διαθήκην καὶ τῶν ἐπεισιόντων καὶ τῶν ἀντιστηριζόντων.<sup>66</sup>

In the light of these passages we can make three statements about Democritus' teaching on the nature of thought: it is a change in the body; this change is caused by the εἶδωλα flowing from an outside object; the nature of thought is dependent upon the condition of the body. We cannot go further, as Zeller does,<sup>67</sup> and say that the change caused by the εἶδωλα was responsible for the condition of the body itself and thus for the nature of thought as well, since there is no evidence for this supposition. It is impossible to state exactly how Democritus supposed the soul (= the mind) was affected by idols so that thought as distinct from sensation arose. For spontaneous thoughts Kirk and Raven<sup>68</sup> suggest the spherical atoms of the soul were capable of self-movement. Since, however, Aristotle says Democritus taught it was the nature of the spherical atoms never to be at rest,<sup>69</sup> we would have to suppose a special type of motion as the cause of spontaneous thought. However in absence of more detailed evidence it would

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<sup>65</sup>Loc. cit.

<sup>66</sup>Sextus Empiricus, 7, 136, D.B. 9.

<sup>67</sup>Zeller, Greek Philosophy, Vol. 2, p. 271.

<sup>68</sup>Kirk and Raven, op. cit., p. 422.

<sup>69</sup>Aristotle, De An., 1, 3, 406 b 17. See above p. 6.

be best in dealing with the topic of thought in Democritus' system simply to keep in mind a strictly corporeal process, one of atoms touching atoms and causing some sort of change, for this is actually as far as our sources will allow us to go.<sup>70</sup>

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<sup>70</sup>See Beare, op. cit., p. 254.



## CHAPTER TWO

### DEMOCRITUS: THEORY OF KNOWLEDGE

We come now to the question of Democritus' views concerning knowledge. As we shall see, a discussion of this question will of necessity be closely connected with Democritus' views on the nature of being, that is, his theory of the atoms and void; epistemology and ontology were closely associated in Democritus' teaching.<sup>1</sup> We must remember that Democritus' system was a strictly material one in which all processes were explained in terms of the atoms and the void; it is, therefore, highly reasonable to expect that his ideas concerning knowledge were based as well on his belief that the atoms and void were the ultimate realities of the universe. An endeavour must be made to discover answers for the following questions: how did Democritus believe one could gain knowledge of the atoms and void, and upon what basis did Democritus believe knowledge rested, the senses, reason or both?<sup>2</sup>

Some of the extant fragments of Democritus certainly give him the appearance of being a sceptic, that is, one who does not believe that

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<sup>1</sup>H. Weiss, "Democritus' Theory of Cognition," CQ. 32 (1938), p. 49; Guthrie, op. cit., p. 454.

<sup>2</sup>For the different solutions to this final question which modern scholars have proposed, see Bailey, Greek Atomists, p. 177-178.

either the senses or thought can lead to man's grasping the true nature of reality. He says:

‘καίτοι δῆλον ἔσται ὅτι ἕτεῃ οἶον ἕκαστον  
γινώσκειν ἐν ἀπόρῳ ἐστί.’<sup>3</sup>

‘ἕτεῃ μὲν νυν ὅτι οἶον ἕκαστον ἔστιν ἢ οὐκ ἔστιν  
οὐ συνίεμεν, πολλαχῇ δεδῆλωται.’<sup>4</sup>

‘δηλοῖ μὲν δὴ καὶ οὗτος ὁ λόγος ὅτι ἕτεῃ οὐδὲν  
ἴσμεν περὶ οὐδενός, ἀλλ’ ἐπιρῶσιμίη ἐκάστοισιν  
ἡδόξις’<sup>5</sup>

This last fragment is similar to Democritus' following statement:

‘ἡμεῖς δὲ τῷ μὲν εἶντι οὐδὲν ἀτρεκὲς συνίεμεν,  
μεταπίπτον δὲ κατὰ τε σώματος διαθήκην καὶ τῶν  
ἐπεισιόντων καὶ τῶν ἀντιστηριζόντων.’<sup>6</sup>

For example, one's opinion that honey is sweet or bitter depends both upon the nature of the idols which "enter and impinge on the body" and upon the state of the body itself. We can, therefore, make no objective judgement of sense-impressions; our opinion of them is a strictly relative one. This fact is emphasized in two further fragments of Democritus:

‘γινώσκειν τε χρή’ φησὶν ‘ἄνθρωπον τῷδε τῷ κανόνι  
ὅτι ἕτεῃς ἀπῆλλακται.’<sup>7</sup>

‘ἕτεῃ δὲ οὐδὲν ἴδμεν· ἐν βυθῷ γὰρ ἡ ἀλήθεια.’<sup>8</sup>

This last statement of Democritus is extremely important: truth does exist but is hidden from us, lying "in the depths."

<sup>3</sup>Sextus Empiricus, 7, 137, D.B. 8.

<sup>4</sup>Ibid., 7, 136, D.B. 10.

<sup>5</sup>Ibid., 7, 137, D.B. 7.

<sup>6</sup>Ibid., 7, 136, D.B. 9.

<sup>7</sup>Ibid., 7, 137, D.B. 6.

<sup>8</sup>Diogenes Laertius, 9, 72, D.B. 117.

These fragments give the impression that Democritus was a sceptic; other statements recorded about the Atomist appear to confirm this impression.

Sextus Empiricus says:

ἐπεὶπερ ὁ μὲν Δημόκριτος μηδὲν ὑποκείσθαι φησι τῶν αἰσθητῶν, ἀλλὰ κενοπαθείας τινὰς αἰσθήσεων εἶναι τὰς ἀντιλήψεις αὐτῶν, καὶ οὔτε γλυκύ τι περὶ τοῖς ἐκτὸς ὑπάρχειν, οὐ πικρὸν ἢ θερμὸν ἢ ψυχρὸν ἢ λευκὸν ἢ μέλαν, οὐκ ἄλλο τι τῶν πᾶσι φαινομένων. παθῶν γὰρ ἡμετέρων ἦν ὀνόματα ταῦτα.<sup>9</sup>

Whatever sense-impressions we receive have no real existence but are merely names given to the "empty affections" of our senses. Sextus Empiricus also says:

οἱ μὲν πάντα ἀνηρήκασιν τὰ φαινόμενα, ὥς οἱ περὶ Δημόκριτον.<sup>10</sup>

Δημόκριτος μὲν πᾶσαν αἰσθητὴν ὑπαρξιν κεκίνηκεν<sup>11</sup>

Theophrastus likewise states:

Δημόκριτος δὲ πάντα [αἰσθητὰ] πάθη τῆς αἰσθήσεως ποιῶν.<sup>12</sup>

Theophrastus speaks also of Democritus' refusal to assign an objective existence to sensible objects: τὸ μὴ ποιεῖν φύσιν τινὰ τῶν αἰσθητῶν.<sup>13</sup>

These statements are elaborated when Theophrastus says:

τῶν δὲ ἄλλων αἰσθητῶν οὐδενὸς εἶναι φύσιν, ἀλλὰ πάντα πάθη τῆς αἰσθήσεως ἀλλοιουμένης, ἐξ ἧς γίνεσθαι τὴν φαντασίαν. οὐδὲ γὰρ τοῦ ψυχροῦ καὶ τοῦ θερμοῦ ὑπάρχειν, ἀλλὰ τὸ σχῆμα μεταπίπτον ἐργάζεσθαι καὶ τὴν ἡμετέραν ἀλλοίωσιν.<sup>14</sup>

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<sup>9</sup>Sextus Empiricus, 8, 184. Cf. 7, 213. <sup>10</sup>Ibid., 7, 369, D.A. 110.

<sup>11</sup>Ibid., 8, 355.

<sup>12</sup>Theophrastus, De Sens., 60, D.A. 135.

<sup>13</sup>Ibid., 71, D.A. 135.

<sup>14</sup>Ibid., 63, D.A. 135. Cf. also Diogenes Laertius, 9, 106.

Sensible qualities are mere "experiences" of the sense-organs: they do not possess an objective reality but only come into existence during the act of being perceived. Thus Aetius states that Democritus taught that sensations were false:

Δημόκριτος ... ψευδεῖς εἶναι τὰς αἰσθήσεις.<sup>15</sup>

Plutarch records a statement made by Colotes that Democritus asserted that an object was "no more one thing than another:"

Ἐγκαλεῖ δὲ αὐτῷ πρῶτον ὅτι τῶν πραγμάτων ἕκαστον εἰπὼν οὐ μᾶλλον τοῖον ἢ τοῖον εἶναι συγκέχυκε τὸν βίον.<sup>16</sup>

Cicero certainly makes Democritus appear to be a sceptic when he observes:

ille (sc. Democritus) esse verum plane negat sensusque idem non obscuros dicit sed tenebricosos: sic enim appellat eos.<sup>17</sup>

According to these authorities, Democritus is said to have overthrown all sensible reality, called all sensation false, and finally denied that truth exists at all. What position could be more characteristic of a sceptic?

We must not, however, accept Cicero's statement. Democritus thought that truth lay "in the deep;" the true explanation of the universe could be found but it must be sought in the objective reality lying behind the deceptive appearances of the senses. Thus Theophrastus says of Democritus:

ὁ μὲν γὰρ πάθη ποιῶν τῆς αἰσθήσεως καθ' αὐτὰ διορίζει τὴν φύσιν.<sup>18</sup>

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<sup>15</sup>Aetius, Pl., 4, 9, 1, D.A. (Anaxagoras) 96, Dox. Gr., p. 396.

<sup>16</sup>Plutarch, Adv. Col., 4, 1108f, D.B. 156.

<sup>17</sup>Cicero, Academica Priora, 2, 23, 73, D.B. 165.

<sup>18</sup>Theophrastus, De Sens., 61, D.A. 135.

This objective reality which Democritus describes as residing in the objects themselves consists of the atoms and void. Sextus Empiricus records the important statement of Democritus that the atoms and void alone exist "in truth:"

Δημόκριτος δὲ ὅτε μὲν ἀναιρεῖ τὰ φαινόμενα ταῖς αἰσθήσεσι, καὶ τούτων λέγει μὴδὲν φαίνεσθαι κατ' ἀλήθειαν ἀλλὰ μόνον κατὰ δόξαν, ἀληθὲς δὲ ἐν τοῖς οὖσιν ὑπάρχειν τὸ ἄτόμους εἶναι καὶ κενόν. 'νόμῳ' γάρ φησι 'γλυκὺ καὶ νόμῳ πικρόν, νόμῳ θερμόν, νόμῳ ψυχρόν, νόμῳ χροίη. ἕτεῃ δὲ ἄτομα καὶ κενόν.' ὅπερ ἔστι, νομίζεται μὲν εἶναι καὶ δοξάζεται ταῖς αἰσθηταῖς, οὐκ ἔστι δὲ κατ' ἀλήθειαν ταῦτα, ἀλλὰ τὰ ἄτομα μόνον καὶ τὸ κενόν.<sup>19</sup>

The term νόμος indicated for the Greeks what was changeable and arbitrary:<sup>20</sup> man's conventions, habits, laws and customs, his νόμοι , varied from place to place and from age to age. Since sense-impressions varied with individuals and circumstances, Democritus could well define sensible qualities as existing νόμῳ . Galen also quotes Democritus' statement about sensible qualities and explains the term νόμῳ :

'νόμῳ γὰρ χροίη, νόμῳ γλυκύ, νόμῳ πικρόν, ἕτεῃ δ' ἄτομα καὶ κενόν' ὁ Δημόκριτος φησιν ἐκ τῆς συνόδου τῶν ἀτόμων γίγνεσθαι νομίζων ἀπάσας τὰς αἰσθητὰς ποιότητας ὡς πρὸς ἡμᾶς τοὺς αἰσθανομένους αὐτῶν, φύσει δ' οὐδὲν εἶναι λευκὸν ἢ μέλαν ἢ ξανθόν ἢ ἐρυθρόν ἢ πικρόν ἢ γλυκύ· τὸ γὰρ δὴ 'νόμῳ' ταῦτο βούλεται τῷ οἷον 'νομιστί' καὶ πρὸς ἡμᾶς, οὐ κατ' αὐτῶν τῶν πραγμάτων τὴν φύσιν, ὅπερ αὐτὸ πάλιν ἕτεῃ καλεῖ, παρὰ τὸ 'ἑτεόν', ὅπερ ἀληθὲς δηλοῖ, ποιήσας τοῦνομα.<sup>21</sup>

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<sup>19</sup>Sextus Empiricus, 7, 135, D.B. 9.

<sup>20</sup>Cf. T. Gomperz, *Greek Thinkers, a History of Ancient Philosophy*, translated by L. Magnus (London, 1901), Vol. 1, p. 320.

<sup>21</sup>Galen, *De Elementis Secundum Hippocratem*, 1, 2, D.A. 49. For this statement of Democritus see also Galen, *De Medicina Empirica*, 1259, D.B. 125 and Diogenes Laertius, 9, 72, D.A. 1. Cf. also Aetius, *Pl.*, 4, 9, 8, D.A. (Leucippus) 32, *Dox. Gr.*, p. 397.

What appear to be the properties of an object are actually nothing other than a variety of atoms arranged in different geometrical patterns: τὰ δ' ἐκ τούτων θέσει καὶ τάξει καὶ σχήματι διαφέροντα ἀλλήλων συμβεβηκότα.<sup>22</sup> The properties of the αἰσθητά correspond to no reality; it is only the basic matter lying behind all appearance that can be said to exist ἔτεῃ.

Theophrastus states the principal reason for Democritus' belief that sensible qualities do not exist φύσει :

σημεῖον δ' ὥς οὐκ εἰσὶ φύσει τὸ μὴ ταύτᾳ  
πᾶσι φαίνεσθαι τοῖς ζώοις, ἀλλ' ὃ ἡμῖν,  
γλυκὺ, τοῦτ' ἄλλοις πικρὸν καὶ ἑτέροις  
ὀξύ καὶ ἄλλοις δριμύ τοῖς δὲ στρυφνόν,  
καὶ τὰ ἄλλα δ' ὡσαύτως.<sup>23</sup>

This statement is echoed in Sextus Empiricus' observation:

ἐκ τοῦ τὸ μέλι τοῖσδε μὲν πικρὸν τοῖσδε  
δὲ γλυκὺ φαίνεσθαι ὃ μὲν Δημόκριτος  
ἔφη μήτε γλυκὺ αὐτὸ εἶναι μήτε πικρόν.<sup>24</sup>

Since the quality perceived by the senses depends not only upon the object causing the sense-impression but also upon the condition of the person affected, it does not have an objective existence:

δεῖ γὰρ εἰδέναι μὴ μόνον τὸ ποιοῦν, ἀλλὰ καὶ τὸ  
πάσχον, ἄλλως τ' εἰ καὶ μὴ πᾶσιν ὁ αὐτὸς [χυμὸς]  
ὁμοίως φαίνεται καθάπερ φησὶν [Δημόκριτος].  
οὐθὲν γὰρ κωλύει τὸν ἡμῖν γλυκὺν ἑτέροις τισὶ τῶν  
ζώων εἶναι πικρὸν καὶ ἐπὶ τῶν ἄλλων δὲ ὁμοίως.<sup>25</sup>

<sup>22</sup>Aetius, Pl., 4, 9, 8, D.A. (Leucippus) 32, Dox. Gr., p. 397.

<sup>23</sup>Theophrastus, De Sens., 63, D.A. 135.

<sup>24</sup>Sextus Empiricus, Pyrrhoniae Hypotyposes, 2, 63, D.A. 134.

<sup>25</sup>Theophrastus, De Causis Plantarum, 6, 2, 1, D.A. 130.

Democritus' reason for rejecting the reality of sensible qualities is stated in a different fashion by Sextus Empiricus:

ὁ μὲν Δημόκριτος διὰ τὸ μηδὲν ὑποκείσθαι  
φύσει αἰσθητόν, τῶν τὰ πάντα συγκρινουσῶν  
ἀτόμων πάσης αἰσθητῆς ποιότητος ἔρημον  
ἔχουσῶν φύσιν <sup>26</sup>

Only atoms exist by nature; these lack every sensible quality; therefore nothing sensible can exist by nature. However, we must remember that it was because the sensible qualities presented such conflicting appearances that Democritus stated that the atoms lacked all αἰσθητὰς ποιότητας.

Thus, our sources make it clear that Democritus taught that sensible qualities were completely lacking in objective reality but that atoms and void, on the other hand, existed φύσει. The question now arises: how does one come to know that atoms and void are the only realities? Sextus Empiricus gives Democritus' answer:

δύο φησὶν εἶναι γνώσεις, τὴν μὲν διὰ τῶν αἰσθήσεων τὴν δὲ διὰ τῆς διανοίας, ὣν τὴν μὲν διὰ τῆς διανοίας γνησίην καλεῖ, προσμαρτυρῶν αὐτῇ τὸ πιστὸν εἰς ἀληθείας κρίσιν, τὴν δὲ διὰ τῶν αἰσθήσεων σκοτίην ὀνομάζει, ἀφαιρούμενος αὐτῆς τὸ πρὸς διάγνωσιν τοῦ ἀληθοῦς ἀπλανές. λέγει δὲ κατὰ λέξιν·  
'γνώμης δὲ δύο εἰσὶν ἰδέαι, ἡ μὲν γνησίη ἡ δὲ σκοτίη· καὶ σκοτίης μὲν τάδε σύμπαντα, ὅφιν ἀκοῇ ὁδμῇ γεῦσις φαῦσις, ἡ δὲ γνησίη, ἀποκεκριμένη δὲ ταύτης. εἴτα προκρίνων τῆς σκοτίης τὴν γνησίην ἐπιφέρει λέγων 'ὅταν ἡ σκοτίη μηκέτι δύνηται μήτε ὀρῆν ἐπ' ἔλαττον μήτε ἀκούειν μήτε ὁδμᾶσθαι μήτε γεύεσθαι μήτε ἐν τῇ φαύσει αἰσθάνεσθαι, ἀλλ' ἐπὶ λεπτότερον <δέη ζητεῖν, τότε ἐπιγίνεται ἡ γνησίη ἅτε ὄργανον ἔχουσα τοῦ νῶσαι λεπτότερον>. οὐκοῦν καὶ κατὰ τοῦτο ὁ λόγος κριτήριον, ὃν γνησίην γνώμην καλεῖ.<sup>27</sup>

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<sup>26</sup>Sextus Empiricus, 8, 6, D.A. 59.

<sup>27</sup>Ibid., 7, 138-139, D.B. 11. Unfortunately the text breaks off at a vital point; the restoration here is that of Diels.

Democritus postulated two forms of cognition, the one trustworthy in relation to the judgement of truth, the other, subject to error. Genuine knowledge is distinct from the σκοτίη γνώμη<sup>28</sup> which can be identified with sensation; when the senses reach the point beyond which they cannot make any further examination, true knowledge carries on the investigation with its "finer instrument" It is clear that the objects of the γνησίη γνώμη are the atoms and void;<sup>29</sup> in some fashion the "knowledge through the intelligence" goes beyond the changing, unsubstantial qualities of τὰ αἰσθητά to grasp the reality which lies within them. The γνώμη of the senses is σκοτίη since it deals with sensible qualities that give conflicting evidence and do not exist φύσει; the γνώμη διὰ τῆς διανοίας, the knowledge resulting from the activity of the mind, is genuine since it grasps true being itself, the atoms and void, which exist φύσει. It is only the γνώμη which is concerned with the ultimate realities that can be called γνησίη.

Sextus Empiricus gives further evidence that Democritus believed the objective reality underlying sensible objects was grasped by thought:

οἱ δὲ περὶ τὸν Πλάτωνα καὶ Δημόκριτον μόνα τὰ νοητὰ ὑπενόησαν ἀληθῆ εἶναι<sup>30</sup>

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<sup>28</sup>γνησίος means literally "legitimate," "born in wedlock;" used with γνώμη it therefore indicates the "true" or "genuine" form of knowledge. σκοτίος meaning literally "dark" is most probably used here by Democritus in the sense of "bastard," "born in secrecy, out of wedlock" (cf. *Iliad* 6, 24). See A.E. Taylor, *Epicurus* (London, 1911), p. 43. Cf. the translations of Diels, B. 11, p. 140 ("unecht"), and Freeman, *op.cit.*, p. 309, Burnet, *op.cit.*, p. 197; Bailey, *Greek Atomists*, p. 180 ff. and Guthrie, *op.cit.*, p. 459 ("bastard").

<sup>29</sup>Bailey, *Greek Atomists*, p. 180; Weiss, *op.cit.*, p. 48; Guthrie, *op.cit.*, pp. 461-462.

<sup>30</sup>Sextus Empiricus, 8, 6, D.A. 59. Cf. 8, 56.



It is certainly to be doubted that νοητόν was a term used by Democritus,<sup>31</sup> but the reason Sextus Empiricus could group him with Plato (on the grounds that both believed the νοητά were the only realities) lies in Democritus' view of the role of γνησίη γνώμη.<sup>32</sup> "Legitimate knowledge" alone (which results from the activity of the mind) can grasp the nature of the ultimate realities, the atoms and the void; the latter are the νοητά,<sup>33</sup> the objects of thought, and they, in Democritus' view, are the only true realities just as Plato's νοητά, the "ideas," were in his view the only realities. Again it is important to note, as further evidence that Democritus believed the mind grasped the nature of the atoms, the three passages of Aetius in which Democritus is said to have called the atoms λόγῳ θεωρητά.<sup>34</sup> This evidence, however, must be treated with caution, since the phrase may have belonged to Epicurean terminology and have been incorrectly applied to Democritus.<sup>35</sup>

It is now clear that Democritus believed there was a true reality lying beneath the conflicting appearances of sensible objects that could be

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<sup>31</sup>Weiss, op. cit., p. 51.

<sup>32</sup>Cf. Bailey, Greek Atomists, p. 181 and Guthrie, op. cit., p. 462.

<sup>33</sup>P. Natorp, Forschungen zu Geschichte des Erkenntnisproblems im Antike (Berlin, 1884), p. 115. Note that the term νοητά as applied to Democritus refers to entities that are of an essentially physical nature in contrast to Plato's "ideas" which are non-sensible by nature. There could not be, of course, in Democritus' strictly material system an exact counterpart to Plato's νοητά.

<sup>34</sup>Aetius, Pl., 4, 3, 5, D.A. 102, Dox. Gr., p. 388; Ibid., 1, 15, 11, D.A. 124, Dox. Gr., p. 314; Ibid., 1, 3, 18, Dox. Gr., p. 285.

<sup>35</sup>Zeller, Greek Philosophy, Vol. 2, p. 225 n.3. For Epicurus' use of the phrase see Aetius Pl., 1, 7, <sup>34</sup>, Dox. Gr., p. 306, Ep. H., 47 b, 62 (twice) and K.D. 1.

apprehended by γνησίη γνώμη. This fact is emphasized by Democritus' opposition to the teachings of Protagoras:

πάσαν μὲν οὖν φαντασίαν οὐκ ἂν εἴποι τις ἀληθῆ  
διὰ τὴν περιτροπὴν, καθὼς ὁ τε Δημόκριτος καὶ ὁ  
Πλάτων ἀντιλέγοντες τῷ Πρωταγόρᾳ ἐδίδασκον.<sup>36</sup>

We get a clear idea of the meaning of the statement that every φαντασία is true from Sextus Empiricus' description of Protagoras' teachings:

ἐπεὶ φησι [ὁ Πρωταγόρας] πάσας τὰς φαντασίας καὶ  
τὰς δόξας ἀληθεῖς ὑπάρχειν καὶ τῶν πρὸς τι εἶναι  
τὴν ἀλήθειαν διὰ τὸ πᾶν τὸ φανέν ἢ δόξαν τινὶ εὐθέως  
πρὸς ἐκεῖνον ὑπάρχειν.<sup>37</sup>

The acceptance of every sense-impression as true reduces all knowledge to sensation<sup>38</sup> and in fact eliminates the possibility of any kind of stable knowledge.<sup>39</sup> Plutarch also mentions that Democritus argued against Protagoras:

ἀλλὰ τοσοῦτόν γε Δημόκριτος ἀποδεῖ τοῦ νομίζειν  
μὴ μᾶλλον εἶναι τοῖον ἢ τοῖον τῶν πραγμάτων ἕκαστον  
ὥστε Πρωταγόρᾳ τῷ σοφιστῇ τοῦτο εἰπόντι μεμαχῆσθαι  
καὶ γεγραφέναι πολλὰ καὶ πιθανὰ πρὸς αὐτόν.<sup>40</sup>

Protagoras said that sense-impressions were true for each person; "man is the measure;" whatever appears to one man is true for him, whatever appears to another man is true for him as well.<sup>41</sup> The result of this assertion is that an object is "no more of one description than another;" truth becomes strictly relative. In relation to the sensible qualities, sweet and bitter

<sup>36</sup>Sextus Empiricus, 7, 389, D.A. 114.

<sup>37</sup>Ibid., 7, 60, 3.

<sup>38</sup>Cf. Plato, Theaetetus, 151 E, 152 A, D.B. (Anaxagoras) 1.

<sup>39</sup>Cf. Freeman, op. cit., p. 349.

<sup>40</sup>Plutarch, Adv. Col., 4, 1108 f, D.B. 156.

<sup>41</sup>Cf. Aristotle, Metaph., 4, 5, 1009 a 6. See also Guthrie, op. cit., p. 455.

for example, Democritus stated they existed only νόμῳ ; these were in fact relative to each individual and were, therefore, "no more one than the other." Democritus did not, however, believe that sense-impressions were true, as Protagoras did, but taught that truth lay ἐν βυθῷ (being the existence of the atoms and void underlying τὰ αἰσθητά themselves) and that this truth could be grasped by a stable form of knowledge, the γνησίη γνώμη.

We have established that Democritus believed the mind could grasp the nature of the atoms and void; the information that the senses receive from τὰ αἰσθητά is assigned to σκοτίνη γνώμη. What role then did Democritus assign to the senses? He accused sense-impressions of being purely subjective and of lacking reality; did he then completely reject τὰ αἰσθητά as sources of information? This can hardly be the case. Democritus himself states that genuine knowledge follows upon the results of sense-perception, but it works by a "finer method." It is important to note that even the σκοτίνη γνώμη is still γνώμη;<sup>42</sup> reports from the senses provide some information but the senses themselves are incapable of analyzing it to any degree; the genuine γνώμη carries on the investigation from the point at which the σκοτίνη γνώμη can go no further. We must always bear in mind that Democritus' system was a strictly physical one. As we have seen, thought and sensation are "changes" caused by εἶδωλα coming from some object outside the body: thought is a physical process brought about through the agency of physical entities.

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<sup>42</sup>Hirzel, *op. cit.*, p. 117; Weiss, *op. cit.*, p. 50; C. Taylor, "Pleasure, Knowledge and Sensation in Democritus," *Phronesis*, 12 (1967), p. 21.

Democritus does not make clear exactly how thought goes beyond the conflicting characteristics presented by sensible objects, or more precisely, how thought can "see" beyond the mere form of the εἶδωλα to the atoms and void which compose them, but these sensible objects are of necessity the cause of thought itself.

There is evidence to support the view that Democritus did believe the sensible objects were the starting point for gaining true knowledge. Sextus Empiricus records a statement of Diotimus that Democritus believed τὰ φαινόμενα were the criterion for the "apprehension of non-evident things."

Διοτίμος δὲ τρία κατ' αὐτὸν [Δημόκριτον] ἔλεγεν  
εἶναι κριτήρια, τῆς μὲν τῶν ἀδήλων καταλήψεως  
τὰ φαινόμενα, <ὅψις γὰρ τῶν ἀδήλων τὰ φαινόμενα,>  
ὥς φησὶν Ἀναξαγόρας, ὃν ἐπὶ τούτῳ Δημόκριτος  
ἐπαινεῖ<sup>43</sup>

Sextus Empiricus also states that Democritus in one of his works assigned the senses mastery over belief:

ἐν δὲ τοῖς Κρατυνηρίοις, καίπερ ὑπεσχημένος  
ταῖς αἰσθήσεσι τὸ κράτος τῆς πίστεως ἀναθεῖναι,  
οὐδὲν ἥττον εὐρίσκεται τούτων καταδικάζων.<sup>44</sup>

We cannot know in what context Democritus was speaking in the Κρατυνηρία nor should we attempt to postulate the specific subject he was discussing.<sup>45</sup>

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<sup>43</sup>Sextus Empiricus, 7, 140, D.B. (Anaxagoras) 21 a. Cf. also the statement of Sextus Empiricus (8, 327, D.B. 10 b) that Democritus may have denied the possibility of ἀπόδειξις (demonstration by deduction). It appears that Democritus believed that demonstration must be based on the facts of experience. See Guthrie, op.cit., p. 483.

<sup>44</sup>Ibid., 7, 136, D.B. 9. For work Κρατυνηρία cf. Diogenes Laertius, 9, 45.

<sup>45</sup>As Hirzel, op.cit., p. 111, attempts to do.

We can only say that in some fashion Democritus did assign the senses "mastery over belief" even though, as Sextus Empiricus points out, he is also found condemning them. Again Sextus Empiricus says that Democritus started from the senses to reach his idea of the atoms and void:

εἰ καὶ ἀπὸ τῆς ἀνωμαλίας τῶν φαινομένων ἄρχεται<sup>46</sup>

The following statement of Theophrastus shows Democritus believed certain useful information was provided through the perception of sensible qualities:

ἰδίως δὲ ἐπὶ πικροῦ [φησὶν] μοῖραν ἔχειν συνέσεως<sup>47</sup>

Theophrastus says that Democritus believed our perception of the sensible quality, bitterness, has a "portion of understanding," that is, it gives us an insight into the objective reality lying behind the quality itself.<sup>48</sup> The statement is a strange one but seems to indicate that Democritus thought some idea of the type of atoms which cause bitterness could be gained when the quality was perceived, although bitterness is not in itself an objective reality but exists νόμῳ.<sup>49</sup> Finally a statement attributed to Democritus<sup>50</sup> and preserved by Galen indicates that the Atomist was well aware of what would be the result of totally rejecting the senses:

[Δημόκριτος] ἐποίησε τὰς αἰσθήσεις λεγούσας πρὸς τὴν διάνοιαν οὕτως· 'τάλαινα φρήν, παρ' ἡμέων λαβοῦσα τὰς πίστεις ἡμέας καταβάλλεις; πτωμά τοι τὸ κατάβλημα'.<sup>51</sup>

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<sup>46</sup>Sextus Empiricus, Pyrrhoniae Hypotyposes, 1, 214.

<sup>47</sup>Theophrastus, De Sens., 71, D.A. 135.

<sup>48</sup>G. M. Stratton, Theophrastus and the Greek Physiological Psychology before Aristotle (London, 1917), pp. 194-195.

<sup>49</sup>Sextus Empiricus, 7, 135, D.B. 9.

<sup>50</sup>There is a possibility that this statement was framed by some later critic as a corrective of Democritus' "sceptical" sayings. See Kirk and Raven, op.cit., p. 424 n. 1.

<sup>51</sup>Galen, De Medicina Empirica, 1259, D.B. 125.

If the senses are overthrown, so is the mind since it receives its information from the senses themselves. This statement probably does not indicate an attitude of complete scepticism on Democritus' part, that is; Democritus is not condemning both the mind and the senses.<sup>52</sup> Rather the saying reveals that the Atomist saw that if the mind did completely reject the evidence of the senses, it would have no basis on which its ideas could rest; therefore, if all stable knowledge was not to become an impossibility, some validity would have to be assigned to both the mind and the senses.<sup>53</sup>

We can now consider in a new light the sayings of Democritus that were termed "sceptical."<sup>54</sup> It is clear that Democritus did reject the senses as reliable sources of truth, but he taught that these same senses, however unreliable they were, acted nonetheless as the starting point for gaining γνησίη γνώμη. It was the objective existence of the sensible qualities that Democritus denied; in his view one's judgement of these qualities was strictly subjective. In this sense Democritus rejected πᾶσαν αἰσθητήν;<sup>55</sup> in this sense he judges αἰ αἰσθήσεις<sup>56</sup> to be false. Democritus is quite different from a sceptic: the latter rejects both sensation and thought as means by which one can grasp the truth; Democritus postulated a stable form of knowledge which could grasp

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<sup>52</sup>This interpretation is made by Bailey, Greek Atomists, p. 179.

<sup>53</sup>Cf. Weiss, op. cit., p. 50 n. 4, Cherniss, op. cit., p. 82 and S. Sambursky, The Physical World of the Greeks, translated by M. Dagut (London, 1956), p. 150.

<sup>54</sup>See above pp. 16-17.

<sup>55</sup>Sextus Empiricus, 8, 355.

<sup>56</sup>Aetius, Pl., 4, 9, 1, D.A. (Anaxagoras) 96, Dox. Gr., p. 396.

the truth, the existence of the atoms and void, and though he was sceptical of the validity of the sensible qualities, yet he used τὰ αἰσθητὰ as sources of information. The true position of Democritus in relation to scepticism is stated by Sextus Empiricus:

ἀλλὰ καὶ ἡ Δημοκρίτειος φιλοσοφία λέγεται κοινωνίαν ἔχειν πρὸς τὴν σκέψιν, ἐπεὶ δοκεῖ τῇ αὐτῇ ὕλῃ ἡμῖν κεχρησθαι. ἀπὸ γὰρ τοῦ τοῖς μὲν γλυκὺ φαίνεσθαι τὸ μέλι τοῖς δὲ πικρὸν τὸν Δημοκρίτου ἐπιλογίζεσθαι φασὶ τὸ μήτε γλυκὺ αὐτὸ εἶναι μήτε πικρὸν, καὶ διὰ τοῦτο ἐπιφθέγγεσθαι τὴν 'οὐ μᾶλλον' φωνὴν σκεπτικὴν οὖσαν. διαφόρως μὲντοι χρῶνται τῇ 'οὐ μᾶλλον' φωνῇ οἱ τε σκεπτικοὶ καὶ οἱ ἀπὸ τοῦ Δημοκρίτου. ἐκεῖνοι μὲν γὰρ ἐπὶ τοῦ μηδέτερον εἶναι τάττουσι τὴν φωνήν, ἡμεῖς δὲ ἐπὶ τοῦ ἀγνοεῖν πότερον ἀμφοτέρω ἢ οὐδέτερον τι ἔστι τῶν φαινομένων. ὥστε καὶ κατὰ τοῦτο μὲν διαφέρομεν, προδηλοτάτῃ δὲ γίνεται ἡ διάκρισις, ὅταν ὁ Δημοκρίτος λέγῃ 'ἐτεῇ δὲ ἄτομα καὶ κενόν.' ἐτεῇ μὲν γὰρ λέγει ἀντὶ τοῦ ἀληθείας· κατ' ἀλήθειαν δὲ ὑφ' ἑστέον λέγων τὰς τε ἀτόμους καὶ τὸ κενὸν ὅτι διενήνοχεν ἡμῶν, εἰ καὶ ἀπὸ τῆς ἀνωμαλίας τῶν φαινομένων ἄρχεται, περιττόν... λέγειν.<sup>57</sup>

We come now to a discussion of the evidence of Aristotle. This has been treated separately since it presents some difficulty in interpretation. The passages of Aristotle can be divided into two groups, the first being quite straightforward and indicating that Democritus used the senses as sources of information about the atoms and void.

Δημόκριτος δὲ καὶ Λεύκιππος ποιήσαντες τὰ σχήματα τὴν ἀλλοίωσιν καὶ τὴν γένεσιν ἐκ τούτων ποιούσι, διακρίσει μὲν καὶ συγκρίσει γένεσιν καὶ φθοράν, τάξει δὲ καὶ θέσει ἀλλοίωσιν. ἐπεὶ δ' ὥντο τ' ἀληθὲς ἐν τῷ φαίνεσθαι, ἐναντία δὲ καὶ ἄπειρα τὰ φαινόμενα, τὰ σχήματα ἄπειρα ἐποίησαν.<sup>58</sup>

<sup>57</sup>Sextus Empiricus, *Pyrrhoniae Hypotyposes*, 1, 213-214. See also Natorp, *op. cit.*, pp. 181-182.

<sup>58</sup>Aristotle, *De Gen. et Corr.*, 1, 1, 315 b 7, D.A. (Leucippus) 9.

Aristotle states that Democritus used appearances as a guide to explain the characteristics of the σχήματα , the atoms which made up τὰ φαινόμενα. Aristotle says Leucippus and Democritus reasoned that since phenomena were infinite in number, the atoms also must be infinite in number and since phenomena appeared to be of infinite variety, the atoms also must be of an infinite number of shapes. Then, accepting the fact that in the realm of τὰ φαινόμενα the same object often appears different to different people, Leucippus and Democritus stated that the atoms were able to alter their position within a compound and in this way cause the object they compose to appear different to different people. Similarly Democritus is said to have justified the existence of the void by reference to the evidence given by sensible objects:

λέγουσι δ' ἔν μὲν ὅτι κίνησις ἡ κατὰ τόπον οὐκ ἂν εἴη (αὕτη δ' ἐστὶ φορὰ καὶ αὔξησις)· οὐ γὰρ ἂν δοκεῖν εἶναι κίνησιν, εἰ μὴ εἴη κενόν· τὸ γὰρ πλήρες ἀδύνατον εἶναι δέξασθαι τι . . . ἄλλον δ' ὅτι φαίνεται ἓν ἑαυτὸν καὶ πηλούμενα . . . ἔτι δὲ καὶ ἡ αὔξησις δοκεῖ πᾶσι γίγνεσθαι διὰ κενοῦ.<sup>59</sup>

If there were no void, there could be no movement (1), contraction or thickening (2), or growth (3); τὰ φαινόμενα, however, reveal that these processes do exist; therefore the void must exist. The sensible objects provide information about the ultimate realities which by their very nature cannot be perceived by the senses themselves.

In the passages in which he speaks of the relation of the Atomists to the Eleatics, Aristotle gives further evidence about Democritus' use of the senses:

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<sup>59</sup>Aristotle, Physica, 4, 6, 213 b. Cf. D.A. (Leucippus) 19.



ὁδῶ δὲ μάλιστα καὶ περὶ πάντων ἐνὶ λόγῳ διωρίκασιν  
 Λεύκιππος καὶ Δημόκριτος, ἀρχὴν ποιησάμενοι κατὰ  
 φύσιν ἥπερ ἐστίν....Λεύκιππος δ' ἔχειν ψήθη λόγους  
 οἵτινες πρὸς τὴν αἴσθησιν ὁμολογούμενα λέγοντες  
 οὐκ ἀναιρήσουσιν οὔτε γένεσιν οὔτε φθορὰν οὔτε κίνησιν·  
 καὶ τὸ πλῆθος τῶν ὄντων. ὁμολογήσας δὲ ταῦτα μὲν  
 τοῖς φαινομένοις, τοῖς δὲ τὸ ἐν κατασκευάζουσιν  
 ὥς οὐκ ἂν κίνησιν οὔσαν ἄνευ κενοῦ 60

The contrast between the Atomists and the Eleatics is clearly shown when Aristotle points out that the Eleatics: ἐκ μὲν οὖν τούτων τῶν λόγων, ὑπερ-  
 βάντες τὴν αἴσθησιν καὶ παριδόντες αὐτὴν ὡς τῷ λόγῳ δέον ἀκουλου-  
 θεῖν.<sup>61</sup> The Eleatics passed over sense-perception and followed reason;

Leucippus (and Democritus), on the other hand, took sense-perception as  
 their starting point and found "arguments" which would be consistent with  
 sense-perception and explain it. In another passage Aristotle notes the  
 difference between these philosophers who based their theories on the  
 phenomena of nature and those who used a dialectical method of inquiry:

ἴδοι δ' ἂν τις καὶ ἐκ τούτων ὅσον διαφέρουσιν  
 οἱ φύσικῶς καὶ λογικῶς σκοποῦντες· περὶ γὰρ τοῦ  
 ἄτομα εἶναι μεγέθη οἱ μὲν φασιν ὅτι τὸ αὐτοτρίγωνον  
 πολλὰ ἔσται, Δημόκριτος δ' ἂν φανείη οἰκειοῖς καὶ  
 φυσικοῖς λόγοις πεπεισθαι.<sup>62</sup>

Democritus based his arguments on a study of nature; he found τὰ φαινόμενα  
 a trustworthy guide for his theory on the nature of reality.

We come now to the second group of Aristotle's statements which

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<sup>60</sup>Aristotle, *De Gen. et Corr.*, 1, 8, 325 a 1, 325 a 23, D.A. (Leucippus) 7. Concerning the similarity of Leucippus and Democritus, see *De Gen. et Corr.*, 1, 8, 324 b 35. Cf. Natorp, *op. cit.*, p. 170; Kirk and Raven, *op. cit.*, p. 402, and C. Taylor, *op. cit.*, p. 24.

<sup>61</sup>Aristotle, *De Gen. et Corr.*, 1, 8, 325 a 12.

<sup>62</sup>*Ibid.*, 1, 2, 316 a 11.

pose a problem of interpretation.<sup>63</sup> In the De Anima Aristotle states:

ἐκεῖνος [ὁ Δημόκριτος] μὲν γὰρ ἀπλῶς ταύτὸν ψυχὴν  
καὶ νοῦν· τὸ γὰρ ἀληθὲς εἶναι τὸ φαινόμενον....  
οὐ δὲ χρῆται τῷ νῷ ὡς δυνάμει τινὶ περὶ τὴν ἀλήθειαν,  
ἀλλὰ ταύτῃ λέγει ψυχὴν καὶ νοῦν.<sup>64</sup>

Similarly in the Metaphysica, he makes the statement;

ὅλως δὲ διὰ τὸ ὑπολαμβάνειν φρόνησιν μὲν τὴν αἴσθησιν,  
ταύτην δ' εἶναι ἀλλοίωσιν, τὸ φαινόμενον κατὰ τὴν  
αἴσθησιν ἐξ ἀνάγκης ἀληθὲς εἶναί φασιν.<sup>65</sup>

The result that follows upon the acceptance of τὰ φαινόμενα as true  
is explained by Aristotle:

εἴτε γὰρ τὰ δοκοῦντα πάντα ἐστὶν ἀληθῆ καὶ τὰ  
φαινόμενα, ἀνάγκη πάντα ἅμα ἀληθῆ καὶ ψευδῆ εἶναι·  
πολλοὶ γὰρ τάναντία ὑπολαμβάνουσιν ἀλλήλοις, καὶ τοὺς  
μὴ ταύτῃ δοξάζοντας ἑαυτοῖς διεφεῦσθαι νομίζουσιν·  
ὥστ' ἀνάγκη τὸ αὐτὸ εἶναί τε καὶ μὴ εἶναι. καὶ εἰ τοῦτ'  
ἐστίν, ἀνάγκη τὰ δοκοῦντα εἶναι πάντ' ἀληθῆ· τὰ  
ἀντικείμενα γὰρ δοξάζουσιν ἀλλήλοις οἱ διεφευσμένοι καὶ  
ἀληθεύοντες. εἰ οὖν ἔχει τὰ ὄντα οὕτως, ἀληθεύσουσι πάντες.<sup>66</sup>

ὥστε ὁ λέγων ἅπαντα τὰ φαινόμενα εἶναι ἀληθῆ, ἅπαντα  
ποιεῖ τὰ ὄντα πρὸς τι.<sup>67</sup>

Aristotle points out that if τὰ φαινόμενα are true, everything will be  
both true and false since different people receive different sensations

<sup>63</sup>Unfortunately these passages have not received full treatment by scholars. Some, such as Burnet, Kirk and Raven, and Gomperz, have simply not treated them at all. Others, such as Brieger and Zeller, dismiss them as expressions of Aristotle's own opinions rather than as valid statements of Democritus' teachings.

<sup>64</sup>Aristotle, De An., 1, 2, 404 a 29, D.A. 101.

<sup>65</sup>Aristotle, Metaph., 3, 5, 1009 b 12, D.A. 112.

<sup>66</sup>Ibid., 3, 4, 1009 a, 8.

<sup>67</sup>Ibid., 3, 4, 1011 a 20. Cf. also 1007 b 19-1008 a 2.

from the same object; the truth of sense-perception is strictly relative to the particular person and situation.<sup>68</sup> We can see that Aristotle is attributing to Democritus teachings similar to those of Protagoras.

Philoponus, whose authority probably consisted solely of the passages of Aristotle,<sup>69</sup> directly associates Democritus and Protagoras:

ἄντικρὺς γὰρ εἶπεν [ὁ Δημόκριτος] ὅτι τὸ ἀληθές  
καὶ τὸ φαινόμενον ταύτόν ἐστι, καὶ οὐδὲν διαφέρειν  
τὴν ἀλήθειαν καὶ τὸ τῇ αἰσθήσει φαινόμενον, ἀλλὰ  
τὸ φαινόμενον ἐκάστω καὶ τὸ δοκοῦν τοῦτο καὶ εἶναι  
ἀληθές, ὥσπερ καὶ Πρωταγόρας ἔλεγε <sup>70</sup>

In these passages in the De Anima and the Metaphysica, therefore, we find evidence which conflicts with the statements of Plutarch and Sextus Empiricus that Democritus opposed Protagoras.<sup>71</sup> On what grounds then does Aristotle attribute to Democritus teachings similar to those of Protagoras? The answer lies in the Aristotelian concept of the νοῦς.<sup>72</sup> Aristotle says of Democritus:

οὐ δὴ χρῆται τῷ νῷ ὡς δυνάμει τινὶ περὶ τὴν  
ἀλήθειαν <sup>73</sup>

In Aristotle's terms, νοῦς was a faculty "concerned with truth,"<sup>74</sup> its function was to comprehend the νοητά,<sup>75</sup> the ἀρχαί, which were the

<sup>68</sup>Aristotle, Metaph., 3, 4, 1011 a 22.

<sup>69</sup>Zeller, Greek Philosophy, Vol. 2, p. 273 n.1; Natorp, op. cit., p. 164.

<sup>70</sup>Philoponus, De Anima, 71, 19 (concerning Aristotle, De An., 1, 2, 405 a 25), D.A. 113.

<sup>71</sup>See above p. 25.

<sup>72</sup>See especially Weiss, op. cit., pp. 47-56. Cf. A.J. Porteous, "Democritus" in the Oxford Classical Dictionary (Oxford, 1949), p. 267.

<sup>73</sup>Aristotle, De An., 1, 2, 404 a 31, D.A. 101.

<sup>74</sup>Aristotle, De An., 3, 3, 428 a 17, Ethica Nicomachea, 1139 b 15. See Aristotle, De Anima, edited by R.D.Hicks (Cambridge, 1907, reprinted Amsterdam, 1965), p. 219 n. a 30.

<sup>75</sup>Weiss, op. cit., p. 54; Guthrie, op. cit., p. 456.

ground and foundation of existing things, that is, the foundation of their being."<sup>76</sup> Aristotle believed reality was divided into the νοητόν (the intelligible) and the αἰσθητόν (the sensible); the former was incorporeal, the latter, corporeal. The ἀρχαί (νοητά) comprised the unchanging οὐσία of existing objects; they existed in what may be called the abstract meaning of the word ὄν, that is, the ἀρχαί were the essential "beingness" which lay behind the object which was ὄν in the concrete sense of the word, that is, the object which was αἰσθητόν.<sup>77</sup> In Aristotle's philosophy, the αἰσθητά were opposed to the νοητά.<sup>78</sup> In the philosophy of Democritus, however, there was no term to correspond to the Aristotelian νοητά; the Atomist accepted only the existence of what Aristotle termed τὰ αἰσθητά. Democritus' ἀρχαί, the atoms and void, by their very nature belonged to what Aristotle termed στοιχεῖα :

Στοιχεῖον λέγεται ἐξ οὗ σύγκειται πρῶτου ἐνυπάρχοντος  
ἀδιαίρετου τῷ εἶδει εἰς ἕτερον εἶδος<sup>79</sup>

Since the atoms had by nature the same character as the objects compounded of them, even though they were ἀναίσθητα with respect to the senses themselves, yet being in fact σώματα, they did belong to the realm of τὰ αἰσθητά.<sup>80</sup> The idea of νοητά in the Aristotelian sense was foreign to Democritus' philosophy. This fact becomes clear when Aristotle

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<sup>76</sup>Weiss, op. cit., p. 53.

<sup>77</sup>P.A. Wickstead and F.M. Cornford, "Introduction" in Aristotle, The Physica (Loeb Classical Library, London and Cambridge, 1929), p. 1.

<sup>78</sup>Cf. Aristotle, De An., 2, 8, 431 b 22. See Weiss, op. cit., p. 53 and Guthrie, op. cit., p. 453.

<sup>79</sup>Aristotle, Metaph., 4, 3, 1014 a 26. Cf. Metaph., 12, 4, 1070 b 7 where Aristotle points out that a νοητόν cannot be a στοιχεῖον.

<sup>80</sup>Weiss, op. cit., p. 53.

says:

Αἴτιον δὲ τῆς δόξης [ὅτι τὸ φαινόμενον ἐστὶν ἀληθές] τούτοις ὅτι περὶ τῶν ὄντων μὲν τὴν ἀλήθειαν ἐσκόπουν, τὰ δ' ὄντα ὑπέλαβον εἶναι τὰ αἰσθητὰ μόνον.<sup>81</sup>

In relation to Democritus, Aristotle says it was because the Atomist believed that νοῦς was the same as ψυχή, the faculty of sense, and that φρόνησις<sup>82</sup> was the same as αἴσθησις (a process caused by effluences from sensible objects) that "of necessity" he found τὸ φαινόμενον to be ἀληθές. In other words, since Democritus denied the existence of the Aristotelian νοητά and did not assign to the νοῦς the independent intellectual activity of discovering what Aristotle himself conceived the ἀρχαί to be, he was forced to take τὰ φαινόμενα as his sphere of truth. We can compare also Aristotle's statement that if there were only αἰσθητά, there would be no νοητόν and no knowledge either unless one said that sense-perception was knowledge:

εἰ μὲν οὖν μηθέν ἐστι παρὰ τὰ καθ' ἕκαστα, οὐθὲν ἂν εἴη νοητόν ἀλλὰ πάντα αἰσθητὰ καὶ ἐπιστημὴ οὐθενός, εἰ μὴ τις εἶναι λέγει τὴν αἴσθησιν ἐπιστήμην.<sup>83</sup>

In Aristotle's eyes, the rejection of the νοητά and the acceptance of the

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<sup>81</sup>Aristotle, Metaph., 4, 5, 1010 a 1. Cf. Metaph., 1, 8, 988 b 25.

<sup>82</sup>Aristotle is using φρόνησις to indicate the activity of the νοῦς; he is not using the word in its narrower sense (most frequently found in Aristotle) in which φρόνησις refers only to reflection in πράξις. See H. Bonitz, Index Aristotelicus, in Aristotelis Opera, ed. by Academia Regia Borussica, Second Edition (Berlin, 1870, reprinted Berlin, 1961), Vol. 5, p. 831; Cf. Weiss, op.cit., p. 55 n. 5. Cf. use of φρονεῖν in De An., 3, 3, 427 a 22.

<sup>83</sup>Aristotle, Metaph., 3, 3, 999 b 1.

existence of those things alone that fall into the realm of the αἰσθητά made it necessary for one to take τὰ φαινόμενα, the sensible objects, as the sole source of information. Since, however, sensible objects give conflicting information, Aristotle believed those who accepted τὰ φαινόμενα as the sole source of knowledge and consequently as the only criterion must make truth relative.

We now see on what grounds Aristotle could attribute to Democritus teachings similar to those of Protagoras. Aristotle believed that since neither philosopher accepted the existence of the νοητά, they both must have taken τὰ φαινόμενα as their sphere of truth. We must note, however, that working within this sphere of truth, Democritus and Protagoras reached different conclusions. The result of accepting τὰ φαινόμενα as true that Aristotle describes belongs primarily to Protagoras himself;<sup>84</sup> Democritus treated τὰ φαινόμενα in a more subtle fashion, as Aristotle himself indicates.

Within the restricted sphere of τὰ φαινόμενα, Democritus believed there was behind the mere appearances of sensible objects a reality consisting of atoms and void; these two were his ἀρχαί which in Aristotle's eyes were still of a nature to belong to the realm of τὰ φαινόμενα, the sensible objects, (in strict opposition to τὰ νοητά). Aristotle himself makes clear the position of Democritus in a statement in which he explains the consequences of accepting τὰ φαινόμενα as true:

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<sup>84</sup>Cf. H. Bonitz, *Aristotelis Metaphysica Commentarius*, (Bonn, 1849 reprinted Hildesheim, 1960), p. 209. Bonitz specifically cites Protagoras.

τὸ μὲν γὰρ ἀληθὲς οὐ πλήθει κρίνεσθαι οἴονται  
 προσήκειν οὐδὲ ὀλιγότῃ, τὸ δ' αὐτὸ τοῖς μὲν γλυκὺ  
 γευομένοις δοκεῖν εἶναι, τοῖς δὲ πικρόν· ὥστ' εἰ  
 πάντες ἕκαμνον ἢ πάντες παρεφρόνουν, δύο δ' ἢ τρεῖς  
 ὑγίαινον ἢ νοῦν εἶχον, δοκεῖν ἂν τούτους κάμνειν καὶ  
 παραφρονεῖν, τοὺς δ' ἄλλους οὐ. ἔτι δὲ πολλοῖς τῶν  
 ἄλλων ζώων τάναντία [περὶ τῶν αὐτῶν] φαίνεσθαι καὶ  
 ἡμῖν, καὶ αὐτῷ δὲ ἐκάστῳ πρὸς αὐτὸν οὐ ταῦτα κατὰ  
 τὴν αἴσθησιν αἰεὶ δοκεῖν. ποῖα οὖν τούτων ἀληθῆ ἢ  
 ψευδῆ, ἄδηλον· οὐθὲν γὰρ μᾶλλον τάδε ἢ τάδε ἀληθῆ,  
 ἀλλ' ὁμοίως. διὸ Δημόκριτος γέ φησιν ἥτοι οὐθὲν  
 εἶναι ἀληθὲς ἢ ἡμῖν γ' ἄδηλον.<sup>85</sup>

When different people have different sensations from the same object,  
 Protagoras' solution<sup>86</sup> was simply to say that all sense-impressions were  
 true. Democritus, however, did not accept sense-impressions as true but  
 found truth in the reality underlying them, using, nonetheless, the  
 evidence of the senses as guides for learning the characteristics of the  
 ultimate realities, the atoms and void;<sup>87</sup> truth for Democritus was ἄδηλον.  
 Aristotle further clarifies Democritus' position when he states that the  
 Atomist advanced a small way to the conception of the οὐσία :

ἐπὶ μικρὸν γὰρ τι μέρος Ἐμπεδοκλῆς καὶ Δημόκριτος  
 τοῦ εἶδους καὶ τοῦ τί ἦν εἶναι ἤψαντο.<sup>88</sup>

αἴτιον δὲ τοῦ μὴ ἐλθεῖν τοὺς προγενεστέρους ἐπὶ  
 τὸν τρόπον τούτον (the (scientific) method of Aristotle),  
 ὅτι τὸ τί ἦν εἶναι καὶ τὸ ὀρίσασθαι τὴν οὐσίαν  
 οὐκ ἦν, ἀλλ' ἤψατο μὲν Δημόκριτος πρῶτος, ὡς  
 οὐκ ἀναγκαίου δὲ τῇ φυσικῇ θεωρίᾳ, ἀλλ' ἐκφερόμενος  
 ὑπ' αὐτοῦ τοῦ πράγματος.<sup>89</sup>

<sup>85</sup>Aristotle, *Metaph.*, 3, 5, 1009 b 2. Cf. D.A. 112. The fact that Aristotle says in the sentence immediately following this statement that Democritus taught τὰ φαινόμενα were true (see above p.33) shows that he saw no contradiction in stating that Democritus believed that truth was ἄδηλον and that τὰ φαινόμενα were true.

<sup>86</sup>Cf. Sextus Empiricus, 7, 60 ff.

<sup>87</sup>See passages of Aristotle quoted above pp. 30-32.

<sup>88</sup>Aristotle, *Physica*, 2, 2, 194 a 20.

<sup>89</sup>Aristotle, *De Partibus Animalium*, 1, 1, 642 a 24; D.A. 36.

It is clear that Democritus came close to the conception of "beingness" by stating that the atoms were the  $\tau\acute{\alpha} \acute{\epsilon}\sigma\tau\acute{\iota}$  of existing things; Aristotle himself terms the atoms  $\alpha\acute{\iota} \omicron\upsilon\sigma\acute{\iota}\alpha\iota$  :  $\tau\grave{\alpha} \acute{\alpha}\tau\omicron\mu\alpha$ ,  $\tau\grave{\alpha}\varsigma \omicron\upsilon\sigma\acute{\iota}\alpha\varsigma \pi\omicron\iota\epsilon\acute{\iota}$  [ $\delta$  Δημόκριτος].<sup>90</sup> Democritus, then, within the sphere of truth in which he worked,  $\tau\grave{\alpha} \phi\alpha\iota\nu\acute{o}\mu\epsilon\nu\alpha$ , attempted to explain the reality which lay behind the appearance of things and for this reason wins Aristotle's praise as the first to gain some idea of the concept of  $\omicron\upsilon\sigma\acute{\iota}\alpha$ .<sup>91</sup>

If we understand Aristotle's statements in the De Anima and the Metaphysica in the light of his own philosophy, they do not appear to be inconsistent with his other statements about Democritus. In these two passages Aristotle indicates that the Atomist took  $\tau\grave{\alpha} \phi\alpha\iota\nu\acute{o}\mu\epsilon\nu\alpha$  as his sphere of truth; in the other passages he shows that within this sphere Democritus believed that there was an objective reality (atoms and void) underlying appearances and that sensible objects were guides for gaining an understanding of this reality. This is essentially the teaching ascribed to Democritus in our other sources.

The fragment of Democritus quoted in Sextus Empiricus makes it clear that Democritus believed the ultimate realities were grasped by  $\gamma\upsilon\eta\sigma\acute{\iota}\eta$   $\gamma\nu\acute{\omega}\mu\eta$ , but the exact fashion in which he believed this occurred has remained a problem. Burnet<sup>92</sup> believes that the soul could come into immediate contact with the atoms themselves and in this way grasp their nature. Burnet, however, does not state how the soul could grasp the

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<sup>90</sup>Aristotle, Metaph., 6, 13, 1039 a 9, D.A. 42.

<sup>91</sup>Cf. Guthrie, op. cit., p. 454.

<sup>92</sup>Burnet, op. cit., p. 198.



reality of the void, for this clearly could not take place through the soul's contact with the void which cannot, by its very nature, come into contact with anything. Scoon<sup>93</sup> also misses this point when he states that the soul could apprehend the atoms and the void immediately as they were. It is clear from Democritus' statement about the two types of knowledge that the γνησίη γνώμη does carry on the investigation λεπτότερον at the point at which the σκοτίη γνώμη can go no further, but there is no evidence that the soul at this point can come into direct contact with the individual atoms and the void (if this were possible) apart from the things compounded of them.<sup>94</sup>

Another solution has been put forward by Bailey.<sup>95</sup> He suggests that when the senses give information concerning the primary qualities of things, that is (as Bailey states) the qualities of shape, size and weight, they can be considered trustworthy and the perception of these qualities is the path of γνησίη γνώμη since the qualities of the ultimate realities can be inferred from the primary qualities of compound objects. When, on the other hand, the senses give information about the remaining secondary qualities of things, they are to be considered deceptive and in this case they lead only to σκοτίη γνώμη. In other words sense-impressions can be divided into two groups, some leading to "legitimate" knowledge, others to "bastard cognition." Bailey bases his interpretation on Democritus' teaching

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<sup>93</sup>Robert Scoon, Greek Philosophy Before Plato (Princeton, 1928), p. 219. Robert English ("Democritus' Theory of Sense Perception," TAPA 46 (1915), pp. 224-27) perhaps holds this view as well, since he states that the mind knows reality directly; he does not explain, however, how this can happen.

<sup>94</sup>Zeller, Greek Philosophy, Vol. 2, p. 271 n.2. Cf. Bailey, Greek Atomists, p. 183.

<sup>95</sup>Bailey, Greek Atomists, pp. 184-185.

concerning the primary and secondary qualities of compounds. Bailey states that Democritus believed that shape, size and weight were the primary qualities of compound objects just as they were the primary qualities of the atoms themselves.<sup>96</sup> Theophrastus, however, gives evidence that Democritus attributed a certain objective reality as well to the qualities of hardness, softness, heaviness, and lightness in τὰ αἰσθητά :

ἔπειτα βαρέος μὲν καὶ κούφου καὶ σκληροῦ καὶ  
μαλακοῦ καθ' αὐτὰ ποιεῖν φύσεις (μέγεθος μὲν  
γὰρ καὶ σμικρότης καὶ τὸ πυκνὸν καὶ τὸ μανὸν  
οὐ πρὸς ἕτερόν ἐστι) <sup>97</sup>

νῦν δὲ σκληροῦ μὲν καὶ μαλακοῦ καὶ βαρέος καὶ  
κούφου ποιεῖ τιν' οὐσίαν.<sup>98</sup>

In one passage Theophrastus does appear to contrast Democritus' treatment of these qualities with the way he treats the other sensible qualities:

περὶ μὲν <οὖν> βαρέος καὶ κούφου καὶ σκληροῦ καὶ  
μαλακοῦ ἐν τούτοις ἀφορίζει. τῶν δὲ ἄλλων αἰσθητῶν  
οὐδενὸς εἶναι φύσιν <sup>99</sup>

Hirzel<sup>100</sup> and Goedeckemeyer <sup>101</sup> in the light of these statements of Theophrastus say that the sensations of hardness, softness, heaviness, and lightness are objectively true in contrast to the perception of the other qualities which must be considered purely subjective. Although

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<sup>96</sup>Bailey, Greek Atomists, pp. 168, 184, 185. For shape and size being the primary qualities of the atoms, see Aetius, Pl., 1, 73, 18, D.A. 47, Dox. Gr., pp. 385, 311. For weight being a primary quality of the atoms, see Aristotle De Gen. et Corr., 1, 326 a 9, D.A. 60 and Theophrastus, De Sens., 61, D.A. 135, and a full discussion in Bailey, Greek Atomists, pp. 128-132 and Guthrie, op. cit., pp. 400-404.

<sup>97</sup>Theophrastus, De Sens., 68, D.A. 135. Cf. 69 and Guthrie, op. cit., p. 440.

<sup>98</sup>Ibid., 71, D.A. 135.

<sup>99</sup>Ibid., 63, D.A. 135.

<sup>100</sup>Hirzel, op. cit., pp. 116-117.

<sup>101</sup>Goedeckemeyer, op. cit., pp. 68-69.

neither of these scholars relates this division of sensible qualities to Democritus' statement on the two types of knowledge, their position is similar to that of Bailey's in relation to the primary properties of τὰ αἰσθητά he mentions (shape, size and weight), namely that certain sensible qualities possess an objective reality and the perception of these qualities can be accepted as true.

The view of these scholars, however, must be rejected in the light of other evidence. With reference to Theophrastus, Hirzel and Goedeckemeyer have not considered his statement:

νῦν δὲ σκληροῦ μὲν καὶ μαλακοῦ καὶ βαρέος καὶ  
κούφου ποιεῖ τιν' οὐσίαν. ἅπερ οὐχ ἥττον ἔδοξε  
λέγεσθαι πρὸς ἡμᾶς<sup>102</sup>

Theophrastus says that even though Democritus assigned some degree of objective reality to the qualities of hardness, softness, lightness, and heaviness, nevertheless he appears to count these qualities among those that are relative to us. In what way then do these qualities have an objective reality? Brieger<sup>103</sup> gives what appears to be the best explanation. The qualities perceived by the sense of taste come into existence only during the process of taste; similarly the quality of colour comes into existence only with vision.<sup>104</sup> Hardness, softness, heaviness, and lightness, however, need no person perceiving them in order to exist, since they owe their origin to the size and number of the atoms,<sup>105</sup> not to the interaction

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<sup>102</sup>Theophrastus, De Sens., 71, D.A. 135.

<sup>103</sup>A. Brieger, "Demokrits Leugnung der Sinneswahrheit," Hermes, 37 (1902), p. 65.

<sup>104</sup>Cf. Aristotle, De An., 3, 2, 426 a 21. For the fact that Aristotle is referring to Democritus see Zeller, Greek Philosophy, Vol. 2, p. 449 n. 1, Hicks, De Anima, p. 440, Ross De Anima, p. 276 and Bonitz, Index Aristotelicus, p. 175 b 50.

<sup>105</sup>Theophrastus, De Sens., 61-63, D.A. 135.

between the atoms of different shapes and the person perceiving those atoms; for this reason these four qualities (as well as the qualities of size, shape and weight) can be said to possess a φύσις. These qualities, however, can still be perceived in different ways by different people, since perception involves an interaction between the atoms of the individual (which may differ from person to person) and the object, and for this reason these qualities can have different effects on different people. Therefore Democritus still called these qualities "relative to us." Thus in other passages Theophrastus, speaking of τὰ αἰσθητά, says that Democritus made all sense qualities relative:

Δημόκριτος δὲ πάντα [τὰ αἰσθητὰ] πάθη τῆς αἰσθήσεως ποιῶν.<sup>106</sup>

ἔτι δ' αὐτοὺς μεταβάλλειν τῇ κήσει κατὰ τὰ πάθη καὶ τὰς ἡλικίας· ἢ καὶ φανερόν ὥς ἡ διάθεσις αἰτία τῆς φαντασίας. ἀπλῶς μὲν οὖν περὶ τῶν αἰσθητῶν οὕτω δεῖν ὑπολαμβάνειν.<sup>107</sup>

The "sceptical" statements of Democritus himself also made clear that he considered all sensible qualities "empty affections of the senses."<sup>108</sup>

Bailey's idea, therefore, that Democritus thought phenomena could give two types of information, one type based on the primary qualities which could lead to γνησίη γνώμη, the other based on the subjective impressions of the senses which resulted only in σκοτίη γνώμη, is not supported by the evidence. The statement of Democritus on the two types of knowledge indicates simply that σκοτίη γνώμη proceeds to a certain point beyond which it cannot advance; γνησίη γνώμη then carries on the investigation in a more subtle

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<sup>106</sup>Theophrastus, De Sens., 60, D.A. 135.

<sup>107</sup>Ibid., 64, D.A. 135.

<sup>108</sup>Sextus Empiricus, 8, 184. See above page 17. See also Natorp, op.cit., p. 165 n. 1.

fashion and is able to grasp the truth, that is, the nature of the atoms and void. It is not the sense-impressions which are divided, some leading to "genuine knowledge," some to "bastard knowledge" but all τὰ αἰσθητά form the subject material of σκοτίνη γνώμη and it is within the whole realm of the sense-impressions that σκοτίνη γνώμη must investigate λεπτότερον in order to discover the nature of reality. Democritus expressly states that "touch" belongs to σκοτίνη γνώμη<sup>109</sup> yet by Bailey's interpretation, touch would be valid in some cases but not in others. Burnet,<sup>110</sup> presumably with the same idea as Bailey, has gone so far as to state that Democritus has two meanings for the word "touch," one for what he terms the qualities of the "special senses" (secondary qualities), and one for the primary qualities. There is, however, no evidence to support this assumption.<sup>111</sup>

How exactly Democritus imagined that γνησίη γνώμη did grasp the ultimate realities must remain unknown, for we simply do not possess evidence to explain the process. It may well be that Democritus himself did not explain the process in detail, his strict materialism perhaps making this impossible. To explain in purely physical terms the method by which, for example, one assumes that the atoms are of infinite shapes because τὰ φαινόμενα are of infinite variety,<sup>112</sup> that is, to make a comparison and draw a conclusion, would be extremely difficult. Yet this is actually the

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<sup>109</sup>Sextus Empiricus, 7, 138, D.B. 11. Cf. also 7, 139.

<sup>110</sup>Burnet, op.cit., pp. 196-197.

<sup>111</sup>Burnet is wrong in stating that when Aristotle says that most of the physicists reduced all sensation to touch, (De Sens., 4, 442 a 29, D.A. 119) he is using "touch" to indicate the sense that perceives only the primary qualities.

<sup>112</sup>Aristotle, De Gen. et Corr., 1, 1, 315 b 6, D.A. (Leucippus) 9; see above page 30.

method Democritus used in determining the characteristics of the atoms and void, that is, the process of using the sensible objects as guides for determining the nature of the ultimate realities which the sense themselves could not perceive. γνησίη γνώμη arises διὰ τῆς διανοίας.<sup>113</sup>

Democritus taught that thinking was a change in the soul-atoms brought about by the touch of εἶδωλα from external objects. It may well be that the Atomist thought this was a sufficient explanation of thought, since it explained the process in strictly physical terms. This is as close as we come to a description of reasoning from our evidence on Democritus and it is actually the only notion, however inadequate it be, that we have of how γνησίη γνώμη functioned.<sup>114</sup>

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<sup>113</sup>Sextus Empiricus, 7, 138, D.B. 11.

<sup>114</sup>Cf. Guthrie, op. cit., pp. 464-465.

### CHAPTER THREE

#### EPICURUS: THE NATURE OF THE SOUL

Like Democritus, Epicurus taught that the soul was a corporeal entity composed of very fine particles:

ἡ ψυχὴ σῶμά ἐστι λεπτομερὲς<sup>1</sup>

The scholiast on Epicurus identifies the shape and quality of the soul atoms:

[ 'Επίκουρος] λέγει ἐν ἄλλοις καὶ ἐξ ἀτόμων [τὴν ψυχὴν] συγκεῖσθαι λειοτάτων καὶ στρογγυλωτάτων, πολλῶ τινι διαφερουσῶν τῶν τοῦ πυρός.<sup>2</sup>

Epicurus taught that the atoms of the soul were extremely smooth and round. Lucretius also states that the soul was composed of very small smooth particles, round in shape:

principio esse aio persubtilem atque minutis  
perquam corporibus factum constare (sc. animum)<sup>3</sup>

. . . (sc. animum) constare rotundis  
perquam seminibus debet perquamque minutis,<sup>4</sup>

nunc igitur quoniam <est> animi natura reperta  
mobilis egregie, perquam constare necessest  
corporibus parvis et levibus atque rotundis.<sup>5</sup>

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<sup>1</sup>Ep. H., 63.

<sup>2</sup>Σ Epicuri, Ep. H., 66, Usener, 311.

<sup>3</sup>Lucretius, 3, 177-178.

<sup>4</sup>Ibid., 3, 186-188.

<sup>5</sup>Ibid., 3, 203-205. Cf. also 3, 216-217, 228-230, and 425.

Lucretius cites as proofs of these statements on the nature of the soul the swiftness of thought<sup>6</sup> (3, 182-207) which must depend on the roundness and smoothness of the soul particles, and the absence of a change of weight in the body after the soul has departed (3, 208-227) which must be attributable to the lightness and small size of the soul atoms.

Of what nature then are these tiny particles that make up the soul? Epicurus describes three components of the soul:

ἡ ψυχὴ σῶμα . . . προσεμφερέστατον δὲ πνεύματι  
θερμοῦ τινα κρᾶσιν ἔχοντι καὶ πῆ μὲν τούτῳ  
προσεμφερές, πῆ δὲ τούτῳ. ἔστι δὲ τὸ μέρος  
πολλὴν παραλλαγὴν εἰληφὸς τῇ λεπτομερείᾳ καὶ  
αὐτῶν τούτων, συμπαθὲς δὲ τούτῳ μᾶλλον καὶ  
τῷ λοιπῷ ἀθροίσματι.<sup>7</sup>

The soul is like wind with an admixture of heat; besides these two components there is a "much subtler element." Lucretius gives a fuller, though less exact, account of the composition of the soul. He is less exact in that he states the components of the soul are particles of breath and heat rather than particles like those of πνεῦμα and θερμός. His account is fuller in that he speaks of the element of the soul, air, which is not mentioned by Epicurus in the Epistula ad Herodotum:

Nec tamen haec simplex nobis natura putanda est.  
tenvis enim quaedam moribundos deserit aura  
mixta vapore, vapor porro trahit aera secum.  
nec calor est quisquam, cui non sit mixtus et aer.  
rara quod eius enim constat natura, necessest  
aeris inter eum primordia multa moveri.  
iam triplex animi est igitur natura reperta;  
nec tamen haec sat sunt ad sensum cuncta creandum,  
nil horum quoniam recipit mens posse creare  
sensiferos motus † quaedamque mente volutat †.  
quarta quoque his igitur quaedam natura necessest

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<sup>6</sup>Note Epicurus' expression ἅμα νοήματι ("as quick as thought") in Ep. H., 48, 61, 83.

<sup>7</sup>Ep. H., 63.



attribuatur. east omnino nominis expers;  
 qua neque mobilius quicquam neque tenuius exstat,  
 nec magis e parvis et levibus ex elementis;  
 sensiferos motus quae didit prima per artus.<sup>8</sup>

Like Lucretius, Plutarch says the Epicureans believed the soul was composed of one substance like heat, one like wind, one like air and a fourth nameless element:

οἱ [Ἐπικούρειοι] μέχρι τῶν περὶ σάρκα τῆς ψυχῆς  
 δυνάμεων, αἷς θερμότητα καὶ μαλακότητα καὶ τόνον  
 παρέχει τῷ σώματι, τὴν οὐσίαν σὺμπληγνύντες αὐτῆς  
 ἕκ τινος θερμοῦ καὶ πνευματικοῦ καὶ ἀερῶδους οὐκ  
 ἐξικνούνται πρὸς τὸ κυριώτατον ἀλλὰ ἀπαγορεύουσι.  
 τὸ γὰρ ᾧ κρίνει καὶ μνημονεύει καὶ φιλεῖ καὶ μισεῖ,  
 καὶ ὅλως τὸ φρόνιμον καὶ λογιστικὸν ἕκ τινός φασιν  
 ἄκατονομάστου ποιότητος ἐπιγίνεσθαι.<sup>9</sup>

Aetius also supports Lucretius' statements that the soul was composed of four elements:

Ἐπίκουρος [τὴν ψυχὴν] κράμα ἐκ τεττάρων, ἐκ τοιοῦ  
 πυρώδους, ἐκ τοιοῦ ἀερῶδους, ἐκ τοιοῦ πνευματικοῦ,  
 ἐκ τεταρτοῦ τινὸς ἀκατονομάστου.<sup>10</sup>

Although he does not mention the "nameless element" Macrobius, like Lucretius, Plutarch and Aetius, includes "air" in his description of Epicurus' teaching:

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<sup>8</sup>Lucretius, 3, 231-245. Cf. also lines 3, 121-129 in which Lucretius mentions aer, ventus and vapor. Bailey (Commentary, Vol. 2, pp. 1006, 1009, 1026) is correct in pointing out that aer here is used as a synonym for ventus. That Lucretius mentions only two elements here (wind and heat), although he adds air later on (231-236) is probably due to the fact that he is not being technical in this passage (Bailey, Commentary, Vol. 2, p. 1009) rather than that he is using two different sources (A. Brieger, Epikurs Lehre von der Seele (Halle, 1893) p. 13) or is being inconsistent.

<sup>9</sup>Plutarch, Adv. Col., 20, 1118 d, Usener 314.

<sup>10</sup>Aetius, Pl., 4, 3, 11, Usener 315, Dox. Gr., p. 388.

Epicurus (animam dixit) speciem ex igne et aere et spiritus mixtam.<sup>11</sup>

In the light of these passages it seems clear that Epicurus taught the soul was composed of four elements. The reason that the element of air was not mentioned by Epicurus himself is to be found in the nature of the Epistula ad Herodotum. This epistle was intended for those who were fairly well acquainted with the teachings and terminology of Epicurus and was to serve only as a summary of the main principles of the system.<sup>12</sup> The description of the soul in the letter, therefore, can be thought to be simply a rough statement, it being very likely<sup>13</sup> that Epicurus did give an elaborate account of the soul in another work (the Magna Epitoma? <sup>14</sup>) which may well have been Lucretius' source.

Lucretius says it is because air, heat, and wind are seen to leave the dying body that these must be components of the soul. The fourth element, however, must be present to account for sensation.<sup>15</sup>

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<sup>11</sup>Macrobius, Commentarius ex Cicerone in Somnium Scipionis, 1, 14, 20, Usener 315. Cf. Alexander of Aphrodisias, De Anima, 1, 8, 127 U, Usener 315.

<sup>12</sup>Bailey, Greek Atomists, p. 389 and G. Strodach, The Philosophy of Epicurus (Northwestern University, 1963), p. 228. De Witt (Epicurus and His Philosophy (Minneapolis, 1954), p. 198) suggests that Epicurus does not mention the element of air, since air was the cause of repose (Aetius, Pl., 4, 3, 11) and Epicurus at this point in the Epistula ad Herodotum was dwelling upon the question of motion. This statement is not strictly accurate. At 63 Epicurus passed to a new topic (the nature of the soul and its functions) leaving the question of mobility (61-62); this question is not treated in the description of the soul.

<sup>13</sup>Note Diogenes Laertius' statement (10, 26) that Epicurus was a prolific writer, exceeding all before him in the number of his works.

<sup>14</sup>See Bailey, Greek Atomists, pp. 11 n.1, 229, and "Studi Lucreziani," in Lucretius, De Rerum Natura, edited by C. Giussani (Torino, 1896) Vol. 1, p. 9.

<sup>15</sup>Giussani (op.cit., p.187) and Bailey (Greek Atomists, p.391) point out that it is likely Epicurus took the idea of the nameless element from Aristotle's "quintessence." (See Cicero, Tusculanae Disputationes, 1, 22, 44-61; Academica Posteriora, 26-29, De Finibus, 4, 12). There is, however, an essential difference between Aristotle's "Fifth" element and Epicurus' "fourth" nature. The functions of the two are similar but the nameless element of Epicurus was strictly material in nature.

(sc. quarta natura) sensiferos motus quae didit prima per artus.  
prima cietur enim, parvis perfecta figuris;<sup>16</sup>

Epicurus also states that the fourth element was more able to feel in harmony with the body than the other soul elements:

τὸ μέρος ... συμπαθὲς δὲ τούτῳ μᾶλλον καὶ τῷ λοιπῷ ἀθροίσματι.<sup>17</sup>

Aetius states that the functions of all four elements were as follows:

ὧν τὸ μὲν πνεῦμα κίνησιν, τὸν δὲ ἀέρα  
ἡρεμίαν, τὸ δὲ θερμὸν τὴν φαινομένην  
θερμότητα τοῦ σώματος, τὸ δ' ἀκατονόμαστον τὴν  
ἐν ἡμῖν ἐμποιεῖν αἴσθησιν· ἐν οὐδενὶ γὰρ τῶν  
ὀνομαζομένων στοιχείων εἶναι αἴσθησιν.<sup>18</sup>

Epicurus taught that the soul and the body were closely united. The soul grows with the body (Epistula ad Herodotum, 64, 7, Lucretius, 3, 344-49). It lives united with the body (Lucretius, 3, 331-332). It provides the body with sensation (Epistula ad Herodotum, 63, 10; 64, 7-10). It is not only the soul present in the body that is capable of sensation, but the body itself, through the soul's presence, receives the power of sensation:

Quod superest, siquis corpus sentire refutat  
atque animam credit permixtam corpore toto  
suscipere hunc motum quem sensum nominamus,  
vel manifestas res contra verasque repugnat.  
quid sit enim corpus sentire quis adferet umquam,  
si non ipsa palam quod res dedit ac docuit nos?  
at dimissa anima corpus caret undique sensu;  
perdit enim quod non proprium fuit eius in aevo,  
multaque praeterea perdit cum expellitur aevo.<sup>19</sup>

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<sup>16</sup>Lucretius, 3, 245-246.

<sup>17</sup>Ep. H., 63.

<sup>18</sup>Aetius, Pl., 4, 3, 11, Usener 315; Dox. Gr., p. 388.

<sup>19</sup>Lucretius, 3, 350-358.

The soul renders the body capable of sensation only because it is enclosed within the body itself; body and soul, therefore, are dependent on each other for their existence.<sup>20</sup> Finally, the soul perishes at the same time as the body (Lucretius, 3, 437-439). To support this supposition Lucretius gives twenty-two proofs on the mortality of the soul in which he emphasizes again and again the strictly physical and perishable nature of the soul.<sup>21</sup>

Epicurus taught that the number of soul particles was smaller than the number of body particles. He indicates this when he speaks of "the sum of soul atoms, however small it be:"

τὸ δὲ λοιπὸν ἄθροισμα ... οὐκ ἔχει τὴν αἴσθησιν  
ἐκείνου ἀπηλλαγμένου, ὅσον ποτὲ ἐστὶ τὸ συντεῖνον  
τῶν ἀτόμων πλῆθος εἰς τὴν τῆς ψυχῆς φύσιν.<sup>22</sup>

Similarly Lucretius opposes Democritus' teaching that the soul particles alternated with the body particles on the ground that the particles of the soul were far fewer than those of the body:

nam cum multo sunt animae elementa minora  
quam quibus e corpus nobis et viscera constant,  
tum numero quoque concedunt et rara per artus  
dissita sunt dumtaxat;<sup>23</sup>

Regarding the soul's position in the body Epicurus says simply that the ψυχή is a body that is παρ' ὅλον τὸ ἄθροισμα παρειαρμένον.<sup>24</sup> Although in the Epistula ad Herodotum Epicurus speaks

<sup>20</sup>Ep.H., 64-65.

<sup>21</sup>Lucretius, 3, 417-827. Cf. Ep.H., 65, Sextus Empiricus, 9, 72, Plutarch, Contr. Epic. Beat., 27, 1104 e - 1105 b.

<sup>22</sup>Ep.H., 65. Cf. Lucretius, 3, 121-123 where he speaks of the few particles of wind and heat that leave the body at death.

<sup>23</sup>Lucretius, 3, 374-377.

<sup>24</sup>Ep. H., 63.

only of the ψυχή as a whole, there is also evidence that he taught that this soul, although of one nature, had two distinct parts, one located in the breast, the other distributed throughout the whole body. The scholiast states:

καὶ τὸ μὲν τι ἄλογον αὐτῆς, ὃ τῷ λοιπῷ παρεσπάρθαι σώματι· τὸ δὲ λογικὸν ἐν τῷ θώρακι, ὡς δῆλον ἔκ τε τῶν φόβων καὶ τῆς χαρᾶς.<sup>25</sup>

Lucretius terms τὸ ἄλογον, anima, τὸ λογικόν, animus:

Nunc animum atque animam dico coniuncta teneri  
inter se atque unam naturam conficere ex se,  
sed caput esse quasi et dominari in corpore toto  
consilium quod nos animum mentemque vocamus.  
idque situm media regione in pectoris haeret.  
hic exsultat enim pavor ac metus, haec loca circum  
laetitiae mulcent; hic ergo mens animusquest.  
cetera pars animae per totum dissita corpus  
paret et ad numen mentis momenque movetur<sup>26</sup>

Aetius also gives evidence that Epicurus taught there were two parts of the soul:

Ἐπίκουρος διμερῇ τὴν ψυχὴν, τὸ μὲν λογικὸν ἔχουσαν ἐν τῷ θώρακι καθιδρυμένον, τὸ δὲ ἄλογον καθ' ὅλην τὴν σύγκρισιν τοῦ σώματος διεσπαρμένον.<sup>27</sup>

Again the reason that Epicurus himself does not describe the division of the soul into two parts lies in the nature of the Epistula ad Herodotum. The advanced students for whom the epistle was intended would probably have been well acquainted with Epicurus' teachings on the nature of the soul.<sup>28</sup>

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<sup>25</sup> Σ Epicuri, Ep. H., 66, Usener 311.

<sup>26</sup> Lucretius, 3, 136-144. Cf. 3, 94-135.

<sup>27</sup> Aetius, Pl., 4, 46, Usener 312, Dox. Gr., p. 390. Cf. Aetius, Pl., 4, 5, 5, Usener 312 and Tertullian, De Anima, 15, Usener, 312.

<sup>28</sup> Cyril Bailey, Epicurus, The Extant Remains (Oxford, 1926), p. 226.

From these passages one can conclude that Epicurus taught that the mind (animus) was a concentration of pure soul particles located in the chest and that the soul (anima) was distributed throughout the body and was chiefly responsible for sensation.<sup>29</sup> Lucretius makes clear that the animus was the more important part of the soul.<sup>30</sup> It was the seat of emotion, will and thought; the anima was subordinate to the momen of the mind (3, 144). The animus was also dominantior ad vitam quam vis animai;<sup>31</sup> when the mind left the body, the anima followed instantly.

We come now to the question of how the four elements of the soul were placed in the body. Scholars have reached different conclusions on this point. Tohte,<sup>32</sup> Woltjer,<sup>33</sup> Munro,<sup>34</sup> and Taylor<sup>35</sup> believe that the animus was composed of the nameless element and the other three components but that the anima was composed only of the three, wind, heat and air. Brieger,<sup>36</sup> De Witt<sup>37</sup> and Farrington<sup>38</sup> believe the four elements formed the

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<sup>29</sup>Bailey, Commentary, Vol. 2, p. 1006.

<sup>30</sup>See lines 3, 136-144 quoted above on p. 52.

<sup>31</sup>Lucretius, 3, 397.

<sup>32</sup>T. Tohte, Epikurs Kriterien der Wahrheit (Clausthal, 1874), p. 4, ff.

<sup>33</sup>J. Woltjer, Lucretii Philosophia Cum Fontibus Comparata (Groningen, 1877), pp. 62 ff., 69 ff.

<sup>34</sup>Lucretius, De Rerum Natura, edited by H. Munro (London, 1900), Fourth Edition, pp. 187-188.

<sup>35</sup>A.E. Taylor, Epicurus (London, 1911), pp. 72-73. Taylor does not make clear whether he believes the animus was composed of all four soul elements or only the fourth element.

<sup>36</sup>Brieger, Epikurs Lehre von der Seele, p. 11. Brieger says, however, that the fourth element (= the mind) moves among the other three elements which are also present in the breast.

<sup>37</sup>De Witt, Epicurus and His Philosophy, pp. 201-202, 211. De Witt says the atoms of the soul are situated in the body, graded in relation to

animus, the other three the anima. In contrast to these scholars, Giussani<sup>39</sup>, Goedeckemeyer,<sup>40</sup> and Bailey<sup>41</sup> believe that both the anima and animus were composed of the four soul elements and that both were identical in composition, although they differed in respect to location and function. This question of the distribution of the soul elements is an important one since the placement of the quarta natura indicates how Epicurus believed sensation took place, whether it arose in the sense-organs themselves or whether it also involved the participation of the animus located in the breast.<sup>42</sup>

Epicurus himself gives us little evidence on this point, since he does not speak of the division of the soul into its two parts. He does say of the fourth element, however, that it was "more capable of feeling in harmony with the rest of the body"<sup>43</sup> than the other soul elements; this statement suggests that the nameless element was distributed throughout the body. Similarly he states that the ψυχή, which he subsequently describes as being composed of a substance like wind, one like heat and a much finer

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their mobility. The particles of the fourth element are located at the centre of the body; the particles of the other three are located nearer to or further from the surface depending upon their mobility.

<sup>38</sup>B. Farrington, The Faith of Epicurus (London, 1967), pp. 115-116.

<sup>39</sup>Giussani, op.cit., pp. 183-217.

<sup>40</sup>Goedeckemeyer, op.cit., p. 57 ff.

<sup>41</sup>Bailey, Greek Atomists, pp. 392, 580-87; Commentary, Vol. 2, pp. 1027 ff.

<sup>42</sup>We are discussing here only the question of the participation of the animus in the process by which the body becomes aware of objects stimulating it (sensation); the interpretation of sensation did take place in the mind. (See Chapters 4 and 5 below; cf. Bailey, Commentary, p. 1052.)

<sup>43</sup>See above p. 50.

substance (the nameless element), was spread throughout the body;<sup>44</sup> this again seems to indicate that Epicurus believed the quarta natura was present in the anima which was distributed throughout the body.

Lucretius gives full evidence on this question. He emphasizes that the mind and the soul have the same nature:

Nam animum atque animam dico coniuncta teneri  
inter se atque unam naturam conficere ex se,<sup>45</sup>

atque animam verbi causa cum dicere pergam,  
mortalem esse docens, animum quoque dicere credas,  
quatenus est unum inter se coniunctaque res est.<sup>46</sup>

He describes the relationship of the four soul elements as follows:

inter enim cursant primordia principiorum  
motibus inter se, nil ut secernier unum  
possit nec spatio fieri divisa potestas,  
sed quasi multae vis unius corporis exstant.  
quod genus in quovis animantum viscere vulgo  
est odor et quidam calor et sapor, et tamen ex his  
omnibus est unum perfectum corporis augmen.  
sic calor atque aer et venti caeca potestas  
mixta creant unam naturam et mobilis illa  
vis, initum motus ab se quae dividit ollis,  
sensifer unde oritur primum per viscera motus.  
nam penitus prorsum latet haec natura subestque  
nec magis hac infra quicquam est in corpore nostro  
atque anima est animae proporro totius ipsa.  
quod genus in nostris membris et corpore toto  
mixta latens animi vis est aminaеque potestas,  
corporibus quia de parvis paucisque creatast.  
sic tibi nominis haec expers vis facta minutis  
corporibus latet atque animae quasi totius ipsa  
proporrost anima et dominatur corpore toto.<sup>47</sup>

The four elements form a whole; none of them can be separated from the others nor can any one element exert its power independently of any other element. The particles of all four elements are constantly moving among

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<sup>45</sup>Lucretius, 3, 136-137.

<sup>46</sup>Ibid., 3, 422-424.

<sup>47</sup>Ibid., 3, 262-281.



one another; all four make up "one nature." Speaking specifically about the fourth nature, Lucretius states that it is present within the soul itself in a manner analogous to how the mind and soul are present in the body. By this statement Lucretius does not mean that the atoms of the fourth nature are hidden deep among the particles of the other three elements, that is, Lucretius is not describing a local arrangement of the atoms of the soul, since he plainly states (3, 262-265) that the atoms of all four elements move freely among one another.<sup>48</sup> By the terms latet, subest and infra Lucretius is expressing what can be called a scale of perceptibility.<sup>49</sup> Because of the nature of the atoms composing them, the particles of the body are such that they are nearer to perception by the senses than the particles of the soul which, owing to the nature of the atoms composing them, are too fine to be able to be perceived by the senses at all.<sup>50</sup> Thus in relation to a scale of perceptibility the atoms of the soul are less perceptible than those of the body. In a similar fashion, of the elements of the soul the quarta natura, because of the nature of its atoms, can be said to be less perceptible<sup>51</sup> than the other

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<sup>48</sup>In Greek Atomists (pp. 392, 585) Bailey states that the fourth nature was placed beneath the other three soul elements, that is, he believes that Lucretius was expressing a local relationship of the elements. It is clear, however, from his Commentary, Vol.2, pp. 1038-1039 that Bailey had come (rightly) to reject this view. Cf. T. Lucretius Carus, De Rerum Natura, edited by W.E.Leonard and S.B.Smith (Madison, 1942), p. 446.

<sup>49</sup>See Bailey, Commentary, Vol.2, pp.1033, 1036-39. Woltjer (op.cit., p.69) takes lines 273-274 as a reference to the restricted position of the fourth element in the breast; however the free movement of all four elements in the nature of the soul as a whole (262-265) refutes this interpretation. Woltjer emends the reading of infra to intra (274) which is unnecessary (Bailey, Commentary, Vol.2, p.1039); infra conveys the same idea as penitus latet, namely, the distance of the fourth element from perception by the senses, that is, the position of the element on the scale of perceptibility.

<sup>50</sup>Cf. Lucretius, 4,110 ff. See Bailey, Commentary, Vol.2, p.1039.

<sup>51</sup>Note that the fourth element is the least perceptible of the elements of the soul but is the most perceptive of the four. (Lucretius, 3, 246-248.)

three components and to be the element furthest from perception by the senses. In relation to the scale of perceptibility, therefore, the atoms of the fourth element are the least perceptible atoms in the body. In this sense there is "nothing below the fourth nature" (274) in the body and the nameless element can be called the anima animae. The passages of Lucretius makes clear that all four elements of the soul form one nature, that is, the composition of the anima and animus is identical, both containing the fourth element. In the united nature of the mind and soul, the particles of all four elements move freely among one another, although in relation to perceptibility, those of the fourth nature are "below" the other three.

The views of those who believe that the fourth element was restricted to the mind (either in union with the other three elements or by itself) are based in part on a statement of Plutarch:

τὸ γὰρ ᾧ κρίνει καὶ μνημονεύει καὶ φιλεῖ καὶ μισεῖ,  
καὶ ὅλως τὸ φρόνιμον καὶ λογιστικὸν ἔκ τινός φασιν  
'ἀκατονομάστου' ποιότητος ἐπιγίνεσθαι.<sup>52</sup>

Plutarch is mentioning some of the functions of the quarta natura which are also the functions Lucretius attributes to the mind (3, 139-144). One cannot, however, conclude on the basis of the similarity of these functions that the mind and the fourth element are identical.<sup>53</sup> The nameless element is also the cause of sensation,<sup>54</sup> a function not mentioned by Plutarch. The statement of Plutarch is an incomplete list of the functions of the fourth element and though it makes clear that the quarta natura was

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<sup>52</sup>Plutarch, Adv. Col., 20, 1118 ε, Usener 314.

<sup>53</sup>As Brieger, Epikurs Lehre von der Seele, p. 13.

<sup>54</sup>See above pp. 49-50.

certainly a part of the mind, it does not exclude the possibility that the fourth nature was present in the rest of the soul (anima) as well.<sup>55</sup>

The misunderstanding concerning the nature of the soul, namely that the fourth element is not present in the anima, results also from a misinterpretation of the following lines of Lucretius:

(sc. quarta natura) prima ciatur enim, parvis perfecta figuris;  
inde calor motus et venti caeca potestas  
accipit, inde aer; inde omnia mobilitantur,  
concutitur sanguis, tum viscera persentiscunt  
omnia, postremis datur ossibus atque medullis  
sive voluptas est sive est contrarius ardor.  
nec temere huc dolor usque potest penetrare neque acre  
permanere malum, quin omnia perturbentur  
usque adeo <ut> vitae desit locus atque animai  
diffugiant partes per caulas corporis omnis.  
sed plerumque fit in summo quasi corpore finis  
motibus: hanc ob rem vitam retinere valemus.<sup>56</sup>

Zeller,<sup>57</sup> Munro,<sup>58</sup> and Woltjer<sup>59</sup> take huc (252) as a reference to the fourth nature. In the light of this interpretation Woltjer<sup>60</sup> takes these lines very closely with the passage 3, 396-401, in which Lucretius states that if the mind departs from the body, the anima follows closely upon it and life comes to an end. Woltjer concludes from these two passages that

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<sup>55</sup>Bailey, Greek Atomists, p. 582. In a similar manner Brieger (Epikurs Lehre von der Seele, p. 14) says that since Lucretius states that both the mind (3, 138) and the quarta natura (3, 281) are predominant (dominare) in the body, these two must be identical. Both statements of Lucretius are true but are no reason for identifying the mind and the fourth element (Bailey, Greek Atomists, p. 583): Lucretius is simply saying that the mind is predominant as the seat of thought and emotion, the fourth nature, as the cause of sensation in the body.

<sup>56</sup>Lucretius, 3, 246-257.

<sup>57</sup>E. Zeller, Die Philosophie der Griechen (Leipzig, 1880), Third Edition, Vol. 3, p. 419 n. 2.

<sup>58</sup>Munro, op.cit., p. 188.

<sup>59</sup>Woltjer, op.cit., p. 69. Bailey in his Greek Atomists (p. 583) accepted this interpretation but rejected it in his Commentary (Vol. 2, p. 1031).

<sup>60</sup>Woltjer, loc.cit.

the mind and the fourth nature must be identical, since the destruction of either of them causes death. Woltjer's interpretation (Zeller's and Munro's also) that huc refers to the fourth element can be questioned. It is far more likely that huc refers to the "bones and marrow."<sup>61</sup> Huc could hardly mean the quarta natura since the latter is the first element of the soul to be moved during the process of sensation (3, 246-256). If a violent pain did penetrate to the bones and marrow, a disruption would occur, causing the soul to leave the body; usually, however, the blow is checked at the surface of the body. This passage of Lucretius, therefore, cannot be taken as proof that the fourth element was not present in the anima.

The evidence of Lucretius and Epicurus himself supports the view that Epicurus taught that both the animus and anima were composed of all four soul elements. If, however, Epicurus did believe that the fourth element was restricted to the mind, the process of sensation would have to involve the animus, since the fourth nature was the cause of sensation. Thus Tohte,<sup>62</sup> Woltjer,<sup>63</sup> Brieger,<sup>64</sup> Munro,<sup>65</sup> Taylor,<sup>66</sup> and De Witt<sup>67</sup> state that the atoms of the anima are moved by idols but it is not until the

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<sup>61</sup>Bailey, Commentary, Vol. 2, p. 1031.

<sup>62</sup>Tohte, op.cit., pp. 5-6.

<sup>63</sup>Woltjer, op.cit., p. 68.

<sup>64</sup>Brieger, Epikurs Lehre von der Seele, p. 17.

<sup>65</sup>Munro, op.cit., p. 191.

<sup>66</sup>Taylor, op.cit., p. 73.

<sup>67</sup>De Witt, Epicurus and His Philosophy, p. 201.

mind-atoms (that is, the fourth nature) are also struck in some fashion<sup>68</sup> and the effect transmitted again to the atoms of the anima which had been first moved, that sensation arises. A statement of Lucretius, however, does make it plain that it is the fourth nature, present in whatever portion of the anima that is found in the sense-organs, that gives rise to sensation:

Dicere porro oculos nullam rem cernere posse,  
sed per eos animum ut foribus spectare reclusis,  
difficilest, contra cum sensus ducat eorum;  
sensus enim trahit atque acies detrudit ad ipsas;  
fulgida praesertim cum cernere saepe nequimus,  
lumina luminibus quia nobis praepediuntur.  
quod foribus non fit; neque enim, qua cernimus ipsi,  
ostia suscipiunt ullum reclusa laborem.<sup>69</sup>

In this passage Lucretius denies that the mind participates in the act of vision. The sensation of the eyes themselves makes this clear, since we cannot see blazing lights; if it were the mind that was responsible for vision, blazing lights would have no effect on the ability to see. Moreover, the feeling in the eyes "draw us to the very pupils (acies),"

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<sup>68</sup>Taylor (op.cit., p. 73) and Zeller (Die Philosophie der Griechen, Vol. 3, p. 421) suggest the idols themselves must pass through the body and strike the mind. (Taylor is not referring to those fine idols which, being too subtle to stir the sense-organs, do strike the mind directly (Lucretius, 4, 749-776) but the idols that stir the senses). Lines 3, 359-366 of Lucretius refute Taylor's view. In this passage Lucretius rejects the teaching that the eyes themselves do not see but the mind looks through them as though through open portals. If, as Taylor suggests, the idols pass through the sense-organs to the mind itself, the sense-organs would play no role but merely be passages to the mind. It is just such a view of the mind and the senses that Lucretius opposes. Tohte (op.cit., pp. 4-5) suggests that the idols causing sensation come only as far as the sense-organs but a picture of the object travels to the mind "ohne Materie." Bailey (Greek Atomists, p. 418), however, points out that in the purely material system of Epicurus, an image of "immaterial form" is an impossibility.

<sup>69</sup>Lucretius, 3, 359-366.

that is, it leads us to believe that the eyes themselves see, not the mind through them.<sup>70</sup> Just as the body as a whole possesses sensation because of the presence of the anima (Lucretius, 3, 350-358), so the eyes too in particular have the power of sensation because of the anima present in them; it is not merely the mind, looking through the eyes, that is able to see. It is clear, moreover, that if the eyes are able to perceive, the soul particles which the eyes contain must possess atoms of the fourth element.

Finally in relation to this question of the involvement of the animus in sensation a passage of Aetius has caused some difficulty:

Οἱ Στωικοὶ τὰ μὲν πάθη ἐν τοῖς πεπονθόσι τόποις,  
τὰς δὲ αἰσθήσεις ἐν τῷ ἡγεμονικῷ. Ἐπίκουρος καὶ  
τὰ πάθη καὶ τὰς αἰσθήσεις ἐν τοῖς πεπονθόσι τόποις,  
τὸ δὲ ἡγεμονικὸν ἀπαθές.<sup>71</sup>

It is the interpretation of this last statement, τὸ δὲ ἡγεμονικὸν ἀπαθές, that has posed a problem in interpretation. Goedeckemeyer<sup>72</sup> and Tohte<sup>73</sup> say that the statement is wrong since Lucretius (3, 141) points out that the mind is the seat of emotion, that is, the mind is the seat of feeling

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<sup>70</sup>Woltjer (op.cit., p. 68) and Munro (op.cit., p. 193) assume as the object of trahit (362) the word "animum": the feeling in the eyes also brings about some effect upon the mind and after the mind has been stirred in this way, vision results. This interpretation must be rejected since Woltjer and Munro, by saying that the animus must participate in sight, are stating exactly the view which Lucretius is rejecting. Cf. Bailey, Commentary, Vol. 2, p. 1055.

<sup>71</sup>Aetius, Pl., 4, 23, 1-2, Dox. Gr., p. 414. Cf. Usener 317.

<sup>72</sup>Goedeckemeyer, op.cit., p. 58.

<sup>73</sup>Tohte, op.cit., p. 6.

and consequently cannot be called ἀπαθείς. These scholars refer also to the scholium on Epicurus' Epistula ad Herodotum (66) which states that the mind must reside in the breast since the latter is the seat of fear and joy, Usener<sup>74</sup> brackets this passage of Aetius following Diels<sup>75</sup> who says the statement is clearly false. Diels agrees with Zeller<sup>76</sup> and Munro<sup>77</sup> who suggest that in this statement Aetius is attempting to express the ideas found in Lucretius 3, 252-257.<sup>78</sup> Bailey<sup>79</sup> and Giussani,<sup>80</sup> however, take the statement as support of the view that Epicurus believed sensation took place in the sense-organs, not the mind. This certainly appears to be the point Aetius is making. The mind is ἀπαθείς in the sense that it is not the place in which sensation takes place. In this passage ἀπαθείς must be thought to have a very restricted meaning<sup>81</sup> with no reference to the mind as the seat of emotion nor to the mind's ability to perceive idols that are too fine to affect the senses. Taken in this light the passage does support Epicurus' view of sensation as expressed by Lucretius: sensation takes place in the sense-organs themselves after the particles of the fourth element present there in the anima have been stirred.

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<sup>74</sup>Usener, op.cit., #317, p. 220.

<sup>75</sup>Diels, Doxographi Graeci, p. 414, "Prolegomena," pp. 219-220.

<sup>76</sup>Zeller, Die Philosophie der Griechen, Vol.3, p. 419 n.2.

<sup>77</sup>Munro, op.cit., p.188.

<sup>78</sup>Zeller and Munro, however, are misled in this interpretation since they believe huc (see above pp.58-59) refers to the fourth nature which they believe was restricted to the mind. Thus they believe Lucretius is speaking of the mind in this passage and stating that, if pain penetrates to the mind, death must follow. The scholars think that Aetius, expressing this idea, stated that the mind must be ἀπαθείς.

<sup>79</sup>Bailey, Greek Atomists, pp. 586-87. <sup>80</sup>Giussani, op.cit., p. 195.

<sup>81</sup>Bailey, Greek Atomists, p. 586.

## CHAPTER FOUR

### THE TWO CRITERIA: SENSATION AND PROLEPSIS

Having established Epicurus' teaching on the nature of the soul we can now discuss the question of how the mind was made aware of the external world and how it dealt with the data provided by the senses. This will lead to a discussion of the nature of two criteria of truth that Epicurus mentions,<sup>1</sup> namely αἴσθησις and πρόληψις, and of the important role these played in his theory of knowledge.

Although sensation occurred in the sense-organs,<sup>2</sup> Epicurus believed the interpretation of the nature of the sense-impression was a function of the mind.<sup>3</sup> How then did the mind become aware of the objects impinging upon the sense-organs? Epicurus himself gives us no evidence on this point. It is unlikely that the idols causing sensation passed right through the body to the mind.<sup>4</sup> Bailey<sup>5</sup> suggests the stimulation of

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<sup>1</sup>The πάθη, the feelings of pleasure and pain that Epicurus believed attended each sensation, were also called a criterion of truth (Diogenes Laertius, 10, 31). These play an important role in Epicurus' ethics. See Tohte, op.cit., p. 19, and Bailey, Greek Atomists, pp.248-59, 485 ff.

<sup>2</sup>See previous chapter.

<sup>3</sup>How this occurs will be discussed below.

<sup>4</sup>See above footnote 67, p. 59.

<sup>5</sup>Bailey, Greek Atomists, pp. 244, 417-418.



the sense-organs caused a movement to take place along a chain of soul-atoms leading directly to the mind. In absence of direct evidence we can only imagine that in some fashion, through a strictly physical process, the mind was stirred with each sense-impression and stimulated to perform the act of interpreting the sensation.

According to Epicurus' teaching, the mind in addition to being stirred in some way with each impression made upon the senses also acted itself like an organ of sense. It was directly stimulated by idols too fine to affect the sense-organs:

quae cum mobiliter summa levitate feruntur,  
 . . . facile uno commovet ictu  
 quaelibet una animum nobis subtilis imago;<sup>6</sup>

nunc igitur quoniam docui me forte leonem  
 cernere per simulacra, oculos quaecumque lacesunt,  
 scire licet mentem simile ratione moveri,  
 per simulacra leonem <et> cetera quae videt aequae  
 nec minus atque oculi, nisi quod mage tenuia cernit.<sup>7</sup>

One instance of the idols that can affect the mind directly is the *συστάσεις*, compound idols formed by *εἰδῶλα* which have

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<sup>6</sup>Lucretius, 4, 745-747. The mind can be struck by a single idol (*uno ictu*) unlike the eyes which can only perceive the impression made by a series of idols. See Bailey, *Commentary*, Vol. 3, pp. 1268, 1270. See also below on *φαντασία*.

<sup>7</sup>Lucretius, 4, 752-756. Lucretius is emphasizing here that the process by which the mind is stirred by finer idols is the same as that by which the senses are stirred. He is not saying that the mind is moved by exactly the same idols as the senses; it is only the *mage tenuia* idols that strike the mind. Cf. R. English, "The Lucretian Theory of Sense Perception," *CW* 14 (1911), p. 105.

joined together in the air:

καὶ συστάσεις ἐν τῷ περιέχοντι ὀξεῖαι διὰ τὸ μὴ  
δεῖν κατὰ βάθος τὸ συμπλήρωμα γίνεσθαι.<sup>8</sup>

The visions of Centaurs and Scyllas can be attributed to such combinations of idols; these are too fine to stimulate the eyes but are able to move the mind.<sup>9</sup> The idols causing dreams and also the visions of madmen form another example of the direct stimulation of the mind:

Ἐνύπνια οὐκ ἔλαχε φύσιν θείαν οὐδὲ μαντικὴν  
δύναμιν, ἀλλὰ γίνεται κατὰ ἔμπτωσιν εἰδώλων.<sup>10</sup>

ἐπὶ γοῦν τοῦ Ὀρεστοῦ, ὅτε ἐδόκει βλέπειν τὰς  
Ἑρινύας, ἡ μὲν αἰσθησις ὑπ' εἰδώλων κινουμένη  
ἀληθὴς ἦν (ὑπέκειτο γὰρ τὰ εἴδωλα)<sup>11</sup>

Similarly the εἴδωλα that flow from the bodies of the gods are directly perceived by the mind:

nec de corpore quae sancto simulacra feruntur  
in mentis hominum divinae nuntia formae,<sup>12</sup>

Epicurus . . . docet eam esse vim et naturam deorum ut  
primum non sensu sed mente cernantur<sup>13</sup>

[Ἐπίκουρός] φησι τοὺς θεοὺς λόγῳ θεωρητοῦς<sup>14</sup>

Finally the mind can be stirred by subtle idols that have remained in existence after the people from whom they arose either have died or are absent:

<sup>8</sup>Ep. H., 48.

<sup>9</sup>Lucretius, 4, 131, 724-33, 738.

<sup>10</sup>Epicurus, Sent. Vat., 24. Cf. Lucretius, 4, 26-41.

<sup>11</sup>Sextus Empiricus, 8, 63, Usener 253.

<sup>12</sup>Lucretius, 6, 76-77. Cf. 5, 1169-1171.

<sup>13</sup>Cicero, De Nat. Deor., 1, 19, 49, Usener 352. Cf. Sextus Empiricus, 9, 25, Usener 353.

<sup>14</sup>Σ Epicuri, K.D., 1, Usener 355. Cf. also Aetius, Pl., 1, 7, 34, Dox.Gr., p. 306, Usener 355. Here the same phrase λόγῳ θεωρητοῦς is used.

nec ratione alia, cum somnus membra profudit,  
mens animi vigilat, nisi quod simulacra lacessunt  
haec eadem nostros animos quae cum vigilamus,  
usque adeo, certe ut videamur cernere eum quem  
relicta vita iam mors et terra potitast.<sup>15</sup>

Not only do idols of people who are no longer present stir the mind but also the εἰδωλα from events and activities that have taken place in the past:

et quicumque dies multos ex ordine ludis  
assiduas dederunt operas, plerumque videmus,  
cum iam destiterunt ea sensibus usurpare,  
reliquas tamen esse vias in mente patentis,  
qua possint eadem rerum simulacra venire.<sup>16</sup>

In the case of these past events, "passages" (along which presumably the image was carried to the mind after the simulacra stimulated the senses)<sup>17</sup> remained open through which the finer εἰδωλα could travel. From this statement of Lucretius we can assume that in the case of the other idols which affect the mind directly some "passages" to the mind existed as well.<sup>18</sup>

It is important to note that before the mind can perceive any of these mage tenvia idols, it must direct its attention to them.<sup>19</sup> It

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<sup>15</sup>Lucretius, 4, 757-761. See also Cicero's ironical statement in Epistulae ad Familiares, 15, 16, 1.

<sup>16</sup>Lucretius, 4, 973-977. Cf. 4, 26-41.

<sup>17</sup>Bailey, Commentary, Vol. 3, p. 1297.

<sup>18</sup>Note also Plutarch's statement (Quaestiones Convivales, 8, 10, 2, 735 A) that Epicurus accepted Democritus' belief that the idols causing dreams ἐγκαταβυσσοῦσθαι τὰ εἰδωλα διὰ τῶν πόρων εἰς τὰ σώματα....

<sup>19</sup>The technical term for this is ἐπιβολὴ τῆς διανοίας. This will be discussed more fully in the following chapter.

is precisely the presence of innumerable images in every place and the ability of the mind to direct its attention to these images that enable the mind to think of whatever it wishes:

propterea fit uti quovis in tempore quaeque  
praesto sint simulacra locis in quisque parata:

et quia tenvia sunt, nisi quae contendit, acute  
cernere non potis est animus; proinde omnia quae sunt  
praeterea pereunt, nisi <si ad> quae se ipse paravit.<sup>20</sup>

cum maximis voluptatibus in eas imagines mentem intentam  
infixamque nostram intellegentiam capere quae sit et  
beata natura et aeterna.<sup>21</sup>

Epicurus gives no evidence on how the mind turns its attention to the idols which strike it. Lucretius does point out, however, that such visions of the mind occur when the senses and the memory are at rest (4, 763 ff). When the mind is free from being stirred by the images arising from the stimulation of the sense-organs, it can turn its attention to the type of idol that can strike it directly.

We have now seen in what way Epicurus believed the mind became aware of the external world. How then did he view the information provided by the senses? Did he consider it trustworthy in presenting a true picture of sensible objects or did he, like Democritus, consider sense-impressions deceptive? There is abundant evidence for Epicurus' views on this point. He states in the Epistula ad Herodotum:

Μετὰ δὲ ταῦτα δεῖ συνορᾶν ἀναφέροντα ἐπὶ τὰς αἰσθήσεις  
... (οὕτω γὰρ ἡ βεβαιοτάτη πίστις ἔσται)<sup>22</sup>

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<sup>20</sup>Lucretius, 4, 797-798, 802-804. See also 4, 777-795.

<sup>21</sup>Cicero, De Nat. Deor., 1, 19, 49-50, Usener 352.

<sup>22</sup>Ep. H., 63.

ἔτι τε κατὰ τὰς αἰσθήσεις δεῖ πάντα τηρεῖν<sup>23</sup>

The Epistula ad Pythoclem also states:

οὐ γὰρ κατὰ ἀξιώματα κενὰ καὶ νομοθεσίας φυσιολογητέον,  
ἀλλ' ὥς τὰ φαινόμενα ἐκκαλεῖται.<sup>24</sup>

Lucretius strongly asserts the truth of sensation:

nam contra sensus ab sensibus ipse (sc. Heraclitus) repugnat  
et labefactat eos, unde omnia credita pendent,<sup>25</sup>

quid nobis certius ipsis  
sensibus esse potest, qui vera ac falsa notemus?<sup>26</sup>

invenies primis ab sensibus esse creatam  
notitiam veri neque sensus posse refelli.  
nam maiore fide debet reperiri illud,  
sponte sua veris quod possit vincere falsa.  
quid maiore fide porro quam sensus haberi  
debet?<sup>27</sup>

Plutarch and Sextus Empiricus give similar evidence about Epicurus' views:

δεῖ δὲ αἰσθήσει μὲν μηδεμιᾷ μάχεσθαι.<sup>28</sup>

ὁ δὲ Ἐπίκουρος ἔλεγε μὲν πάντα τὰ αἰσθητὰ εἶναι ἀληθῆ<sup>29</sup>

ὁ δὲ Ἐπίκουρος πάντα ἔλεγε τὰ αἰσθητὰ τοιαῦτα ὑποκεῖσθαι  
ὅποια φαίνεται καὶ κατ' αἰσθησιν προσπίπτει, μηδέποτε  
ψευδομένης τῆς αἰσθήσεως<sup>30</sup>

<sup>23</sup>Ep. H., 38. Cf. also 68 and 82.

<sup>24</sup>Ep. P., 86. This letter is probably not by Epicurus himself but is rather an abridged compilation of some longer work of Epicurus. Nonetheless the letter appears to contain teachings that are strictly in accord with Epicurean tradition. See Usener, Epicurea, XXXVII-XXXIX, Bailey, Epicurus, pp. 275-276, Greek Atomists, p. 228.

<sup>25</sup>Lucretius, 1, 693-694.

<sup>26</sup>Ibid., 1, 699-700.

<sup>27</sup>Ibid., 4, 478-483; cf. also 1, 422-425.

<sup>28</sup>Plutarch, Adv. Col., 5, 1109 d, Usener 250.

<sup>29</sup>Sextus Empiricus, 8, 63, Usener 253.

<sup>30</sup>Ibid., 8, 185, Usener 247.

ὁ δὲ Ἐπίκουρος τὰ μὲν αἰσθητὰ πάντα ἔλεγεν ἀληθῆ καὶ ὄντα. οὐ διήνεγκε γὰρ ἀληθὲς εἶναί τι λέγειν ἢ ὑπάρχον. <sup>31</sup>

Epicurus believed that each sense-impression gave a true picture of the sensible object in the particular conditions in which that object was present. For example, the sense-impression that shows an oar bent in water is true since it reveals the actual appearance of a straight oar in water.<sup>32</sup> Similarly the sense-impression that shows a square tower at a distance as round is true since it presents a true picture of how a square tower actually appears in these particular circumstances, that is, at some distance away. Epicurus taught that one should accept the evidence of the senses as ἀληθῆ and ὄντα; the senses give a true picture of objects which really exist. For this reason Epicurus called the senses a standard of truth:

ἐν τοίνυν τῷ Κανόνι λέγων ἔστιν ὁ Ἐπίκουρος κριτήρια τῆς ἀληθείας τὰς αἰσθήσεις<sup>33</sup>

In the passages quoted so far, the terms used for "sensation" have been αἰσθησις, τὰ αἰσθητά and τὰ φαινόμενα. There is also evidence that Epicurus taught that every φαντασία was true. It seems clear that Epicurus himself used this term to refer to the image

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<sup>31</sup>Sextus Empiricus, 8, 9, Usener 244. Other passages in which Epicurus is said to have asserted the truth of sensation are Sextus Empiricus, 7, 369; Olympiodorus, In Platonis Phaedo, 80,T, Tertullian, De Anima, 17; Augustine, De Civitate Dei, 8, 7, (all in Usener 247), Cicero, Academica Priora, 2, 26, 82 (Usener 247), 2, 7, 19 (Usener 252) and Cicero, De Finibus, 1, 9, 30 (Usener 256).

<sup>32</sup>See Plutarch, Adv. Col., 25, 1121 A, Usener 252.

<sup>33</sup>Diogenes Laertius, 10, 31. Cf. Cicero, Academica Priora, 2, 46, 142 where the senses are called a iudicium and Diogenes Laertius, 9, 106 where the senses are once again called a κριτήριον.

created in the eye as a result of a swift succession of idols;<sup>34</sup> the eye is only able to perceive an image formed by many idols since it cannot perceive the idols individually.

sunt igitur iam formarum vestigia certa  
quae vulgo volitant subtili praedita filo  
nec singillatim possunt secreta videri.<sup>35</sup>

καὶ ἦν ἂν λάβωμεν φαντασίαν ἐπιβλητικῶς τῇ διανοίᾳ  
ἢ τοῖς αἰσθητηρίοις εἴτε μορφῆς εἴτε συμβεβηκότων,  
μορφὴ ἐστὶν αὕτη τοῦ στερεομένου, γινομένη κατὰ τὸ  
ἕξῃς πύκνωμα ἢ ἐγκατάλειμμα τοῦ εἰδώλου.<sup>36</sup>

The φαντασία is "the shape of the solid object" that is, it is a true representation of the sensible object. When Aetius, Sextus Empiricus, and Plutarch, however, report that Epicurus taught every φαντασία was true, they use the term to signify any sense-impression and φαντασία is used simply as a synonym for αἴσθησις:<sup>37</sup>

Ἐπίκουρος πᾶσαν αἴσθησιν καὶ πᾶσαν φαντασίαν ἀληθῆ<sup>38</sup>

τὴν φαντασίαν ... διὰ παντὸς ἀληθῆ φησιν [Ἐπίκουρος]  
ὑπάρχειν.<sup>39</sup>

Ἐπικουρεῖω δόγματι κέχρηται τῷ 'πάσας εἶναι τὰς δι'  
αἰσθήσεως φαντασίας ἀληθεῖς.'<sup>40</sup>

<sup>34</sup>Bailey, *Epicurus*, p. 196, *Greek Atomists*, p. 410 n.3. The evidence on Epicurus' views of φαντασία is slight since the word occurs only twice in his extant works (*Ep.H.*, 50, 80). That the term was an important one in Epicurus' system is shown by the fact that one of his works was called *Περὶ φαντασίας* (Diogenes Laertius, 10, 28).

<sup>35</sup>Lucretius, 4, 87-89. Cf. 4, 256-258. <sup>36</sup>*Ep.H.*, 50.

<sup>37</sup>Tohte, *op.cit.*, p. 6, Zeller, *Die Philosophie der Griechen*, Vol. 3, p. 388 n.3, and W.A. Heidel, "Epicurea," *AJP* 23 (1902), p. 187.

<sup>38</sup>Aetius, *Pl.*, 4, 95, Usener 248, *Dox.Gr.*, p. 396.

<sup>39</sup>Sextus Empiricus, 7, 203, Usener 247. Cf. also 8, 63.

<sup>40</sup>Plutarch, *Adv. Col.*, 4, 1109 a, Usener 250. Cf. 25, 1121 d, Usener 252.

Epicurus accepted the truth of αἴσθησις because it was ἄλογος ; the senses neither add to nor detract from the impression made by an external object:

πάντα γὰρ φησὶν, αἴσθησις ἄλογός ἐστι καὶ μνήμης οὐδεμιᾶς  
δεκτικὴ οὔτε γὰρ ὑφ' αὐτῆς κινεῖται, οὔτε ὑφ' ἑτέρου  
κινήσεισα δύναται τι προσθεῖναι ἢ ἀφελεῖν. οὐδὲ ἐστὶ  
τὸ δυνάμενον αὐτὰς διελέγξαι.<sup>41</sup>

τὴν τε αἴσθησιν ἀντιληπτικὴν οὔσαν τῶν ὑποπιπτόντων  
αὐτῇ, καὶ μήτε ἀφαιρουσάν τι μήτε προστιθεῖσαν μήτε  
μετατιθεῖσαν τῷ ἄλογον εἶναι, διὰ παντός τε ἀληθεύειν  
καὶ οὕτω τὸ ὄν λαμβάνειν ὡς εἶχε φύσεως αὐτὸ ἐκείνο.  
πάντων δὲ τῶν αἰσθητῶν ἀληθῶν ὄντων<sup>42</sup>

Furthermore Epicurus supports his belief in the truth of sensation through the following three points:<sup>43</sup> a sensation arising in one sense-organ cannot refute another sensation arising in the same sense-organ since both have equal validity; sensations arising in different sense-organs cannot refute one another (for example, taste cannot refute sight); reason cannot refute sensation since its origin lies in sensation itself.

Not only did Epicurus believe that every sensation was true but also that, if the truth of one sensation was rejected, no standard of truth could exist.

eo enim rem demittit Epicurus, si unus sensus semel in  
vita mentitus sit, nulli umquam esse credendum.<sup>44</sup>

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<sup>41</sup>Diogenes Laertius, 10, 32. Cf. Lucretius, 4, 480 ff.

<sup>42</sup>Sextus Empiricus, 8, 9, Usener 247; cf. Lucretius, 4, 486-98.

<sup>43</sup>Diogenes Laertius, 10, 32. Cf. Lucretius, 4, 480 ff.

<sup>44</sup>Cicero, Academica Priora, 2, 25, 79, Usener 251. Cf. also 2, 32, 101.



timuit Epicurus ne si unum visum esset falsum nullum  
esset verum: omnis sensus veri nuntios dixit esse.<sup>45</sup>

Furthermore not only the sense-impressions made upon the sense-organs were true but also the impressions made directly upon the mind by the idols causing dreams, the delusions of madmen and the visions of the gods:

τά τε τῶν μαινομένων φαντάσματα καὶ <τὰ> κατ' ὄναρ  
ἀληθῆ, κινεῖ γάρ· τὸ δὲ μὴ ὄν οὐ κινεῖ.<sup>46</sup>

εἰς τὸ αὐτὸ συνενεγκόντες ἐκ τῶν ἐνυπνίων καὶ τῶν  
παρακοπῶν οὐδὲν εἶναί φασι παρόραμα τούτων οὐδὲ ψεύδος  
οὐδὲ ἀσύστατον, ἀλλὰ φαντασίας ἀληθεῖς ἀπάσας καὶ  
σώματα καὶ μορφὰς ἐκ τοῦ περιέχοντος ἀφικουμένας.<sup>47</sup>

Epicurus believed all αἰσθησεις were ἀληθεῖς ; how  
then did he explain that people often hold incorrect notions of sensible  
objects as a result of sense-impressions? Before we can discuss Epicurus'  
solution of this problem, the nature of the πρόληψις must be made  
clear.

Epicurus taught that the prolepsis, like sensation, was a  
criterion of truth.<sup>48</sup> Its nature is described by Diogenes Laertius as  
follows:

Τὴν δὲ πρόληψιν λέγουσιν οἷον εἰ κατάληψιν ἢ δόξαν ὀρθὴν  
ἢ ἐννοίαν ἢ καθολικὴν νόησιν ἐναποκειμένην, τοῦτ' ἐστὶ  
μνήμην τοῦ πολλάκις ἔξωθεν φανέντος, οἷον τὸ τοιοῦτόν  
ἐστὶν ἄνθρωπος· ἅμα γὰρ τῷ ῥηθῆναι ἄνθρωπος εὐθὺς  
κατὰ πρόληψιν καὶ ὁ τύπος αὐτοῦ νοεῖται προηγούμενων  
τῶν αἰσθήσεων. παντὶ οὖν ὀνόματι τὸ πρῶτως ὑποτεταγ-  
μένον ἐναργές ἐστι. καὶ οὐκ ἂν ἐζητήσαμεν τὸ ζητούμενον,

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<sup>45</sup>Cicero, De Nat. Deor., 1, 25, 70.

<sup>46</sup>Diogenes Laertius, 10, 32. Cf. also Sextus Empiricus, 8, 63  
quoted on page 65 concerning the truth of Orestes' visions of the  
Furies.

<sup>47</sup>Plutarch, Adv., Col., 28, 1123 b-c, Usener 254.

<sup>48</sup>Diogenes Laertius, 10, 31. Cf. Cicero, Academica Priora, 2, 46,  
142 (notitiis).

εἰ μὴ πρότερον ἐγνώκειμεν αὐτό· οἷον τὸ πόρρω ἐστὼς ἵππος ἐστὶν ἢ βούς· δεῖ γὰρ κατὰ πρόληψιν ἐγνωκέναι ποτὲ ἵππου καὶ βόος μορφήν. οὐδ' ἂν ὠνομάσαμεν τι μὴ πρότερον αὐτοῦ κατὰ πρόληψιν τὸν τύπον μαθόντες. ἔναργεῖς οὖν εἰσιν αἱ προλήψεις.<sup>49</sup>

Epicurus taught that the prolepsis was a general or universal concept of a class of objects; it was an "universal idea stored in the mind," "a recollection of what has often been presented from without." Our sources give no detailed explanation of how Epicurus believed prolepseis were formed by the mind. We can, however, form some idea of the process by using Diogenes Laertius' description of the prolepsis and keeping in mind Epicurus' belief in the strictly physical nature of the mind and its activities. It appears that the mind stores up both the individual images conveyed to it each time the senses are stimulated and those images it perceives directly, placing similar images together. When several similar images have been stored together, in some fashion -- we must imagine a strictly physical process -- the mind joins together these similar images, placing aside the individual differences, and forms a "concept" or general picture of what all the images represent. Thus, for example, the mind, having received several images of different men, combines these images, selecting out what is common to all of them and allowing the individual differences to disappear and in this way forms a prolepsis, a concept of "man." The prolepsis once formed can be used by the mind to classify new sense-impressions. The concepts act as "anticipations" of future sense-impressions of the same nature; thus they can be termed προλήψεις, "anticipations." Moreover, since the concepts are built from previous

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<sup>49</sup>Diogenes Laertius, 10, 33.

sensations, they themselves can be called true.<sup>50</sup> Because they represent composite pictures of individual sense-impressions, their validity can be thought to be equal to the validity of sensation itself and thus the prolepseis act as criteria of truth. Not only are prolepseis true but also "clear," ( ἐναργεῖς ) ; they present a distinct and well-defined picture of some object to the mind.<sup>51</sup>

Epicurus believed the prolepsis was a necessary requirement if one was to make any inquiry or be able to gain an understanding of the nature of anything. Thus Diogenes Laertius in his description of prolepsis said that "we could not seek the object of our investigation unless we had known it beforehand." Prolepsis makes investigation possible. Cicero and Clement also emphasize this feature of the concept:

sine qua (sc. prolepsis) nec intellegi quicquam nec quaeri nec disputari possit.<sup>52</sup>

μὴ δύνασθαι δὲ μηδένᾳ μῆτε ζητῆσαι μῆτε ἀπορῆσαι μηδὲ μὴν δοξάσαι, ἀλλ' οὐδὲ ἐλέγξειν χωρὶς προλήψεως.<sup>53</sup>

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<sup>50</sup>Zeller, Die Philosophie der Griechen, Vol. 3, p. 390, Taylor, op.cit., 48, 50 and Ritter and Preller, op.cit., p. 379. Bailey (Greek Atomists, p. 246) states that the prolepseis are ἐναργεῖς but not ἀληθεῖς since they do not correspond to "one external existence." It is true that Epicurus used the term ἀληθής to indicate what was real (Sextus Empiricus, 8, 9, Usener 244) but he certainly did not use the term exclusively in this sense; ἀληθής also is used by Epicurus to mean "not false" (see Ep.H., 62). With this meaning of ἀληθής (not false), the prolepseis must have been true since they were themselves a criterion of truth. Again taking the second meaning of ἀληθής (real), there is no evidence that Epicurus' idea of "real" was limited to external objects. Prolepseis, although invisible and present within the individuals' mind, were just as real ( ἀληθεῖς ) as external objects since they were, in Epicurus' eyes, physical in nature. The fact that Epicurus does not specifically call the prolepseis ἀληθεῖς is not conclusive since this term is found only four times in his extant works and in the passages in which πρόληψις does occur, there is no definition of the term.

<sup>51</sup>F. Merbach, De Epicuri Canonica (Weida, 1909), p. 18.

<sup>52</sup>Cicero, De Nat. Deor., 1, 16, 43, Usener 255.

<sup>53</sup>Clement of Alexandria, Stromateis, 2, 4, Usener 255.

To recognize an object one must have a prolepsis to which the sensible object can be referred; to carry on an investigation, one must know by means of a concept the object which is sought. The prolepsis is also closely linked with the use of language: each word is a symbol of some concept and the task of the word is to represent the πρόληψις so exactly that there is no need of further definition to illustrate the meaning of the concept.<sup>54</sup>

The evidence of Clement supports the interpretation of the prolepsis that Diogenes Laertius gives. Clement shows that the term prolepsis was used not only in the passive sense of the general concept existing in the mind but also in the active sense of the actual act of grasping the clear image formed from a "generalization" of several similar sense-impressions.<sup>55</sup>

πρόληψιν δὲ ἀποδίδωσιν [ὁ Ἐπίκουρος] ἐπιβολὴν ἐπὶ τι  
ἐναργὲς καὶ ἐπὶ τὴν ἐναργῆ τοῦ πράγματος ἐπίνοιαν.<sup>56</sup>

Lucretius uses the word notitia (notities) to indicate the πρόληψις of Epicurus.<sup>57</sup> The manner in which he uses the term also lends support to the interpretation of the prolepsis that Diogenes Laertius gives.

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<sup>54</sup>See Ep. H., 37-38. For Epicurus' use of words see Bailey, Epicurus, pp. 173, 177.

<sup>55</sup>Bailey, Greek Atomists, p. 247.

<sup>56</sup>Clement of Alexandria, Stromateis, 2, 4, Usener 255. Cf. Theodoretus, Graecorum affectionum Curatio, I, 90.

<sup>57</sup>Tohte, op.cit., p. 17; Munro, op.cit., p. 182; Leonard and Smith, op.cit., p. 566; Bailey, Commentary, Vol. 2, p. 823, Vol. 3, p. 1345; F. Peters, T. Lucretius et M. Cicerō Quo Modo Vocabula Graeca Epicuri Disciplināe Propria Latine Verterint (Westfalia, 1926), p. 19.

exemplum porro gignundis rebus et ipsa  
notities divis hominum unde est insita primum,  
quid vellent facere ut scirent animoque viderent,<sup>58</sup>

praeterea si non alii quoque vocibus usi  
inter se fuerant, unde insita notities sat  
utilitatis et unde data est huic prima potestas,  
quid vellet facere ut sciret animoque videret?<sup>59</sup>

In these two passages Lucretius indicates the impossibility of creating anything unless a concept of that object is already present in the mind. Lucretius' meaning is clearly that neither the gods could have created mankind nor any individual, language without notitiae of these objects and since the possession of these concepts was dependent upon experience with the objects themselves already in existence (whether it be mankind or language), neither the gods nor some individual could have created them.

notitiam veri quae res falsique creavit  
et dubium certo quae res differre probavit.  
invenies primis ab sensibus esse creatam  
notitiam veri neque sensus posse refelli.<sup>60</sup>

It is from the information provided by the senses that one gains a concept of what is true and this forms an "anticipation" by which one can judge truth and falsehood. The senses are the source of the prolepsis.

illa quidem sorsum sunt omnia quae prius ipsa  
nata dedere suae post notitiam utilitatis.  
quo genere in primis sensus et membra videmus;<sup>61</sup>

It was only after the parts of the body had been created (and used) that a concept of their usefulness could have arisen. This passage, like the others, supports Diogenes Laertius' definition of the prolepsis as a "recollection of something which has often been presented before from without."

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<sup>58</sup>Lucretius, 5, 181-183.

<sup>59</sup>Ibid., 5, 1046-1049.

<sup>60</sup>Ibid., 4, 476-479.

<sup>61</sup>Ibid., 4, 853-855.

In two further passages Lucretius indicates that the mind can combine existing prolepseis to form new concepts. These new concepts are still true since they arise from prolepseis which originated directly from sensation.

quae procul usque adeo divino a numine distent,  
inque deum numero quae sint indigna videri,  
notitiam potius praebere ut posse putentur  
quid sit vitali motu sensuque remotum.<sup>62</sup>

In these lines Lucretius states that the mind, grouping together the concepts it possesses of the sun, moon and other heavenly phenomena and picking out the elements common to these concepts, can form a new prolepsis of an object that lacks both motion and feeling.

scire licet nostrae quoque menti corpora posse  
verti in notitiam nullo circumlita fuco.<sup>63</sup>

The mind is also able to combine the concept of "body" and the concept of the "absence of colour" to form a new notitia of bodies without colour.

In Epicurus' extant writings the word πρόληψις occurs only four times and unfortunately the passages in which the term occurs cast little light on the nature of the prolepsis. In Kuriai Doxai 37 and 38, Epicurus speaks of the concept of justice; according to Diogenes Laertius' definition this would be the prolepsis formed by the mind after several just acts had been perceived. In relation to the beliefs concerning the gods Epicurus states:

οὐ γὰρ προλήψεις εἰσὶν ἀλλ' ὑπολήψεις ψευδεῖς  
αἱ τῶν πολλῶν ὑπὲρ θεῶν ἀποφάσεις<sup>64</sup>

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<sup>62</sup>Lucretius, 5, 122-125.

<sup>63</sup>Ibid., 2, 744-745. Cf. also 2, 124 where Lucretius states that concepts of important principles can be formed from the example of small things.

<sup>64</sup>Ep.M., 124.

Again, according to Diogenes Laertius' description of the prolepsis, Epicurus is saying that what the common people believe about the gods are not concepts formed when their minds unified several of the individual images of the gods which had struck their minds directly, but inferences incorrectly drawn, as Lucretius states,<sup>65a</sup> from observation of the universe. Finally speaking of "time" Epicurus says:

τὸν γὰρ δὴ χρόνον οὐ ζητητέον ὥσπερ καὶ τὰ λοιπά,  
ὅσα ἐν ὑποκειμένῳ ζητοῦμεν ἀνάγοντες ἐπὶ τὰς  
βλεπομένας παρ' ἡμῖν αὐτοῖς προλήψεις<sup>65</sup>

In the case of all objects (except time), concepts of their nature and qualities can exist in the mind, to which new sense-impressions can be referred. According to Diogenes Laertius' definition of the concept, these prolepseis would exist as a result of frequent experience with the objects themselves.

The interpretation of the evidence which Cicero gives about the nature of the prolepsis of Epicurus poses a serious problem. Cicero states as follows:

Ita fit ut deus ille quem mente noscimus atque in animi  
notione tamquam in vestigio volumus reponere nusquam  
prorsus appareat.<sup>66</sup>

Solus (sc. Epicurus) enim vidit primum esse deos, quod in  
omnium animis eorum notionem impressisset ipsa natura.  
Quae est enim gens aut quod genus hominum, quod non habeat  
sine doctrina anticipationem quandam deorum: quam appellat  
πρόληψιν Epicurus, id est anteceptam animo rei quandam  
informationem, sine qua nec intellegi quicquam nec quaeri  
nec disputari possit . . . intellegi necesse est esse deos,  
quoniam insitas eorum vel potius innatas cognitiones habemus;<sup>67</sup>

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<sup>65</sup>Ep. H., 72. 65 a 5, 1183-1193.

<sup>66</sup>Cicero, De Nat. Deor., 1, 14, 37.

<sup>67</sup>Ibid., 1, 16, 43-44.

fateamur constare illud etiam, hanc nos habere sive anticipationem ut ante dixi sive praenotionem deorum (sunt enim rebus novis nova ponenda nomina, ut Epicurus ipse πρόληψιν appellavit, quam antea nemo eo verbo nominarat)<sup>68</sup>

primum quod ita sit informatum anticipatumque mentibus nostris ut homini, cum de deo cogitet, forma occurrat humana;<sup>69</sup>

"Habemus" inquis "in animo insitam informationem quandam dei."<sup>70</sup>

The most difficult phrase to deal with is insitas . . . vel potius innatas cognitiones (44). These words seem to indicate that the prolepsis was an innate idea present in the individual at birth and not obtained through sensation. Thus it would appear that man was provided by nature with ideas necessary for thought just as he was provided with feelings of pleasure and pain which he could use as "moral guides."<sup>71</sup>

This interpretation of Cicero's words has its difficulties.<sup>72</sup>

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<sup>68</sup>Cicero, De Nat. Deor., 1, 17, 44.

<sup>69</sup>Ibid., 1, 27, 76.

<sup>70</sup>Ibid., 1, 36, 100.

<sup>71</sup>For the feelings of pleasure and pain being provided by nature, see Ep.M., 129, 137 and K.D., 7. Strodach (op.cit., p. 225 n.29) says that if prolepseis are innate ideas provided by nature in order to enable man to classify his sensations, nature would be a "purposeful agent" but Epicurus clearly rejected the idea of purpose in nature (Lucretius, 4, 823 ff). This objection is not valid. In the same way as Epicurus taught that man was endowed with feelings of pleasure and pain, these being given by no "purposeful agent" but merely being parts of man's state of being (as much as eyes and ears) so, if Epicurus believed prolepseis were innate ideas, he could explain their presence by simply calling them parts of man's constitution, given him "by nature."

<sup>72</sup>Most scholars reject the evidence of Cicero: Ritter and Preller, op.cit., p. 379, Zeller, Die Philosophie der Griechen, Vol. 3, p. 390, Woltjer, op.cit., p. 92 n.2, Tohte, op.cit., p. 17, Brieger, op.cit., p. 19, Merbach, op.cit., p. 51, and Bailey, Greek Atomists, p. 557. De Witt ("The God of Epicurus and the Canon," Transactions of the Royal Society of Canada, Ser. 3, Sect. 2, Vol. 36 (1942), pp. 33-49 and Epicurus and His Philosophy, pp. 142-150) accepts Cicero's evidence, rejecting Diogenes Laertius' definition.



It is true that the term πρόληψις, "anticipation," seems to support this interpretation, that is, the term appears to indicate that the prolepseis are anticipations of all sensation. However we must still ask: is the prolepsis an anticipation of all sensation or only of those sense-impressions that follow after the prolepsis has been formed in the mind as a result of sensation?<sup>73</sup> Secondly, the statement of Epicurus that all reasoning was derived from the senses<sup>74</sup> conflicts with the presence in the mind at birth of innate ideas not derived from sensation.<sup>75</sup> Furthermore the non-physical character of the notion of "innate ideas" seems to be at variance with the strictly physical system of Epicurus.<sup>76</sup>

In the works of Epicurus himself it is difficult to confirm or refute Cicero's definition since the references to prolepsis are so few and especially since three of the passages in which the word does occur<sup>77</sup> offer good sense with either meaning given to "prolepsis." However when Epicurus states that the suppositions of the common people concerning the nature of the gods are not πρόληψις but ὑπολήψις,<sup>78</sup> it is difficult to see, if prolepseis are innate ideas, why the people should not have had the proper concepts of the gods straight from birth.

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<sup>73</sup>Bailey, Greek Atomists, p. 245.

<sup>74</sup>Diogenes Laertius, 10, 32. Lucretius, 4, 484.

<sup>75</sup>Woltjer, op.cit., p. 92 n.2.

<sup>76</sup>Bailey, Greek Atomists, p. 557.

<sup>77</sup>Namely K.D., 37 and 38, Ep. H., 72. See above pp. 77-78.

<sup>78</sup>Ep. M., 124.

In the passages of Lucretius in which notitia (notities)<sup>79</sup> occurs, difficulties arise when the meaning of "innate idea" is assigned to notitia. In lines 5, 181-183 in which Lucretius asks where the gods could have obtained a concept of mankind in order that they could create men, the implication is certainly that the only source of such a concept was actual experience with mankind who were already in existence. Similarly in 5, 1046-49, the meaning is clearly that a man could not have invented speech unless he had received a notitia of speech from hearing those who were already using it. If notitia was an innate idea not derived from sense-perception, there was certainly no point to Lucretius' questions, since direct experience with mankind and speech would not have been necessary for the presence of notitiae of them.<sup>80</sup> In 4, 476-479 where Lucretius states that the concept of truth is derived from the senses, there is a clear contradiction of the idea that the notitia was inborn. Similarly in 4, 853-855 one can ask why the concept of the usefulness of the parts of the body could only result from actual use of these parts if this concept was inborn. Also in 5, 124 Lucretius states that the heavenly phenomena can be thought to provide a concept of something that is lacking in sensation and feeling; here again the concept certainly is said to be derived from sensation. Only in lines 2, 744-45, where Lucretius states it is possible for a concept of bodies without colour to

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<sup>79</sup>De Witt (*Epicurus and His Philosophy*, p. 100) denies that this term represents the Epicurean prolepsis. In "The Gods of Epicurus and the Canon," however, he identifies the two terms, pointing out that Cicero (*Academica Priora*, 2, 10, 30) specifically identifies the two words.

<sup>80</sup>De Witt's explanation ("The Epicurean Gods and the Canon," pp. 39-40) that the prolepsis of mankind or speech could not be present unless it was caused by an actual experience with them is certainly inconsistent with his assertion that the prolepsis is an innate idea. Unfortunately, De Witt only deals with these two passages of Lucretius.

exist in the mind, can either meaning of prolepsis be applied to notitia with equal sense.

In the light of the evidence of both Epicurus and Lucretius, doubt can be cast upon Cicero's statement that the prolepseis were innatas cognitiones. Bailey<sup>81</sup> in treating the evidence of Cicero says that the term innatas does not necessarily mean "born in" but that the word is being used by Cicero with the meaning of "be implanted, grow up in." Tohte<sup>82</sup> also says that the word innatas indicates merely that concepts were implanted in the mind. Mayor<sup>83</sup> notes that the two words insitus and innatus were used together by Cicero to indicate something which was a "natural growth" rather than the result of "artificial training." He says that Cicero's description of prolepseis as insitas vel potius innatas cognitiones means simply that the prolepseis were not "arbitrarily imposed from without" but were the natural result of experience. He cites as support for this statement the following three passages:

(sc. nos) habere etiam insitam quandam vel potius innatam cupiditatem scientiae<sup>84</sup>

insulam Siciliam totam esse Cereri et Liberae consecratam  
. . . ipsis Siculis ita persuasum est ut in animis eorum  
insitum atque innatum esse videatur.<sup>85</sup>

ut anteponantur . . . innata atque insita assumptis et  
adventiciis<sup>86</sup>

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<sup>81</sup>Bailey, Greek Atomists, p. 557.

<sup>82</sup>Tohte, op.cit., p. 17.

<sup>83</sup>M. Tullius Cicero, De Natura Deorum, edited by H. H. Mayor (Cambridge, 1880), Vol. 1, pp. 137-138.

<sup>84</sup>Cicero, De Finibus, 4, 2, 4.

<sup>85</sup>Cicero, Actio in Verrem, 2, 4, 106.

<sup>86</sup>Cicero, Topica, 18, 69.

Surely, however, innatus in these passages has the meaning of that which is "inborn," "present from birth" with no reference to a result of experience? Pease<sup>87</sup> suggests it is safest to take innatas cognitiones as ideas "implanted by nature sine doctrina at some time subsequent to birth." He also points out<sup>88</sup> that if all people must form prolepseis at an early age, it is only slightly incorrect (though not strictly accurate) to speak of prolepseis as innatas. The interpretation of innatas as meaning "implanted as a result of experience," appears to gain some support from the fact that Cicero, after saying the existence of the gods was known by a prolepsis (41-45), states:

Nam a natura habemus omnes omnium gentium speciem nullam  
 aliam nisi humanam deorum; quae enim forma alia occurrit  
 umquam aut vigilantibus cuiquam aut dormientibus?<sup>89</sup>

The gods were believed to have human shape since this was the only form in which visions of them came to men whether they were awake or asleep. Cicero is certainly speaking of a knowledge of the gods gained through sensation.<sup>90</sup> Nonetheless one cannot ignore the basic meaning of innatas ("inborn") and the possibility that Cicero did intend innatas cognitiones to mean "innate ideas." Because of the scantiness of evidence on the nature of prolepsis in Epicurus' works, it is impossible to reach a definite conclusion to this problem, although the description of the prolepsis given by Diogenes Laertius seems most in accord with the material nature of Epicurus' system.

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<sup>87</sup>M. Tullius Cicero, De Natura Deorum, edited by H. S. Pease (Cambridge, Mass., 1955), pp. 298-299.

<sup>88</sup>Quoting Cicero, Academica, edited by J. S. Reid (London, 1885), 2, 30.

<sup>89</sup>Cicero, De Nat. Deor., 1, 18, 46.

<sup>90</sup>J. P. Elder, "Review of N. De Witt's Epicurus and His Philosophy," AJP 77 (1956), p. 80.

We can now discuss how Epicurus explained the apparent falsity of some sensations. Epicurus' explanation was a simple one: the senses themselves do not deceive but the mind in making inferences about "irrational" ( ἄλογος ) sensation can give rise to error, since the opinion ( δόξα ) it forms about sensation can be true or false:

τὸ δὲ διημαρτημένον οὐκ ἂν ὑπῆρχεν, εἰ μὴ ἐλαμβάνομεν καὶ ἄλλην τινὰ κίνησιν ἐν ἡμῖν αὐτοῖς<sup>91</sup>

τὴν δὲ δόξαν καὶ ὑπόληψιν λέγουσιν, ἀληθῆ τέ φασι καὶ ψευδῆ.<sup>92</sup>

αἰσθήσεως δὲ ἴδιον ὑπῆρχε τοῦ παρόντος μόνον καὶ κινούντος αὐτὴν ἀντιλαμβάνεσθαι, οἷον χρώματος, οὐχὶ δὲ τὸ διακρίνειν ὅτι ἄλλο μὲν ἐστὶ τὸ ἐνθάδε ἄλλο δὲ τὸ ἐνθάδε ὑποκείμενον. διόπερ αἱ μὲν φαντασίαι διὰ ταῦτα πᾶσαι εἰσὶν ἀληθεῖς, (αἱ δὲ δόξαι οὐ πᾶσαι ἦσαν ἀληθεῖς, > ἄλλ' εἶχόν τινα διαφοράν. τούτων γὰρ αἱ μὲν ἦσαν ἀληθεῖς αἱ δὲ ψευδεῖς, ἐπεὶ περ κρίσεις καθεστᾶσιν ἡμῶν ἐπὶ ταῖς φαντασίαις, κρίνομεν δὲ τὰ μὲν ὀρθῶς τὰ δὲ μοχθηρῶς ἥτοι παρὰ τὸ προστιθέναι τι καὶ προσνέμειν ταῖς φαντασίαις ἢ παρὰ τὸ ἀφαιρεῖν τι τούτων καὶ κοινῶς καταψεύδεσθαι τῆς ἀλόγου αἰσθήσεως. οὐκοῦν τῶν δοξῶν κατὰ τὸν Ἐπίκουρον αἱ μὲν ἀληθεῖς εἰσὶν αἱ δὲ ψευδεῖς<sup>93</sup>

As soon as the mind becomes aware of some object stimulating the eyes (for example) it spontaneously makes some inference ( ὑπόληψις, δόξα ) about the nature of the object by referring the sense-impression of the object to one of the concepts present in the mind itself:

καὶ τὸ δοξαστὸν ἀπὸ προτέρου τινὸς ἐναργοῦς ἥρτηται, ἐφ' ὃ ἀναφέροντες λέγομεν· οἷον Πόθεν ἴσμεν εἰ τοῦτό ἐστιν ἄνθρωπος;<sup>94</sup>

<sup>91</sup>Ep. H., 51.

<sup>92</sup>Diogenes Laertius, 10, 34. Cf. Aetius, Pl., 4, 8, 2, Usener 248; Dox.Gr., p. 396.

<sup>93</sup>Sextus Empiricus, 7, 210, Usener 247. Cf. Lucretius, 4, 386, 462-68 and Tertullian, De Anima, 17, Usener 247.

<sup>94</sup>Diogenes Laertius, 10, 33.

Whatever interpretation the mind gives to the sense-impression is called the "addition of opinion" (προσδοξαζόμενον). For example, a square tower at a distance appears to be round. If a person concludes the tower is round, his mind has added information (προσδοξαζόμενον) to the simple sensation and formed a judgement (ὑπόληψις) which in this case is incorrect since the tower is not round. The original sensation, however, was still true since it showed how a square tower appears at a distance.<sup>95</sup>

To determine whether an opinion is true or false, one must examine the object in question at close hand in the medium of air;<sup>96</sup> he must gain a clear well-defined view of the object (ἐνάργημα, ἐνάργεια).

Τὸ ὑφ' ὧφ' ὅστις δειττέλος ἐπιλογίζεσθαι καὶ πᾶσαν τὴν ἐνάργειαν, ἐφ' ἣν τὰ δοξαζόμενα ἀνάγομεν.<sup>97</sup>

The opinions about those objects that do present a distinct view can be accepted as true. In the case of these δόξαι, the mind correctly selects the concept to which the object corresponds and a recognition of the object (ἐπαίσθημα) occurs. Thus concerning the ἐπαίσθημα Diogenes Laertius states:

καὶ τὸ τὰ ἐπαισθήματα δ' ὑφ' ὧφ' ὅστις πιστοῦται τὴν τῶν αἰσθήσεων ἀλήθειαν.<sup>98</sup>

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<sup>95</sup>For other common examples of false δόξαι made by the mind, see Lucretius, 4, 379-461.

<sup>96</sup>Epicurus never mentions the necessity of a medium of air but it was perhaps a feature of the ἐνάργημα that he took for granted. An oar in water seen at very close hand will still look bent; placed in the air the oar will present a clear view of its real nature.

<sup>97</sup>K.D., 22, Bailey, Greek Atomists, pp. 243 ff., and Merbach, op.cit., p. 18.

<sup>98</sup>Diogenes Laertius, 10. 32.

That the sense-impression exactly fits an existing concept gives proof that the sense-impression is true.<sup>99</sup>

It is not possible, however, to obtain a clear view (ἐνάργημα) of every sensible object. The object may be a great distance away or the light too dim to allow one to see it clearly. The sense-impressions one receives of these objects are true (they give a true picture of what the object appears to be at a certain distance) but they are not clear (ἐναργής). Stimulation of the senses by these objects does not give rise to an ἐπαίσθημα.<sup>100</sup> Before one's opinion about these "unclear" objects

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<sup>99</sup>The understanding of the term ἐπαίσθημα (ἐπαίσθησις) is difficult because the evidence on the Epicurean use of the term is so slight. ἐπαίσθησις occurs twice in the works of Epicurus (Ep.H., 52, 53) and appears to indicate the act of comprehension or recognition of the nature of the sensation (in these passages, the understanding of the words of the speaker). For this comprehension to have taken place, the mind clearly must have assigned the sense-impression to the correct concept. (Cf. De Witt, Epicurus and His Philosophy, pp. 140, 205.) Besides the use of ἐπαίσθημα in the passage of Diogenes Laertius just quoted (a passage which sheds little light on the nature of an ἐπαίσθημα), there is only one other use of the word in relation to Epicurus (Aetius, Pl., 4, 8, 2, Usener 249, Dox.Gr., p. 394):

Ἐπικούρου τό τε μόριόν ἐστιν ἡ αἴσθησις, ἥ τις ἐστὶν ἡ δύναμις, καὶ τὸ ἐπαίσθημα, ὃ περ ἐστὶ τὸ ἐνάργημα.

Here ἐπαίσθημα refers to the passive impression received by the senses (See Bailey, Greek Atomists, p. 238 n.3.) The word is certainly, in its meaning, equivalent to φαντασία (sense-impression) and perhaps its use may be accounted for by ascribing it to a failure on the part of Aetius to keep φαντασία and ἐπαίσθημα, passive sensation and cognition, distinct.

Bailey's account of ἐπαίσθημα (ἐπαίσθησις) is rather confusing. In Epicurus (p. 415 n.5) and Greek Atomists (pp. 420, 558) he describes it as the act of cognition, that is, the method by which the mind interprets the sense-impression and performs an "act of comprehension," by which it grasps the nature of the object. Nonetheless, he also describes it (Greek Atomists, p. 240 n.6) as the process by which a series of idols following quickly upon one another forms a sense-impression (φαντασία) which the eye can grasp. It is difficult to see, however, in this case how ἐπαίσθησις would differ from αἴσθησις.

<sup>100</sup>De Witt ("Epicurus: All Sensations Are True," TAPA 74 (1943), p. 20) is wrong in supposing that Diogenes Laertius' statement that the occurrence of ἐπαισθηματα confirms the truth of sensation also implies a negative that the non-occurrence of ἐπαισθηματα reveals the falsity

can be accepted as true, it must be confirmed by further evidence, that is, a close view of the sensible object must be obtained. A sensible object whose exact nature has not been ascertained by attention to the close view must be regarded as an "object awaiting confirmation"

(προσμένον).<sup>101</sup> If the close view of the object does not confirm the opinion one held about its nature, the δόξα is false:

κατὰ δὲ ταύτην [κίνησιν], εἴαν μὲν μὴ ἐπιμαρτυρηθῇ  
ἢ ἀντιμαρτυρηθῇ τὸ ψεῦδος γίνεται· εἴαν δὲ ἐπιμαρτυρηθῇ  
ἢ μὴ ἀντιμαρτυρηθῇ, τὸ ἀληθές.<sup>102</sup>

ἂν μὲν γὰρ ἐπιμαρτύρηται ἢ μὴ ἀντιμαρτύρηται, [τὴν  
δόξαν] ἀληθῆ εἶναι· εἴαν δὲ μὴ ἐπιμαρτύρηται ἢ  
ἀντιμαρτύρηται, ψευδῆ τυγχάνειν. ὅθεν <τὸ> προσμένον  
εἰσήχθη.<sup>103</sup>

Εἴ τινα' ἐκβαλεῖς ἀπλῶς αἰσθησιν καὶ μὴ διαιρήσεις  
τὸ δοξαζόμενον κατὰ τὸ προσμένον καὶ τὸ παρὸν ἤδη  
κατὰ τὴν αἰσθησιν καὶ τὰ πάθη καὶ πᾶσαν φανταστικὴν  
ἐπιβολὴν τῆς διανοίας, συνταράξεις καὶ τὰς λοιπὰς  
αἰσθήσεις τῇ ματαιῷ δόξῃ, ὥστε τὸ κριτήριον ἅπαν  
ἐκβαλεῖς. εἰ δὲ βεβαιώσεις καὶ τὸ προσμένον ἅπαν ἐν

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of the sensations. If an ἐπαίσθημα does not take place it shows simply that the object was not seen clearly enough for recognition to occur or that a concept of that particular sensible object had not yet been formed. The sense-impressions are still true.

<sup>101</sup>Ep.H., 38 and K.D., 24. Diogenes Laertius (10,34) is misled in interpreting the term προσμένον as the individual's act of waiting to confirm his sense-impression. See Tohte, op.cit., p. 174 n.1, Zeller, Die Philosophie der Griechen, Vol. 3, p. 430 n.2, and Bailey, Greek Atomists, p. 254 n. 3.

<sup>102</sup>Ep.H., 51. Cf. also 50.

<sup>103</sup>Diogenes Laertius, 10, 34. See also the description of ἀντιμαρτύρησις and ἐπιμαρτύρησις in Sextus Empiricus, 7, 212-216, Usener 247. Note especially the prominence of ἐνάργεια.



ταῖς δοξαστικαῖς ἐννοίαις καὶ τὸ μὴ τὴν ἐπιμαρτύρησιν, οὐκ ἐκλείψει τὸ διεφευσμένον, ὡς τετηρηκῶς ἔσει πᾶσαν ἀμφισβήτησιν κατὰ πᾶσαν κρίσιν τοῦ ὀρθῶς ἢ μὴ ὀρθῶς.<sup>104</sup>

In the act of confirming or contradicting the προσμένον , one purposely directs the attention of the senses to the ἐνάργημα ; the technical term for this action is ἐπιβολὴ τῶν αἰσθητηρίων.<sup>105</sup>

In some cases one can perceive objects with the senses but cannot receive a clear view (ἐνάργημα) of them (for example, the heavenly phenomena). Since it is impossible to confirm one's δόξα about these objects, Epicurus introduced the principle of non-contradiction (οὐκ ἀντιμαρτύρησις) : any explanation that is not contradicted by the evidence of the senses can be accepted as true. In the case of heavenly phenomena several explanations can be given but one explanation must not be preferred over another since definite confirmation of one view is not possible:

καὶ πάντα τὰ τοιαῦτα ὃν ὅσα μοναχὴν ἔχει τοῖς φαινομένοις συμφωνίαν· ὅπερ ἐπὶ τῶν μετεώρων οὐχ ὑπάρχει, ἀλλὰ ταῦτά γε πλεοναχὴν ἔχει καὶ τῆς γενέσεως αἰτίαν καὶ τῆς οὐσίας ταῖς αἰσθήσεσι σύμφωνον κατηγορίαν.<sup>106</sup>

<sup>104</sup>K.D., 24; K.D., 23 must be taken closely with 24:

Εἰ μάχη πάσαις ταῖς αἰσθήσεσιν, οὐχ ἔξεις οὐδ' ἄς ἂν φῆς αὐτῶν διεφεῦσθαι πρὸς τί ποιοῦμενος τὴν ἀναγωγὴν κρίνης.

Epicurus is speaking of the consequences of two different positions: if all sensations are rejected, no standard by which to judge any sensation can exist; if one sensation is rejected, again no standard of judgement can exist. De Witt (Epicurus and His Philosophy, p. 141) is incorrect in assuming that Kuria Doxa 23 indicates Epicurus did not affirm the truth of all sensations.

<sup>105</sup>Ep.H., 38, 50, 51, and 62. This expression will be discussed at greater length in the following chapter.

<sup>106</sup>Ep.P., 86. For other statements about Epicurus' belief in several explanations to account for heavenly phenomena, see Ep.P., 94, 95, 98 and 173, Lucretius 5, 526-33 and Seneca, Naturales Quaestiones, 6, 20. For examples of explanations by non-contradiction see Ep.P., 88, 92, 93 and Lucretius, Bks. 5 and 6.

Epicurus also used the principle of non-contradiction to support his views about the ultimate realities of the universe which were by nature imperceptible:<sup>107</sup>

οὐκ ἀντιμαρτύρησις δὲ ἔστιν ἀκολουθία τοῦ ὑποσταθέντος καὶ δοξασθέντος ἀδήλου τῷ φαινομένῳ, οἷον ὁ Ἐπίκουρος λέγων εἶναι κενόν, ὅπερ ἐστὶν ἄδηλον, πιστοῦται δι' ἐναργούς πράγματος τοῦτο, τῆς κινήσεως.<sup>108</sup>

In the case of objects of which an ἐνάργημα could not be gained and also in the case of those realities which could not be perceived at all, the evidence of the senses was still in Epicurus' view all important; it did not give definite confirmation of one's δόξα but still it ruled out error by contradicting what was definitely false.

In addition to explaining error by means of the false δόξαι formed by the mind, Epicurus<sup>109</sup> appears to have held the view (although there is no mention of it in his extant works) that the idols coming from an object at a distance could be altered in some way during their flight through the air.<sup>110</sup> The sense-impression is true in that it records the shape of the εἶδωλα but opinion errs in assuming that the idols are the same shape as the object from which they came. The supposition that the

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<sup>107</sup>The reason Epicurus was able to assert the truth of the theory of atoms and void even though these were not perceptible to the senses will be discussed in the following chapter.

<sup>108</sup>Sextus Empiricus, 7, 213, Usener 247. See also Ep.H., 47-48 in reference to the existence of εἶδωλα.

<sup>109</sup>Bailey (Greek Atomists, pp. 256-257) suggests that this teaching did not originate with Epicurus himself but only with the later Epicureans. Even though there is no mention of the teaching in the extant works of Epicurus, it is still not possible to state the origin of the doctrine since we have no evidence on this point.

<sup>110</sup>Sextus Empiricus, 7, 209, Usener 247. Lucretius, 4, 353-363.

idols can be altered gives rise to a serious problem: how can one distinguish εἰδωλα that do correspond to the object from those that do not? Epicurus' probable answer would be that idols coming from an object close at hand do correspond exactly to the sensible object and one should, therefore, always try to gain a clear view (ἐνάργημα) of each object.<sup>111</sup> Nonetheless the teaching that the idols could be altered strikes at the very root of Epicurus' system, since the assertion that all sensation is true would hold no weight if the idols did not correspond exactly to the concrete objects from which they arise.<sup>112</sup>

The importance Epicurus attached to ἐνάργεια, the clear view of an object obtained by turning the attention of the senses to it,<sup>113</sup> cannot be overemphasized. Again and again Epicurus points out that it is the clear evidence presented by objects which one must consider in carrying on an investigation of the phenomena of nature:

οὐθὲν γὰρ τούτων ἀντιμαρτυρεῖται ταῖς αἰσθήσεσιν,  
 ἂν βλέπῃ τις τίνα τρόπον τὰς ἐναργείας, τίνα καὶ  
 τὰς συμπαθείας ἀπὸ τῶν ἔξωθεν πρὸς ἡμᾶς ἀνοίσει.<sup>114</sup>

καὶ ταύτην οὖν σφόδρα γε δεῖ τὴν δόξαν κατέχειν, ἵνα  
 μήτε τὰ κριτήρια ἀναιρεῖται τὰ κατὰ τὰς ἐναργείας<sup>115</sup>

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<sup>111</sup>See Ep.H., 50 where he states that every image obtained ἐπιβλητικῶς τῇ διανοίᾳ ἢ τοῖς αἰσθητηρίοις is the shape of the object. As noted above, ἐπιβολὴ τῶν αἰσθητηρίων is used in the process of confirming an opinion by means of a close view (ἐνάργημα).

<sup>112</sup>Cf. Zeller, *Die Philosophie der Griechen*, Vol. 3, pp. 393-394 and Bailey, *Greek Atomists*, pp. 256-257.

<sup>113</sup>ἐπιβολὴ τῶν αἰσθητηρίων.

<sup>114</sup>Ep.H., 48.

<sup>115</sup>Ibid., 52.

ὅθεν ... προσεκτέον ... πάση τῇ παρούσῃ καθ' ἕκαστον  
τῶν κριτηρίων ἐναργεία.<sup>116</sup>

καὶ πᾶν δὲ εἰς τοῦτο τὸ μέρος ἔνστημα ῥαδίως δια-  
λυθήσεται, ἐάν τις τοῖς ἐναργήμασι προσέχη<sup>117</sup>.

πάντα γὰρ τὰ τοιαῦτα καὶ τὰ τούτοις συγγενῇ οὐθενὶ  
τῶν ἐναργημάτων διαφωνεῖ<sup>118</sup>

τὸ ὑφ'esτηκὸς δεῖ τέλος ἐπιλογίζεσθαι καὶ πᾶσαν τὴν  
ἐνάργειαν, ἐφ' ἣν τὰ δοξαζόμενα ἀνάγομεν.<sup>119</sup>

Scholars have failed to make clear the importance of ἐνάργεια because they have identified αἴσθησις and ἐνάργεια.<sup>120</sup> This identification can be questioned. Nowhere in the extant work of Epicurus is αἴσθησις declared to be identical to ἐνάργεια; nowhere is all αἴσθησις termed ἐναργής. Epicurus' teaching seems rather that all sensations were true but not all were ἐναργής, that is, they did not all present a distinct view of the real nature of the sensible object.<sup>121</sup>

Those who have identified αἴσθησις and ἐνάργεια have done so on the basis of two passages, one in Sextus Empiricus, the other in Plutarch.

Ἐπίκουρος δὲ δυοῖν ὄντων τῶν συζυγούντων ἀλλήλοις πραγμάτων, φαντασίας καὶ τῆς δόξης, τούτων τὴν φαντασίαν, ἣν καὶ ἐνάργειαν καλεῖ, διὰ παντὸς ἀληθῆ φησὶν ὑπάρχειν.<sup>122</sup>

<sup>116</sup>Ep.H., 82

<sup>117</sup>Ep.P., 91

<sup>118</sup>Ibid., 93. Cf. also 96

<sup>119</sup>K.D., 22. Cf. also Ep.H., 71

<sup>120</sup>Zeller, *Die Philosophie der Griechen*, Vol. 3, p. 388. For this identification see Ritter and Preller, *op.cit.*, p. 378, Taylor, *op.cit.*, p. 44, Wallace, *op.cit.*, p. 416.

<sup>121</sup>For Epicurus' use of ἐναργής see Bailey, *Epicurus*, pp. 194, 256; *Greek Atomists*, p. 243 ff. and Merbach, *op.cit.*, p. 18.

<sup>122</sup>Sextus Empiricus, 7, 203, Usener 247.

One objection that can be made to Sextus Empiricus' identification of φαντασία (sense-perception) and ἐνάργεια is that the whole principle of confirmation or contradiction of a προσμένον would be unnecessary if all sense-impressions were ἐναργής and thus equally valuable in relation to giving a distinct view of the nature of a sensible object without the circumstances in which the object was placed (distance, light) playing a significant role.

De Witt<sup>123</sup> accepts this statement of Sextus Empiricus, but on the basis of the identification of ἐνάργεια and φαντασία, he gives a special interpretation to the term φαντασία. He defines this word as a clear image coming from an object close at hand; the φαντασία, he says, is true. He states that φαντασία was used by Epicurus in opposition to φάντασμα, the term he used, to indicate dreams, the visions of madmen and the heavenly phenomena. De Witt also says that φαντάσματα are all false. This last statement is certainly incorrect since Diogenes Laertius explicitly states that Epicurus believed all φαντάσματα (referring to the visions of madmen and dreams) were true.<sup>124</sup> De Witt is incorrect also in restricting Epicurus' use of φάντασμα to dreams, hallucinations and heavenly phenomena (although the word is used most often in this sense<sup>125</sup>) since the term is found in the Epistula ad Herodotum<sup>126</sup> referring simply to sense-

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<sup>123</sup>De Witt, *Epicurus and His Philosophy*, p. 137; "Epicurus, Περὶ Φαντασίας," ΤΑΡΑ 70 (1939), pp. 414-417.

<sup>124</sup>Diogenes Laertius, 10, 32. (See quote on page 72.)

<sup>125</sup>Namely in Ep.H., 51; Ep.P., 88, 102 and 110.

<sup>126</sup>Ep.H., 75.

impressions in general. Again De Witt's view that φαντασία can come only from an object near at hand is not supported by any direct evidence. It is true that Epicurus<sup>127</sup> speaks of a φαντασία which is "the exact shape of the sensible object" but he defines this φαντασία as one obtained by an ἐπιβολή of the διάνοια or the αἰσθητήρια; the ἐπιβολή of the αἰσθητήρια has been shown to be connected with the confirmation of one's opinion of the nature of an object by a close view. Furthermore Epicurus does use the term φαντασία in relation to objects which can only be seen at a distance.<sup>128</sup> De Witt, on the basis of Sextus Empiricus' identification of φαντασία and ἐνάργεια, has attempted to show that φαντασία was in fact a term used only to indicate objects observed close at hand; the evidence does not support his view and it seems better to question the statement of Sextus Empiricus rather than to assign this restricted meaning to φαντασία, a term which Sextus Empiricus clearly uses simply as a synonym for αἰσθησις.<sup>129</sup>

Plutarch's statement is as follows:

εἰ δὲ γίνεται διαφορὰ τοῦ πάθους ἀποστάσι καὶ προσ-  
ελθοῦσι, ψευδὸς ἐστὶ τὸ μῆτε φαντασίαν μῆτε αἰσθησιν  
ἐτέρας ἐτέραν ἐναργεστέραν ὑπάρχειν<sup>130</sup>

Plutarch states that if one affirms that an object seen at close hand is

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<sup>127</sup>Ep.H., 50.

<sup>128</sup>Ep.H., 80. I have followed the text of Bailey (see Epicurus pp. 50 and 254) and Arrighetti (Epicurus, Opere (Torino, 1960), p. 71) in this difficult passage.

<sup>129</sup>See above page 70.

<sup>130</sup>Plutarch, Adv.Col., 25, 121 d-e, Usener 252.

of the nature it appears to be but says that an object seen at a distance appears to be of such and such a nature but does not state that it is of such a nature, it is false for this person to say one sensation is not *ἐναργεστέραν* than another. How is Plutarch using the term *ἐναργής*? The context of the passage immediately preceding the words just quoted makes it clear that Plutarch is using *ἐναργής* as a synonym for *ἀληθής* (true); he is not preserving the distinction Epicurus drew between what is true (not false, real) and what is clear (distinct, seen at close hand).<sup>131</sup> Einarson and De Lacy<sup>132</sup> translate the passage containing *ἐναργεστέραν* as "no impression and no sensation has . . . a better warrant of truth than another." Plutarch is arguing that if a person accepts some sense-impressions as trustworthy in showing the nature of an object, that is, accepts them as true (objects close at hand) but not others (objects at a distance), he should not say that all sensations are equally true. Epicurus' answer to this objection would be that all sensations are equally true since they show the nature of an object as it exists in certain conditions; the clear view, however, is more valuable for ascertaining the objective nature of the object.

Despite the passages in Sextus Empiricus and Plutarch, it appears likely that Epicurus believed that *αἴσθησις* was not identical to *ἐνάργεια* but *ἐνάργεια* referred only to the evidence of objects perceived distinctly at close range. It was not every sensation which Epicurus believed

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<sup>131</sup>Cf. Merbach's definition of *ἐναργής* and *ἀληθής*, op.cit., p. 20.

<sup>132</sup>Plutarch, "Reply to Colotes" in *Moralia*, Vol. 14, edited by B. Einarson and P. De Lacy (Loeb Classical Library, London and Cambridge, Mass., 1967), p. 277.

to be of equal value<sup>133</sup> for obtaining scientific accuracy and knowledge but only the *ἐναργήματα*.<sup>134</sup>

In his attitude to sensation we see that Epicurus differed greatly from Democritus.<sup>135</sup> Democritus believed that sensible qualities did not exist in themselves but were merely subjective *πάθη* of the senses. Epicurus maintained that all sensible qualities were real and the perception of them true. It is possible to suppose that Epicurus' teaching that all sensations were true would place him in the same position as Protagoras, that is, if all sensations are true, even contradictory sense-impressions from the same object, truth becomes strictly relative and the real nature of any object cannot be known. Epicurus believed sensation gave a true picture of the effect of an object in certain circumstances. If the same object appeared different to different people, this was the result of the interreaction of the *εἶδωλα* from the object and the particular state of the person. Epicurus emphasizes, however, that one should pay attention to the clear view (*ἐνάργημα*) of an object; such a view was more valuable, though no more true, than another view for discovering the real nature of an object. Also in the

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<sup>133</sup>De Witt (*Epicurus and His Philosophy*, p. 138 ff.) is right in pointing out that Epicurus did not ascribe the same value (for ascertaining the real nature of an object) to all sensations; he is wrong to conclude that Epicurus did not treat all sensation as true.

<sup>134</sup>Merbach, *op.cit.*, p. 18; Bailey, *Greek Atomists*, pp. 243, 252 and Farrington, *op.cit.*, p. 108. Note also the frequent use by Lucretius of the expression *manifesta res* as clear proof of some assertion: 1, 803; 893, 2, 565; 3, 353, 686; 6, 139, 249. That *manifestus* is the equivalent of *ἐναργής* see Peters, *op.cit.*, p. 13.

<sup>135</sup>Natorp, *op.cit.*, p. 220. Cf. Sextus Empiricus, 7, 369: τῶν φυσικῶν οἱ μὲν πάντα ἀνηρήκασιν τὰ φαινόμενα, ὥς οἱ περὶ Δημόκριτον, οἱ δὲ πάντα ἔθεσαν, ὥς οἱ περὶ τὸν Ἐπίκουρον....



cases in which people received different sense-impressions from the same object; he urged them to pay attention not only to their individual sensations but also to the experiences of others in order, presumably, that they could determine how much the nature of their personal sensations was dependent upon their own individual condition.<sup>136</sup> This emphasis Epicurus lays upon both *ἐνάργεια* and common experience shows he believed that some sense-impressions could be relied upon to present a view of an object that was clearer than the view given by other objects and that consequently these impressions could be thought to give a picture of the real nature of the object itself.

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<sup>136</sup>Ep.H., 82. See Bailey, Epicurus, p. 256 n.5.

## CHAPTER FIVE

### KNOWLEDGE OF THE IMPERCEPTIBLE

In the previous chapter four instances of the functioning of the mind were mentioned. First of all the mind treats the very subtle idols which strike it directly. Secondly the mind with each sense-impression made upon the sense-organs receives in some manner a related stimulus. Closely allied with reception of a stimulus from the sense-organs is the subsequent classification of the sense-impression by the mind (the action of  $\delta\acute{o}\xi\alpha$  ) through reference to the prolepseis. Finally the mind, after storing up individual impressions, can form a general picture or concept (prolepsis) of some object by selecting out the essential features from the images it has stored up of that object. We have no information concerning exactly how the atoms of the mind can, for example, assign an image to the correct prolepsis or form a general concept. It is possible to suppose<sup>1</sup> that the stimulation of the mind involved the rearrangement of the atoms into new patterns and that these patterns could be stored in the mind (as material for the formation of prolepseis). The difficulty connected with this supposition, however, is that the atoms of all four elements of the mind are in constant motion, intermingling among themselves<sup>2</sup> and the storage of patterns would certainly involve a permanent arrangement of atoms. The lack of evidence makes it impossible for us to understand how

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<sup>1</sup>D. J. Furley, Two Studies in the Greek Atomists (Princeton, 1967), p. 200.

<sup>2</sup>Lucretius, 3, 263-264.

Epicurus, if he did give a detailed explanation of this difficult question, believed the mind as a strictly physical structure performed its operations.

Two points, however, do become clear from these four activities of the mind. First, in all cases thought is caused by idols;<sup>3</sup> the mind is either directly stimulated by these or receives images that result from the impression of idols made upon the senses. Second, in all cases thought takes place by means of images. It can, therefore, be described as a process of visualization.<sup>4</sup>

In addition to these four types of thought, all caused by sensation, Epicurus believed the mind was capable of independent thought, that is, logical activity or reasoning. Even here the material the mind used was provided only by idols striking the mind or the senses. Reasoning was wholly dependent upon sensation:

οὐδὲ ἔστι τὸ δυνάμενον αὐτὰς [αἰσθήσεις]. διελέγξαι  
... οὔτε μὴν λόγος, πᾶς γὰρ λόγος ἀπὸ τῶν αἰσθήσεων  
ῥηται.<sup>5</sup>

In the process of reasoning the mind simply manipulates and rearranges images already present within it; this is why Epicurus believed there could be no thought or inquiry without the prolepseis.<sup>6</sup> All independent thought must begin with the concepts the mind has already formed and by arranging

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<sup>3</sup>Cf. Cicero, De Finibus, 1, 6, 21, and Aetius, Pl., 4, 8, 10, Usener 317, Dox.Gr., p. 395.

<sup>4</sup>Bailey, Greek Atomists, pp. 424-425. Note also Ep.H., 38 where Epicurus states that the mind must "look (βλέπεσθαι) at the πρῶτον ἐννόημα.

<sup>5</sup>Diogenes Laertius, 10, 32. Cf. Lucretius, 4, 483-485.

<sup>6</sup>Clement of Alexandria, Stromateis, 2, 4 (Usener 255) and Cicero, De Nat. Deor., 1, 16, 43.

and rearranging these give rise to new ideas.<sup>7</sup>

The process of reasoning played a chief role in the problem we must now discuss. How did Epicurus believe one could gain a knowledge of the ἄδηλα, things not immediately perceptible? These included both the exact nature of heavenly phenomena and the ultimate realities underlying all sensible objects (the atoms and void). It was stated above<sup>8</sup> that in the case of heavenly phenomena Epicurus accepted as true any explanation that was not contradicted by the senses. How then were such explanations formed and, in particular, how did Epicurus teach that a knowledge of the atoms and void could be obtained? Epicurus states:

σώματα μὲν γὰρ ὥς ἔστιν, αὐτὴ ἡ αἴσθησις ἐπὶ  
πάντων μαρτυρεῖ, καθ' ἣν ἀναγκαῖον τὸ ἄδηλον  
τῷ λογισμῷ τεκμαίρεσθαι<sup>9</sup>

On the basis of sensation one can make inferences about the ἄδηλον with the help of reasoning. λογισμός<sup>10</sup> (and its compounds<sup>11</sup>) appears to be the term Epicurus employed to indicate the process of reasoning based on the material provided by sensation.<sup>12</sup> It is difficult to define exactly the meaning of the terms related to thought that occur in Epicurus'

<sup>7</sup>Cf. pp. 76-77 above for the evidence of Lucretius concerning the combination of prolepseis to form new ideas, 5, 123-125 and 2, 744-745.

<sup>8</sup>See pp. 88-89.

<sup>9</sup>Ep.H., 39.

<sup>10</sup>This term is found also in Ep.H., 75, 76; Ep.M., 132; K.D., 16, 19 and Fr. 74 with the general meaning of "reason."

<sup>11</sup>Namely διαλόγισμα (Ep.H., 68; Ep.P., 85), διαλογισμός (Ep.P., 84, Sent. Vat., 10, Fr., 30, 49) and ἐπιλογισμός (Ep.H., 73, K.D., 20, Fr., (29.16) 7, 10, (31.16) 8, and (31.32) 9 (Arrighetti).

<sup>12</sup>Cf. Bailey, *Greek Atomists*, p. 423 n.3, R. Philippson, "Zur Epikureischen Götterlehre," Hermes 51 (1916), p. 572, Merbach, op.cit., p. 22.

extant works since each occurs so infrequently and often then in a context that does not help to define the meaning of the term. In addition to λογισμός and its compounds, διανόσις<sup>13</sup> seems also to refer to the process of reasoning. λόγος is used in a wide sense by Epicurus with these meanings: account or discourse,<sup>14</sup> reason itself,<sup>15</sup> and reasonings.<sup>16</sup> Philippson<sup>17</sup> says Epicurus used the term only to refer to the faculty of mind that dealt with the ἄδηλα. One statement of Epicurus certainly supports this interpretation:

ἔτι τε τὰ ἐλάχιστα καὶ ἀμιγῇ πέρατα δεῖ νομίζειν  
... τῇ διὰ λόγου θεωρίᾳ ἐπὶ τῶν ἀοράτων.<sup>18</sup>

However, it is best not to define λόγος so strictly, since other passages in which λόγος appears show that Epicurus did not use the term in one restricted sense. Bailey's contention<sup>19</sup> that Epicurus is making no reference to the process of reasoning when he uses the expression θεωρητὸς λόγῳ<sup>20</sup> is again too precise. Epicurus uses this expression to indicate ideas that are formed ("seen") by the mind and that are of such a nature to indicate they result from the manipulation of concepts by the mind itself, that is, that they result from what Epicurus conceived the process of reasoning to be.<sup>21</sup>

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<sup>13</sup>Ep.H., 63, Fr., (31.23) 4 (Arrighetti).

<sup>14</sup>Ep.H., 83, Sent. Vat., 26.

<sup>15</sup>Ep.H., 47 b, 59, 62 (twice), Fr., (29.15) 3 (Arrighetti).

<sup>16</sup>Ep.P., 86, K.D., 25.

<sup>17</sup>Philippson, "Zur Epikureischen Götterlehre," pp. 571-72.

<sup>18</sup>Ep.H., 59      <sup>19</sup>Bailey, Greek Atomists, pp. 423 n. 3, 591.

<sup>20</sup>See Ep.H., 47 b, 62 (twice), 59. (θεωρία).

<sup>21</sup>The Latin equivalent of λογισμός is ratio: Cicero, De Finibus, 1, 9, 30, and Lucretius passim especially 4, 483 ff. and 796. Cf. Philippson, "Zur Epikureischen Götterlehre," p. 574, Bailey, Greek Atomists, p. 423 n. 3 and Commentary, Vol. 2, 605.

Further evidence of how Epicurus believed knowledge of imperceptible things was established is given in the Epistula ad Pythoclem:

ἐάν τις καλῶς τοῖς φαινομένοις ἀκολουθῶν περὶ τῶν ἀφανῶν σημειῶται.<sup>22</sup>

σημεῖα δ' ἐπὶ τῶν ἐν τοῖς μετεώροις συντελουμένων φέρειν τῶν παρ' ἡμῖν τινα φαινομένων<sup>23</sup>

τὰ φαινόμενα ἃ δεῖ σημεῖα ἀποδέχεσθαι<sup>24</sup>

καὶ κατ' ἄλλους δὲ πλείονας τρόπους τοῦτο δυνατόν συντελεῖσθαι, ἐάν τις δύνηται τὸ σύμφωνον τοῖς φαινομένοις συλλογίζεσθαι.<sup>25</sup>

The phenomena of earth provide "signs" on the basis of which explanations of the heavenly phenomena can be formed (συλλογίζεσθαι). That it is sensation that must act as the source of material for the understanding of both heavenly phenomena and the atoms and void is made clear also by Epicurus' statement:

ἔτι τε κατὰ τὰς αἰσθήσεις δεῖ πάντα τηρεῖν ... ὅπως ἂν καὶ τὸ προσμένον καὶ τὸ ἄδηλον ἔχωμεν οἷς σημειωσόμεθα.<sup>26</sup>

This same fact is stated explicitly by Sextus Empiricus, Diogenes Laertius and Lucretius:

... διὰ φαινομένου γὰρ ὀφείλει τὸ ἄδηλον ἀποδείκνυσθαι.<sup>27</sup>

ὅθεν καὶ περὶ τῶν ἀδήλων ἀπὸ τῶν φαινομένων χρὴ σημειοῦσθαι.<sup>28</sup>

<sup>22</sup>Ep.P., 104.

<sup>23</sup>Ibid., 87.

<sup>24</sup>Ibid., 97

<sup>25</sup>Ibid., 112.

<sup>26</sup>Ep.H., 38. The sentence immediately following indicates that Epicurus has in mind in particular at this point the atoms and void.

<sup>27</sup>Sextus Empiricus, 8, 64, Usener 253.

<sup>28</sup>Diogenes Laertius, 10, 32.

. . . enim per se communis dedicat esse  
sensus; cui nisi prima fides fundata valebit,  
haud erit occultis de rebus quo referentes  
confirmare animi quicquam ratione queamus.<sup>29</sup>

The ἁδῆλα are explained by reasoning from the perceptible to the imperceptible, that is, by analogy. There is a clear example of this process in the Epistula ad Herodotum in which Epicurus makes inferences about the structure of the atoms from the nature of sensible bodies.

ταύτη τῇ ἀναλογίᾳ νομιστέον καὶ τὸ ἐν τῇ ἀτόμῳ  
ἐλάχιστον κεχρησθαι· μικρότητι γὰρ ἐκεῖνο δῆλον  
ὡς διαφέρει τοῦ κατὰ τὴν αἴσθησιν θεωρουμένου,  
ἀναλογία δὲ τῇ αὐτῇ κέχρηται. ἐπεὶ περ καὶ ὅτι  
μέγεθος ἔχει ἡ ἄτομος, κατὰ τὴν <τῶν> ἐνταῦθα  
ἀναλογίαν κατηγορήσαμεν, μικρόν τι μόνον μακρὰν  
ἐκβάλλοντες.<sup>30</sup>

This analogy, we must believe, is followed by the minimum in the atom; for in its smallness, clearly, it differs from that which is perceptible, but it follows the same analogy. For we have already stated that the atom has magnitude, in virtue of its analogy with the things of this world, just projecting something small on a large scale.<sup>31</sup>

From this example we can see how Epicurus used what he terms in another passage τὴν ἀναλογίαν τὴν κατὰ τὰ φαινόμενα[α ἐ]ν τοῖς ἀοράτοις ο[ῦσα]ν<sup>32</sup> and τὴν συμφωνίαν τὴν ταῖς αἰσθήσεσιν ὑπέρχουσαν

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<sup>29</sup>Lucretius, 1, 422-425.

<sup>30</sup>Ep.H., 58-59.

<sup>31</sup>I have given here the translation of Furley (op.cit., p. 22) because of the difficulty in interpretation of the final phrase. Bailey's translation of this ("only we placed it far below them (sensible bodies) in smallness") is forced and does not make clear the point Epicurus is making, namely that in comparing atoms to a sensible object one is in effect magnifying the atoms themselves (Furley, op.cit., p. 23). Bailey's insistence also on the strict meaning of the term ἀναλογία, namely "proportion" "relation" (Epicurus, pp. 210-211) is perhaps unnecessary. Aristotle used the term in both senses (LSJ s.v.) and Epicurus clearly uses it with the meaning of "analogy" in Fragment 49 (LSJ s.v.).

<sup>32</sup>Fr., 49.

πρὸς τὰ ἁοράτα.<sup>33</sup>

Lucretius by his abundant use of analogy makes quite plain that Epicurus believed the nature of the ἄδηλα was to be discovered through information given by the senses. Two clear examples of analogy found in the De Rerum Natura are the proofs given for the existence of the atoms<sup>34</sup> and for the nature of the movement of the atoms in the void.<sup>35</sup>

There is evidence that the conclusions the mind reaches after it has combined and rearranged concepts on the basis of the "signs" provided by nature were termed by Epicurus ἐπίνοιαι.<sup>36</sup> Diogenes Laertius gives specific information concerning the nature of these "ideas." It is important to note that Diogenes Laertius' description of ἐπίνοιαι follows immediately upon his statement that we must make inferences about the ἄδηλα from phenomena<sup>37</sup> and acts as an explanation of this statement (as the γάρ makes clear):

καὶ γὰρ καὶ ἐπίνοιαι παῖσαι ἀπὸ τῶν αἰσθήσεων  
γεγόνασιν κατὰ τε περίπτωσιν καὶ ἀναλογίαν καὶ  
ὁμοιότητα καὶ σύνθεσιν, συμβαλλομένου τι καὶ  
τοῦ λογισμοῦ.<sup>38</sup>

ἐπίνοιαι all find their source in sensation and arise in four ways. An observation made quite by chance of the signs provided by sensation

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<sup>33</sup>Loc. cit.

<sup>34</sup>1, 265-328. Lucretius uses the analogy of wind, scents, garments losing their moisture, and objects being invisibly worn away.

<sup>35</sup>2, 112-24. He uses the analogy of the motes in the sunbeam.

<sup>36</sup>Opperman, op.cit., p. 197, Merbach, op.cit., p. 22, Tohte, op.cit., p. 11.

<sup>37</sup>See page 101 above.

<sup>38</sup>Diogenes Laertius, 10, 32.



(περίπτωσις) can result in the formation of an *ἐπίνοια*.<sup>39</sup> The mind can form *ἐπίνοιαι* by (purposely) comparing one experience with another and becoming aware of the similarity between them (*ἀναλογία* and *ὁμοιότης*). Finally the mind can form *ἐπίνοιαι* by combining several of the *σημεῖα* provided by experience (*σύνθεσις*). The logical activity of the mind (*λογισμός*) also has a part to play in the formation of ideas but its role is only secondary. Sensation furnishes all the material for *ἐπίνοιαι*; *λογισμός* simply aids the mind in making use of this material.

In a statement on the nature of thought, Epicurus gives a description of the way in which he believed ideas (*ἐπίνοιαι*) were formed.

οὐθὲν οὐδ' ἐπινοηθῆναι δύναται οὔτε περιληπτικῶς  
οὔτε ἀναλόγως τοῖς περιληπτοῖς<sup>40</sup>

"Nothing can be thought of either by mental apprehension or by analogy with what has been apprehended by the mind." *περιληπτικῶς* indicates the process by which the mind grasps (*περιλαμβάνειν*) the images that result from the stimulation of the sense-organs, the direct striking of the

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<sup>39</sup>Tohte, *op.cit.*, p. 12; Bailey, *Epicurus*, p. 413.

<sup>40</sup>Ep.H., 40. Cf. Lucretius, 1, 445-448. *ἐπινοέω* (for example, Ep.H., 56, 68), *διανοέω* (for example, Ep.H., 49, 60), *ἐννοέω* (for example, Ep.H., 73), *ἐπιλογίζομαι* (for example, Ep.H., 73) and *νοέω* (for example, Ep.H., 60, 66, 67) were all used by Epicurus with the meanings of "think," "consider," and refer to the (material) process of thinking he postulated. The term *ἐπίνοια* occurs also in Ep.H., 45, Fr., 13 and 169 (Usener). In these last two passages the term means simply "thought." In 45 it is likely the word is used simply with the meaning of "understanding," not in the technical sense as a result of reasoning on basis of sensation (as Bailey, *Epicurus*, p. 187, supposes).

mind by subtle idols and the formation by the mind of prolepseis.

ἀναλόγως τοῖς περιληπτοῖς indicates the process by which the mind forms new ideas by combining the images it has already apprehended.<sup>41</sup>

Thus it seems clear that Epicurus taught that ideas formed as a result of logical activity basing its conclusions on the experience of the senses were called ἐπίνοιαι.<sup>42</sup> The notion, therefore, of the existence of atoms and all other scientific principles that lie at the basis of Epicurus' system are ἐπίνοιαι. How then can one know that these ἐπίνοιαι are true? Epicurus taught that ἐπίνοιαι just like δόξα<sup>43</sup> must be checked by sensation since error could arise in their formation and they must therefore either be confirmed or not contradicted by the evidence of the senses before they are accepted as true. Thus Epicurus states concerning the sizes existing among the atoms:

Ἄλλὰ μὴν οὐδὲ δεῖ νομίζειν πᾶν μέγεθος ἐν ταῖς  
ἀτόμοις ὑπάρχειν, ἵνα μὴ τὰ φαινόμενα ἀντιμαρτυρῇ.  
παρὰ λαγὰς δὲ τινὰς μεγεθῶν νομιστέον εἶναι.<sup>44</sup>

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<sup>41</sup>Bailey, Epicurus, p. 182.

<sup>42</sup>De Witt (Epicurus and His Philosophy, pp. 113, 136) interprets ἐπίνοιαι as ideas logically derived, not built up from sensation with the aid of reasoning. This view, however, is clearly refuted by Diogenes Laertius' description of the nature of ἐπίνοιαι (32). De Witt (Ibid., pp. 135-136) also says Epicurus used the term ἐννοια (ἐννόημα) to refer to the basic scientific concepts of his system. ἐννοια, however, is not found with this meaning in the passages in which it occurs in the works of Epicurus (namely Ep.H., 57, 69, 77, K.D. 24) where it means simply "thought" or "mental comprehension."

<sup>43</sup>The distinction between δόξα and ἐπίνοια seems to be that the former is an opinion formed by the mind in the classification of sense-impressions, the latter, an idea formed by the mind as it reasons about the nature of the ἄδηλα (Cf. Bailey, Greek Atomists, p. 259 n.2). There is, however, some overlapping in usage of the terms (see below on Ep. H., 62). Tohte (op.cit., p. 12 n.1) and Zeller (Die Philosophie der Griechen, Vol. 3, p. 390), are incorrect in identifying δόξα and ἐπίνοια, since Diogenes Laertius (10,32) makes clear the terms had distinct meanings.

<sup>44</sup>Ep.H., 55. Cf. 63 and especially 68 where Epicurus mentions the referral of διαλογίσματα about the soul to the criteria of the perception.

Similarly Epicurus' assertion that the idols exist is made on the grounds that nothing in nature contradicts a belief in their existence:

Εἴθ' ὅτι τὰ εἰδωλα ταῖς λεπτότησιν ἀνυπερβλήτοις  
κέχρηται, οὐθὲν ἀντιμαρτυρεῖ τῶν φαινομένων.<sup>45</sup>

In the same fashion Lucretius asserts that nothing in nature contradicts the existence of the swerve of the atoms (2, 249-250) nor the principle that bodies possessing sensation are formed of atoms lacking feeling:

neque id manifesta refutant  
nec contra pugnant, in promptu cognita quae sunt,  
sed magis ipsa manu ducunt et credere cogunt  
ex insensilibus, quod dico, animalia gigni.<sup>46</sup>

It appears that Epicurus believed that *επίνοιαι*, especially scientific concepts, just like *prolepseis*, could be stored in the mind and used in the process of reasoning about other problems (see *Epistula ad Herodotum* 62).<sup>47</sup> Presumably, however, it would only be "proven" *επίνοιαι* that were stored in the intellect, that is, those not contradicted by the senses.

From the evidence we possess it seems clear that Epicurus believed the nature of the *ἄδηλα* was discovered by the mind drawing conclusions from information provided by sensation and checking that these conclusions were not contradicted by the evidence of the senses. The results of Epicurus' investigations of the two types of *ἄδηλα*, namely the nature of the heavenly phenomena and the imperceptible realities underlying sensible objects (atoms and void), show one distinct difference:<sup>48</sup> he offered

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<sup>45</sup>*Ep.H.*, 47a.

<sup>46</sup>Lucretius, 2, 867-870.

<sup>47</sup>This passage will be discussed in full below.

<sup>48</sup>Cf. F. M. Cornford, *Principium Sapientiae* (Cambridge, 1952), pp. 26-27.

several explanations of the same heavenly phenomenon but only one explanation of the nature of the imperceptible realities underlying sensible objects.

μήτε τὸ ἀδύνατον καὶ παραβιάζεσθαι μήτε ὁμοίαν  
κατὰ πάντα τὴν θεωρίαν ἔχειν ἢ τοῖς περὶ βίων λόγοις  
ἢ τοῖς κατὰ τὴν τῶν ἄλλων φυσικῶν προβλημάτων κάθαρσιν,  
οἷον ὅτι τὸ πᾶν σώματα καὶ ἀναφῆς φύσις ἐστὶν ἢ  
ὅτι ἄτομα <τὰ> στοιχεῖα, καὶ πάντα τὰ τοιαῦτα δὴ  
ὅσα μοναχὴν ἔχει τοῖς φαινομένοις συμφωνίαν· ὅπερ  
ἐπὶ τῶν μετεώρων οὐχ ὑπάρχει, ἀλλὰ ταῦτά γε πλεοναχὴν  
ἔχει καὶ τῆς γενέσεως αἰτίαν καὶ τῆς οὐσίας ταῖς  
αἰσθήσεσι σύμφωνον κατηγορίαν.<sup>49</sup>

Bailey<sup>50</sup> lays great emphasis upon this difference in results and believes that Epicurus could dogmatically affirm the truth of a single solution to the problem of the ultimate constituents of the universe (a problem to which, perhaps, since the realities were wholly imperceptible, one would expect Epicurus to give only a tentative solution or several possible answers) because this solution was formed by an ἐπιβολὴ τῆς διανοίας.<sup>51</sup> It is clear that this ἐπιβολὴ τῆς διανοίας did have an important role in Epicurean thought, for Diogenes Laërtius records that the later Epicureans added it as the fourth criterion of truth.<sup>52</sup> Its significance, however, in establishing the one true explanation of nature can be questioned.

To understand what Epicurus meant by the phrase ἐπιβολὴ τῆς διανοίας, we must first determine the meaning of ἐπιβολή since it

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<sup>49</sup>Ep.P., 86.

<sup>50</sup>Bailey, Greek Atomists, pp. 264-265.

<sup>51</sup>See Ibid., Appendix 3, pp. 559-570.

<sup>52</sup>Epicurus' three criteria were the sensations, feelings and prolepseis. Diogenes Laërtius, 10, 31.

was an aim of Epicurus, even if he was not entirely successful,<sup>53</sup> that each word be employed in its most obvious meaning.<sup>54</sup> The term ἐπιβολή does not appear in the works of Homer,<sup>55</sup> Pindar,<sup>56</sup> Bacchylides,<sup>57</sup> Aeschylus,<sup>58</sup> Sophocles,<sup>59</sup> Euripides,<sup>60</sup> Herodotus,<sup>61</sup> Plato,<sup>62</sup> or Aristotle.<sup>63</sup> The word is not listed in the Wortindex to Diels: Die Fragmente der Vorsokratiker.<sup>64</sup> ἐπιβολή occurs in the work of Thucydides, both in the active meaning of iniectio, "a casting upon!"<sup>65</sup> and in the passive meaning of "that which is cast upon."<sup>66</sup> In Aristophanes,<sup>67</sup> Xenophon,<sup>68</sup> Lysias,<sup>69</sup> Andocides<sup>70</sup> and Aeschines<sup>71</sup> the word is found with the meaning of "penalty" or "fine," thus the word again has a passive sense of "that which has been laid upon." The verb ἐπιβάλλω, which is of more frequent occurrence in the authors who proceeded Epicurus than the noun, has the basic meaning of "throw upon," "cast upon" or "impose."<sup>72</sup> This meaning of

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<sup>53</sup>Cf. Bailey, Epicurus, p. 117.

<sup>54</sup>Ep. H., 38.

<sup>55</sup>R.J.Cunliffe, A Lexicon of the Homeric Dialect (London, 1924).

<sup>56</sup>J.Rumpel, Lexicon Pindaricum (Leipzig, 1883).

<sup>57</sup>R.C.Jebb, Bacchylides, The Poems and Fragments (Cambridge, 1905).

<sup>58</sup>G. Italie, Index Aeschylus (Leiden, 1955).

<sup>59</sup>B.W.Beatson, Index Graecitatis Sophocleae (London, 1830).

<sup>60</sup>C.D.Beckio, Index Graecitatis Euripideae (London, 1829).

<sup>61</sup>H.Cary, Lexicon to Herodotus (Oxford, 1843).

<sup>62</sup>D.Astius, Lexicon Platonicum (Leipzig, 1835).

<sup>63</sup>Bonitz, Index Aristotelicus.

<sup>64</sup>W.Kranz, Wortindex in Die Fragmente der Vorsokratiker, Vol. 3.

<sup>65</sup>2, 49 (clothes) and 7, 62, 65 (grappling irons).

<sup>66</sup>3, 20 (layers of bricks). <sup>67</sup>Vespae, 769.

<sup>68</sup>For example Historia Graeca, 1.7.2.

<sup>69</sup>Orationes, 20, 14; 6, 21.

<sup>70</sup>Orationes, 1, 73.

<sup>71</sup>Orationes, 2, 93.

<sup>72</sup>See, for example, Homer, Iliad, 23, 135, Pindar, Pythian Ode, 11, 14 (tmesis), Aeschylus, Choephoroi, 395 (tmesis), Herodotus, 7,

ἐπιβάλλω appears in the statement of Aetius about Epicurus:

Ἐπίκουρος τὴν αἴσθησιν καὶ τὴν νόησιν γίνεσθαι εἰδώλων  
ἔξωθεν προσιόντων· μηδενὶ γὰρ ἐπιβάλλειν μηδετέραν  
χωρὶς τοῦ προσπίπτοντος εἰδώλου.<sup>73</sup>

"Neither thought nor sensation can grasp anything apart from the idol that falls upon it."

Therefore it is possible for us to expect that Epicurus, if he did actually follow his principle of using each term in its most literal sense, used the term ἐπιβολή with the meaning of "throwing upon" or "projection towards." In fact the passages in which Epicurus refers to the ἐπιβολή τῶν αἰσθητηρίων<sup>74</sup> indicate he employed ἐπιβολή in its most obvious meaning. By this "projection of the senses" toward some object, one purposely examines closely the nature of that object; it is clear that this ἐπιβολή by its very nature plays an important role in Epicurus' process of ἐπιμαρτύρησις.<sup>75</sup> Two other instances of ἐπιβολή in Epicurus' works also appear to have an active meaning of "projection" or "apprehension." In Epistula ad Herodotum Epicurus speaks of properties as having ἐπιβολὰς ... ἰδίας<sup>76</sup> and accidents being perceived κατ' ἐπιβολὰς ... τινας.<sup>77</sup> In both instances Epicurus appears to be referring to the process by which the senses can project themselves upon these qualities.<sup>78</sup>

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107, Thucydides, 2, 52, Plato, Theaetetus, 173 A and Aristotle, Metaph., 1053 a 35.

<sup>73</sup>Aetius, Pl., 4, 8, 10, Usener 317, Dox.Gr., p. 395.

<sup>74</sup>Ep.H., 38, 50 and 51. <sup>75</sup>See above page. 88.

<sup>76</sup>Ep.H., 69. <sup>77</sup>Ibid., 70.

<sup>78</sup>Cf. Bailey, Epicurus, pp. 238, 240 and A. Brieger, Epikurs Brief an Herodot, 68-83 (Halle, 1882), p. 69.

Again taking ἐπιβολή in its literal sense, we can translate ἐπιβολή τῆς διανοίας as "a casting of the mind onto" or "an apprehension by the mind of" some object. That Epicurus did indicate by the phrase ἐπιβολή τῆς διανοίας an active projection of the mind onto some object is shown by certain expressions in the works of Lucretius and Cicero that appear to translate the activity of ἐπιβολή τῆς διανοίας or this phrase itself.<sup>79</sup>

si inmensam et interminatam in omnis partis magnitudinem  
regionum videretis, in quam se iniciens animus et intendens  
ita late longueque peregrinatur ut nullam tamen oram ultimi  
videat in qua possit insistere.<sup>80</sup>

Epicurus . . . docet . . . in eas imagines mentem intentam  
infixamque nostram intellegentiam capere quae sit et beata  
natura et aeterna.<sup>81</sup>

et quia tenvia sunt (sc. simulacra), nisi quae contendit, acute  
cernere non potis est animus; proinde omnia quae sunt  
praeterea pereunt, nisi <si ad> quae se ipse paravit.<sup>82</sup>

et tamen in rebus quoque apertis noscere possis,  
si non advertas animum, proinde esse quasi omni  
tempore semotum fuerit longueque remotum.<sup>83</sup>

quaerit enim rationem animus, cum summa loci sit  
infinita foris haec extra moenia mundi,  
quid sit ibi porro quo prospicere usque velit mens  
atque animi iactus liber quo pervolet ipse.<sup>84</sup>

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<sup>79</sup>Peters, op.cit., p. 41; Munro, op.cit., p. 156; Leonard and Smith, op.cit., pp. 47, 380; Bailey, Commentary, Vol. 2, p. 920. De Witt ("Epicurus, Περὶ Φαντασίας," pp. 426-427) agrees that Cicero and Lucretius are translating ἐπιβολή τῆς διανοίας but states that their interpretation of the phrase is incorrect because Epicurus never had the notion of the "free flight of the soul." De Witt is taking the meaning of iactus animi far too literally. When, for example, Lucretius speaks of the mind travelling beyond the moenia mundi (1, 72-74), he is simply referring to the activity of the mind in turning its attention to the subject of the whole universe.

<sup>80</sup>Cicero, De Nat. Deor., 1, 20, 54.

<sup>81</sup>Ibid., 1, 19, 49. Cf. also 1, 37, 105.

<sup>82</sup>Lucretius, 4, 802-804.

<sup>83</sup>Ibid., 4, 811-813.

<sup>84</sup>Ibid., 2, 1044-1047.

in quae corpora si nullus tibi forte videtur  
posse animi iniectus fieri, procul avius erras.

scire licet nostrae quoque menti corpora posse  
verti in notitiam nullo circumlita fuce.<sup>85</sup>

Clement's statement that Epicurus taught the prolepsis was an ἐπιβολὴν  
ἐπὶ τι ἐναργὲς καὶ ἐπὶ τὴν ἐναργῆ τοῦ πράγματος ἐπίνοιαν<sup>86</sup>  
also supports the interpretation of ἐπιβολὴ τῆς διανοίας as an  
active process.<sup>87</sup>

There is evidence that Epicurus also used the term ἐπιβολή  
in a passive sense to indicate the result of some projection or apprehension.  
In the following passages of Epicurus' works in which the simple term  
ἐπιβολή is used, the word clearly bears the passive meaning of "grasp,"  
"view" or "comprehension."

τῆς γὰρ ἀθρόας ἐπιβολῆς πυκνὸν δεόμεθα, τῆς δὲ κατὰ  
μέρος οὐχ ὁμοίως.<sup>88</sup>

βαδιστέον μὲν οὖν ἐπ' ἐκεῖνα καὶ συνεχῶς ἐν τῇ μνήμῃ  
τὸ τοσοῦτον ποιητέον, ἀφ' οὗ ἢ τε κυριωτάτῃ ἐπιβολῇ  
ἐπὶ τὰ πράγματα ἔσται ... ἐπεὶ καὶ τοῦ τετελεστούργημένου  
τοῦτο κυριώτατον τοῦ παντὸς ἀκριβώματος γίνεται, τὸ  
ταῖς ἐπιβολαῖς ὁξέως δύνασθαι χρῆσθαι.<sup>89</sup>

εἰς τὰς τοιαύτας ἀναλύοντας ἐπιβολὰς τὰς πλείστας τῶν  
περιοδειῶν ὑπὲρ τῆς ὅλης φύσεως ποιεῖσθαι.<sup>90</sup>

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<sup>85</sup>Lucretius, 2, 739-740, 744-745.

<sup>86</sup>Clement of Alexandria, Stromateis, 2, 4, Usener 255.

<sup>87</sup>See also Farrington, op.cit., p. 108, Opperman, op.cit., p. 195,  
and Merbach, op.cit., p. 31.

<sup>88</sup>Ep.H., 35.

<sup>89</sup>Ibid., 36.

<sup>90</sup>Ibid., 83.



The expression ἐπιβολὴ τῆς διανοίας with ἐπιβολή having a passive meaning would mean the comprehension or grasp by the mind of some subject as a result of the mind projecting itself upon it. Tohte<sup>91</sup> believes Epicurus uses the phrase ἐπιβολὴ τῆς διανοίας strictly in this passive sense but he also states that Lucretius and Cicero, who clearly refer to an active meaning of the phrase, translate the expression but use it in a different sense. Giussani<sup>92</sup> seems correct in pointing out, however, that Lucretius and Cicero are certainly attempting to reproduce precisely both the wording and meaning of Epicurus' expression. It is the active sense of ἐπιβολή that occurs in the phrase ἐπιβολὴ τῆς διανοίας.

The expression ἐπιβολὴ τῆς διανοίας occurs in six passages of the extant works of Epicurus. One meaning of the phrase is made clear by the following passages in the Epistula ad Herodotum:

ἥ τε γὰρ ὁμοιότης τῶν φαντασμῶν οἶον εἰ ἐν εἰκόνι  
λαμβανομένων ἢ καθ' ὕπνους γινομένων ἢ κατ' ἄλλας  
τινὰς ἐπιβολὰς τῆς διανοίας ἢ τῶν λοιπῶν κριτηρίων  
οὐκ ἂν ποτε ὑπῆρχε τοῖς οὐσί τε καὶ ἀληθέσι προσ-  
αγορευομένοις, εἰ μὴ ἦν τινα καὶ τοιαῦτα προσβαλλόμενα.<sup>93</sup>

Epicurus speaks of the images that arise either "in sleep or in any other apprehensions of the mind or the rest of the κριτήρια." He is using the phrase ἐπιβολὴ τῆς διανοίας to refer to the perception by the mind of idols too fine to strike the senses. Some of these idols cause dreams; others bring the visions of the gods, cause the hallucinations of madmen or help form the compound images that arise in the air (such as, for example,

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<sup>91</sup>Tohte, op.cit., p. 24.

<sup>92</sup>Giussani, op.cit., p. 171. Cf. Bailey, Greek Atomists, p. 576.

<sup>93</sup>Ep. H., 51.

Centaurs<sup>94</sup>). The phrase τῶν λοιπῶν κριτηρίων<sup>95</sup> is significant since it indicates that Epicurus is referring to the mind as an organ of sense, that is, as one of the "means of judgement." It was in the perception of fine idols that the mind acted as a sense-organ.

καὶ ἦν ἄν λάβωμεν φαντασίαν ἐπιβλητικῶς τῇ διανοίᾳ  
ἢ τοῖς αἰσθητηρίοις εἴτε μορφῆς εἴτε συμβεβηκότων,  
μορφή ἐστὶν αὕτη τοῦ στερεομένου, γινομένη κατὰ τὸ  
ἐξῆς πύκνωμα ἢ ἐγκατάλειμμα τοῦ εἰδώλου.<sup>96</sup>

The image obtained by an ἐπιβολὴ τῆς διανοίας is "the shape of the solid object." Again Epicurus is using this expression to refer to the apprehension by the mind of subtle idols, since only these idols can strike the mind directly and give rise to a φαντασία within it. There is the problem that one class of these fine idols, namely the συστάσεις, the compound images that arise from idols uniting in the air, cannot be said to correspond to the shape of the solid object. We can only suppose that Epicurus when making this statement was not referring to this particular class of the finer idols.<sup>97</sup> Lucretius' statement that the mind could only perceive those idols that it strained itself to perceive<sup>98</sup> shows that Epicurus used the expression ἐπιβολὴ τῆς διανοίας to indicate the apprehension by the mind of subtle idols.

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<sup>94</sup>See beginning of Chapter 4.

<sup>95</sup>κριτήρια is here used in the sense of the "means of judgement" and refers to the individual senses (See Bailey, Epicurus, pp. 178, 198). The word certainly does not mean "standards of judgements" that is, the sensations, feelings and prolepses, for we have no reference to, if such a reference is even possible, an ἐπιβολή of the πάθη or the προλήψεις.

<sup>96</sup>Ep.H., 50.

<sup>97</sup>Tohte, op.cit., p. 23 and Bailey, Greek Atomists, p. 566.

<sup>98</sup>4, 802-804. Cf. 4, 811-813 and Cicero, De Nat. Deor., 1, 19, 49. See quoted on page 110.

In fact Lucretius shows that it was only by an ἐπιβολὴ τῆς διανοίας that the mind could perceive such idols.

The passage in Epistula ad Herodotum 38 that contains a reference to ἐπιβολὴ τῆς διανοίας also supports this interpretation of the phrase.

ἔτι τε κατὰ τὰς αἰσθήσεις δεῖ πάντα τηρεῖν καὶ ἀπλῶς  
(κατὰ) τὰς παρούσας ἐπιβολὰς εἴτε διανοίας εἴθ'  
οὔτου δῆποτε τῶν κριτηρίων, ὁμοίως δὲ κατὰ τὰ ὑπάρχοντα  
πάθη, ὅπως ἂν καὶ τὸ προσμένον καὶ τὸ ἄδηλον ἔχωμεν  
οἷς σημειωσόμεθα.<sup>99</sup>

It is especially important to note the expression "of the mind or of any of the κριτήρια." As in Epistula ad Herodotum 51, κριτήρια refers to the individual senses<sup>100</sup> and here the mind appears to be identified with one of these "means of judgement," that is, Epicurus is referring to the mind as an organ of sense. In this case Epicurus clearly is making reference to the perception of fine idols by the intellect.

In addition to this meaning of ἐπιβολὴ τῆς διανοίας, we have in Clement, Cicero, and Lucretius evidence for another interpretation of the expression. When Clement describes a prolepsis as an ἐπιβολή "of something clear or the clear notion of the thing,"<sup>101</sup> the term ἐπιβολή is being used to express the grasp made by the mind of some concept that exists in the mind itself.<sup>102</sup> Cicero is clearly using ἐπιβολὴ τῆς

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<sup>99</sup>Ep.H., 38.

<sup>100</sup> κριτήρια does not refer to Epicurus' "standards of judgement," that is, his criteria of truth since both αἰσθήσεις and πάθη are mentioned separately.

<sup>101</sup>Clement of Alexandria, Stromateis, 2, 4, Usener 255. See quoted above on page 111.

<sup>102</sup>Bailey, Greek Atomists, p. 568.

διανοίας in this same sense when he speaks of the mind projecting itself onto the measureless region of space;<sup>103</sup> the mind casts itself onto, that is, grasps the concept of space (ἐπίνοια) existing in itself. This meaning of ἐπιβολὴ τῆς διανοίας is also found twice<sup>104</sup> in Lucretius when he speaks of the "projection of the mind" into space and the "casting of the mind" onto bodies without colour.<sup>105</sup> The mind is turning its attention to, that is, selecting out the notions of space and colourless bodies stored within itself.

We come now to deal with the very difficult passage in the Epistula ad Herodotum 62 and the important statement of Epicurus in 51 on the basis of which Bailey assigns a special role to ἐπιβολὴ τῆς διανοίας in the formation of the scientific concepts of Epicurus' system:

ἀλλὰ μὴν καὶ κατὰ τὰς συγκρίσεις θάπτων ἑτέρα ἑτέρας  
 ῥηθήσεται τῶν ἀτόμων ἰσοταχῶν οὐσῶν, τῷ ἐφ' ἓνα τόπον  
 φέρεσθαι τὰς ἐν τοῖς ἀθροίσμασιν ἀτόμους καὶ κατὰ  
 τὸν ἐλάχιστον συνεχῆ χρόνον, εἰ μὴ ἐφ' ἓνα κατὰ τοὺς  
 λόγῳ θεωρητοὺς χρόνους, ἀλλὰ πυκνὸν ἀντικόπτουσιν,  
 ἕως ἂν ὑπὸ τὴν αἴσθησιν τὸ συνεχὲς τῆς φορᾶς γίνηται.  
 τὸ γὰρ προσδοξαζόμενον περὶ τοῦ ἀοράτου, ὥς ἄρα καὶ  
 οἱ διὰ λόγου θεωρητοὶ χρόνοι τὸ συνεχὲς τῆς φορᾶς  
 ἔξουσιν, οὐκ ἀληθὲς ἐστὶν ἐπὶ τῶν τοιούτων· ἐπεὶ τό  
 γε θεωρούμενον πᾶν ἢ κατ' ἐπιβολὴν λαμβανόμενον τῇ  
 διανοίᾳ ἀληθὲς ἐστίν.<sup>106</sup>

<sup>103</sup>Cicero, De Nat. Deor., 1, 20, 54. See quoted on page 110.

<sup>104</sup>If the reading of Lipsius be adopted (as it has by Giussani, Bailey and Rouse) in 2, 1080 (in primia animalibus inice mentem), we find another reference to the mind projecting itself upon a concept (namely of animals). See Bailey, Commentary, Vol. 2, p. 970.

<sup>105</sup>Lucretius, 2, 1044-1047, 739-744. See quoted on pages 110 and 111.

<sup>106</sup>Ep.H., 62.

τὸ δὲ διημαρτημένον οὐκ ἂν ὑπῆρχεν, εἰ μὴ ἐλαμ-  
 βάνομεν καὶ ἄλλην τινὰ κίνησιν ἐν ἡμῖν αὐτοῖς  
 συνημμένην μὲν <τῇ φανταστικῇ ἐπιβολῇ>, διάληψιν  
 δὲ ἔχουσιν.<sup>107</sup>

In 62, Epicurus states that some people may think that one compound body moves more quickly than another because the atoms of the one compound are moving more quickly in one direction than those in the other body. They come to this conclusion because they see that even in the smallest periods of "continuous time" compounds have movement in one direction. Therefore they conclude that in the periods of time conceived only by thought the atoms of a compound also move in one direction only. This is a false inference made by δόξα (προσδοξαζόμενον). The true concept of the movement of atoms in a compound is that they are all travelling at equal speed, constantly colliding and moving in tiny trajects in all directions. The speed and direction in which a compound body moves will be an expression of the number of atoms that happen to be moving in the same direction over a continuous period of time.<sup>108</sup>

The last clause in 62 is especially difficult to interpret. Epicurus states that the analogy drawn by δόξα that the nature of the movement of atoms in a compound is the same as the movement of the compound itself, that is, that the atoms move only in one direction, is false. Why? because τό γε θεωρούμενον πᾶν ἢ κατ' ἐπιβολὴν λαμβανόμενον τῇ διανοίᾳ is true. Hicks translates this clause "Our canon is that direct observation by sense and direct apprehension by the mind are alone invariably

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<sup>107</sup>Ep.H., 51. The missing dative was supplied by Usener from a gloss on 50. (See Usener, op.cit., p. 11 and Bailey, Epicurus, pp. 28, 198.) The κίνησις is the movement of δόξα (see above chapter 4).

<sup>108</sup>Furley, op.cit., pp. 123-125.

true."<sup>109</sup> Strodach<sup>110</sup> translates the clause "since 'true' means either that which is empirically observed or that which is mentally apprehended." Gigon<sup>111</sup> renders the clause by "Denn wahr ist das wirklich Geschaute oder auf Grund der Beobachtung mit dem Denken begriffene." Finally Philippson<sup>112</sup> translates the clause "denn das Geschaute und das nach einer ἐπιβολή durch die διάνοια Erfasste ist wahr." All these scholars take τό γε θεωρούμενον πᾶν as a reference to that which is perceived by the senses. They all appear to take the whole clause as a statement by Epicurus of his belief in the complete trustworthiness of sensation, whether of the sense-organs themselves (τό γε θεωρούμενον πᾶν) or of the mind functioning as an organ of sense (in the case of the fine idols).<sup>113</sup> This interpretation of the first half of the clause is open to question. Epicurus has just stated that the προσδοξαζόμενον based on an analogy drawn from sensation is false, for τό γε θεωρούμενον πᾶν ἢ κατ' ἐπιβολὴν λαμβανόμενον τῇ διανοίᾳ is true. If τό γε θεωρούμενον πᾶν refers to sensation, the last clause hardly makes sense as an explanation of why the analogy drawn from sensation itself is false.

Bailey<sup>114</sup> translates the last clause of 62 "for we must remember that it is what we observe with the senses or grasp with the mind by an

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<sup>109</sup>Diogenes Laertius; Book 10, translated by R.D.Hicks (Loeb Classical Library, London and New York, 1925), p. 593.

<sup>110</sup>Strodach, op.cit., pp. 125-126.

<sup>111</sup>Epikur translated by O. Gigon (Zürich, 1949), p. 21.

<sup>112</sup>R. Philippson, "Review of C. Bailey, The Greek Atomists and Epicurus," Gnomon 6 (1930), p. 471.

<sup>113</sup>Ibid., pp. 470-471.

<sup>114</sup>Bailey, Epicurus, p. 39.

apprehension that is true." He takes τό γε θεωρούμενον πᾶν as a reference to "that which is grasped by the senses when 'looking' at the close view, i.e. by an ἐπιβολή."<sup>115</sup> This interpretation, however, can be questioned. The passages in which θεωρέω occurs<sup>116</sup> indicate that Epicurus used the word simply as a synonym for ὁράω. Epicurus' use of the term in reference to heavenly phenomena (Epistula ad Herodotum 78, Epistula ad Pythoclem 112, 113 and 114) and objects on earth seen at a distance (Epistula ad Pythoclem 91, 103) make questionable Bailey's interpretation of τό γε θεωρούμενον as a reference to the process of ἐπιβολή τῶν αἰσθητηρίων, that is, the purposeful examination of an object at close view. Again we must ask: why should Epicurus be saying in this causal clause that sense-perceptions are true (whether perceived by close attention of the senses or not) when he has just stated the analogy drawn from sensation is false?

Bailey's interpretation of ἐπιβολή τῆς διανοίας in the passages in 62 is as follows. He takes the first half of the final clause (ἐπεὶ ... ἐστίν) as a general statement by Epicurus of the truth of sensation; he lays upon the last half of the clause (ἢ κατ' ἐπιβολὴν ... διανοίᾳ) the weight of the ἐπεὶ:<sup>117</sup> the conclusion of δόξα is false, for the conclusion reached by an ἐπιβολή τῆς διανοίας is true. Bailey, bearing in mind Epicurus' other statement

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<sup>115</sup>Bailey, Greek Atomists, p. 569. Cf. also pp. 429 and Epicurus, p. 223.

<sup>116</sup>Ep.H., 41, 56, 58, 59, 71, 73, 74, 78; Ep.P., 87, 91, 94 (twice), 95, 96, 98 (twice), 103, 109, 110, 112, 113, 114 and 116.

<sup>117</sup>Bailey, Greek Atomists, pp. 568-572.

in the Epistula ad Herodotum 51 that δόξα is different from the ἐπιβολὴ τῆς διανοίας<sup>118</sup> believes the Atomist in 62 is contrasting δόξα with ἐπιβολὴ τῆς διανοίας. He takes the clause (ἐπεὶ ... ἐστίν) as the statement of two parallel cases: just as the nature of sense-perception is confirmed by the close view (τό γε θεωρούμενον), so the characteristics of the imperceptible realities of the universe, the atoms and void, are established by an ἐπιβολὴ τῆς διανοίας. Bailey says that δόξα forming the theory that the atoms in compound bodies move only in one direction refers this theory to what is grasped by an ἐπιβολὴ τῆς διανοίας, namely the image of atoms in compound bodies moving in tiny trajects. Bailey says the ἐπιβολὴ τῆς διανοίας grasped this vision by the juxtaposition of previously conceived clear scientific concepts of the movement of atoms, these concepts themselves having been grasped by an ἐπιβολή of the mind. Such a juxtaposition results in only one clear vision, that is, in a scientific truth. Thus Bailey states that an ἐπιβολὴ τῆς διανοίας is "the immediate, or 'intuitive' apprehension of concepts, and in particular of the 'clear,' i.e. self-evident concepts of scientific thought."<sup>119</sup>

First of all Bailey's assertion that it is the second half of the final clause that contains the force of the ἐπεὶ, that is, that the προσδοξαζόμενον is false because the ἐπιβολή of the mind is true, is open to question. Would it not be more natural to take both τό γε θεωρούμενον πᾶν and κατ' ἐπιβολὴν λαμβανόμενον

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<sup>118</sup>Bailey, Greek Atomists, p. 569.

<sup>119</sup>Ibid., p. 561.



with τῇ διανοίᾳ? The translation would then be: "everything that is examined by the mind or received as a result of an apprehension by the mind is true." This meaning of θεωρέω, "to study" or "examine" (with the mind) is found both in Plato<sup>120</sup> and Aristotle.<sup>121</sup> We now have a new problem: what does Epicurus mean by this statement? We must examine the passage in its strict context in order to discover the answer.

The reasoning in 62 if explained strictly in Epicurean terms will proceed as follows. The mind is faced with the problem of the movement of atoms in a compound body. δόξα working from the signs given by sensation assigns this problem of atomic movement to the concept (prolepsis) the mind possesses of the movement of compound bodies. δόξα forms the προσδοξαζόμενον that the atoms move only in one direction in times conceived by thought just as compound bodies even in the smallest periods of continuous time have movement in one direction. However, the mind performs an act of memory, that is, it chooses out the ideas (ἐπίνοιαι) of the motion of the atoms that it possesses and in light of these rejects the conclusion of δόξα.<sup>122</sup> Where did the mind obtain these ἐπίνοιαι of the motion of atoms? Epicurus believed that the atoms, since they possessed weight,<sup>123</sup> moved downward, for sensible objects were seen always to have a downward movement because of their weight.<sup>124</sup> Similarly Epicurus believed the atoms swerved because of the very existence of

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<sup>120</sup>Astius, op.cit., s.v. θεωρέω.

<sup>121</sup>Bonitz, Index Aristotelicus, s.v. θεωρέω.

<sup>122</sup>We have here an overlapping in usage of δόξα and λογισμός.

<sup>123</sup>This is clear since objects composed of atoms possess weight. Lucretius, 1, 358-67.

<sup>124</sup>Ibid., 2, 184-215.

created objects showed the atoms must have swerved as they fell downward at equal speed through the void and also because nothing in nature contradicted this supposition.<sup>125</sup> Both these ἐπίνοιαι, therefore, can be said to be derived from sensation itself. δόξα made a hasty (in the sense that it did not pay attention to principles already established on the basis of sensation) and incorrect comparison of the motion of compound bodies and the atoms of those bodies; the careful attention of the mind to the proper ἐπίνοιαι resulted in the correct conclusion. In the last clause of 62 Epicurus appears to be stating the two activities of the mind that are true as opposed to the incorrect (in this particular case) action of δόξα. It is the careful attention of the mind to principles already established (in this case the principles of the motion of atoms) that is true and also "what is grasped by an ἐπιβολή of the mind," that is, images perceived directly by the mind acting as an organ of sense. This is probably the sense in which Epicurus is using ἐπιβολὴ τῆς διανοίας in 62, although he may be referring to the second meaning of the phrase, namely the grasping or selecting out by the mind of some concept or image already existing within it. This action can be called true since the objects of the action are true, namely the prolepseis and "proven" ἐπίνοιαι (those not contradicted by sensation).

Besides Bailey's questionable interpretation of τό γε θεωρούμενον πᾶν and his overemphasis on the phrase κατ' ἐπιβολὴν λαμβανόμενον τῇ διανοίᾳ, there are difficulties involved in his

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<sup>125</sup>Lucretius, 2, 216-250.

interpretation of ἐπιβολὴ τῆς διανοίας. The most important problem is that Bailey's notion of the ἐπιβολή of the mind is inconsistent with the emphasis Epicurus laid upon sensation as the criterion of truth. Bailey states that the results of an ἐπιβολὴ τῆς διανοίας are true simply because they arise from an ἐπιβολή of the mind, not because they are confirmed or not contradicted by the evidence of the senses; Bailey is in fact asserting the validity of thought that is independent of sensation.<sup>126</sup> The result of what Bailey conceives an "apprehension of the mind" to be is simply a new idea and if this is true simply because of the way it was "grasped," the validity of independent thought is being asserted.

Another problem of Bailey's interpretation of ἐπιβολὴ τῆς διανοίας is that there is no evidence to support it (except Bailey's questionable understanding of Epistula ad Herodotum 62). Although the phrase ἐπιβολὴ τῆς διανοίας was used to indicate the selection or apprehension of a concept or idea, nowhere is the term used in reference to the process of reasoning, that is, the actual manipulation of concepts. Perhaps it would not be incorrect to say that the ἐπιβολή of the mind formed a part of the process of reasoning in as much as it performed the function of selecting out concepts for consideration, but it did not involve the arranging and rearranging of these notions. Furthermore apart from 62 and 38 (where the use of ἐπιβολὴ τῆς διανοίας almost certainly refers to apprehension of fine idols by the mind), there is no

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<sup>126</sup>Bailey seems to be aware of the difficulty here for in Epicurus (pp. 177, 223) he states that the results of the "apprehension of the mind" are verified by reference to sensation, although in his Appendix he clearly states (pp. 570-571) that the results are true simply because they are grasped by an ἐπιβολή of the mind.

mention of the ἐπιβολή of the mind in reference to the problem of the ἄδηλα (in particular the nature of the atoms and void). If Bailey's interpretation of ἐπιβολὴ τῆς διανοίας were correct, we would expect perhaps some mention of the term when Diogenes Laertius describes the method by which one can gain knowledge of the nature of the ἄδηλα (32), especially since he has just mentioned (31) that the Epicureans added the "apprehension of the mind" as a criterion of truth.

Bailey supports his interpretation of 62 that Epicurus is contrasting ἐπιβολὴ τῆς διανοίας with δόξα (= λογισμός) by reference to the statement in the Epistula ad Herodotum 51 that δόξα is a movement within us "closely connected with the ἐπιβολή of the mind but differing from it."<sup>127</sup> Since the discussion in 50 and 51 concerns the errors that occur in vision, it is more than likely that the reference to δόξα in 51 is to the term's more usual function of classifying sense-impressions, by selecting the concepts to which they correspond. Similarly the ἐπιβολή of the mind may refer to the apprehension of subtle idols. This passage makes clear sense with the terms given these meanings: ἐπιβολὴ τῆς διανοίας is the passive reception of idols, δόξα is connected with this ἐπιβολή in that it is also a movement concerned with idols, but differs in that it is not the process that perceives idols but classifies them.<sup>128</sup> Or again with the terms used in this same sense, Epicurus may not have in mind, the difference in the actual processes of δόξα and ἐπιβολή so

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<sup>127</sup>See quote on page 115.

<sup>128</sup>Merbach, op.cit., p. 22 and Furley, op.cit., p. 125.

much as the nature of the processes themselves: ἐπιβολὴ τῆς διανοίας is true because it is a form of sensation, δόξα on the other hand, can be true or false since it can apply the sense-impression to the correct or incorrect concept.<sup>129</sup> The reference to δόξα in 51 is not to a faculty that solves problems about the unknown (ἄδηλα) by use of concepts existing in the mind itself (λογισμός). Bailey's statement,<sup>130</sup> therefore, that the difference mentioned in 51 lies in the way δόξα (= λογισμός) and ἐπιβολὴ τῆς διανοίας use concepts is highly questionable.

Bailey<sup>131</sup> also feels that the reference to the ἐπιβολή of the mind in 38 supports the wider interpretation he gives the phrase. It is more likely that the term here refers simply to the apprehension of fine idols by the mind.<sup>132</sup> Epicurus is mentioning the criterion one must use in investigating problems; the ἐπιβολή of the mind is a part of the most important criterion, sensation itself. Similarly Bailey says the extended meaning of the expression is found in Kuria Doxa 24, the sixth passage in which the phrase occurs:

Εἴ τινα' ἐκβαλεῖς ἀπλῶς αἰσθῆσιν καὶ μὴ διαρῆσεις  
τὸ δοξαζόμενον κατὰ τὸ προσμένον καὶ τὸ παρὸν ἤδη  
κατὰ τὴν αἰσθῆσιν καὶ τὰ πάθη καὶ πᾶσαν φανταστικὴν  
ἐπιβολὴν τῆς διανοίας, συνταράξεις καὶ τὰς λοιπὰς  
αἰσθήσεις τῇ ματαίῳ δόξῃ, ὥστε τὸ κριτήριον ἅπαν  
ἐκβαλεῖς.<sup>133</sup>

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<sup>129</sup>De Witt, "Epicurus, Περὶ Φαντασίας," p. 416.

<sup>130</sup>Bailey, Greek Atomists, p. 571.

<sup>131</sup>Ibid., pp. 567, 571.

<sup>132</sup>See above page 114.

<sup>133</sup>K.D., 24.

Here again, however, Epicurus is simply making reference to the criteria that must be used. The passage itself does not shed light on the nature of the ἐπιβολὴ τῆς διανοίας but Epicurus appears to be referring again to the apprehension of idols by the mind.

It seems best in the light of the evidence we possess to limit the meaning of ἐπιβολὴ τῆς διανοίας to the perception by the mind of subtle idols and the apprehension of concepts already existing within the mind itself.<sup>134</sup> Two problems still remain with the phrase ἐπιβολὴ τῆς διανοίας. In Kuria Doxa 24 and the Epistula ad Herodotum 51, ἐπιβολή is modified by the epithet φανταστικός; the equivalent of this term seems to occur in 38 in the form of παρούσας. Giussani<sup>135</sup> and Bailey<sup>136</sup> deny that the word has a special significance since all thought was φανταστικός, that is, it was caused by mental images. De Witt<sup>137</sup> (who takes ἐπιβολὴ τῆς διανοίας simply as the operations of the mind) states that if an ἐπιβολή was true, it was termed φανταστική. This distinction, however, is refuted by the fact that in 62 the ἐπιβολή of the mind (without φανταστική) is specifically called true. Since the epithet occurs only once (Kuria Doxa 24) where the text is sure,<sup>138</sup> it is really impossible

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<sup>134</sup>In this sense ἐπιβολή of the mind is equivalent, as Clement says (see above page 114), to a prolepsis in its active sense. Cf. Brieger, Epikurs Lehre von der Seele, p. 19, Heidel, op.cit., p. 188, and Bailey, Greek Atomists, p. 572.

<sup>135</sup>Giussani, op.cit., p. 176.

<sup>136</sup>Bailey, Greek Atomists, pp. 572-573.

<sup>137</sup>De Witt "Epicurus: All Sensations Are True," p. 21.

<sup>138</sup>The reference to ἐπιβολή in 51 is an addition of Usener. See above page 116.

to determine the real significance of the word. Finally we can ask why the later Epicureans added the ἐπιβολὴ τῆς διανοίας as the fourth criterion of truth. Epicurus clearly used the expression and since he appears to have indicated by the term principally the apprehension by the mind of subtle idols, it is likely he considered the ἐπιβολὴ τῆς διανοίας simply a part of sensation itself. The later Epicureans merely made the ἐπιβολή of the mind a separate criterion, perhaps, as Tohte<sup>139</sup> suggests, to establish firmly their teachings on the gods (in order to refute charges of atheism) by making the process by which the gods became known a criterion of truth.

It does not appear, therefore, that the phrase ἐπιβολὴ τῆς διανοίας was used by Epicurus to indicate a special process by which scientific concepts were apprehended so clearly that Epicurus could confidently assert the truth of his (one) explanation of the nature of the ultimate realities of the universe. Epicurus' confidence in his belief in the atoms and void was based simply on the fact that this was in his view the only explanation that was in accord with phenomena.<sup>140</sup>

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<sup>139</sup>Tohte, op.cit., p. 24.

<sup>140</sup>See Ep.P., 86 (quoted on page 107).

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