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**FACULTY OF GRADUATE AND  
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**On the Reliability of Sense Perception in Epicurean Epistemology**

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On the Reliability of Sense Perceptions  
in Epicurean Epistemology

Zeev Schneider

Thesis submitted to the Faculty of Graduate and Postdoctoral Studies  
In partial fulfillment of the requirements  
For the MA degree in philosophy

Department of Philosophy  
Faculty of Arts  
University of Ottawa

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*To Rose*

The Epicurean four-part cure

*Don't fear god,  
Don't worry about death;  
What is good is easy to get, and  
What is terrible is easy to endure*

Philodemus, *PHerc* 1005, 4.9-14; translation from Inwood and Gerson (1994)

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## Abstract

In this thesis I advance an interpretation of the statement, famously attributed to Epicurus by several ancient sources, ‘all perceptions (*aisthēseis* or *phantasia*) are true (*alēthēs*).’ The statement earned Epicurus and his followers the scorn and ridicule of prominent non-Epicurean figures, including Cicero and Plutarch, and has remained the subject of scholarly controversy. The interpretation I advance in this thesis is oriented around the foundational role of perceptions in Epicurean epistemology. Though they are themselves irrational (*alogos*), perceptions are both the basis of all reasoning and criteria of truth in Epicurus’ system. To show how all perceptions are true in this role, I analyse the causal mechanism of perception and show that the content of each perception is basic and irreducible: no perception can contradict another and all are equally reliable as evidence. Thus, on my reading, the truth of all perceptions refers to their reliability in Epicurus’ method.

## Introduction

The focus of this thesis is a statement attributed to Epicurus, namely, ‘all perceptions (*aisthēseis*) are true (*alēthes*).’<sup>1</sup> My aim is to advance an interpretation of this statement while accounting for the foundational and evidential roles of perceptions in Epicurean epistemology. In the spirit of most scholarly interpretations of this statement, my purpose in this thesis is to present an interpretation which is consistent with the surviving evidence, while taking into account the reliability of the sources. While it is not my purpose to defend Epicurean epistemology in general, I aim to show that the truth of all perceptions is consistent with it.

In the remainder of this introduction, I will briefly present some of the problems associated with interpreting the statement ‘all perceptions are true’ (APAT), and follow with a brief summary of my thesis. I will then present a concise introduction to Epicurus and his school, and conclude with a survey of the extant evidence.

Both ancient and modern commentators have found the statement ‘all perceptions are true’ to be problematic. Two problems come to mind. The first is to understand how Epicurus could have claimed that all perceptions are true without contradicting our everyday experience. That is, if we understand a true perception to report the facts as they are (“statements of that which is that it is, or of that which is not that it is not”), everyday experience shows that not all perceptions accurately do this but that the content of certain perceptions turns out to be false.<sup>2</sup>

The second problem, specific to Epicurean epistemology, is to fit an interpretation of the truth of

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<sup>1</sup> Versions of the statement ‘all perceptions are true’, or arguments for it, are found in Sextus Empiricus, Lucretius, Diogenes Laertius, Plutarch, and Epicurus. See Lucretius *De Rerum Natura* (DRN) IV.469-521; DL X 31-32; Epicurus, KD 23; SE M VIII (63): *panta ta aisthēta einai alēthē*, translated as “all sensibles are true” in R. G. Bury, ed., *Sextus Empiricus*, vol. 2, Loeb Classical Library (Cambridge, MA: Harvard University Press 1957), 115. The references are collected in A. A. Long and D. N. Sedley, *The Hellenistic Philosophers*, 2 vols. (Cambridge: Cambridge University Press, 1987), Vol. I, 16. I will prefer *aisthēsis* throughout. The sources sometimes use *phantasia*: see the discussion on terminology below. I use ‘perception’ for the English translation of *aisthēsis*; this choice reflects the mechanics of the process of perception—see ‘Eidola’ below.

<sup>2</sup> Aristotle, *Metaphysics* 1125b25; Sextus Empiricus (SE) M VIII (9). Translation in Hippocrates G. Apostle, ed., *Aristotle's Metaphysics* (Bloomington and London: Indiana University Press, 1966).

all perceptions with the foundational and evidential role of perceptions. Perceptions are foundational in Epicurean epistemology: they are at the basis of all reasoning and thought.<sup>3</sup> The difficulty of reconciling the foundational role of perceptions with the claim that all perceptions are true has resulted in some inventive scholarly interpretations, including the interpretation that Epicurus did not in fact postulate the truth of perceptions at all, but only meant to say ‘all perceptions are real’ (*alēthēs* can mean either true or real).

A good part of this thesis is devoted to analysing what a perception is on the Epicurean account. The bulk of this work is done in chapter one, where I present an analysis of the Epicurean account of what perceptions are and how they are formed. Epicurus was an atomist and a strict materialist; thus all perceptible objects are ultimately real and material and all perceptions arise from material interactions. The causal mechanism of perceptions which meets Epicurus’ materialist requirements is borrowed from the fifth-century atomists, Leucippus and Democritus. Following his Abderite predecessors, Epicurus proposes that the properties of external objects are transmitted to our sense organs by means of *eidola*, which are themselves invisible models, or copies, of perceptible objects that are continuously emitted by the objects due to the vibrations of atoms within the objects. Thus, a visual perception of any given object (a tower, say) is caused by the impact of the *eidola*, miniature models of the tower which are continuously emitted by it, on the eyes. The result of the interaction between the *eidola* and sense organ is a perception of a special property of the perceptible object (thus, I see the shape and colour of the tower).<sup>4</sup> A perception does not involve language—it is a raw and unpropositional datum of the property of the perceived object.

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<sup>3</sup> See Diogenes X 31-32 and Epicurus, *Principal Doctrine* XXIII.

<sup>4</sup> Strictly speaking, the shape of the tower is perceived by touch and the vision by sight. See ‘The objects of perception’ section below.

In chapter two, I take up the role of perceptions in the context of true and false statements. This analysis is oriented around problems with perception, or what is commonly thought of as errors in perception. The fact that there are errors, i.e., that a perception of an object is sometimes contradicted and corrected by a subsequent perception, must be reconciled with the truth of all perceptions, which requires that all of perceptions of the tower (it may appear to be round from afar but turn out to be square from close up) be in some sense true. The Epicureans explain that the cause for the apparent error is a physical change in the *eidola* in the course of their movement through the air—their edges are broken off. At the same time, the reality of enduring perceptible objects with relatively stable properties (such as square towers) must also be accounted for.

At this point the question arises of what it means for a perception—a raw, unpropositional datum of a special property of an object—to be true. The perception of the tower for Epicurus is merely a datum of the shape of the tower: the perception is neither true nor false in a propositional sense. It is rather the opinion, or judgment, regarding the object perceived that is true or false. Thus, the opinion regarding the shape of the tower, ‘that the tower I see is round,’ is false: the tower, as we find out as when we get closer, is in fact square. However, we must still account for the truth of the perception of a round tower.

Some scholars, based on a report by Sextus Empiricus, account for the truth of the first perception, which was caused by the misshaped *eidola*, by arguing that the perception in that case was not of the secondary property of the object—the roundness of the tower itself, but the of roundness of the *eidola* which are emitted by the tower. Epicurus and his followers, however, insist that it is the object (or more specifically, a property of the object) which is perceived, not the *eidola*, by means of which the perception takes place. I argue that the account consistent

with the Epicurean position is that the perceived shape originates from a real object—in this case, a square tower— which is always understood to be the object of perception. Thus, the perception of the round tower is true for two reasons: first, it ultimately originates from a real object—a square tower; and second, it is used as the starting point for ascertaining the shape of the object.

In chapter three I turn to the evidential roles of perceptions as the basis for making inferences about both perceptible and imperceptible objects and as one of the three criteria of truth. It is important that the objects of perception be ultimately materially real because inferences regarding the existence and properties of real imperceptible objects (atoms) are made based on analogy with perceptible objects. If perceptible objects are not all materially real, then there is something other than just atoms and void in the universe. But Epicurus' ontology prohibits the existence of anything other than atoms and void.

In this chapter I also present my interpretation of the statement 'all perceptions are true' in the context of the evidential roles of perceptions as the basis for making and assessing inferences regarding perceptible and imperceptible objects. In order to fulfill their roles as constructive and criterial evidence in Epicurean epistemology, all perceptions must be reliable. The reliability of all perceptions, in turn, is guaranteed by the basic nature and irreducible content of perceptions as raw and unpropositional data.

In the concluding section of the thesis, I situate the epistemological features of the Epicurean system in the context of the ethical exhortation to become free of anxiety, which is the primary motivation for the acquisition of scientific knowledge.

## Epicurus and his school

The Epicureans formed one of the major three post-Aristotelian schools of the Hellenistic period (323-31 B.C.E); the other two main schools were the Academic Skeptics, originating from Plato's Academy, and the Stoics, whose founding master was Zeno of Citium.<sup>5</sup> The Epicurean and Stoics were the main dogmatic, or doctrinaire, schools of the period. The founders and subsequent heads of the schools developed teachings in ethics and epistemology. The Stoics also made important advances in logic. The Skeptics are primarily known for engaging the doctrinaire schools in epistemological debates surrounding the possibility of knowledge.<sup>6</sup>

Epicurus of Samos (341-270 B.C.E) founded his school in Athens in 306 on the grounds of a garden which he had purchased.<sup>7</sup> The son of a schoolmaster, Epicurus had studied under the Democritean Nausiphanes of Teos and later reportedly had a falling out with his teacher. After a few years of self-study, Epicurus presented himself as a teacher, first in Mytilene, then in Lampascus, and finally in Athens. In his brief summary of the Epicurean teachings, Diogenes Laertius reports that they are divided into the Canonicon (method of investigation), physics, and ethics:

The physics contains all investigation into nature, and is contained in the thirty-seven books *On Nature* and in an abridged form in the letters. The ethics deals with choice and avoidance.... The Epicureans usually group the canonicon with

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<sup>5</sup> I found the following two surveys of Hellenistic philosophy to be useful: A. A. Long, *Hellenistic Philosophy: Stoics, Epicureans, Sceptics* (Berkeley: University of California Press, 1986); R. W. Sharples, *Stoics, Epicureans and Sceptics* (London: Routledge, 1996). Some of the key evidence, as well as useful commentary, is assembled in Long and Sedley, *The Hellenistic Philosophers*.

<sup>6</sup> A useful introduction to the orientation of the three schools is found in the introduction to B. Inwood and L. P. Gerson, eds., *Hellenistic Philosophy: Introductory Readings*, 2nd ed. (Indianapolis: Hackett 1997), xv-xx.

<sup>7</sup> I only cover the main points of Epicurus' life and primarily rely on the following sources which should be consulted for a more detailed account: J. M. Rist, *Epicurus: An Introduction* (Cambridge: Cambridge University Press, 1972); N. DeWitt, *Epicurus and His Philosophy* (Minneapolis: University of Minnesota Press, 1954).

the physics and state that it deals with criterion of truth and the fundamental principles and contains the elements of the system.<sup>8</sup>

Epicurus developed an atomist physics, based on the physics of the 5<sup>th</sup>-century atomists, and an empirical method of investigation. Epicurean physics and epistemology support the ethics which promotes freedom from anxiety, including having no fear of the gods and of death, and the importance of friendship.

Epicurus is often portrayed as a philosopher who claimed absolute originality, and who derided his forerunners, teachers, and contemporaries in strong terms, going as far as to deny the existence of the early atomist Leucippus.<sup>9</sup> It is difficult to know how much of these accounts is the product of polemic and rivalry, though Epicurus' reputation as a charismatic figure and an original and wide-ranging thinker was well-earned.<sup>10</sup>

Though the followers of all three major schools held some allegiance to the philosophical views of their founders, the views of the Stoic and Skeptical schools were more flexible and changed considerably over a century-and-a-half thanks to a running debate between the two schools.<sup>11</sup> The Epicureans, on the other hand, while continuing to develop their philosophical system and engage their contemporaries, were circumspect in revising the doctrines set out in the

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<sup>8</sup> DL X 30. Unless otherwise stated, all quotations to Diogenes Laertius' Book X, including the three *Letters* are from C. Bailey, ed., *Epicurus: The Extant Remains* (Oxford: Clarendon Press 1926; reprint, Georg Olms Verlag, 1970).

<sup>9</sup> See Rist, *Epicurus: An Introduction*, 5.

<sup>10</sup> For a reading of the evidence charitable to Epicurus, see D. Sedley, "Epicurus and His Professional Rivals," in *Cahiers De Philologie, I: Études sur l'épicurisme antique*, ed. J. Bollack and A. Laks (Centre de Recherche Philologique de l'Université de Lille, 1976).

<sup>11</sup> See D. Sedley, "The Protagonists," in *Doubt and Dogmatism: Studies in Hellenistic Epistemology*, ed. M. Schofield, M. Burnyeat, and J. Barnes (Oxford: Clarendon Press, 1980), 12.

master's writings and were careful to conserve the orthodoxy which Epicurus "spelled out ... with immense precision."<sup>12</sup>

## Sources

Epicurus is reputed to have been one of antiquity's most prolific authors, but the extant evidence from his own writings is small.<sup>13</sup> The most important source is book X of Diogenes Laertius' (early 3rd century C.E.) compilation *Lives of the Eminent Philosophers*.<sup>14</sup> The book is devoted in its entirety to Epicurus and includes a long report comprising, among other items, a biography, a list of Epicurus' writings, a copy of his will, and a mention of the price he paid for his garden. Diogenes also reproduces the longest continuous textual evidence in Epicurus' own words, comprising three letters to his disciples: the *Letter to Herodotus*, concerning the physics; the *Letter to Pythocles*, concerning meteorological phenomena and the heavenly bodies; and the *Letter to Menoeceus*, concerning the ethics.<sup>15</sup> The *Letter to Herodotus* in particular contains important remarks on the role of perceptions in the method of investigation, and outlines the process of perception by means of *eidola*.<sup>16</sup> Diogenes also transmits the *Kuriai Doxai (KD)*, or *Principal Doctrines*, a collection of forty pithy Epicurean maxims, of which *Principal Doctrines* XXIII and XXIV are of particular interest for the details they provide on the nature and

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<sup>12</sup> Long and Sedley, *The Hellenistic Philosophers*, Vol. 1, 6. See also D. Sedley, "Philosophical Allegiance in the Greco-Roman World," in *Philosophia Togata*, ed. M. Griffin and J. Barnes (Oxford: Clarendon Press, 1989). The Epicurean movement impressively lasted well past the 2<sup>nd</sup> century of the Common Era. For an overview, see chapter 15 of DeWitt, *Epicurus and His Philosophy*. For accounts of the modern re-discovery and propagation of Epicureanism see Long, *Hellenistic Philosophy: Stoics, Epicureans, Sceptics*, 241 ff; J Masson, *Lucretius: Epicurean and Poet (supplementary volume)* (London: John Murray, Albemarle Street, W., 1909), 14-44.

<sup>13</sup> A survey of the works of Epicurus and his followers is presented in T. Dorandi, "Le corpus épicurien," in *Lire Épicure et les épicuriens*, ed. A. Gigandet and P.-M. Morel (Paris: Presses Universitaires de France, 2007).

<sup>14</sup> An account of the history of the transmission of the modern manuscript is given in J. Bollack, M. Bollack, and H. Wismann, eds., *La lettre d'Épicure* (Paris: Les Éditions de Minuit, 1971).

<sup>15</sup> It has been questioned whether the *Letter to Pythocles* was composed by Epicurus himself or by one of his pupils. See Bailey, ed., *Epicurus: The Extant Remains*, 275.

<sup>16</sup> References to the *Letter to Herodotus*, unless otherwise stated, are from Bailey's translation with the Greek text side-by-side: Bailey, ed., *Epicurus: The Extant Remains*. As a secondary translation I used B. Inwood and L. P. Gerson, eds., *The Epicurus Reader: Selected Writings and Testimonia* (Indianapolis: Hackett, 1994). I also consulted, on occasion, M. Conche, ed., *Épicure: Lettres et Maximes* (Paris: Presses Universitaires de France, 1987).

foundational roles of perceptions. Some of the *Vatican Sayings*, which also take the form of brief aphorisms and whose provenance is a fourteenth-century manuscript, overlap with the *Principal Doctrines*.<sup>17</sup>

Another source for fragments from Epicurus' own works are the carbonized papyrus scrolls found at Herculaneum at the site of the Villa of the Papyri. The papyri from the library of the villa's owners (thought to have been the Roman family of Pisos) were buried in volcanic ash during the eruption of mount Vesuvius in 79 C.E. They were first discovered in the mid-18th century and the work of deciphering the charred scrolls continues still. In addition to fragments from Epicurus' own works—the most important being sections from his book *On Nature*—the papyri also yielded sections from works by early Epicureans, most notably Philodemus (1<sup>st</sup> century B.C.E), who may have been in charge of the library.<sup>18</sup>

*De Rerum Natura*, the proem in six books by Lucretius, the 1<sup>st</sup>-century B.C.E Roman poet and a contemporary of Cicero, is by far the most comprehensive account we have of Epicurean physics. Lucretius was a passionate follower of Epicurus and, though little is known of him, he is widely considered to be a reliable source; indeed, his account may well be based on Epicurus' work, *On Nature*.<sup>19</sup> A fascinating source of evidence from another of Epicurus' followers is the Epicurean inscription at Oinoanda. The inscription, carved on a large stone wall in a public area, was erected by Diogenes (2<sup>nd</sup> century C.E.), a wealthy man who wished "to

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<sup>17</sup> See Bailey, ed., *Epicurus: The Extant Remains*, 375.

<sup>18</sup> For a bibliography of published editions, see "The Friends of Herculaneum Society: A Guide to Editions and Translations of the Principal Works Discovered at Herculaneum and Related Texts," <http://www.herculaneum.ox.ac.uk/books.html>.

<sup>19</sup> See D. Sedley, *Lucretius and the Transformation of Greek Wisdom* (Cambridge: Cambridge University Press, 1998). Unless otherwise stated, I cite from Smith's translation using the following format book number (in roman numerals) followed by the lines. M. F. Smith, *Lucretius: On the Nature of Things* (Indianapolis: Hackett, 2001). Since I use a translation, the lines quoted may not always match exactly with the text I quote but may include one or two additional lines; this should not pose a problem for locating the quoted material.

advertise the benefits of the Epicurean philosophy” to his fellow citizens.<sup>20</sup> It transmits Epicurus’ teachings on physics, epistemology, and ethics, is believed to “have contained about 25,000 words and filled about 260 square meters of wall space.”<sup>21</sup> The first fragments from the inscription were uncovered in 1884 and only about a third of the inscription as a whole has been recovered to date.<sup>22</sup>

In addition to the reliable textual evidence from Epicurus and his followers, there is also the evidence provided by followers of other philosophical schools, which must be treated with caution. Some of the key evidence from non-Epicureans comes from Cicero, the 1<sup>st</sup>-century (B.C.E) Roman statesman and follower of the New Academy; Plutarch, the 1<sup>st</sup> - 2<sup>nd</sup> century (C.E) Platonist; and Sextus Empiricus, the 2<sup>nd</sup>-century (C.E.) physician and follower of Pyrrhonian Skepticism.<sup>23</sup>

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<sup>20</sup> Smith, *Lucretius: On the Nature of Things*, xx.

<sup>21</sup> *Ibid.*, xxi.

<sup>22</sup> Several editions of the excavated texts are available. The most authoritative is Smith’s: M. F. Smith, ed., *Diogenes of Oinoanda: The Epicurean Inscription* (Naples: Bibliopolis, 1993). In his 2003 supplement to the work, Smith notes that “no work has been possible at Oinoanda since 1997.” See M. F. Smith, ed., *Supplement to Diogenes of Oinoanda: The Epicurean Inscription* (Naples: Bibliopolis, 2003), 13. The Deutsche Archäologische Institut has since been involved in some recent work at Oionada in 2007 and 2008. See “Deutsche Archäologische Institut: Oinoanda and the Biggest Inscription of the Ancient World,” [http://www.dainst.org/index\\_8097\\_en.html](http://www.dainst.org/index_8097_en.html). (The alternate spelling ‘Oenoanada’ is sometimes used).

<sup>23</sup> The fundamental collection of Epicurean texts, fragments, and testimonia is H. Usener, *Epicurea* (Leipzig: 1887; reprint, Stuttgart, 1969). For an overview of this and the other key reference works, see R. Goulet, “Épicure De Samos,” in *Dictionnaire des philosophes antiques*, ed. R. Goulet (Paris 2000); Long and Sedley, *The Hellenistic Philosophers*, Vol. 2, 481-2.

## Chapter 1: Epicurean perceptions

The task of this chapter is to arrive at an interpretation of ‘perceptions’ (*aisthēseis*) which will form the basis for my interpretation of the statement ‘all perceptions are true.’ As the discussion below will show, there are a number of possible senses of the term which relate both to the various aspects of perceptions, including the process of perceiving, the result of the process, and, in Epicurus’ usage, the sense faculties (i.e., sight, hearing, smell, touch, and taste).<sup>1</sup> In their interpretations of APAT, commentators have posited additional senses of *aisthēsis*, which include propositions expressing any given perception and the specific mechanism underlying the process of perceptions, *eidola* (of which more below). I begin with an overview of scholarly interpretations of the statement ‘all perceptions are true’ and then turn to surveying terminological discussions on the Greek terms which are translated as ‘perceptions’: *aisthēseis* and *phantasia*. The rest of the chapter consists of a detailed analysis of the nature of perceptions and the mechanism which underlies them. The following points will be covered: *eidola* and the nature of their effect on the senses, the role and function of the sense organs, the objects of perceptions, and the *alogos* nature of perceptions.

It will be useful to keep in mind three key aspects of my account of Epicurean perceptions. The first is that, although *eidola* are responsible for perception, we do not perceive *eidola*. Rather, it is by means of *eidola* that we perceive the special qualities of real external objects. Each sense organ is used to perceive a special quality of a subject-independent object in the world. Thus, vision perceives colour, touch perceives texture (as well as temperature), etc.<sup>2</sup>

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<sup>1</sup> I will use *aisthēsis* (or *aisthēseis* for the plural in the nominative case) throughout, but see the discussion on terminology below for the use of *phantasia*.

<sup>2</sup> The case of touch is somewhat more complex than of the other senses. See Long and Sedley, *The Hellenistic Philosophers*, Volume I, commentary on (16).

While this point is made by Epicurus and his followers, some commentators overlook it in their interpretation of ‘all perceptions are true’.

The second point involves the nature of each perception. Because each sense organ is used to observe a different quality (shape, smell, etc.), no perception can refute another. The third point is that perceptions are unpropositional. The *alogos* nature of perceptions is illustrated by their distinction from preconceptions and similarity to feelings, the other two criteria of truth in Epicurean epistemology.

### **An overview of the scholarship**

The statement ‘all perceptions are true’ has earned Epicurus and his followers Plutarch’s scorn and Cicero’s derision and has baffled modern scholars.<sup>3</sup> By ‘perceptions’, Epicurus refers to sense and mental perceptions which are had in the course of the interaction of the five senses and the mind with external objects. Each perception is a datum of a special quality of an external object. Cicero’s association of the statement ‘all perceptions are true’ with knowledge acquisition is supported by Epicurus’ surviving texts.<sup>4</sup> Thus Cicero explains that “everything that comes before our mind has its origin in sense-perception. If all sense-perceptions are true, as Epicurus’ system teaches, then knowledge and understanding are in the end possible.”<sup>5</sup>

It does not take long, however, to register the problem from contrary perceptions: if all sense perceptions of an object in the world are true, how is perceptual error accounted for?<sup>6</sup> If, to take the stock example, a tower that appears to have round edges from afar is seen to have straight edges upon closer inspection, affirming the truth of all perceptions may force us to make

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<sup>3</sup> See Cicero, *Lucullus* 2.82: “Let’s leave the gullible Epicurus to think that the senses never deceive” in J. Annas, ed., *Cicero: On Moral Ends* (Cambridge: Cambridge University Press, 2001), 48.

<sup>4</sup> See Epicurus’ *Principal Doctrine* XXIII.

<sup>5</sup> *On Moral Ends* (64) in Annas, ed., *Cicero: On Moral Ends*, 23.

<sup>6</sup> The formulation ‘argument from contrary perceptions’ is Striker’s: G. Striker, “Epicurus on the Truth of Sense Impressions,” in *Essays on Hellenistic Epistemology and Ethics* (Cambridge: Cambridge University Press, 1996), 87.

a choice between two uncomfortable positions: either there are two towers or the same tower has multiple contrary properties.<sup>7</sup> Commentators have used a number of interpretive strategies to tackle the problem and try to make sense of the statement attributed to Epicurus, often trying to save him from embarrassment. I will present my own interpretation of the statement in chapter three, at which point the interpretations of several influential modern commentators will be critically discussed in detail. In the present section, I will introduce the interpretive strategies of the following four commentators representing three influential lines of interpretation: John Rist, Gisela Striker, Christopher Taylor, and Stephen Everson.

Interpretations of the statement ‘all perceptions are true’ involve taking a position on what Epicurus means by ‘perceptions’ and what he means by ‘truth’ in the context of the statement. Another aspect to consider is the foundational role that perceptions have in Epicurus’ theory of knowledge, noted in the quote from Cicero above. ‘Perceptions’ can refer to the process involved in having a perception or the sense-content resulting from that process. Thus different commentators adopt one of the two, or both, aspects of perceptions in their interpretation of the statement ‘all perceptions are true.’ As it happens, Epicurus and the ancient sources use two Greek terms for ‘perceptions’: *aisthēsis* and *phantasia*. As we will see shortly, there is some scholarly controversy over Epicurus’ use of the two terms.

Rist and Striker present a striking contrast in their respective reading of ‘perceptions.’ Rist argues that, in the context of affirming the truth of all perceptions, Epicurus refers to the process of perception rather than to sense content. In particular, Rist refers to perceptions as dynamic ‘events’ which consist of “the contact between an object in the world [or] an effluent

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<sup>7</sup> See D. J. Furley, "Democritus and Epicurus on Sensible Qualities," in *Passions and Perceptions: Studies in Hellenistic Philosophy of Mind*, ed. J. and M. Nussbaum Brunschwig (Cambridge: Cambridge University Press, 1993), 90.

from such an object... and the organ of sense.”<sup>8</sup> Furthermore, in his interpretation, Rist exploits the ambiguity in the Greek term *alēthēs*, which can mean ‘true’ or ‘real’, to argue that by the truth of all perceptions, Epicurus said merely that the process of perception is real: “what Epicurus means when he says that all sensations are true is that a real event takes place in the act of sensing.”<sup>9</sup>

Writing in the early 1970’s, Rist is one of a line of commentators which can be traced back to DeWitt’s work in the 1940’s and 1950’s (to be examined in chapter 3), and which includes the early Long and the early Furley (writing around the same period as Rist), all of whom argued for some version of the interpretation of ‘all perceptions are *alēthēs*’ as ‘all perceptions are real.’<sup>10</sup> Striker, who started writing on the subject in the mid-1970’s, was aware of these interpretations and rejected them. Her interpretation diverges from Rist in two important ways: her interpretation of *alēthēs* and her interpretation of ‘perceptions’ in the context of the Epicurean dictum.

In her reading of APAT, Striker differentiates between *phantasia* and *aisthēsis* and argues that *phantasia* refers to “the result of the process of sense perception” rather than to the process of perception. She argues that DeWitt’s, Rist’s, and Long’s reading of ‘true’ as ‘real’ robs the statement of its epistemological significance; instead, she adopts a standard conception of truth as propositional.<sup>11</sup> Striker prefers *phantasia* over *aisthēsis* because the former is “expressed in language;” her position is that by the truth of all perceptions Epicurus meant that

<sup>8</sup> Rist, *Epicurus: An Introduction*, 19.

<sup>9</sup> *Ibid.*, 20.

<sup>10</sup> See DeWitt, *Epicurus and His Philosophy*; N. DeWitt, “Epicurus: All Sensations Are True,” *Transactions and Proceedings of the American Philological Association* 74 (1943); D. J. Furley, “Knowledge of Atoms and Void in Epicureanism,” in *Essays in Ancient Greek Philosophy*, ed. J.P. and G.L. Kostas Anton, eds. (New York: Research Foundation of State University of New York, 1971); A. A. Long, “Aisthesis, Prolepsis, and Linguistic Theory in Epicurus,” *Bulletin of the Institute of Classical Studies, University of London* 18 (1971). Furley changed his position in the 1990’s and Long in the 1980’s. See Furley, “Democritus and Epicurus on Sensible Qualities.”; Long, *Hellenistic Philosophy: Stoics, Epicureans, Sceptics*.

<sup>11</sup> Striker, “Epicurus on the Truth of Sense Impressions,” 85.

“all propositions expressing no more nor less than the content of a given sense impression are true.”<sup>12</sup>

From her articles from the 1970's to her treatment of Epicurean epistemology in 1990, Striker consistently holds that the affirmation of the truth of all perceptions by Epicurus and his followers was formulated as a response to their contemporary philosophical rivals, the Skeptics, who argued against the possibility of knowledge. Striker argues that Epicurus was forced into an uncomfortable epistemological position in order to maintain the possibility of knowledge.

The most recent line of influential commentators includes Christopher Taylor, writing in 1980, and Stephen Everson, writing in 1990. Taylor and Everson both argue that in postulating the truth of all perceptions, Epicurus referred to the mechanism underlying the process of perception as the object of perception. Epicurus, an atomist, took perceptions to result from the impact of *eidola*—an imperceptible collection of atoms—on the sense organs. The process will be discussed in detail later in this chapter. Both Taylor and Everson argue that the sense content of perceptions is the *eidola* which are the material cause for the perception. Thus Taylor interprets the truth of all perceptions to mean “that every instance of *aisthēsis* consists in the stimulation of the sense-organ by a real object which is represented in *aisthēsis* exactly as it is in reality.”<sup>13</sup> Everson similarly argues that “it is only if the objects of perception are...*eidola*...that the claim that all perceptions are true could stand a chance of being plausible.”<sup>14</sup>

## Terminology

As we have seen, the terms used for ‘perception’ in Epicurus and the ancient sources invite scholarly controversy. It will be helpful to proceed with an analysis of the Greek terms used for

<sup>12</sup> Striker, "Epicurus on the Truth of Sense Impressions," 78, 90.

<sup>13</sup> C. C. W. Taylor, "All Perceptions Are True," in *Doubt and Dogmatism: Studies in Hellenistic Epistemology*, ed. M. Schofield and M.F. Burnyeat (Oxford: Clarendon Press, 1980), 117.

<sup>14</sup> S. Everson, "Epicurus on the Truth of the Senses," in *Epistemology*, ed. S. Everson, *Companions to Ancient Thought* (Cambridge: Cambridge University Press, 1990), 177.

perceptions in the texts, namely, *aisthēseis* and *phantasia*. In the discussion to follow, I rely on the helpful commentaries of three scholars—Kenneth Robin Jackson, Gisela Striker, and Christopher Taylor.<sup>15</sup> In arguing for a particular interpretation of ‘perceptions’, the commentators analyse the context of the Greek terms in the extant texts of Epicurus and the ancient sources. Depending, it seems, on either precedents of usage set by earlier commentators, or on their own interpretations of the Greek terms, scholars writing in English use a variety of translations for either *aisthēsis* or *phantasia* (or both), ‘sensations’ being a common one among scholars writing prior to the mid-1970’s. I chose to use ‘perceptions’ to reflect the epistemic process which involves not merely a passive reception of *eidola*, but also an active response by the sense organ.

Jackson notes that “the doxographical accounts display little uniformity in their wording of the thesis, varying between a version according to which every *aisthēsis* is true and one according to which every *phantasia* is true.” Sextus “generally uses *phantasia*, but occasionally rephrases the thesis in terms of *aisthēsis* or *aisthēta*.”<sup>16</sup> Epicurus himself “tends to prefer *aisthēsis* when speaking of perception,” though *phantasia* does appear twice in the *Letter to Herodotus*.<sup>17</sup> Scholars are divided on the question of whether there is a substantive difference in the sources’ usage of the two terms. Taylor cites from Plutarch and Aristocles by way of Eusebius to show that both of the Greek terms are used, and notes that Sextus is alone in using *aisthēton*.<sup>18</sup> Taylor also points to another interesting case: where Sextus and other commentators

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<sup>15</sup> K. R. Jackson, “Studies in the Epistemology of Ancient Greek Atomism” (Ph.D. diss., Princeton University, 1982); Striker, “Epicurus on the Truth of Sense Impressions.”; G. Striker, “Kritērion Tēs Alēthias,” in *Essays on Hellenistic Epistemology and Ethics*, ed. G. Striker (Cambridge: Cambridge University Press, 1996); Taylor, “All Perceptions Are True.”

<sup>16</sup> Jackson, “Studies in the Epistemology of Ancient Greek Atomism”, 251.

<sup>17</sup> *Ibid.*, 251.

<sup>18</sup> Taylor, “All Perceptions Are True,” 106.

use some version of every *aisthēsis*, *phantasia*, or *aisthēton* is true, Sextus also states that *aisthēsis* always tells the truth.

Striker identifies several distinct meanings for *aisthēsis*: the term can denote (a) the faculty of sense-perception; (b) ‘sensation,’ “the process of being acted upon by a sensible object”; or (c) ‘perception,’ “the recognition of a sensible object (as in “I see a man”) or of an observable fact as in (“I see that it’s raining”).”<sup>19</sup> Striker also notes that *phantasia* “is usually rendered as ‘sense impression’ or ‘presentation,’ meaning the result of the process of sensation.”<sup>20</sup> Jackson, however, suggests that *phantasia* may be subsumed under the broader term *aisthēsis* which “can refer not only to the end-product of the process of sensation (like *phantasia*) but also to the process itself.”<sup>21</sup> Jackson thus points to an “important ambiguity, for it is not always clear which of the senses of *aisthēsis* (i.e., end-product of the process of sensation or the process itself) Epicurus intends, or whether he is aware of the difference between them.”<sup>22</sup> Based on the doxographical reports, Taylor appears to agree with Striker in translating *phantasia* as ‘appearance’ and suggests that *aisthēton*, ‘sense content’ is “interchangeable with *phantasia*.”<sup>23</sup> Taylor also notes the possible ambiguity of the term *aisthēsis* in the context of Sextus’ report that *aisthēsis* always tells the truth. According to Taylor, while this formulation can lead to any number of possible readings of *aisthēsis*, “the thesis that *aisthēsis* always tells the truth is presented either as following immediately from the central thesis that all *aisthēta* are true, or as entailing it, or as restating it.”<sup>24</sup>

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<sup>19</sup> Striker, “Epicurus on the Truth of Sense Impressions,” 77-78.

<sup>20</sup> *Ibid.*, 78.

<sup>21</sup> Jackson, “Studies in the Epistemology of Ancient Greek Atomism,” 252.

<sup>22</sup> *Ibid.*, 252.

<sup>23</sup> Taylor, “All Perceptions Are True,” 106 and n. 2.

<sup>24</sup> *Ibid.*, 107.

Taylor concludes that the force of the thesis is that every appearance (either *aisthēton* or *phantasia*) is true and it remains to him to interpret the term ‘appearance’ in its Epicurean context.<sup>25</sup> Jackson, on the other hand, argues that in saying that *aisthēsis* always *tells* the truth, Sextus is referring to the *process* of perception. Thus Jackson concludes that “on the whole...Epicurus’ references appear to be to the results of the process of sensation when he claims that all *aisthēseis* are true.”<sup>26</sup> Both Jackson and Taylor recognize that Epicurus’ usage leaves room for speculation. Jackson has the following to say regarding Epicurus’ usage of the two terms, *aisthēseis* and *phantasia*:

At worst, it may illustrate a conceptual confusion underlying his claim concerning the truthfulness of sensation. Alternatively, and more generously, it may indicate a close connection between the thesis that sensation is a veridical process and the thesis that the products of such a process are true.

It seems to me that there is not sufficient evidence to support making a substantive distinction between *aisthēsis* and *phantasia*. As both Striker and Jackson point out, a distinction between the terms appears to have been introduced later by the Stoics.<sup>27</sup> My approach, then, will be to treat only one type of perceptual data and, as a matter of convention and deference to Epicurus’ own usage, when referring to the Greek I will prefer *aisthēsis* to *phantasia*.

Even if no substantive distinction is made between the terms, there remains a variety of possible meanings associated with the term ‘perception’ in the texts. The term may refer to the sense organ, the process of sensing, propositions, or the so-called ‘products’ of the process.<sup>28</sup> How does one choose among the possibilities? The answer, to some extent, depends on the purpose and orientation of the analysis. Commentators analysing the statement ‘all perceptions

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<sup>25</sup> By ‘appearance’, Taylor takes Epicurus to refer to *eidola* as the objects of perception. Taylor’s interpretation is treated in detail in chapter 3, ‘A survey of scholarly interpretations.’

<sup>26</sup> Jackson, “Studies in the Epistemology of Ancient Greek Atomism,” 252.

<sup>27</sup> For an in-depth treatment of the Stoic usage, see S. Rubarth, “The Stoic Theory of Aisthēsis” (Ph.D. diss., University of Toronto, 1997).

<sup>28</sup> Striker, “Epicurus on the Truth of Sense Impressions,” 84.

are true (or real)' will take into account the process of perception and the end-product (sense-content or data) of the process. On the other hand, an interpretation of the statement on which perceptions refer to sense organs makes little sense.<sup>29</sup> In her analysis of the statement, Striker treats the truth of perceptions relative to "propositions expressing...the content of a given sense impression." As we have seen, Striker's position is oriented by her commitment to propositional truth: "it is not strictly speaking the impression or the perception which is true or false, but the proposition which expresses it."<sup>30</sup>

The orientation of the present study is a treatment of the statement 'all perceptions are true' with special consideration to the foundational role of perceptions as the evidential basis of inference-making and of testing opinions. For the purposes of this analysis, I treat perceptions as the data (or sense-content, or end-product) resulting from the process of perception, rather than the process itself. My aim in this chapter is to advance a particular reading of 'perceptions' as sense-contents. It will be useful, for this purpose, to know Epicurus' account of the process which gives rise to a perception.

## Eidola

*Eidola* (the plural form is commonly used; the singular is *eidolon*), constitute the mechanism underlying perception which Epicurus adopted from his forerunners, the 5<sup>th</sup>-century atomists Leucippus and Democritus. Sometimes the more general term *tupos* (type or outline) is used instead of '*eidolon*.'<sup>31</sup> The mechanism is introduced and discussed in the *Letter to Herodotus* (46-53), once the existence of atoms and void has been established. Epicurus is a materialist: the proof for atoms and void shows that the only basic material constituents of an unbounded and

<sup>29</sup> See Taylor, "All Perceptions Are True," 108.

<sup>30</sup> Striker, "Epicurus on the Truth of Sense Impressions," 78.

<sup>31</sup> The differences between Epicurus' and Democritus' conceptions of *eidola* are discussed by Cicero in *De fin.* 21. See also Sharples, *Stoics, Epicureans and Sceptics*, 12. On *tupoi*, "presumably another term for *eidola*," see Furley, "Democritus and Epicurus on Sensible Qualities," 83.

eternal universe are atoms— undivided bodies having a great variety of shapes—which are in motion, and void, which gives the atoms the room to move.

*Eidola* are used to explain how perceptions take place in a physical world where there is void, or empty space, between the observer and the object. In order to have perceptions, says Epicurus, objects must somehow affect the sense organs “by means of the air which lies between us and them....by means of rays or effluences” of some kind.<sup>32</sup> The discussion of *eidola* in the *Letter to Herodotus* is brief and extremely technical. It covers the *eidola*’s speed of travel and of production; their relation to the mind and to the senses of sight, sound, and smell; and their role in error. Lucretius supplements the discussion and includes descriptions of taste and some aspects of touch in book four of his poem.<sup>33</sup>

Epicurus opens the discussion in the letter with the following:

There are images (*tupoi*) like in shape to the solid bodies, far surpassing perceptible things in their subtlety or texture. For it is not impossible that such emanations should be formed in that which surrounds the objects, nor that should be opportunities for the formation of such hollow and thin frames, nor that should be effluences which preserve the respective position and order which they had before in the solid bodies: these images we call *eidola*.<sup>34</sup>

*Eidola* are projected in streams from perceptible objects. Each *eidolon* has a “surface-layer one atom thick” and is “thrown off at tremendous speed and in rapid succession by solid bodies as a result of their internal atomic vibration.”<sup>35</sup> *Eidola* have the same primary qualities as atoms: shape, weight, size, and “all that necessarily goes with shape” as well as colour.<sup>36</sup> Objects “throw off particles emanating not only from deep within them...but often from their surfaces as

<sup>32</sup> *Letter to Herodotus* (49).

<sup>33</sup> Unless otherwise noted, translations are from Smith, *Lucretius: On the Nature of Things*.

<sup>34</sup> *Letter to Herodotus* (46).

<sup>35</sup> Long and Sedley, *The Hellenistic Philosophers*, vol. I, 76-77.

<sup>36</sup> *Letter to Herodotus* (49, 54) and Furley, “Democritus and Epicurus on Sensible Qualities,” 83. Taylor is surely wrong in stating that *eidola* cannot “be said to possess colour, taste, or smell” (Taylor, “All Perceptions Are True,” 121).

well—particles of their own color.”<sup>37</sup> Thus smells originate from deep inside the object, whereas visions are caused by *eidola* coming off the object’s surface: “that odors emanate and withdraw from the interior of objects is indicated by the patent fact that every substance diffuses a stronger smell when broken, bruised or burned.”<sup>38</sup>

### ***Eidola and the six senses***

Epicurus’ treatment of perceptions in the *Letter to Herodotus* deals primarily with sight and with mental perceptions, vision being the paradigm case (though the mechanism of mental perceptions is similar).<sup>39</sup> By mental perceptions, Epicurus is referring to the variety of visions we experience in our minds, both voluntary and involuntary.<sup>40</sup> Thus Epicurus insists that all dreams, fantasies, hallucinations, etc. originate from outside the observer.<sup>41</sup> Which sense organ receives the *eidola* depends on the coarseness or fineness of the *eidolon* in question: *eidola* “similar [to the source object] in colour and shape, leave the objects and enter according to their respective size either into our sight or into our mind.”<sup>42</sup> An *eidolon* transmitting an odour, compared to one transmitting sound, for example, “is said to be ‘made of larger particles’, because it can’t penetrate walls as sound can.”<sup>43</sup> The *eidola* which enter the eyes, in turn, are finer than those received by the other senses; those entering the mind are the finest.<sup>44</sup>

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<sup>37</sup> *DRN* IV.72-74.

<sup>38</sup> *DRN* IV.694-670.

<sup>39</sup> Long and Sedley, *The Hellenistic Philosophers*, vol. I, 76.

<sup>40</sup> Mental perception consists in “having images ... [and] does not imply the use of reason.” See E. Asmis, *Epicurus’ Scientific Method* (Ithaca: Cornell University Press, 1984), 105-6.

<sup>41</sup> Long and Sedley speculate that Epicurus adopted this mechanism to explain mental visions because “if he admitted that imagination can operate with no external cause, he would be unable to exclude the possibility that sensation might itself be an equally internal fantasy of the sense-organs” (Long and Sedley, *The Hellenistic Philosophers*, Vol. I, 77).

<sup>42</sup> *Letter to Herodotus* (49-50).

<sup>43</sup> Furley, “Democritus and Epicurus on Sensible Qualities,” 86. The reference is to Lucretius, *DRN* IV.699.

<sup>44</sup> Lucretius, *DRN* IV.976-985.

The *eidola* which enter the eyes have the colour and shape of their source object. Thus a tree would be continuously emitting images of itself which impinge on our eyes. Hearing is explained similarly, resulting

when the current is carried off from the object speaking or sounding or making a noise.... [T]his current is split up into particles, each like the whole, which at the same time preserve a correspondence of qualities with one another and a unity of character which stretches right back to the object which emitted the sound.<sup>45</sup>

Smell, the last kind of sense perception covered in the *Letter to Herodotus*, is also caused by “certain particles carried off from the object of suitable size to stir up this sense-organ.”<sup>46</sup>

Epicurus provides no discussion of taste and touch in the *Letter to Herodotus*, perhaps because he is only concerned with objects perceived at a distance.<sup>47</sup> In his account of the process of taste perception, Lucretius explains that the particles of food are “channeled through the ducts of the palate and tortuous passages of the porous tongue.”<sup>48</sup> A perception of touch occurs when the percipient’s body has “immediate contact...with atoms from the surface of the external body.”<sup>49</sup> Epicurus appears to note the subjective quality of smells in the *Letter to Herodotus* (53) when describing certain *eidola* particles that stir smell “in a manner disorderly and alien to it.” Subjective experiences of taste are raised in Plutarch’s critique of the objectivity of perceptions in the Epicurean account which will be discussed in chapter two.

*Eidola*, like atoms, are imperceptible.<sup>50</sup> Though both Epicurus and Lucretius make the point that we do not perceive *eidola* but perceptible objects by means of *eidola*, some scholars

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<sup>45</sup> *Letter to Herodotus* (52).

<sup>46</sup> *Letter to Herodotus* (53).

<sup>47</sup> According to Asmis, Epicurus is “here considering only the problem of how we can perceive something when the source of perception is at an interval from the percipient” (Asmis, *Epicurus' Scientific Method*, 115).

<sup>48</sup> *DRN* IV.620-625.

<sup>49</sup> Asmis, *Epicurus' Scientific Method*, 105. Lucretius discusses touch at IV.259-268

<sup>50</sup> See Lucretius *DRN* IV.256-8: “Although the images that impinge on our eyes are individually invisible, the objects themselves are visible.”

attempt to stretch the point.<sup>51</sup> What we see are “the actual colour and form of the external object itself that is impressed upon us *by means of the eidola*.”<sup>52</sup> The same point is made in the discussion of the speed of *eidola* in the *Letter to Herodotus*. These technical sections, which some editors relocate to a discussion on the motion of atoms,<sup>53</sup> show that, under ideal conditions, the *eidola* transmit the outline of the object as it is when the object under observation:

Since their movement through the void occurs with no conflict from [atoms which] could resist them, it can cover any comprehensively graspable distance in an inconceivably [short] time. For the presence and absence of resistance takes on a similarity to slowness and speed. The moving body itself, however, cannot reach several places at the same time, speaking in terms of time contemplated by reason; for that is unthinkable. Yet when considered as arriving in perceptible time from any point at all in the unlimited, it will not be departing from the place from which we comprehensively grasp its motion as having come from.<sup>54</sup>

The passage shows that *eidola* must reach the senses in time for there to be a sensation of the observed object (“the moving body itself”) as it was when the *eidola* have departed from it. As Conche observes,

les simulacres [*eidola*] naissent en même temps que, grâce à eux, la pensée se représente les objets (au même instant *sensible*) : les objets sont donc *présents*. Les simulacres par lesquels je vois un arbre se détachent à l’instant même...où je le vois, de sorte que je vois l’arbre tel qu’il *est*, non tel qu’il *a été*.<sup>55</sup>

### Perception by means of *eidola*

The details of the interaction between *eidola* and sense organ are technical and obscure. Though the account itself is difficult to defend on its own terms—Epicurus appears to have adopted it

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<sup>51</sup> Notably Everson, “Epicurus on the Truth of the Senses.” The Epicurean point is also expressed in a fragment in Diogenes of Oinoanda mentioned by Lee, who makes the point forcefully in E. N. Lee, “The Sense of an Object: Epicurus on Seeing and Hearing,” in *Studies in Perception*, ed. P. K. Machamer and R. G. Turnbull (Columbus: Ohio State University Press, 1978), 43-44.

<sup>52</sup> Furley, “Democritus and Epicurus on Sensible Qualities,” 92. Furley’s emphasis.

<sup>53</sup> Bailey, following Giussani—see C. Bailey, ed., *Epicurus: The Extant Remains* (New York: George Olms Verlag, 1970; reprint, Oxford University Press, 1926), 190, commentary on (46) and 219, commentary on (46b).

<sup>54</sup> *Letter to Herodotus* (46-47), translation from Inwood and Gerson, eds., *The Epicurus Reader: Selected Writings and Testimonia*.

<sup>55</sup> Conche, ed., *Épicure: Lettres et Maximes*, 134. Emphasis in Conche.

from the Abderite philosophers and modified it to fit his materialistic, epistemological, and cosmological assumptions—a reasonable reconstruction is important for the purpose of analysing perceptions.<sup>56</sup> The following description is based on Asmis' work.

On Epicurus' account, *eidola* originating from an external source object deliver a blow to the sense organ, making an impression of the object. The sense organ in turn responds with its own activity and a perception of an external object takes place in the sense organ. As several commentators point out on the basis of the *Letter to Herodotus* (50-51), in order to transmit the external object faithfully, the *eidola* must affect the sense organ in one of two specific ways, either as "successive repetition of the *eidolon*, or because of the remaining effect of the *eidolon*."<sup>57</sup> The passage reads,

Whatever image, of shape or of properties, we get by apprehension of the mind or the senses, this is the shape of the solid object, when it comes about because of the successive repetition of the *eidolon*, or because of the remaining effect of the *eidolon*.<sup>58</sup>

According to some commentators, this passage implies that *eidola* can affect the sense in some other way, thus causing an error in perception.<sup>59</sup> On this controversial reading, an error would occur when a single, random *eidolon*, rather than a succession of *eidola*, affects the sense organ.

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<sup>56</sup> The cosmological and materialist foundations include the existence of atoms and void and the laws of conservation, both covered in detail in chapter three, in the section treating the proof for atoms and void.

<sup>57</sup> See below.

<sup>58</sup> In Furley, "Knowledge of Atoms and Void in Epicureanism," 610.

<sup>59</sup> This controversial point is further discussed in chapter 2. Asmis dismisses the possibility of a third type of effect, noting that "the successive compacting is an essential feature of the process of coming to see any object at all, no matter how large or how small. It follows that successive compacting cannot be a criterion by which a supposedly truthful presentation is distinguished from a supposedly deceptive presentation. Nor indeed is there anything about the process of successive compacting that can ensure that the presentation is free of distortion. For *eidola* that come in succession are just as vulnerable to disturbance, both individually and in their entirety, as an *eidolon* that comes by itself" (Asmis, *Epicurus' Scientific Method*, 135). Kleve constructs a scale of reliability, suggesting that the impressions of single *eidola* are less reliable than those from a stream: K. Kleve, "Empiricism and Theology in Epicureanism," *Symbolae Osloenses* 52, no. 1 (1977): 47. Asmis compares the various scholarly accounts in Asmis, *Epicurus' Scientific Method*, 127, n. 18.

It is, however, generally recognized that *eidola* must affect the sense organ in one of the two ways—as successive repetition (or ‘successive compacting’) or as residue.

Among the two effects of *eidola* on the sense organs, successive compacting is the less controversial. Asmis locates evidence for successive compacting in a report by Augustine who attests that, being asked “why there appears a single image of a body...from which countless images flow[?]”, the Epicureans replied that “for the very reason that images flow and pass by continuously, it happens by a kind of compacting and condensation of them that one image appears out of many.”<sup>60</sup> Augustine here explains, in Asmis’ words, that the “compacting consists in the merging of successive *eidola* into a single *eidolon*.”<sup>61</sup>

The second type of effect described in the *Letter to Herodotus* (50-51) is the ‘remaining effect of the *eidolon*.’ The evidence for this type of effect is scant and commentators often associate it with preconceptions, though others have attempted to show that it can uniformly apply to other perceptions as well.<sup>62</sup>

### ***Epibolē tēs dianoias***

The second element of the process of perception, in addition to the motion and impacting of the *eidola* on the sense organs and the mind, is the response by the sense organs: “at the same time as the particles flow into the perceptual organ, the organ responds to the particles by an activity of its own.”<sup>63</sup> There are two reasons that an activity by the sense organ is required. First, this activity accounts for the perceptual ‘act of apprehending’, as the sentence at the *Letter to Herodotus* (50) stipulates: “And every image which we obtain *by an act of apprehension* on the

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<sup>60</sup> Augustine *Epistulae* 118.30 as quoted in Asmis, *Epicurus' Scientific Method*, 128.

<sup>61</sup> *Ibid.*, 128.

<sup>62</sup> *Ibid.*, 137-48. Furley calls this effect “mysterious” and suggests that the effect may be related to the role of *prolēpsis* (preconception) in Epicurus’ theory of knowledge; see Furley, “Knowledge of Atoms and Void in Epicureanism,” 618, n. 14. See also T. G. Rosenmeyer, “One Strike Will Do: A Lucretian Puzzle,” *Scripta Classica Israelica* 18 (1999): 29 and n. 14.

<sup>63</sup> Asmis, *Epicurus' Scientific Method*, 118.

part of mind or of the sense-organs whether of shape or of properties, this image is the shape <or the properties> of the concrete object.”<sup>64</sup> Second, since the world is full of *eidola* continually emitted by objects, in order to perceive a particular object, the observer must have the ability to focus on a particular set of *eidola*. Otherwise, our sense organs and mind would be overwhelmed. Lucretius illustrates the importance of the focussing mechanism in his description of the myriad mental images roaming about:

Countless subtle images of things roam about in countless ways in all directions on every side. When they meet in the air, they easily become interlinked, like cobwebs or gold leaf. They are far finer in texture than the images that occupy our eyes and provoke sight, since they pass through the interstices of the body, stir the subtle substance of the mind within, and so provoke its sensation.<sup>65</sup>

The phrase translated as ‘act of apprehension’ at *Letter to Herodotus* (50) is a variation of the term *epibolē*.<sup>66</sup> The term and the related constructions ‘apprehensions of the senses’ and—in particular—‘apprehensions of the mind’ or ‘*epibolē tēs dianoias*’, have been the subject of scholarly controversy since Cyril Bailey’s extensive commentary.<sup>67</sup> Bailey proposed that *epibolē* refers to a mechanism by which the senses and mind apprehend the truth of an object, and *epibolē tēs dianoias* refers to “the immediate, or ‘intuitive’ apprehensions of concepts, and in particular of the ‘clear’, i.e., self-evident concepts of scientific thought.”<sup>68</sup> Most scholars who have assessed Bailey’s analysis agree that his interpretation likely overextends the meaning of

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<sup>64</sup> Translation from Bailey, ed., *Epicurus: The Extant Remains*. Emphasis added.

<sup>65</sup> *DRN* IV.721-735. For positive implications of the condition of being surrounded by *eidola* on the potential for the study of nature in *DRN* III, see Kleve, “Empiricism and Theology in Epicureanism,” 46.

<sup>66</sup> *Epiblētikos* is used at (50).

<sup>67</sup> See the appendix to Bailey, ed., *Epicurus: The Extant Remains*, 259-74. The appendix is reproduced in C. Bailey, *The Greek Atomists and Epicurus* (Oxford: Clarendon Press, 1928; reprint, Russell & Russell, 1964), 559-79.

<sup>68</sup> Bailey, ed., *Epicurus: The Extant Remains*, 260-1.

the term. Moreover, not all scholars agree that “*epibolē*, as the term is used by Epicurus, necessarily involves straining or concentration.”<sup>69</sup>

Asmis takes *epibolē* to refer to an involuntary “response by which the perceptual organ makes an effort to bring an object into focus.”<sup>70</sup> Her reading is supported by a passage by Lucretius on dreams (IV.794-815) in which he again refers to the wealth of images available to the mind:<sup>71</sup>

At any time in any place all kinds of images are ready at hand: so immense is their velocity, and so immense is the store of them.... And because the subtlety of the images, the mind cannot perceive them distinctly unless it concentrates its attention on them. Consequently all pass away unnoticed, except those for which it has prepared itself.... Similarly have you not noticed that when the eyes endeavour to perceive minute objects, they strain themselves and prepare themselves, and that, unless they do this, we cannot see them distinctly?

Lucretius’ description of straining resolves another problem famously posed by Cicero: how the mind can instantly think of anything it wants.<sup>72</sup> The mind need only focus through *epibolē* on a particular set from the vast pool of *eidola* available to it.

The process of perception by means of *eidola*, then, is more complex than a blow to a sense organ from the outside. Indeed, even in cases of accurate perceptions of external objects, the *eidola* involved in the perception must compact in the course of their motion from the source object to the sense organ or mind. Evidence from Alexander of Aphrodisias suggests that when the object of vision is too large to enter the pupil as a whole—a criticism leveled against

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<sup>69</sup> Asmis, *Epicurus’ Scientific Method*, 125. Asmis surveys the views of Furley, Dewitt, and Rist in Asmis, *Epicurus’ Scientific Method*, 125 and n. 14.

<sup>70</sup> *Ibid.*, 126.

<sup>71</sup> *Ibid.*, 119.

<sup>72</sup> *DRN* IV.780-782; the formulation is in Smith, *Lucretius: On the Nature of Things*. Cicero’s criticisms are cited in Asmis, *Epicurus’ Scientific Method*, 119 and n. 2. They include *Epistulae ad familiares* 15.16.1-2, where Cicero “demands to know from his friend Cassius, who is currently in Britain, how an *eidolon* of him is to appear to Cicero as soon as he wishes to think of Cassius, and, furthermore, how an *eidolon* of the island of Britain is to come flying to him.”

Epicurus' account of vision—"small parts of *eidola* enter successively and combine in the eye to form a single presentation of an object."<sup>73</sup>

It may be difficult to see how, despite the compacting of *eidola*, Epicurus and his followers defend their position that the object of perception is the external body from which the *eidola* originate rather than the *eidola* or a representation of the object. Lucretius, however, affirms the doctrinal point through an analogy from the sense of touch to the sense of sight:

You should not consider it strange that, although the images that impinge on our eyes are individually invisible, the objects themselves are visible. After all, when the wind whips us with fitful blasts, and when biting cold flows upon us, we do not feel the individual particles of wind or cold, but rather their combined effect; and when we perceive that blows are falling upon our body, just as if some external force were whipping us and giving us the sensation of its body. Moreover, when we tap a stone with a finger, what we touch is merely the superficial layer of colour on the outside of the rock; but what we feel, when we touch the rock, is not its surface color, but rather the hardness deep down within it.<sup>74</sup>

With sight as with touch "we do not...perceive the particles with which we are immediately in contact; rather what we perceive is an independently existing object, and we perceive it all at once (*unorsum*), as the result of an accumulation of successively arriving particles."<sup>75</sup> Touch provides direct access to an object: it is the object that we feel, rather than its upper-most layer of atoms. As Long and Sedley explain, "we can never feel by touch a single layer of atoms *in itself*. We only feel the cumulative hardness of the multiple layers supporting it: remove these and the surface layer would become imperceptible even to the touch."<sup>76</sup>

<sup>73</sup> Asmis, *Epicurus' Scientific Method*, 132. For a modern variation involving the Taj Mahal, see J. Annas, *Hellenistic Philosophy of Mind* (California: University of California Press, 1992), 159.

<sup>74</sup> *DRN IV*. 256-68.

<sup>75</sup> Asmis, *Epicurus' Scientific Method*, 129-30.

<sup>76</sup> Long and Sedley, *The Hellenistic Philosophers*, Vol. I, 77. Emphasis in Long and Sedley.

## The objects of perceptions

If we follow Epicurus' words carefully, we note that perceptions are in fact not of an object as a whole, but, depending on the sense organ affected, of an object's primary property (shape) or of its secondary property (colour, taste, smell, and sound).<sup>77</sup> This should not be surprising if we recall that each sense organ receives *eidola* of different sizes: "models, similar in colour and shape, leave the objects and enter according to their respective size either into our sight or into our mind."<sup>78</sup> In fact, then, each sense perceives a special quality of an object, and Lucretius reports as much:

The fact is that each sense has its own special sphere, its own separate function. Thus the discernment of softness, cold, and heat, must be the province of one particular sense, while the perception of the various colors and everything connected with colors must be the business of another. Taste too has its own distinct function; smell is produced separately, and so is sound.<sup>79</sup>

Lucretius deals with the senses of taste, smell, and sound briefly at the end of this passage, but touch and vision take the greater part. The association of softness, cold, and heat with touch and of colour with vision is not controversial. But which sense or senses would be associated perceiving the shape of an object? It would appear that it must be touch and vision, for when we see an object, do we not perceive its shape as well as its colour? Epicurus himself tells us that external objects "make on us an impression of the nature of their own colour and shape."<sup>80</sup> In a note to his translation of Lucretius' passage, Smith observes that "by 'everything connected with colours' Lucretius presumably means shape, outlines, etc."<sup>81</sup>

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<sup>77</sup> This is also confirmed by Sextus; see M VII (207): "it is not the whole solid body that is seen, but the color of the solid body;" and 208: "the specific role of sense-perception is to apprehend only the thing that is present and affecting it (for example, color)."

<sup>78</sup> *Letter to Herodotus* (49).

<sup>79</sup> *DRN IV.489-500*.

<sup>80</sup> *Letter to Herodotus* (49).

<sup>81</sup> Smith, *Lucretius: On the Nature of Things*, 113, n. 30.

But David Sedley notes “that while touch has texture and temperature as its objects...sight has as its special function ‘sensing the various colours of things, and seeing the inseparable attributes (*coniuncta*) of colours.’”<sup>82</sup> Based on a papyrus fragment by a later Epicurean (probably Philodemus), Sedley argues that shape and size are, in fact, “not common objects of vision and touch,” but rather that “touch primarily registers body, vision primarily registers colour.”<sup>83</sup> The anonymous author reports that “we hold that vision perceives visibles and touch tangibles, that the one is of colours, the other of body, and that the one never interferes in the other’s sphere of discrimination.”<sup>84</sup> Touch “has its most peculiar characteristic that of registering no quality at all.”<sup>85</sup> Sedley explains that touch is the one sense which “registers body as such.”<sup>86</sup> Thus shape and size are common perceptibles of vision and touch only ‘by analogy.’ Each sense perception, then, has one special property of a body as its object of perception:

Touch primarily registers body, vision primarily registers colours. Derivatively from this, touch also registers the shape and size of body, vision the shape and size of colour. These two types of shape and size are from identical. Whereas a body’s size is an intrinsic property of it, the size of a perceived colour patch is merely a relation between its parts and the portion of colour seen around it.<sup>87</sup>

## **The *alogos* nature of perceptions**

The Epicurean position of carving out a special sphere for each sense is related to the infallibility of each sense in relation to the others. Lucretius testifies to this principle:

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<sup>82</sup> D. Sedley, "Epicurus on the Common Sensibles," in *The Criterion of Truth*, ed. P. M. Huby and G. C. Neale (Liverpool: Liverpool University Press, 1987), 126. Sedley provides his own translation of IV.480-499.

<sup>83</sup> *Ibid.*, 127, 133. The fragment is from *P.Herc.* (Herculaneum papyrus) 19/698 col. 17, which is found in W. Scott’s *Fragmenta Herculaniensia*. Annick Monet has more recently produced an edition of the papyrus in which he argues that Philodemus is the author of the work. See A. Monet, "[Phiodème, *Sur les sensations*]," *Cronache Ercolanesi* 26 (1996): 55.

<sup>84</sup> Sedley, "Epicurus on the Common Sensibles," 127. (*P.Herc.* 19/698 col. 17)

<sup>85</sup> *Ibid.*, 129. (*P.Herc.* 19/698 col. 26)

<sup>86</sup> *Ibid.*, 130.

<sup>87</sup> *Ibid.*, 133. In her analysis of the same papyrus, Asmis similarly concludes that “shape and size are not objects common to the senses of sight and touch, but are entirely different objects of perception” (Asmis, *Epicurus’ Scientific Method*, 106). On Asmis’ reading, the difference between shape and size as perceived by sight and as perceived by touch is a function of distance.

Can sight be corrected by hearing, or hearing by touch? Can the evidence of touch be challenged by taste, refuted by hearing, or invalidated by sight? Not so, in my opinion. The fact is that each sense has its own special sphere, its own special function.

Diogenes similarly attests: “a similar sensation cannot refute a similar because it is equivalent in validity; nor a dissimilar a dissimilar, for the objects of which they are the criteria are not the same.”<sup>88</sup>

As Diogenes explains, there is another aspect in which sense perceptions cannot be contradicted by other perceptions: there can be no conflict between the perception of an organ and another perception by the same organ. While everyday experience demonstrates that we can not trust all of our perceptions equally (an ostensibly accurate perception may turn out to be inaccurate on a closer look), Epicurus denies that either perception is false.

In order to defend this claim without shaking the foundations of everyday experience, Epicurus explains that perceptions of properties of real objects in the world are separate from opinions regarding the objects. Where perceptions are *alogos*, opinions are expressed in propositions such as, ‘this is a tree’; ‘there is a square tower.’<sup>89</sup> There is a separate element in Epicurus’ epistemology which, unlike perceptions, is associated with both language and memory—*prolēpseis*, or preconceptions. It will be useful to compare perceptions to and contrast them with the other two criteria of truth, preconceptions and feelings (*pathē*), to further delineate the *alogos* features of perceptions.

### Perceptions and feelings

Feelings (*pathē*), also translated as ‘affections’, and perceptions are similar in three ways: in having an objective source; in the processes which give rise to them; and in their roles as criteria

<sup>88</sup> *DRN* IV.485-490; DL X 32.

<sup>89</sup> See *DRN* IV.500-515. The distinction between perceptions and opinions and the non refutation of one perception by another are discussed in detail in the next chapter.

of truth. *Pathē* are feelings or internal sensations of pleasure and pain.<sup>90</sup> In the *Letter to Herodotus*, Epicurus refers to *aisthēseis* and *pathē* together as a criterion of truth.<sup>91</sup> A sentence in the *Letter to Menoeceus* (129), however, suggests that *pathē* are a criterion of choice and avoidance: “We recognize pleasure as the first good innate in us, and from pleasure we begin every act of choice and avoidance, and to pleasure we return again, using the feeling as the standard by which we judge every good.”<sup>92</sup> Some scholars argue that feelings should be understood as a criterion of action, rather than as a criterion of truth.<sup>93</sup> Since my interest here is in the relation of *pathē* to *aisthēseis*, I do not propose to examine the potentially independent role of feelings as a separate criterion but only to point to the *alogos* aspects common to both perceptions and *pathē*.

Sextus Empiricus reports that both feelings and perceptions have an objective source:

For just as the primary feelings, that is pleasure and pain, come about from certain agents and in accordance with those agents—pleasure from pleasant things and pain from painful things and it is impossible for what is productive of pleasure not to be pleasant or what is productive of pain not to be painful but that which produces pleasure must necessarily be naturally pleasant and that which produces pain naturally painful—so also with perceptions, which are feelings of ours, that which produces each of them is always perceived entirely and, as perceived, cannot bring about the perception unless it is in truth such as it appears.<sup>94</sup>

Here Sextus notes the similarity between feelings and perceptions on two levels. First, both feelings and perceptions come from an objective cause—“that which produces each of them...cannot bring about the perception unless it is in truth such as it appears.” Second, Sextus

<sup>90</sup> See Asmis, *Epicurus' Scientific Method*, 97-98 and 167-171.

<sup>91</sup> Striker, “Kritērion Tēs Alēthias,” 30; Asmis, *Epicurus' Scientific Method*, 96.

<sup>92</sup> Translation in Bailey, ed., *Epicurus: The Extant Remains*.

<sup>93</sup> Striker, “Kritērion Tēs Alēthias,” 30-31, Long, “Aisthesis, Prolepsis, and Linguistic Theory in Epicurus,” 116; Asmis, *Epicurus' Scientific Method*, 96-97. Asmis posits a solution that respects both roles of *pathē* in the two letters. She suggests that Epicurus “himself assigned a double function to the affections [i.e., as a criterion of truth and as a criterion of action] and did not subsume them under the perceptions, but that his followers later reclassified the affections as a criterion of action alone, while subsuming their epistemological role under that of the perceptions” (Asmis, *Epicurus' Scientific Method*, 97).

<sup>94</sup> SE M VII (203), translation in Everson, “Epicurus on the Truth of the Senses,” 166-67.

notes that sensations are “feelings of ours.” For Epicurus, perceiving is a kind of *pathē*.<sup>95</sup> According to Asmis, affections “are produced just like the perceptions of seeing, hearing, and so on.”<sup>96</sup> We can therefore draw an analogy from feelings, both as regards the object of *pathē* and the process of experiencing *pathē*, to perceptions.<sup>97</sup> The process of having a feeling or a perception is one of “an immediate acquaintance with reality.”<sup>98</sup> The processes are unmediated by words or analysis. As Diogenes reports, “seeing and hearing are as much facts as feeling pain.”<sup>99</sup>

### Perceptions and preconceptions

Preconceptions (*prolēpseis*) are concepts formed by repeated instances of perceptions and the second Epicurean criterion of truth according to Diogenes’ report. Unlike perceptions, which are *alogos*, preconceptions are associated with naming. Because of the dependence of preconceptions on perceptions, some scholars argue that Epicurean preconceptions are reducible to perceptions and should not be taken to be a stand-alone criterion of truth.<sup>100</sup> On the whole, however, and despite the scant extant evidence on preconceptions, modern commentators recognize preconceptions at least as an independent mechanism in Epicurus’ epistemology. Diogenes provides us with the following description of preconceptions:

The concept (*prolēpsin*) they speak of as an apprehension or right opinion or thought or general idea stored within the mind, that is to say a recollection of what

<sup>95</sup> Asmis, *Epicurus' Scientific Method*, 97; Everson, “Epicurus on the Truth of the Senses,” 166-8. See also Furley and Conche : Furley, “Democritus and Epicurus on Sensible Qualities,” 84; Conche, ed., *Épicure: Lettres et Maximes*, 26.

<sup>96</sup> Asmis, *Epicurus' Scientific Method*, 168.

<sup>97</sup> This is a point Professor Gonzalez brought up at the proposal defence.

<sup>98</sup> Asmis, *Epicurus' Scientific Method*, 170.

<sup>99</sup> DL X 32.

<sup>100</sup> Striker, “Kritērion Tēs Alēthias,” 30, n. 13. Furley notes the lack of a definite article in front of *prolēpsis* in Diogenes’ report at X 31—“in the *Canon* Epicurus says that the *kritēria tēs alēthias* are the *aisthēseis* and *prolēpseis* and the *pathē*”—but Striker counters that the observation “obviously carries no weight: the wording is simply explained by the fact that *aisthēsis* and *prolēpsis* are both feminine nouns, while the neuter noun *pathē* requires a different article.” See D. J. Furley, *Two Studies in the Greek Atomists* (Princeton: Princeton University Press, 1967), 202; Monet, “[Phiodème, *Sur les sensations*],” 57, n. 113.

has often been presented from without, as for instance, ‘Such and such a thing is a man’; for the moment the word ‘man’ is thought of, as the senses give us the information. Therefore the first signification of every name is immediate and clear evidence (*enarges*). And we could not look for the object of our search, unless we have first known it.

Diogenes continues with an example:

For instance we ask ‘Is that standing yonder a horse or a cow?’: to do this we must know by means of a concept the shape of horse and of cow. Otherwise we could not have named them, unless we previously knew their appearance by means of a concept (*prolēpsin*). So the concepts (*prolēpseis*) themselves are clear and immediate evidence (*enargeis*).<sup>101</sup>

Diogenes’ testimony shows that *prolēpseis* are related to perceptions and involve two aspects which perceptions themselves lack: memory and language. Preconceptions are built up from perceptions: the word ‘man’ is spoken, the form is “thought of” because “the senses give us the information.” The *prolēpseis*, in turn, are used in forming words and recollecting thoughts or general ideas “stored within the mind;” as Epicurus himself explains in a passage from the *Letter to Herodotus* (38), “it is essential that the first mental image associated with each word should be regarded.”

Epicurus probably coined the term *prolēpsis*; unfortunately, it is scarcely mentioned in the extant texts. In the *Letter to Herodotus* (38) Epicurus is almost certainly referring to preconceptions without using the term.<sup>102</sup> In the few instances Epicurus does use the term in his extant writings, he does so “in connection with our knowledge of the gods, of justice, of

<sup>101</sup> DL X 33.

<sup>102</sup> Sedley argues that the *Letter* was written before Epicurus developed the concept of *prolēpsis*. See D. Sedley, “Epicurus, on Nature Book XXVIII,” *Chronache Ercolanesi* 3 (1973): 14-15.

responsibility, and of time.”<sup>103</sup> Epicurus’ uses, when compared with Diogenes’ examples of *prolēpseis* of cows and men, point to the broad range of this criterion, including its origin in both sense perceptions (cows) and mental perceptions (gods).<sup>104</sup>

Glidden divides the types of *prolēpesis* into natural examples, such as a man, a horse, or a dog, which are reported by Diogenes, and abstract examples, including justice and the gods’ properties of blessedness and immortality, which are supplied by Epicurus. The process of forming natural preconceptions is simpler: as Diogenes’ reports, preconceptions are formed through repetition of perceptions. More complex preconceptions are arrived at through experience: “the mind comes to each new experience trained in habits of recognition to search out the familiar.”<sup>105</sup> For the purposes of this discussion, I will only look at natural *prolēpseis* which correspond to specific sense or mental perceptions.

Epicurus’ mention of a *prolēpesis* of the gods occurs in the *Letter to Menoecus* (124). The justification for the existence of the gods is explained with reference to sense perception. Here Epicurus uses the same term Diogenes employs above—*enargeia*, or evidence—which, due to the interpretive work of some scholars, has become closely related to *prolēpesis*. Thus, on Bailey’s translation:

First of all believe that god is a being immortal and blessed...believe about him everything that can uphold his blessedness and immortality. For gods there are, since the knowledge of them is by clear vision (*enargēs*). But they are not such as the many believe them to be. And the impious man is not he who denies the gods of the many, but he who attaches to the gods the beliefs of the many. For the

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<sup>103</sup> D. Glidden, "Epicurean Prolepsis," *Oxford Studies in Ancient Philosophy* 3 (1985): 179. Long and Sedley locate a number of other examples including body, utility, truth, and properties of bodies; see Long and Sedley, *The Hellenistic Philosophers* (1987), Vol. I, commentary on section (17). Some of the examples are taken from Lucretius whom Glidden does not find to be a useful source of evidence on the subject. (But see P.-M. Morel, "Method and Evidence: Epicurean Preconception," in *Proceedings of the Boston Area Colloquium in Ancient Philosophy* (2007), 28 and n. 10).

<sup>104</sup> Glidden points out that Diogenes’ evidence consists of an analysis rather than a report, but we have no reason to doubt his examples. Glidden, "Epicurean Prolepsis," 180.

<sup>105</sup> *Ibid.*, 206.

statements of the many about the gods are not conceptions (*prolēpseis*) derived from sensation, but false suppositions, according to which the greatest misfortunes befall the wicked and the greatest blessings <the good> by the gift of the gods.<sup>106</sup>

As Glidden observes, the gods themselves are recognized by perceptions while their blessed and immortal nature is apprehended through *prolēpseis*.<sup>107</sup>

On Bailey's controversial interpretation of *epibolē tēs dianoias*, or the apprehensions of the mind, the meaning of the term is expanded beyond indicating an aspect of mental perception. *Epibolē tēs dianoias* are "apprehensions of concepts, and in particular of the 'clear', i.e., self-evident concepts of scientific thought."<sup>108</sup> Bailey's interpretation of this mechanism enlists *enargēia*, or *enargēs*. The term, typically translated as 'evidence,' is assigned a technical meaning 'the clear view' or 'near view.' 'Clear views' are privileged to other perceptions in their being "immediate perceptions of clear objects."<sup>109</sup> For Bailey, *enargēia* are the basis of *prolēpseis*, "'concepts' formed in the mind by the constant repetition of the *enargēs* vision of the image."<sup>110</sup>

But Bailey's interpretation of *enargēia* as a special class of perceptions goes beyond the evidence. There is insufficient textual basis for making *enargēia* into a special class of perceptions, as there is insufficient textual basis to designate *epibolē tes dianoias* as a special process of knowledge acquisition.<sup>111</sup> While we cannot be certain of the details, *prolēpseis* may constitute a stage in the process of perception subsequent to the interaction of the sense organs, including the mind, and the *eidola* stream.

<sup>106</sup> Letter to Menoecus (123-124).

<sup>107</sup> Glidden, "Epicurean Prolepsis," 187.

<sup>108</sup> Bailey, ed. *Epicurus: The Extant Remains*, 260-261.

<sup>109</sup> Ibid., 330, commentary on 123 (8). Bailey uses the singular: "*enargēs* is a technical term used of the immediate perception of a near object."

<sup>110</sup> Ibid., 330, commentary on 124 (1). Long follows Bailey's reading, see Long, "Aisthesis, Prolepsis, and Linguistic Theory in Epicurus," 117-19; Long, *Hellenistic Philosophy: Stoics, Epicureans, Sceptics*, 22-23.

<sup>111</sup> On the latter, see Furley, "Knowledge of Atoms and Void in Epicureanism." It appears that in some contexts, at least, *enargēia* are interchangeable with perceptions: see SE M VII (203) and Asmis, *Epicurus' Scientific Method*, 92-98.

Note the differences between *prolēpseis* and sense or mental perceptions: the latter lack memory and are *alogos*; the former involve memory and naming. The formation of preconceptions depends on perceptions: following repeated perceptions of a cow, I form a *prolēpsis* of cows. The next time I see a cow, its *eidola* strike my eyes which react, forming a “present sensory experience” which involves no words, of the cow’s colour and (by analogy with touch) shape. I complete my apprehension by recalling my previous visions and the term for this object, and naming it ‘cow.’<sup>112</sup> The preconception is the concept underlying the named object. *Prolēpseis* fill this role for any perception involving any of the sense organs as well as mental perceptions.

Thus the roles of perceptions and preconceptions in the process which begins with an interaction between a sense organ and an object and is completed by naming the object are distinct. A perception, at the level of content, is the raw and unpropositional datum of a special property of an external object. A preconception is used further along in the process when the perceived object is analysed and named with reference to a preconception. While memory and language are associated with preconceptions, perceptions are associated with neither.

## Conclusion

In this chapter, I argued for a particular reading of ‘perceptions’ (*aisthēseis*) *qua* sense contents as raw and unpropositional data of special properties of external objects. I advanced this reading with reference to *eidola*, the mechanism underlying perceptions; an analysis of the process by which the *eidola* and sense and mental organs interact to result in a perception of an external object; and a comparison of perceptions with the other two criteria of truth, preconceptions (*prolēpseis*) and feelings (*pathē*). The task of the next chapter is to take the conception of

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<sup>112</sup> “Present sensory experience” is Glidden’s phrase: Glidden, “Epicurean Prolepsis,” 206.

*aisthēsis* introduced in this chapter and examine what it means for perceptions as non-propositional data to be true.

## Chapter 2: *Doxa*, errors, and objects

In the first chapter I presented an interpretation, based on the extant texts, of Epicurean perceptions as non-propositional sense-content of a special property (colour, shape, smell, or taste) of an external object in the world. In the two parts of this chapter I will address two questions, the first associated with the truth of perceptions and the second with the objects of perceptions. The first is as follows: what is the role of perceptions in the context of propositional truth expressed in opinions and judgments? The second question concerns two aspects of the reality of external objects: their material reality and their ontological status vis-à-vis that of atoms. I will orient the two questions around analyses of various types of errors and other problems in perception.

I begin with examining the principles of errors in general as outlined in the *Letter to Herodotus* (50-52), the most important text on the subject in Epicurus' own words. This text points to a key distinction between opinions (*doxais*) regarding perceptions, and the perceptions themselves, a distinction which is also found in Sextus Empiricus' account. The distinction made in the texts between the truth or falsity of opinions on the one hand, and the truth of all perceptions on the other, supports my interpretation of perceptions as non-propositional data: on a standard propositional reading of 'truth', opinions can be either true or false; perceptions, on the other hand, cannot be true or false in this sense and thus must all be true in some other sense.<sup>1</sup>

One alternative sense in which perceptions can be true, and which is popular with some recent commentators, is given by Sextus. My discussion of Sextus' position covers apparent perceptual errors which involve a correction of one visual perception of an object by another visual perception. These apparent errors in perception appear to privilege one perception over

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<sup>1</sup> This *pace* Striker's reading of the truth of all perceptions as propositional truth. See also T. O'Keefe, "The Ontological Status of Sensible Qualities for Democritus and Epicurus," *Ancient Philosophy* 17 (1997): 131-32.

another, thus posing perhaps the most basic and obvious difficulty in interpreting the statement 'all perceptions are true.' Sextus points out that all perceptions of an object are true, while opinions passed on the perceptions can be either true or false; but his interpretation of the statement 'all perceptions are true', as we will see, relies on a controversial position regarding the objects of perception, which he sometimes locates in the *eidola* of objects, sometimes in objects themselves.

In the second part of this chapter, I turn to mental perceptions and address the question of the reality of perceptible objects. The importance of establishing both the ontological status of objects of perception as real for Epicurus, and the ultimate reality of all such objects (including mentally perceptible ones), will become clearer when Epicurus' method of inferring imperceptible bodies (atoms) from perceptible bodies is presented in chapter three. The objects of mental perceptions (dreams, fantasies, or a thought of a particular object) are often fleeting when compared to the objects of sense perceptions which, while impermanent, are often stable and enduring. Thus ascertaining the truth of opinions regarding mentally-perceptible objects can be more difficult than evaluating opinions regarding sense-perceptible objects. Lucretius, however, identifies a number of cases in which opinions regarding the objects of mental perceptions are known to be false.

The physical cause for the false opinions regarding those mental objects, much like the physical cause for apparent errors in the case of sense objects, is in the *eidola* received by the organ of perception, *dianoia*. Nevertheless, the source objects of the *eidola*, in the cases of both sense and mental perceptions, are real material objects. Thus, as Lucretius explains, even mental objects which cannot be real in a material sense (mythical beasts, for example), ultimately originate from real material objects.

The final problem in perception I address in this chapter concerns the ontological status of perceptible objects and their properties. As we have already seen, the process of perception involves atomic structures (*eidola*) impacting other atomic structures found in our sense organs, which then respond with their own activity. The perception is determined not only by the atomic structure of the *eidola* which the object emits and the sense receives, but also by the atomic structure of the sense organ of the percipient, which may be disposed to tasting honey, for example, as sweet or as sour. Thus, perceptions are dispositional.<sup>2</sup> The problem raised by Plutarch in his polemic directed at Colotes, a contemporary and follower of Epicurus, is that of showing that the objects of perception possess objective properties, and not merely subjective properties created in the course of having a perception.

## Problems in perception

### ***Letter to Herodotus (50-52)***

The key passage on error in Epicurus' own words is found in the *Letter to Herodotus (50-52)*. It can helpfully be divided into four sections:

(A) Whatever image, of shape or of properties, we get by apprehension of the mind or the senses, this is the shape of the solid object, when it comes about because of the successive repetition of the *eidolon*, or because of the remaining effect of the *eidolon*.

(B) But falsehood and error always lie in the addition made by *doxa*....

(C) For there would have been no similarity between the appearances seen as if in a picture or occurring in dreams or in any of the other apprehensions (*epibolai*) of the mind or of the other criteria, and things which really exist and are called true (*alēthēsi*), unless these things that we apprehend really existed.

(D) But the error would not have happened if we did not have a second motion, in ourselves, connected with the apprehension of the image, but different from it; in

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<sup>2</sup> O'Keefe, "The Ontological Status of Sensible Qualities for Democritus and Epicurus."

this motion, if there is no confirmation, or refutation, error arises, and if there is confirmation or no refutation, truth.<sup>3</sup>

Section (A) was already covered in the previous chapter. It shows that any perception involves an impact of *eidola* on a sense organ in one of two ways: successive compacting or the residue of an *eidolon* (it is of little controversy, at any rate, that successive compacting is required). An *eidolic* impact on a sense organ in one of the two prescribed ways is necessary for having an apprehension of a property of a real external object, a thing which really exists.

In section (C) Epicurus draws a distinction between false appearances and real objects and points to a similarity between the two. Epicurus is concise in describing real objects: “things which really exist and are called true” and generous with his description of false appearances: “appearances seen as if in a picture or occurring in dreams or in any of the other apprehensions of the mind or of the other criteria.” Referring to the distinction between appearances of true objects and false appearances, we can say of false appearances that they are of objects which do not exist in the same way that objects “which...are called true” exist. However, as we will see in the course of my examination of concrete examples of perceptual error and dreams, perceptions of objects which do not really exist, just as perceptions of real objects, are also caused by *eidola* emanating from real objects.

Error is associated with *doxa*, which is an opinion regarding a perception. Without *doxa* there would be no error: “falsehood and error always lie in the addition made by *doxa*.” False appearances and “things which really exist” are similar, says Epicurus, and this similarity would not exist “unless these things which we apprehend really existed.” It is likely that “these things

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<sup>3</sup> *Letter to Herodotus* (50-51) as translated in Furley, “Knowledge of Atoms and Void in Epicureanism,” 610. I follow Furley’s division of the passage into the four sections.

which we apprehend” refer to *eidola*.<sup>4</sup> If this is the case, similarity between real objects and false appearances is explained by the existence of *eidola*, as there would be no such similarity unless *eidola* “really existed.” The similarity between “things which really exist” and false appearances, however, is misleading, because one type of appearances is of real objects where the other is of unreal objects, or objects which do not really exist. Without *eidola* we would have neither type of perception.

Why do *eidola* sometimes cause us to have perceptions of real things and sometimes perceptions of false appearances, dreams, and “appearances seen as if in a picture”? Some commentators locate the answer in a relationship between sections (A) and (C) of the passage.<sup>5</sup> Section (A) describes the two types of impact which cause an apprehension of an image of the shape or properties of an external object, thus establishing the conditions for a successful perception: the perception of an object takes place “when it comes about because of the successive repetition of the *eidolon*, or because of the remaining effect of the *eidolon*.” Section (C) may be interpreted as follows: both real and unreal objects are perceived by means of *eidolic* impacts, but a perception of an unreal object is caused by a different type of *eidolic* impact, not

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<sup>4</sup> That Epicurus is referring to *eidola* is not made explicit in Furley’s translation, but Furley affirms that this is the force of the sentence: “illusory images, as well as reliable images, are produced by the apprehension of real *eidola*” (611). The MS at 51(6) is uncertain: see Furley, “Knowledge of Atoms and Void in Epicureanism,” 618, n. 12. and Bailey, ed., *Epicurus: The Extant Remains*, 198, commentary on 51(6). Bailey emends and translates to show that “these things which we apprehend” refer to *eidola* but he notes that another editor (Von der Muell) retains the MS reading which refers to “the bodies which emit the images.” Thus Bailey’s translation of part (C) reads “For the similarity between the things which exist, which we call real, and the images received as a likeness of things and produced either in sleep or through some other acts of apprehension on the part of the mind or the other instruments of judgment, could never be, unless there were some effluences of this nature actually brought into contact with our senses.” Inwood and Gerson’s translation raises another possibility: *doxa*, i.e., the additional motion in ourselves, is responsible for the similarity of real objects to false appearances: “For the similarity of appearances...to what are called real and true things would never occur if some such thing were not added [to basic experience]” (Inwood and Gerson, eds., *The Epicurus Reader: Selected Writings and Testimonia*, 10).

<sup>5</sup> Furley appears to have been the first to advance this interpretation. See Furley, “Knowledge of Atoms and Void in Epicureanism.”

by one of the specified types of (successive compacting or *eidolic* residue), but instead by the impact of a single, random *eidola*.<sup>6</sup>

While there is insufficient textual evidence to show that Epicurus conceived of a third type of *eidolic* impact on the sense organs which would result in the perception of an unreal object, this reading is correct in locating the cause of the error. The cause of error is a change in the shape of the *eidola* in the span between their ejection from the source object and their interaction with the sense organ. The disturbance in the shape of the *eidola* results in a perception that is wrongly taken to be of an object that really exists and thus in a false opinion regarding that object.

The extant sources confirm that the order and shape of *eidola* can be disturbed in the course of their travel from the external object, especially where the object is quite far away from the percipient in temporal or spatial terms. Epicurus allows that “the flow of images preserves for a long time the position and order of the atoms in the solid body, though it is occasionally confused.”<sup>7</sup> Lucretius and Sextus also point to specific examples—which I analyse below—of physical changes in the shape of the *eidola* in their travel from a distant object and point to this change as a cause for apparent perceptual errors. As we have seen in the previous chapter, the *eidola* can undergo complex changes in the very brief period between their ejection from an object of perception and their impacting the sense organ.

Epicurus himself points to the distinction between a perception and an opinion regarding the object of that perception. *Doxa* is separate from perception, which is described in the passage as “the apprehension of the mind or the senses.” *Doxa* is an opinion regarding

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<sup>6</sup> See note 59 at page 31, above and Furley, *Two Studies in the Greek Atomists*; Furley, “Knowledge of Atoms and Void in Epicureanism,” 611.

<sup>7</sup> *Letter to Herodotus* (48). Also see Sextus M VII (211) and the other examples of the city towers viewed from afar (discussed in detail below).

perceptual data—a judgment, either true or false, which is expressed in the form of a statement. Perceptions, on the other hand, are non-propositional and are neither true nor false in a propositional sense. More details on the relation between *doxa* and perception are helpfully given by Sextus Empiricus. According to his report, opinions are judgments regarding objects. Thus Sextus contrasts opinions, which are expressed in statements, with *alogos* perceptions, which only register the property of an object:

The specific role of sense-perception is to apprehend only the thing that is present and affecting it (for example, color), not to judge that the existing thing here and the existing thing there are distinct. Hence...all appearances are true, but opinions are not all true but have a certain diversity. For of these some are true and others are false, seeing that they are judgments of ours applied to the appearances.<sup>8</sup>

It is an opinion, *doxa*, regarding a perceived object and not the perception itself which is true or false. Opinions are made based on the evidence of perceptions. At the stage of perception, however, the evidence is merely received in the form of raw data; thus, no perception can impugn another.<sup>9</sup> As raw data of properties of external objects, Epicurean perceptions as such are neither true nor false in a propositional sense.<sup>10</sup>

### **Errors in sense perception**

The well-worn example of “the square towers of a city [which, when] viewed...from a distance, often appear round” appears in Sextus, Lucretius, and other sources.<sup>11</sup> Both Lucretius and Sextus point to the alteration in *eidola* as they travel from the distant object to reach our eyes to account for the change in the perceived shape of the tower. Lucretius explains that “the image loses its sharpness before it can deliver a blow to our eyes, because the images, during their long

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<sup>8</sup> SE M VII (210).

<sup>9</sup> See DL X 32; *DRN* IV.490-500.

<sup>10</sup> Furley, “Knowledge of Atoms and Void in Epicureanism,” 616.

<sup>11</sup> Quote is from *DRN* IV.350-360. In addition to the references in Lucretius (*DRN* IV.353–363) and Sextus, M VII (209), other references to the tower problem are also found in Plutarch *Moralia* 1121A-E, Diogenes Laertius X 34, and, based on Smith’s reconstruction, possibly in fragment 69 of Diogenes of Oinoanda.

journey through the air, are constantly buffeted and so become blunted.” Sextus provides a similar explanation: “the edges of the images are broken off by their movement through the air.”<sup>12</sup>

Though Lucretius and Sextus both attribute the error of opinion regarding the shape of the tower to a corruption of the *eidola*, there is a key difference as regards the reality of perceived objects in the two accounts. Sextus reports that the tower is always as it appears, at times small and round and at other times large and square. Lucretius, on the other hand, maintains that there is only one tower with a set of properties (its sides having straight edges), and that the appearances of the tower with other sets of properties (round sides) are not of the real tower. I take Lucretius’ account to be the correct explication of the Epicurean position. Sextus’ explanation for the perceptual error, however, is seductive and needs to be properly assessed, especially in light of its influence on modern interpretations of the statement ‘all perceptions are true.’ The rest of this section will be largely devoted to a critique of Sextus’ analysis.

Perhaps the most compelling case Sextus makes for the truth of all appearances is his analogy from sound. For the moment I will only quote the analogy and will return to it at the end of the section, following my exposition of Sextus’ explanation:

It is not the sound in the bronze instrument being struck that is heard, nor the sound in the mouth of the person yelling, but the one that strikes our sense; and no one says that the person who hears a faint sound from a distance hears it falsely given that on coming close he apprehends it louder. Likewise, then, I would not say that one’s eyesight tells a falsehood because from a great distance one sees the tower as small and round, but from close up as larger and square, but rather that it tells the truth.<sup>13</sup>

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<sup>12</sup> SE M VII (209).

<sup>13</sup> SE M VII (208).

The analogy from sound encapsulates Sextus' position regarding the reality of the tower: for Sextus, each of the visual perceptions of the tower (and therefore all of them) tells the truth about the object. In explaining the differences in the visual perceptions of the tower, Sextus refers to the *eidola* emitted by it:

I would not say that one's eyesight tells a falsehood because from a distance one sees the tower as small and round, but from close up as larger and square, but rather that it tells the truth. Because when the perceptible thing appears to it small and of such a shape, it is in fact small and of such a shape, since the edges of the images are broken off by their movement through the air; and when, by contrast, it appears large and of a different shape, it *is*, by contrast, equally large and of a different shape. However, it is not any longer the *same* thing that has both sets of features. For this is left to distorted opinion to think—that the thing that appears when observed close up and the thing that appears when observed from far away were the same thing.<sup>14</sup>

Sextus points to the corruption of *eidola* whose edges are “broken off by their movement through the air” as the source of error at the level of judgment: perceptions are not to be blamed for the problem. But in his account regarding the truth of all perceptions, Sextus does not refer to the specific role of perception “to apprehend only the thing that is present and affecting it (for example, color)” rather than “to judge that the existing thing here and the existing thing there are distinct.” Instead, Sextus' account is that the object of every perception has the properties it is perceived to have at the moment of the given perception: “when the perceptible thing appears...small and of such a shape, it is in fact small and of such a shape.” Thus Sextus locates the object of perception in the *eidola*, bits of which are broken off in the course of their movement, rather than in the objective tower.

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<sup>14</sup> SE M VII (208-209); emphasis in Bett's translation.

It will be useful to compare Sextus' account with Lucretius' treatment of the same problem. In Lucretius' text, the tower example is one of a number of instances of errors and illusions described in IV.354-378. Lucretius explains as follows:

The square towers of a city, viewed by us from a distance, often appear round. This is because every angle surveyed from afar is seen as obtuse—or rather is not seen at all. The image loses its sharpness before it can deliver a blow to our eyes, because the images, during their long journey through the air, are constantly buffeted and so become blunted. In this way every angle eludes our vision, with the result that the stone structures appear as though they were shaped on a lathe. Even so, they do not look like objects close at hand that really are round, but vaguely resemble them in a shadowy fashion.<sup>15</sup>

The underlying explanation for the perceptual error is the same—the corruption of *eidola* in their “long journey through the air.” Thus Lucretius' explanation for the cause of the apparent error is consistent with Sextus'—that in the course of the *eidola*'s travel, their edges are buffeted and lose their original sharpness. The sides of the tower no longer appear straight, as “every angle eludes our vision.” But, unlike Sextus, who identifies multiple towers of different shapes and sizes, Lucretius speaks of the city's square towers which only appear to be round.

Lucretius explains that we have been deceived in our opinion, for, on closer inspection, the towers are seen to be square, their sides having sharp edges, which only resemble round edges “in a shadowy fashion.” The deception has been enacted on the mind, not on the eyes: “the eyes cannot take cognizance of the real nature of things. Refrain...from foisting on the eyes the shortcomings of the mind.”<sup>16</sup> The difference between Sextus' and Lucretius' accounts is the latter's affirmation of the reality of a single perceptible object having a particular shape and size rather than of multiple objects of various shapes and sizes.

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<sup>15</sup> *DRN* IV.353–363.

<sup>16</sup> *DRN* IV.380-390.

Sextus takes all appearances to be real in the sense of having an objective existence. He defends this view with reference to the change in the shape of the *eidola*. Thus Sextus treats *eidola* as perceptible objects, a position, as we have seen in the previous chapters, which Epicurus and his followers reject. Two puzzling passages, both related to the role of *eidola* in the process of perception, illustrate the problem. In the first (M VII 206-7), Sextus explains why it is mistaken to conclude from the “difference in the appearances that seem to strike us from the same perceptible (e.g., visible) thing” that “one of them must be true, while the other one...turns out to be false.” Sextus’ position is that both appearances are true. He begins by distinguishing two kinds of *eidola*: one kind, emanating from objects nearby, is on the surface of the object; the other kind, emanating from objects at a great distance, is outside of the object. He then suggests that the changes in the course of the travels of the first kind of *eidola* result in a true perception:

For (to give the argument in the case of visible things) it is not the whole solid body that is seen, but the color of the solid body. And of color, some is on the solid body itself, as in the case of things looked at close up or from a moderate distance, while some is outside the solid body, and exists in the neighboring locations, as in the case of things observed from a great distance. But this changes in the space in between, and takes on its own shape, and hence gives off an appearance of the same kind as it is itself in its true existence.<sup>17</sup>

Sextus’ claim appears to be that, in the course of the change in their properties, the *eidola* transmit a colour having “the same kind as it is itself in its true existence.” But if Sextus is suggesting that it is the colour of the *eidola*, rather than the colour of the source object, which is perceived, then he misunderstands Epicurus on this point. For it is not the *eidola* which are perceived, but the properties of real external objects as transmitted by means of *eidola*. As

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<sup>17</sup> SE M VII (206).

Lucretius explains, “you should not consider it strange that, although the images that impinge on our eyes are individually invisible, the objects themselves are visible.”<sup>18</sup>

The second puzzling passage confirms that Sextus is intent on revising this Epicurean orthodoxy. He introduces the passage with an accurate description of the Epicurean distinction between opinion and perception:

Epicurus said that everything perceptible is true, and that every appearance is from a real thing, and is of the same kind of what activates the sensation, and that those who say that some appearances are true and others false are in error through not being able to separate opinion from plain experience (*enargeias*).<sup>19</sup>

Sextus then critiques Epicurus for chiding those who “introduce a difference in the appearances,” i.e., who take appearances, rather than opinions, to be true or false. Epicurus’ criticism, according to Sextus, is that people holding such views “do not have the ability to confirm that some of [the appearances] are true and others false.” Sextus then attributes to Epicurus the view that *eidola* are sometimes the objects of perception:

If he [Epicurus] agrees that some appearances come from solid bodies (*somaton*) and others from an image (*eidolon*), and concedes that plain evidence (*enargēian*) is one thing but opinion another, then, I ask, how does he distinguish the appearances that strike us from a solid body and those from an image?<sup>20</sup>

But in the *Letter to Herodotus*, Epicurus establishes that *eidola* are themselves invisible and merely transmit “the shape or properties...of the concrete object.”<sup>21</sup>

We are now properly situated to assess Sextus’ analogy from sound. Sextus’ claim is that the immediate perception of sound is the sound that is heard, rather than the sound at the time that it was produced: “it is not the sound in the bronze instrument being struck that is heard, nor

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<sup>18</sup> *DRN* IV.256-60.

<sup>19</sup> *SE M* VIII (63).

<sup>20</sup> *SE M* VIII (65).

<sup>21</sup> *Letter to Herodotus* (50).

the sound in the mouth of the person yelling, but the one that strikes our sense.” Surely, a distant sound will sound differently than a sound whose source is closer. As the *eidola* travel and drift away from the source object and no longer resemble it, the sound loses its strength and becomes faint. As Epicurus notes, the truth or falsity of the opinion regarding the sound will be related to the extent to which the *eidola* which reach the ear maintain their position relative to the object:

Hearing...results when a current is carried off from the object speaking or sounding or making a noise, or causing in any other way a sensation of hearing. Now this current is split up into particles, each like the whole, which at the same time preserve a unity of character which stretches right back to the object which emitted the sound: this unity it is which in most cases produces comprehension in the recipient, or, if not, merely makes manifest the presence of the external object.<sup>22</sup>

The question to ask as regards the truth or falsity of the opinion regarding the sound is whether the sound that is produced by the source object is heard accurately, i.e., whether the sound heard has preserved its unity of character with the source object. If it has not, and we opine that it has, then our opinion is a false one.<sup>23</sup>

### Verification

Opinions, as they relate to perceptions, are judgments regarding objects; the judgments are based on the evidence of perception. There are true and false opinions regarding objects, but there can be no true or false perceptions of objects in the same sense. An opinion is false when we opine, based on a perception which is caused by *eidola* that were in some way disturbed in the transmission from the object to the sense organ, that an unreal perceptible object is a real object, or that a perceptible object has property X when it in fact has property Y (thus the square towers which appear to be round). The sticky question is as follows: how is a false opinion

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<sup>22</sup> *Letter to Herodotus* (52).

<sup>23</sup> Also see Lucretius, *DRN* IV.540-570.

acknowledged if no perceptions as such are false? In concrete terms, how do we establish the real shape of the tower? Diogenes Laertius explains as follows:

Opinion...may be true or false: if it is confirmed or not contradicted, it is true; if it is not confirmed or is contradicted, it is false. For this reason was introduced the notion of the problem awaiting confirmation: for example, waiting to come near the tower and see how it looks to the near view.<sup>24</sup>

Several texts, including sections (B) and (D) of the *Letter to Herodotus* 50-52, presented above, point to the technical process of verification.<sup>25</sup> Section (B), in its complete form, reads, “falsehood and error lie in the addition of opinion with regard to <what is waiting> to be confirmed or not contradicted, and then is not confirmed <or is contradicted>.”<sup>26</sup> Section (D) of the passage again refers to non-confirmation and confirmation: “if there is no confirmation, or refutation, error arises, and if there is confirmation or no refutation, truth.”

The process of verification is technical and cryptic and a controversial area in Epicurean scholarship. For these reasons, it will receive only cursory treatment here.<sup>27</sup> As verification of the truth or falsity of opinions regarding perceptible objects goes, the opinions are taken as hypotheses which are either verified or disconfirmed by additional sense perception. The verification process involves memory and language, and must also involve preconceptions of different types. Sextus describes the case of perceiving a figure approaching from a distance where an opinion about the identity of the person is made, then verified:

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<sup>24</sup> DL X 34.

<sup>25</sup> The process is used in the verification of both perceptible and imperceptible objects (specifically, atoms and void); but see Long and Sedley’s commentary in Long and Sedley, *The Hellenistic Philosophers*, Vol. I, section 18, 94-97. In this section, I will limit my discussion to perceptible objects. Sextus provides the most detailed discussion available in M VII (211-216). The process is also mentioned in Plutarch, *Moralia* 1121 D-E. All references to Plutarch’s text are from volume XIV of B. Einarson and P. H. De Lacy, eds., *Plutarch's Moralia*, Loeb Classical Library (Cambridge, MA: Harvard University Press, 1967).

<sup>26</sup> Translation in Bailey. Furley omits this part of the passage in his article.

<sup>27</sup> For scholarly treatments of the process of verification, see the following: Conche, ed., *Épicure: Lettres et Maximes*, 34-9; E. Asmis, “Epicurean Epistemology,” in *The Cambridge History of Hellenistic Philosophy*, ed. K. Algra, J. Barnes, J. Mansfeld, and M. Schofield (Cambridge: 1999), 283-94; Striker, “Kritērion Tēs Alēthias,” 42-51; Long and Sedley, *The Hellenistic Philosophers*, Vol. I, 94-97.

As when, for example, on the approach of Plato from afar I guess and opine, because of the distance, that it is Plato, and when he has drawn near the fact that he is Plato is further testified—the distance being reduced—and is confirmed by actual evidence of sense.<sup>28</sup>

Thus, as perceptions of objects are had, judgments are made. Occasionally, different opinions or judgments may be formed about the same stable object based on multiple perceptions, in which case one opinion is true and the other is false.

But if no perception is true or false, how is one perception recognized as the basis of a true opinion while another is recognized as the basis for a false one? In response to this question, some scholars conceive of a privileged class of perceptions, namely, ‘*enargeia*.’<sup>29</sup> Against this interpretation we know that, while the truth of an opinion put forward as an hypothesis is confirmed or rejected through additional observation, no perception is more or less reliable than another.<sup>30</sup> The process is iterative and recursive. Although it would appear that one perception was rejected when another was confirmed, it was in fact an opinion regarding a perception, and not the perception itself, which was confirmed or rejected.

The cumulative experience in individuals and groups, resulting in the formation of preconceptions, plays a key role in the process of verification.<sup>31</sup> Experience teaches us that objects seen at a distance are sometimes different than when viewed closer by and that opinions based on the former observations may be corrected by opinions based on the latter.<sup>32</sup>

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<sup>28</sup> Sextus M VII (213), translation in Bury, ed., *Sextus Empiricus*. “Evidence of sense” is a translation of *enargeias*. See M VII (215-216) for the contrary case, where opinion is shown to be false and “we learn by evidence (*enargeias*) that it is not Plato.”

<sup>29</sup> Especially C. Bailey. The current scholarly view generally rejects this interpretation. See discussion on preconceptions in chapter 1 and my critique of Bailey’s interpretation in chapter 3.

<sup>30</sup> See *DRN* IV.495-515. Though no perception can contradict another, Epicurus may have appealed to the coherence of among perceptions, or “the tendency of diverse sense-impressions to support each other.” See Long and Sedley, *The Hellenistic Philosophers*, Vol. I, commentary on sections 15 and 16.

<sup>31</sup> On a discussion of the development of reasoning across epochs and nations, see *Letter to Herodotus* (75-76).

<sup>32</sup> Allen remarks on Epicurus’ “exceptionally rich conception of experience.” See J. Allen, *Inference from Signs: Ancient Debates About the Nature of Evidence* (Oxford: Clarendon Press, 2001), 196.

## The reality of objects

Epicurus is a materialist. According to Epicurean physics, atoms and void are the exclusive basic material constituents of the universe: “besides these two nothing can even be thought of either by conception or on the analogy of things conceivable.”<sup>33</sup> Thus, all objects are ultimately reducible to atoms and void.<sup>34</sup> Mental perceptions, however, such as appearances in dreams and fantasies, appear to pose a challenge to the Epicurean account, as they are often perceptions of fleeting objects which are not normally taken as real in a material sense. How Epicurus accounts for the material reality of such mentally-perceived objects while holding the line both on robust materialism and a consistent account of perception is explained in the section to follow.

The second aspect of the reality of perceptible objects to consider is the ontological status of perceptible objects and of their properties vis-à-vis the ontological status of atoms. Unlike his atomist predecessor Democritus, and despite his attribution of impermanence to objects and permanence to atoms, Epicurus takes perceptible objects to be as real as atoms. Indeed, Epicurus’ proof for the existence of atoms and void proceeds from an analogy with perceptible objects.<sup>35</sup>

Impermanent properties and objects are sometimes perceived differently by different individuals, depending—among other factors—on the state of their sense organs. This fact, according to Plutarch, is problematic for the Epicurean position on the reality of enduring perceptible objects. Plutarch argues that due to the dispositional quality associated with the perception of properties of objects, a perceptible object can be ‘no more this than that’, which is to say, no more sweet than it is sour, no more dark than it is green, etc. If this is correct, it may

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<sup>33</sup> *Letter to Herodotus* (40).

<sup>34</sup> Sedley argues that there are certain elements in Epicurean epistemology which are non-material. See D. Sedley, “Epicurean Anti-Reductionism,” in *Matter and Metaphysics*, ed. J. Barnes and M. Mignucci (Naples: Bibliopolis, 1988).

<sup>35</sup> See my discussion in chapter 3, ‘The proof for atoms and void.’

be fatal not only to Epicurus' epistemology, but also to the possibility of leading a normal life.

In the final section of this chapter, I address Plutarch's critique and show, based on the Epicurean account of the function of the sense organs, that the dispositional nature of perceptions does not undermine the reality of perceptible objects.

### **Dreams and mental visions**

In the *Letter to Herodotus* (50-52), Epicurus contrasts two types of errors: "appearances seen as if in a picture *or* occurring in dreams" with "things which really exist and are called true." It is uncertain to what Epicurus is referring in "appearances seen as if in a picture," though he may well be thinking of mental visions.<sup>36</sup> The rest of the sentence, at any event, indicates that perceptual error includes errors of mental perceptions ("apprehensions of the mind") as well as the other sense perceptions ("the other criteria"). Having covered problems with sense perceptions above, I will now turn to examining some problems related to mental perceptions.

Where the issue surrounding the objects of sense perceptions is the truth or falsity of an opinion regarding the perceived property, the objects of mental perceptions pose a different challenge. Epicurus' distinction between objects "seen as if in a picture" and "things which really exist and are called true" suggests that some perceptions are of unreal objects. Because of the nature of mentally-perceptible objects, the standards of verification may not always be applied in the same way to mental perceptions as they might be to sense perceptions. An assessment of the shape of the tower perceived with our eyes is possible because of the stability of the object. An assessment of the shape of a tower spontaneously perceived with our mind is difficult, perhaps impossible, because of the fleeting quality of the object. Lucretius, however, points to some examples in which there is no doubt that a mentally-perceptible object is unreal.

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<sup>36</sup> See Furley, "Knowledge of Atoms and Void in Epicureanism," 618, n. 15.

The point to emphasise for the purposes of the present discussion is that, even in such cases, the *eidola* of the unreal object of mental perception originate from a real object.

The mechanism of mental perceptions, then, is the same as it is for the other senses. Like perceptions of the other senses, mental perceptions are caused by *eidola* affecting the organ of the mind, *dianoia*.<sup>37</sup> Mental perceptions are especially close to visual perceptions and take the form of visions, whether in a dream, a fantasy, or a thought. *Eidola* of the smallest size enter the mind where a mental (or mental-visual) perception occurs, much in the same way as they *eidola* would enter the eyes:

It is when something enters us from external objects that we not only see but think of their shapes.... [M]odels, similar in colour and shape, leave the objects and enter according to their respective size either into our sight or into our mind (*dianoian*).<sup>38</sup>

Lucretius notes that “the fact that mental vision is similar to ocular vision means that the two processes must be effected by similar means.... The only difference is that the images perceived by the mind are finer.”<sup>39</sup> Diogenes of Oinoanda also points to the similarity, and explains how it is that an appearance perceived by the eyes can still be maintained in thought, even after it leaves our visual scope:

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<sup>37</sup> I follow Asmis' view which is supported by Lucretius: that mental perceptions occur in the organ of *dianoia* in a manner similar to the perceptions of the other sense organs. See Asmis, *Epicurus' Scientific Method*, 105-06. (But see Diogenes of Oinoanda's use of *psyche* and *dianoia* in fragment 9, n. 40 below). This is not the place to get into an extensive discussion of the Epicurean conception of the *psyche* vis-à-vis *dianoia*; the *psyche* an extremely controversial aspect of Epicurean philosophy (the main texts are *Letter to Herodotus* 63-68 and books 3 and 4 of *DRN*). Kerford is a valuable resource: G. B. Kerford, "Epicurus' Doctrine of the Soul," *Phronesis* 16, no. 1 (1971). According to the texts, the *psyche* is divided into two parts, one irrational, spread around the body, the other rational, concentrated in the chest. The *psyche* and body have a complex relationship. The *psyche* plays an important role in making perception possible in general (at death, when the *psyche* leaves the body, perception no longer takes place). There is some controversy surrounding the role of the irrational aspect of the *psyche* in individual perceptions -- for an overview see Robert Brown, *Lucretius on Love and Sex* (New York: E.J. Brill, 1987), 16-17. Finally, as we have already seen from Bailey's position on *epibolē tēs dianoias*, some controversy surrounds the role of mental perceptions as such: see C. Bailey, *The Greek Atomists and Epicurus* (New York: Russell & Russell, 1964; reprint, Oxford University Press, 1928), 417 ff; Long, *Hellenistic Philosophy: Stoics, Epicureans, Sceptics*, 24-25 and 54-56.

<sup>38</sup> *Letter to Herodotus* (49).

<sup>39</sup> *DRN* IV.750-760.

Now the images that flow from external objects, by impinging on our eyes, cause us both to see external realities and, [through entering our soul, to think of them. So it is through impingements] that the soul receives in turn the things seen by the eyes; and after the impingements of the first images, our nature is rendered porous in such a manner that, even if the objects which it first saw are no longer present, images similar to the first ones are received by the mind, [creating visions both when we are awake and in sleep.]<sup>40</sup>

The material cause of mental perceptions is the same as they are for sense perceptions—*eidola* roaming about. Lucretius points to specific cases of false mental appearances, where the subtle *eidola* originating from real objects become inter-mingled in the course of their travels, resulting in a vision of an unreal object:

Countless subtle images of things roam about in countless ways in all directions on every side. When these meet in the air, they easily become interlinked, like cobwebs or gold leaf. They are far finer in texture than the images that occupy our eyes and provoke sight, since they pass through the interstices of the body, stir the subtle substance of the mind within, and so provoke the sensation.

In this way we see Centaurs, and the forms of Scyllas, the faces of Cerberean hounds, and the specters of people who are dead and whose bones are embosomed in the earth. For images of every kind are moving everywhere, some formed spontaneously in the air, others emanating from various things and compounded of their different shapes. Certainly the image of a Centaur is not derived from a living being, since no such creature ever existed. But when the images of a horse and a human being chance to meet, they instantly and easily cohere...on account of the subtlety of their substance and the tenuity of their texture. The images of all other such monsters are produced in the same way. And since these subtle images...move swiftly and with extreme lightness, any one of them can easily stimulate our mind with a single impression. For the mind itself is subtle and extraordinarily mobile.<sup>41</sup>

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<sup>40</sup> Fragment 9. Smith translates 'mind' and 'soul' advisedly: Diogenes of Oinoanda says that the *psykē* receives the things seen by the eyes, but refers to *dianoia* at the end of the passage: See M. F. Smith, "New Fragments of Diogenes of Oenoanda," *American Journal of Archaeology* 75, no. 4 (1971): 362-63.

<sup>41</sup> *DRN* IV.733-745. The possibility of spontaneous formation of *eidola* is curious: it is unclear how it would not violate the principles of conservation in the *Letter to Herodotus* (38-39), but it need not pose a problem with respect to the objects of perception. Spontaneous formation of *eidola* is used to explain the formation of clouds (IV. 130-143), which then become the objects of perception. See Rist, *Epicurus: An Introduction*, 24; Rosenmeyer, "One Strike Will Do: A Lucretian Puzzle," 39.

Lucretius explains that the *eidola* responsible for visions of imaginary creatures impinge on the mind randomly. This random impact is contrasted with the mind's capacity to think of anything at will by focussing on one set of *eidola* to the exclusion of the others:

Because of the subtlety of the images, the mind cannot perceive them distinctly unless it concentrates its attention on them. Consequently all pass away unnoticed, except those for which it has prepared itself.<sup>42</sup>

The act of focussing lends a continuity to the processes of thought and imagination: the mind “expectantly prepares itself to see the consequences of each happening, and therefore does see them.”<sup>43</sup> In sleep, however, the mind loses its capacity to focus on a particular set of images. Lucretius’ explanation for the continuity of dream narratives is that in sleep one image simply follows another, where in active thought the mind focusses on the progression of images. Thus, although dream appearances are often continuous—“advancing with rhythmic steps and swaying their lissome limbs, swiftly swinging supple arms”—the mind does not focus on the images in the same way as it does on thoughts, but merely passively receives them.<sup>44</sup> Dream appearances simply happen to present themselves in succession: “when one image fades away and is succeeded by another in a different position, it looks as though the former image has changed its posture.”<sup>45</sup>

Appearances of unreal objects in dreams and appearances of mythical creatures in mental perceptions result from *eidola* whose ultimate origins are real objects. In waking life, we can recognize the error of false opinions through verification which depends on prior experience and memory. Thus previous perceptions and subsequent perceptions, mediated through preconceptions, are used as the ultimate basis for evaluating the opinion regarding the object. In

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<sup>42</sup> *DRN* IV.800-810.

<sup>43</sup> *DRN* IV.800-810.

<sup>44</sup> Quote is from *DRN* IV.785-795.

<sup>45</sup> *DRN* IV.770-775. In his note on the passage in his translation, Smith compares this to a cinematographic experience.

sleep, however, the process of verification and the application of previous experiences are not available, as both memory and the other senses are asleep:

When we are asleep, with all the senses as it were paralysed and extinguished [again in] sleep, the soul, which is [still wide] awake [and yet is unable to recognise] the predicament and condition of the senses at that time, on receiving the images that approaches it, conceives an untested and false opinion concerning them, as if it were actually apprehending the solid nature of true realities; for the means of testing the opinion are asleep at that time. These are the senses.<sup>46</sup>

Thus, just as appearances of centaurs and other mythical creatures—which we recognize to be unreal—may occur to us during our waking hours, strange appearances may also occur to us in our sleep.<sup>47</sup> In either case, the fine *eidola* originating from real objects intersperse among other *eidola* and cause perceptions which result in false opinions regarding the mentally-perceptible objects. Sextus makes the point as follows: “In the case of Orestes...when he thought he was looking at the Furies, the sensation (*aisthēsis*) that was activated by the images (*eidolon*) was true (*alēthēs*) (for the images did exist), but the intellect in thinking that they were solid Furies had a false opinion.”<sup>48</sup>

Thus, the ultimate sources of all *eidola* are real material objects. Note, however, that Epicurus rules out the existence of non-material objects only once perceptions of them are explained with reference to the mechanism of *eidola*. The mechanism, at this point, is already in place, having been established, in the *Letter to Herodotus*, from the evidence of perceptions of real objects. That all objects of perception are ultimately materially real, then, seems to be an unproven Epicurean assumption.<sup>49</sup>

<sup>46</sup> Diogenes of Oinoanda, fragment 9 in Smith (1993).

<sup>47</sup> Lucretius' example is dreaming of the dead. See *DRN* IV.755-770.

<sup>48</sup> *SE M* VIII (63). This example betrays Sextus' conception of true perceptions; alternatively, *alēthēs* can be translated as 'real'. See my discussion of scholarly interpretations of APAT in chapter three.

<sup>49</sup> See Asmis, *Epicurus' Scientific Method*, 153-4.

### Subjective differences in perception

*Eidola* are the mechanism for explaining perceptions of unreal objects—false opinions regarding the perceptible properties of the objects: the belief, for example, that the tower is round. Such errors can be expected of all observers under similar conditions: any person whose eyes are in order and who is looking at the square towers of the city from a certain distance can be expected to form a false opinion regarding the shape of the towers because of the change in the shape of *eidola* which originate from the towers in the course of “their movement through the air.” But if multiple observers cannot agree upon the shape of the towers even when the towers are viewed from up close, the distinction between false and true opinions may lose its force and the existence of enduring, observer-independent objects with particular sets of properties may also be threatened. This is the thrust of Plutarch’s criticism of the Epicurean position regarding subjective differences in perceptions.

Plutarch addresses cases of sight and, in particular, the question of whether or not objects in the dark can be said to be coloured. For the purposes of this section, however, I will look at Plutarch’s critique involving subjective perceptions of taste in particular. The criticism, in concise form, is as follows: different individuals sometimes report different perceptions of the taste of a particular object. Thus honey may taste sweet to one individual and sour to another; wine may have a warming effect for one individual and a cooling effect for another. Therefore, the object of taste cannot be said to be sweet or sour, or have the quality, in the case of wine, of warmth or of coolness. The honey, in other words, cannot be said to be any more sweet than sour. If this is indeed the case, no knowledge of the properties of objects is possible—indeed, objects cannot be said to have specific properties, and life itself is thrown into confusion.<sup>50</sup>

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<sup>50</sup> *Moralia* 1109 E.

Plutarch's critique is centered around the Epicurean account of atomism and the school's criticisms against certain aspects of Democritean atomism. Epicurus, having adopted Democritus' physics, did so with important modifications. One key difference is Epicurus' ontological assessment of perceptible objects. Reports of Democritus' assessment of perceptible objects show that the early atomist degraded their ontological status. Democritus' famous declaration on the topic is, "By convention hot, by convention cold, but in reality atoms and void."<sup>51</sup> Thus Democritus postulates that perceptible objects are not ultimately real, and affirms instead the reality, and ontological priority, of atoms. The Epicureans, as Diogenes of Oinoanda reports, criticised Democritus on this point:

Even Democritus erred in a manner unworthy of himself when he said that atoms alone among existing things have true reality, while everything else exists by convention. For, according to your account, Democritus, it will be impossible for us even to live, let alone discover the truth.<sup>52</sup>

For both Democritus and Epicurus, atoms are undivided and imperceptible bodies in continuous motion which have always existed and whose properties of shape, size, and weight do not change.<sup>53</sup> *Eidola*, for Epicurus, have the same primary properties as atoms, with the addition of colour (for Democritus, *eidola* do not have colour). In the aggregate form of *eidola*, atoms of certain sizes and shapes in certain combinations cause the perception of secondary qualities of objects: colour, sound, taste, etc. Where atoms are eternal and their number infinite, the secondary properties of objects comprised of them are transitory and impermanent.

<sup>51</sup> DL IX 72 in C. C. W. Taylor, ed., *The Atomists: Leucippus and Democritus, Fragments* (Toronto: University of Toronto Press, 1999), 143.

<sup>52</sup> Diogenes of Oinoanda, fragment 7 in Smith, ed., *Diogenes of Oinoanda: The Epicurean Inscription*.

<sup>53</sup> See *Letter to Herodotus* (54): "the atoms do not possess any of the qualities belonging to perceptible things except shape, weight, and size, and all that necessarily goes with shape." Whether Democritus assigned weight as a primary property of atoms is a matter of debate: see Bailey, *The Greek Atomists and Epicurus*, 128 ff. Epicurus allows that atoms may have 'minimal parts', i.e., be conceptually divisible but physically undivided. See *Letter to Herodotus* (56-59) and Long and Sedley, *The Hellenistic Philosophers*, volume 1, section 9. On the distinction between physically 'undivided' and conceptually 'indivisible' in Democritus (and in general) see E. Lewis, "The Dogmas of Indivisibility: On the Origins of Ancient Atomism," in *Proceedings of the Boston Area Colloquium in Ancient Philosophy*, ed. J. J. Cleary and G. M. Gurtler (Boston: Brill, 1999).

To return to Plutarch's criticism, secondary qualities are sometimes perceived differently by different individuals. In his rejection of the reality of sensible properties, Democritus points to this difference in the dispositional experiences of secondary properties: "From the fact that honey appears bitter to some people and sweet to others Democritus said that it is neither sweet nor bitter."<sup>54</sup> Democritus' position is that the perceived property is merely a *pathē* of the senses and that the properties of objects do not have a nature of their own: "Democritus reduces them [the objects of sense] all to states of the sense."<sup>55</sup> The evidence for this, according to the Peripatetic Theophrastus,

is that things do not naturally seem the same to all creatures, but what is sweet to us is bitter to other creatures, sharp-tasting to others, pungent to others, sour to others again, and the same for other cases.<sup>56</sup>

As the fragment from Diogenes of Oinoanda shows, the Epicureans parted ways with Democritus on this point: for the Epicureans, perceptible objects and their properties are just as real as *eidola* and atoms. Faced with Plutarch's challenge, it behooves the Epicureans to explain the mechanism of perception in such a way as to preserve the reality of objective properties despite the varied perceptions experienced by different individuals. Plutarch, for his part, declares that, based on the Epicurean dictum 'all perceptions are true', the Epicureans must follow his interpretation of Democritus' position that perceptibles are 'no more this than that' (*ou malon toion ē toion*):

Whoever held that nothing is any more of one description than of another is following an Epicurean doctrine, that all the impressions reaching us through the senses (*aisthēseos phantasias*) are true (*alētheis*). For if one of two persons says

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<sup>54</sup> Sextus Empiricus, *Outlines of Pyrrhonism* II (63) in Taylor, ed., *The Atomists: Leucippus and Democritus, Fragments*, fragment 178b. See O'Keefe, "The Ontological Status of Sensible Qualities for Democritus and Epicurus," 124.

<sup>55</sup> Theophrastus, *On the Senses* (60). Text in Taylor, ed., *The Atomists: Leucippus and Democritus, Fragments*, 111. See also Furley, "Democritus and Epicurus on Sensible Qualities."

<sup>56</sup> Theophrastus, *On the Senses* (63). Text in Taylor, ed., *The Atomists: Leucippus and Democritus, Fragments*, 112.

that the wine is dry and the other that it is sweet, and neither errs in his sensation, how is the wine any more dry than sweet?<sup>57</sup>

David Furley convincingly argues that Plutarch's criticism of Democritus goes too far.

While Democritus asserted the ultimate reality of atoms and degraded the reality of perceptible properties, he did not claim that perceptible properties were merely random.<sup>58</sup> For both Democritus and Epicurus, perceptions of certain taste are caused by the interaction of atoms having certain shapes with sense organs. This mechanism of perception defuses Plutarch's challenge.

The process of perception, as we have seen previously, involves a motion which takes place in the sense organ. The sense organ is struck by *eidola*—collections of atoms having certain primary properties—and responds to them with its own activity. The whole process involves the interaction between two sets of atoms: the atoms received by the sense organ, which is itself comprised of atoms. Thus, a taste perception, as Lucretius explains, involves the shape of the atoms affecting the palate as well as the shape of the receiving organs:

Since the seeds vary in shape, there must be corresponding differences in the shape of the interstices and passages—the pores, as we term them—in every part of the body, including the mouth and the palate itself. Some pores will be smaller, other larger; in some creatures they will be triangular, in other square.... The shapes and the pores and passages are invariably determined by the shapes and movements of the atoms that constitute the surrounding tissue. So when something that tastes bitter to one creature proves sweet to another, undoubtedly what happens is this: if the food tastes sweet, extremely smooth particles are entering the pores of the palate with caressing touch; if, however, the same food tastes bitter, then rough and barbed particles are penetrating the orifices.<sup>59</sup>

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<sup>57</sup> *Moralia* 1109 A-B.

<sup>58</sup> See Furley, "Democritus and Epicurus on Sensible Qualities."

<sup>59</sup> Lucretius IV.640-665. It appears that this theory is familiar to Plutarch who pursues his objections: *Moralia* 1109 C-D.

Lucretius' explanation shows that a taste-perception is caused by the concentration of atoms having a particular shape. When these atoms, by way of *eidola*, interact with the palate, a certain perception is normally had: honey tastes sweet. If the honey tastes bitter, this may be attributed to a misalignment in the atoms of the person's sense organs:

Thus when fever has assailed someone through excess of bile, or when a violent disease has been provoked by some other cause, the whole body is at once disordered and the positions of the constituent elements are all changed. Consequently particles that previously suited the person's taste are now unsuitable to it; others prove better adapted to it, and these penetrate the pores and produce a bitter sensation.<sup>60</sup>

Smell and colour would also affect people whose sense organs are out of alignment, as well as other creatures whose sense organs are differently arranged.<sup>61</sup> While the properties of objects may be perceived differently depending on the specific atomic constituents of the sense organ at any given time, the perceptible properties nonetheless correspond to certain atomic arrangements of the *eidola* which channel the source object's atomic structure. Thus, though the properties of objects may be experienced differently relative to the atomic composition of the sense organs in different creatures and, in abnormal cases, in different persons, the properties are not thereby subjective: they are the real properties of perceptible objects in the world.

## Conclusion

The accounts of error and problems with perception I treated in this chapter pose challenges to Epicurus' claim for the reality of objects of perception and of their properties. Thus Sextus Empiricus' explanation of the mechanism of apparent errors in sense perceptions would result in the existence of a number of real objects, each having different properties, rather than in a single perceptible object with consistent properties. Epicurus and his followers would resist this

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<sup>60</sup> *DRN* IV.660-675.

<sup>61</sup> *DRN* IV.672-721.

conclusion at all costs, even at the cost of providing “an erroneous explanation for the difference in shape.”<sup>62</sup> There should be no reason, however, for the Epicureans to go to such lengths. For, as with unreal mentally-perceptible objects, such as centaurs, the perception of a round-sided tower is caused by *eidola* which originate from a real object: a square tower. In both cases, the unreal perceptible object (centaurs and round towers) originate from a real perceptible object (humans, horses, and square towers).

My examination of Epicurus’ general account of error in the *Letter to Herodotus* (50-52) confirms the *alogos* nature of perceptions. Perceptions can neither be true nor false in the sense of judging whether an object is real or unreal. Rather, it is the opinions, or judgments regarding perceptible objects that are true or false. The theory of verification, moreover, shows that, while perceptions are *alogos*, they play an important role in Epicurus’ method of investigation—a role which will be further developed in the next chapter.

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<sup>62</sup> *DRN* IV.500-515.

### Chapter 3: Perceptions as evidence and criteria

The role of perceptions as evidence is central to my interpretation of the statement ‘all perceptions are true.’ Perceptions are evidence in two ways: constructive evidence for opining and making inferences, and as a standard for evaluating opinions and inferences. Epicurus explicitly designates perceptions to be one of the three criteria of truth; the other two are preconceptions (*prolēpseis*) and feelings (*pathē*). Diogenes’ report on preconceptions, discussed in chapter 1, shows that perceptions are at the foundation of preconceptions. Preconceptions, concepts which underlie words, are formed by recalling repeated instances of perceptions. Thus, the word ‘tower’ refers to a preconception of towers which was formed by having repeated perceptions of such objects. Preconceptions are concepts associated with the words which are used in the expression of judgments and opinions and in the evaluation of inferences. Since perceptions are at the basis of preconceptions, ultimately it is the perceptions which are referred to in forming opinions and assessing inferences.

In the first part of this chapter, I analyse the constructive and criterial roles of perceptions as evidence and then turn to presenting my interpretation of the statement ‘all perceptions are true.’ In the second part, I critically survey five influential interpretations of the statement advanced by scholars in recent decades. The first two sections of the first part treat three key texts on the evidential role of perceptions found in Diogenes, Lucretius, and Epicurus. Both Diogenes (explicitly) and Epicurus (implicitly) also refer to the role of preconceptions, relative to perceptions, in the procedure of making and assessing inferences. Lucretius’ text addresses the nature of perceptions, the non-refutation of one perception by another, and the reliability of every perception.

Based on the evidential role of perceptions and Lucretius’ evidence, I argue that the statement ‘all perceptions are true’ in the context of Epicurus’ method refers to the reliability of

all perceptions and their authoritativeness as evidence. The reliability of perceptions is guaranteed by their immediacy. With this reliability in place, perceptions can serve as a criterion of truth and the foundation for reasoning. Thus, in their roles as foundational evidence and as criteria of truth, all perceptions are reliable and authoritative evidence.

## The criteria of truth

### Diogenes' report at X 31-33 and Lucretius' evidence at IV.479-499

Diogenes Laertius follows his summary of the *Canon*, Epicurus' work on method and epistemology, with a description of the nature and role of perceptions (X 31-32), a paragraph-long exposition on preconceptions (X 33), and another on opinion and verification (X 33-34). The summary begins by situating perceptions, preconceptions, and feelings, as well as the immediate apprehensions of the mind, in their roles as criteria of truth:

Thus in the *Canon* Epicurus says that the criteria of truth<sup>1</sup> (*kritēria tēs alētheias*) are the *aisthēseis* and *prolēpseis* and the *pathē*; the Epicureans add to these the intuitive apprehensions of the mind (*phantastikas epibolas tēs dianoiās*). And this he says himself too in the summary addressed to Herodotus and in the *Principal Doctrines*.

The term 'criterion of truth' was used in the epistemological debates among the philosophical schools of the Hellenistic period.<sup>2</sup> While there is some controversy surrounding Epicurus' usage of the term, Diogenes reports that he is transmitting the position of Epicurus (as well as that of Epicurus' followers) as explicated in texts included in book X—dedicated to

<sup>1</sup> Bailey renders 'the tests of truth.'

<sup>2</sup> See Jackson, "Studies in the Epistemology of Ancient Greek Atomism", 165; A. A. Long and D. N. Sedley, eds., *The Hellenistic Philosophers*, vol. 1 (Cambridge: Cambridge University Press, 1987), Vol. 1, section 40. For a historical and philological analysis of the term 'criterion', see Striker, "Kritēron Tēs Alēthias."

Epicurus in its entirety—of his *Lives of Eminent Philosophers*.<sup>3</sup> Thus Diogenes' description in X 31-32, once properly explicated, can be compared with Epicurus' own words in the *Letter to Herodotus*.

Diogenes' description of perceptions covers a number of elements, some of which have already been introduced in the previous chapters of the thesis. I quote it in full.

For, [Epicurus] says, all *aisthēsis* is *alogos* and does not admit of memory; for it is not set in motion by itself, nor when it is set in motion by something else, can it add to it or take from it. Nor is there anything which can refute the *aisthēseis*.<sup>4</sup> For a similar *aisthēsis* cannot refute a similar because it is equivalent in validity; nor a dissimilar a dissimilar, for the objects of which they are the criteria are not the same; nor again can reason, for all reason is dependent upon *aisthēseon*; nor can one *aisthēsis*<sup>5</sup> refute another, for we attend to them all alike. Again, the fact of apperception confirms the truth of *aisthēseon*. And seeing and hearing are as much facts as feeling pain. From this it follows that as regards the imperceptible we must draw inferences from phenomena. For all thoughts have their origin in *aisthēseon* by means of coincidence and analogy and similarity and combination, reasoning too contributing something. And the visions of the insane and those in dreams are true (*alēthē*), for they cause movement, and that which does not exist cannot cause movement.<sup>6</sup>

The summary can helpfully be broken into what it tells about the nature of perceptions, what it tells us about the relationship among perceptions, and what it tells about the relationship between perceptions on the one hand, and reasoning on the other.<sup>7</sup>

With respect to the nature of perceptions, Diogenes reports that perceptions are *alogos* and that they do not involve memory; that they are 'facts' in the same way as feeling pain is a fact;

<sup>3</sup> As we have already seen, Epicurus calls the senses and the mind 'criteria' (see the *Letter to Herodotus* (50-52)). Diogenes appears to use the term in the same way in his argument for the non-refutation of a perception of one sense organ by a perception from another sense organ (for example, vision and touch). For discussion, see Long and Sedley, eds., *The Hellenistic Philosophers*, vol. 1, section 17; Asmis, *Epicurus' Scientific Method*, 87-93 and the first chapter regarding the criterial role of preconceptions and feelings. Asmis suggests that the addition of *epibolas tēs dianoias* as a criterion of truth by Epicurus' later followers was perhaps meant to make clear that perceptions referred to mental, as well as sense, perceptions.

<sup>4</sup> The term *aisthēseis* is not in the Greek text here; where Bailey has 'sensations', I replace with 'perceptions' (see note 6 below).

<sup>5</sup> The term *aisthēsis* is not in the Greek text here; where Bailey has 'sensations', I replace with 'perceptions.'

<sup>6</sup> DL X 31-32. Bailey translates *aisthēseis* as sensations and *prolēpseis* as concepts.

<sup>7</sup> Two of the most provocative statements in the description, the statement concerning the "fact of apperception" and the final sentence, will be treated in the last section in the context of scholarly interpretations of the statement 'all perceptions are true.'

and that they are caused by an external motion. With respect to the relationship among perceptions, making the distinction between perceptions of the same sense (for example, sight) and perceptions of different senses, Diogenes reports that, in either case, no perception can refute another. Diogenes' explanations for the non-refutation of one perception by another are different in the two cases. The reason that perceptions of the same sense organ do not refute one another is their being "equivalent in validity." The reason that perceptions of different sense organs do not refute one another is their being directed at different objects of perception.

Lucretius' explanation for perceptions not refuting one another is consistent with Diogenes'. Perceptions of different sense organs cannot contradict one another because each sense has its own special sphere: each sense is used in the perception of a different and special property.

[C]an sight be corrected by hearing, or hearing by touch? Can the evidence of touch be challenged by taste, refuted by hearing, or invalidated by sight? Not so, in my opinion. The fact is that each sense has its own special sphere, its own separate function. Thus the discernment of softness, cold, and heat must be the province of one particular sense, while the perception of the various colors and everything connected with colors must be the business of another. Taste too has its own distinct function; smell is produced separately, and so is sound. It necessarily follows therefore that one sense cannot refute another. It is also impossible for any sense to correct itself, since it must always be considered equally reliable.<sup>8</sup>

The bulk of this passage is an argument for perceptions from different sense organs not refuting one another based on the separate spheres and objects of perceptions.<sup>9</sup> In the last sentence of the passage, Lucretius argues that the perceptions of a single sense organ do not refute one another because each perception "must always be considered equally reliable."

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<sup>8</sup> *DRN* IV. 486-499.

<sup>9</sup> See chapter 1, 'The objects of perceptions.'

Lucretius' arguments for perceptions not refuting other perceptions from the same or different sense organ thus closely mirror the arguments presented by Diogenes.<sup>10</sup>

There are two aspects to consider with respect to the general relationship between the perceptions and reasoning: their constructive role in the formation of opinions and inferences and their criterial role in assessing opinions and inferences. In both these roles, perceptions are evidence. Thus Diogenes' statement on the equivalent validity of all perceptions and Lucretius' statement on the reliability of all perceptions refer to the foundational status, and constructive and criterial roles, of perceptions as evidence in Epicurus' method.

Diogenes reports that "all reason is dependent upon *aisthēseon*," and that perceptions are at the basis of thinking: "all thoughts have their origin in *aisthēseon* by means of coincidence and analogy and similarity and combination, reasoning too contributing something."<sup>11</sup> Epicurus does not engage in a theoretical discussion in the *Letter to Herodotus* on the modes of reasoning. That he and his followers were engaged in such theoretical discussions is shown in the work of Philodemus which survives in incomplete form and in fragments from Epicurus' lost work, *On Nature*.<sup>12</sup>

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<sup>10</sup> There are two other reasons for which perceptions in general do not contradict one another. The first is the basic nature of perceptions as unpropositional raw data; the second is given by Diogenes in his report: "for we attend (*prosechomen*) to them all alike." On R.D. Hicks' translation, Diogenes is here referring to the senses, rather than to perceptions: "nor can one sense refute another, since we pay equal heed to all." See R. D. Hicks, ed., *Diogenes Laertius: Lives of Eminent Philosophers*, 2 vols., Loeb Classical Library (Cambridge, MA: Harvard University Press, 1925), 561. Long and Sedley note that "it is unclear how this [argument] relates to the arguments [in the previous lines]. It apparently caps them with a quite general consideration, one which differs in not referring to different types of sensation at all." See Long and Sedley, *The Hellenistic Philosophers*, Volume 2, commentary on 16B.

<sup>11</sup> DL X 32.

<sup>12</sup> P. De Lacy and E. De Lacy, eds., *Philodemus: On Methods of Inference* (Naples: Bibliopolis, 1978); Sedley, "Epicurus, on Nature Book XXVIII." Philodemus' work may be titled *On Signs*, but the text is uncertain. A discussion of Philodemus' technical work must be left for another occasion. For scholarly discussion of *On Signs*, see Allen, *Inference from Signs: Ancient Debates About the Nature of Evidence*; J. Barnes, "Epicurean Signs," *Oxford Studies in Ancient Philosophy* supplementary volume (1988); D. Sedley, "On Signs," in *Science and Speculation: Studies in Hellenistic and Practice*, ed. J. Barnes, et al. (Cambridge: Cambridge University Press, 1982); Asmis, *Epicurus' Scientific Method*, 175-224.

We have already seen that opinions regarding perceptible objects are expressed with reference to preconceptions which are themselves formed by perceptions. Scientific inferences regarding the existence and nature of imperceptible objects are also formed with reference to perceptions mediated by preconceptions.<sup>13</sup> Diogenes describes the nature of preconceptions and their relation to perceptions as follows:

The concept (*prolēpsin*) they speak of as an apprehension or right opinion or thought or general idea stored within the mind, that is to say a recollection of what has often been presented from without, as for instance ‘Such and such a thing is a man’: for the moment the word ‘man’ is spoken, immediately by means of the concept his form too is thought of, as the senses give us the information. Therefore the first significance of every name is evident (*enargēs*). And we could not look for the object of our search, unless we have first known it. For instance we ask ‘Is that standing yonder a horse or a cow?’: to do this we must know by means of a concept the shape of horse and of cow. Otherwise we could not have named them, unless we previously knew their appearance by means of a concept. So the concepts are evident (*enargeis*).<sup>14</sup>

Perceptions are epistemological building blocks from which preconceptions are formed; a preconception, at its simplest form, is a recollection of multiple perceptions of similar objects.

The criterial aspect of perceptions is discussed in Epicurus’ *Principal Doctrine* XXIII and in the passage from Lucretius. In the *Principal Doctrine*, Epicurus warns that “if you fight against all *aisthēsesin*, you will have no standard by which to judge even those of them which you say are false.”<sup>15</sup> This pithy statement points to the criterial role of perception as a means for assessing inferences and underscores the role of perceptions as the foundation of reason.<sup>16</sup>

Lucretius’ remarks are more extensive:

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<sup>13</sup> For a useful overview on the distinction between scientific and non-scientific opinions, see Asmis, *Epicurus’ Scientific Method*, 163-4 and 175-80. For the distinction between inferences about perceptible objects and imperceptible ones, see A. Gigandet, “La connaissance : principes et méthode,” in *Lire Épicure et les épicuriens*, ed. Alain Gigandet and Pierre-Marie Morel (Paris Quadrige / PUF, 2007), 93-4.

<sup>14</sup> DL X 33. Bailey renders *enarges* and *enargeis* as ‘immediate and clear evidence’; I substitute with ‘evident.’

<sup>15</sup> KD XXIII.

<sup>16</sup> Cicero also makes the point in *On Moral Ends* (64) and in *On Academic Scepticism*, *Lucullus* XXV 79; XXXII 101.

You will find that our conception of truth is derived ultimately from the senses, and that their evidence is unimpugnable. You see, what we need is some specially reliable standard which by its own authority is able to ensure the victory over falsehood. Well now, what standard can be more reliable than sensation? If the senses are false, will reason be competent to impeach them when it is itself entirely dependent upon the senses? If they are not true, all reason is also rendered false.<sup>17</sup>

In capturing the roles of perceptions as constructive and criterial evidence, Lucretius confirms Diogenes' report that all reason is dependent on perceptions and explains, along with Epicurus, that the evidence furnished by the senses is a criterion of truth.

### **Epicurus' two rules of inquiry<sup>18</sup>**

Diogenes' description of the function of perceptible objects as the basis for making inferences regarding the imperceptible is consistent with Epicurus' second rule of inquiry, stated in the *Letter to Herodotus* (38). Epicurus distinguishes between two classes of objects about which we can have knowledge: the perceptible (*prodēla*) and the imperceptible (*adēla*), which, in addition to atoms and *eidola*, include meteorological phenomena and the heavenly bodies.<sup>19</sup> The two rules of inquiry reverse the order of Diogenes' report: Epicurus first addresses the role of preconceptions in the method of investigation, then turns to the role of perceptions:<sup>20</sup>

First, Herodotus, it is necessary to have grasped what is subordinate to the utterances, so that we may have the means to judge what is believed or sought or perplexing by referring to this, and so that it may not be the case that everything be unjudged by us as we demonstrate to infinity, or that we have empty utterances. For it is necessary that the first concept in accordance with each utterance be seen and not require demonstration, if we are to have [a standard] to which we shall refer what is sought or perplexing or believed.<sup>21</sup>

Next, it is necessary to observe all things with the perceptions (*aisthēseis*) and simply the present applications (*epibolas*), whether of the mind or of any of the

<sup>17</sup> DRN IV.479-486.

<sup>18</sup> The formulation is from Asmis, *Epicurus' Scientific Method*.

<sup>19</sup> See Bailey, *The Greek Atomists and Epicurus*, 253 ff. Meteorological phenomena are discussed in the *Letter to Pythocles*.

<sup>20</sup> On the order of the two rules, see Asmis, *Epicurus' Scientific Method*, 23.

<sup>21</sup> *Letter to Herodotus* (37-8), translation in Asmis, *Epicurus' Scientific Method*, 20.

criteria (*kritēriōn*), and similarly [in accordance with] the affections (*pathē*) that obtain, so that we may have the means to infer both what is expected [to appear] and what is non apparent (*to adēlon*).<sup>22</sup>

The two rules support Diogenes' report in naming perceptions, preconceptions, and feelings (or affections) as the criteria of truth. The second rule moreover confirms that perceptions are to be used as "the means to infer" both the perceptible and the imperceptible.

In the first rule, Epicurus points to the importance of linguistic reference for investigation. Although he does not use the technical term in this passage, it is likely that Epicurus is thinking of *prolēpseis*.<sup>23</sup> Diogenes' description of preconceptions, quoted above, supports this reading. Preconceptions, as Diogenes explains, are necessary for investigation: "we could not look for the object of our search, unless we have first known it." As we have already seen, preconceptions are built up from perceptions. In their basic forms, preconceptions, which underlie words which name and identify objects, are used in the process of forming opinions:<sup>24</sup>

The decision of opinion depends on some previous clear and immediate evidence, to which we refer when we express it: for instance, 'how do we know whether this is a man?'<sup>25</sup>

Preconceptions, being "the first concept[s] in accordance with each utterance," underlie the words that name objects and are used in expressing opinions regarding objects of perceptions. Preconceptions are "the means to judge what is believed or sought or perplexing." The judgments are made and assessed using preconceptions and ultimately referring to the preconceptions through which they are formed. Thus perceptions are evidence in two ways: as the raw data about which opinions, mediated through words and preconceptions, are formed, and as the ultimate basis for assessing opinions as true or false.

<sup>22</sup> *Letter to Herodotus* (38); translation in Asmis, *Epicurus' Scientific Method*, 83.

<sup>23</sup> For a survey of scholarly opinions on this question, see Asmis, *Epicurus' Scientific Method*, 22 and n. 9.

<sup>24</sup> Basic and complex forms of preconceptions were discussed in the section on perceptions and preconceptions in chapter one.

<sup>25</sup> DL X 33-34.

These dual roles are reflected in terminology.<sup>26</sup> The first role is reflected in the legal metaphors used in describing the process of verification and in *Principal Doctrines* XXIII and XXIV, showing, in both cases, that perceptions are used to “supply unshakeable testimony for use as the basis of judgment.”<sup>27</sup> The second role is reflected the title of Epicurus’ work on epistemology, the *Canon*. The literal meaning of the term is a carpenter’s ruler or a straightedge, “primarily an instrument for testing straightness and crookedness.”<sup>28</sup> The metaphor of the carpenter’s ruler is itself twofold: its specific function is to test the straightness or crookedness of any constructed object; and its general function is architectural: to ensure that the foundations of the structure are solid.<sup>29</sup>

Epicurus already points to the second role in *Principal Doctrine* XXIII. In the following *Principal Doctrine* (KD XXIV), he goes on to refer to the specific function of perceptions as criteria which are used to assess opinions.

If you reject any single *aisthēsin* and fail to distinguish between the conclusion of opinion as to the appearance awaiting confirmation and that which is actually given by the *aisthēsin* or feeling, or each intuitive apprehension of the mind (*phantastikēn epibolēn tēs dianoias*), you will confound all other *aisthēseis* as well with the same groundless opinion, so that you will reject every standard of judgment.<sup>30</sup>

This *Principal Doctrine* both confirms the distinction between immediate perceptions (“that which is actually given by the *aisthēsin*”) and opinion, and points to the specific role of perception as a standard used for assessing opinions.

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<sup>26</sup> See Jackson, “Studies in the Epistemology of Ancient Greek Atomism”, 246-49; Taylor, “All Perceptions Are True,” 109; Striker, “Kritērion Tēs Alēthias,” 31-33.

<sup>27</sup> Jackson, “Studies in the Epistemology of Ancient Greek Atomism”, 247; DeWitt, *Epicurus and His Philosophy*, 141 and n. 26 on p. 368. Also see the discussion on C. C. W. Taylor’s work, below.

<sup>28</sup> Striker, “Kritērion Tēs Alēthias,” 33.

<sup>29</sup> DRN IV.513-21; Jackson, “Studies in the Epistemology of Ancient Greek Atomism”, 247-48.

<sup>30</sup> KD XXIV.

Epicurus' second rule of inquiry in the *Letter to Herodotus* refers to the constructive role of perceptions as evidence as expressed in the legal metaphor. In this role, *aisthēseis* are the evidence of sense collected by the various sense organs (the "criteria") in a process which involves *epibolas*.<sup>31</sup> Being "the means to infer both what is expected to appear and what is non-apparent", perceptions are the evidence which is used in making inferences about imperceptible objects. The imperceptible objects which Epicurus goes on to examine in the *Letter to Herodotus*, where the subject-matter is physics, are atoms, void, and *eidola*. The proof for atoms and void described in the *Letter* is analysed below.

### **The proof for atoms and void**

The subject matter of the *Letter to Herodotus* is physics. Among the topics covered are the physical and temporal nature of the universe; atoms and void; details regarding atoms, such as their properties and minimal parts; and the relation of atoms to perceptible objects. The key passage which demonstrates the role of perceptions in inference-making as regards imperceptible objects (*adēla*) is the proof for atoms and void. The proof follows the two rules of inquiry in the text. It begins (38-39) with the three laws of conservation, principles which are based on "the regularity of natural processes, and our empirical experience about them:"<sup>32</sup> nothing is created out of that which does not exist "for if it were, everything would be created out of everything;" nothing is destroyed into that which does not exist, for "all things would have perished;" and "the universe always was such as it is now, and always will be the same...[, for] there is nothing into which it changes."

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<sup>31</sup> Much like Diogenes, Epicurus is here likely making the analogy between the process of perception and that of feeling. See further discussion in the commentary on Everson's work, below.

<sup>32</sup> G. Betegh, "Epicurus' Argument for Atomism," *Oxford Studies in Ancient Philosophy* 30 (2006): 269. Though the laws of conservation and the proof for void take the form of *a priori* statements here, Lucretius' examples in I.146-417 show that the principles reflect natural phenomena. For a treatment of Epicurus' empirical method see Asmis, "Epicurean Epistemology." For a specific treatment of the proof for void, see Long and Sedley, *The Hellenistic Philosophers*, Vol. I, 94-97.

Once the laws of conservation are in place, the existence of bodies and void as the basic constituents of the universe is empirically reasoned on the basis of the evidence of sense perception (39): “for that bodies exist sense itself witnesses in the experience of all men, and in accordance with the evidence of sense we must of necessity judge of the imperceptible by reasoning.” The existence of void is also proven on the basis of sense perception (40): “And if there were not that which we term void and place and intangible existence, bodies would have nowhere to exist and nothing through which to move, as they are seen to move.” Atoms, “indivisible and unalterable” constituents of compound bodies ensure that, while perceptible bodies themselves undergo change, they are not destroyed into nothing (41): “if, that is, all things are not to be destroyed into the non-existent, but something permanent is to remain behind at the dissolution of compounds.” Atoms and void, then, are the sole basic material constituents, for “besides these two nothing can even be thought of either by conception or on the analogy of things conceivable such as could be grasped as whole existences and not spoken of as accidents or properties of accidents.”<sup>33</sup>

At the basis of Epicurus’ proof for atoms and void is an appeal to concepts which are known through the accumulated experience of sense perception, or “notion[s] derived from perception”—and in particular, the concepts of bodies and their motion.<sup>34</sup> These notions are preconceptions formed by repeated perceptions. Through the accumulated experience of perceptions we come to know that there are bodies; that bodies resist touch; and that they change and move.<sup>35</sup>

The logical structure of both the proof for atoms and the proof for void is the same: atoms and void exist, for if they did not, the universe would not have the features which it is observed

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<sup>33</sup> *Letter to Herodotus* (40).

<sup>34</sup> The formulation “notion...derived from perception” is Asmis’: Asmis, “Epicurean Epistemology,” 287.

<sup>35</sup> Asmis, “Epicurean Epistemology,” 287.

to have.<sup>36</sup> If atoms did not exist, “all things would perish into not-being” in contradiction with the principles of conservation and, if void did not exist, “there would be no motion, which we observe to be false.” The proof is formally described in Sextus’ report on the theory of verification, falling under “lack of contrary testimony.”<sup>37</sup>

When Epicurus says that there is void, which is unclear, he confirms this through a matter that is plain, namely motion. For if there is not void there should not be motion, since the moving body does not have a place into which it can progress, on account of everything being full and solid.

The evidence for the existence of atoms is also furnished by the experience accumulated by sense perception: “for that bodies exist sense itself witnesses.” The evidence for void is given by the experience of perception, that bodies are seen to move.

Atoms, then, are used to account for the general concept of body as derived from perception—a body having, at a minimum, the basic properties of shape and size.<sup>38</sup> Atoms, eternal and imperishable, exist because transient and perishable bodies exist. Atoms, the existence of which is inferred from the perception of bodies, are the sole basic material constituents in Epicurus’ materialist ontology. For Epicurus, perceptible objects are just as real as atoms, and atoms are as real as perceptible objects. The unproven assumption in Epicurus’ account seems to be that the objects of perception are real and material.

### **The truth of all perceptions**

I have argued thus far in the thesis for a specific interpretation of the character of perceptions and of the reality of perceptible objects, and analysed, in this chapter, the role of perceptions as evidence in Epicurus’ method. It is now time to square my account with the statement ‘all perceptions are true.’ The evidential and criterial roles of perceptions in inference-making and in

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<sup>36</sup> Betegh, “Epicurus’ Argument for Atomism,” 275; Furley, “Knowledge of Atoms and Void in Epicureanism,” 612.

<sup>37</sup> VII 212-213; translation in Bury, ed., *Sextus Empiricus*.

<sup>38</sup> *Letter to Herodotus* (55-56).

the assessment of opinions (through verification) are central to my interpretation of the statement. The texts covering the specific function of perceptions as constructive evidence and as criteria of truth show that, in addition to their being basic data of the special qualities of real, observer-independent objects in the world, perceptions are both the basis of all inferences about perceptible and imperceptible objects, and the standard for assessing the truth or falsity of opinions.

We have already seen that perceptions cannot be true in the sense of being “statements of that which is that it is, or of that which is not that it is not,” though Sextus reports that Epicurus was committed to a version of the Aristotelian definition.<sup>39</sup> Perceptions are not true in this sense because they are *alogos* and involve no language or memory. Sextus’ characterization of sense-perception as “being capable of grasping the things that impinge on it, and neither taking away nor adding nor changing anything (since it is non-rational)” is supported by the textual evidence of other sources, including Diogenes Laertius and Lucretius.

Lucretius and Diogenes tell us that because of the *alogos* nature of perception and the special spheres of the senses, it is only the opinion regarding the appearance which is true or false in the Aristotelian sense of the term, and not the perception itself. As I showed in chapter two, Sextus’ report—according to which the truth of every perception refers to every object of perception existing in just the way that it is perceived—rests on a confusion is about the real objects of perception, which Sextus sometimes takes to be *eidola* rather than, as both Lucretius and Epicurus report, the properties of real external objects.

If Sextus’ interpretation of the truth of all perceptions is misleading, Plutarch’s polemical account is intentionally destructive to Epicurean ontology. If his account is to be believed, the consequence of the Epicurean postulate ‘all perceptions are true’ is a denial of the existence of

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<sup>39</sup> SE M VIII (9); Aristotle, *Metaphysics* 1125b25; translation from Apostle, ed., *Aristotle's Metaphysics*.

observer-independent objects. In contending that the objects of perception are produced in the course of a perception, Plutarch misrepresents the Epicurean account of the perceptual process, on which the objects of subjective perception exist independently and externally of the observer.

The passage from Lucretius' proem (IV.479-499), analysed above, reports the following: "our conception of truth is derived ultimately from the senses;" perceptions are criteria of truth; the evidence of perceptions is unimpugnable; reason is "entirely dependent" on the senses; all perceptions are equally reliable; and all perceptions are true. These points are supported by Diogenes Laertius' description of perceptions; by the two rules of inquiry in Epicurus' *Letter to Herodotus* (38); and in Epicurus' *Principal Doctrines* XXIII and XXIV. The evidence of perceptions is used in making inferences and as the ultimate criterion for assessing opinions. Thus, the Epicurean postulate 'all perceptions are true' means, in the context of the epistemological roles of perceptions, that all perceptions are reliable and that the evidence of perceptions is authoritative: because of the irreducible character of every perception, no perception can be refuted.

### **A survey of scholarly interpretations**

I will now turn to analysing some modern interpretations of APAT which have proven influential in the past few decades. The purpose of the survey is not only to point out what I take to be the pitfalls of the interpretations, but also to pick out some of their insights and acknowledge the ambiguity of the meaning of the statement in the complex system of Epicurean epistemology, which itself remains uncertain to us.<sup>40</sup> Important obstacles in interpreting the statement include the ambiguity of some basic elements of Epicurean epistemology, including the correct reading

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<sup>40</sup> In my treatment of DeWitt's interpretation below, I also return to two statements in Diogenes' summary of perceptions. See n. 7 on p. 74, above.

of the terms ‘perceptions’ (*aisthēseis* or *phantasia*) and ‘truth’ (*alēthēs*) in the context of the statement.

The interpretative strategies adopted by modern scholars which will be examined below include following in the steps of Sextus in locating the object of perception in *eidola* rather than in real external perceptible objects; arguing that the statement ‘all perceptions are true’ only establishes that the process of perception is real; and speculating that Epicurus and his followers took a valiant but ultimately problematic stance in order to defend the possibility of knowledge in the face of the epistemological challenges posed by their contemporary philosophical rivals, notably, the Academic Sceptics. The survey is chronological and treats the following five influential commentators: Bailey (1920’s); DeWitt (1940’s and 1950’s); Striker (mid-late 1970’s); Taylor (1980); and Everson (1990).<sup>41</sup> I acknowledge at the very outset of the survey the difficulty in the context of brief critical expositions to do justice to the nuanced interpretations of all of the commentators.

### **Cyril Bailey**

Bailey’s work on Epicurus in the 1920’s often informs the work of later scholars. Bailey is acutely cognizant of the methodological role of perceptions as laid down in Epicurus’ second rule of inquiry. For Bailey (who translates ‘*aisthēsis*’ as ‘sensation’)<sup>42</sup> the “simple principle” according to which “all our investigation...must be controlled by sensations” is “the keystone of

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<sup>41</sup> The following publications are used: Bailey, ed., *Epicurus: The Extant Remains*; Bailey, *The Greek Atomists and Epicurus*; DeWitt, “Epicurus: All Sensations Are True.”; DeWitt, *Epicurus and His Philosophy*; Striker, “Kritēion Tēs Alēthias,” (originally published in German in 1974); Striker, “Epicurus on the Truth of Sense Impressions,” (originally published in German in 1977); G. Striker, “The Problem of the Criterion,” in *Essays on Hellenistic Epistemology and Ethics* (Cambridge: Cambridge University Press, 1996); Taylor, “All Perceptions Are True.”; Everson, “Epicurus on the Truth of the Senses.”

<sup>42</sup> Based on their interpretations, scholars favour different translations of the terms *aisthēsis* and *phantasia* (the translation ‘sensations’ is often used in the earlier scholarship). Unless referring to a scholar’s specific use, I will continue my practice of using the term ‘perceptions’ in the commentary.

the whole metaphysic of Epicureanism.”<sup>43</sup> On the meaning of the truth of perceptions, Bailey says the following: “by the truth of a sensation Epicurus meant and could only mean its truth to the external object which it represents.”<sup>44</sup> Bailey readily admits that this conception of truth leads immediately to the problem from contrary perceptions, but offers an easy out for Epicurus by charitably suggesting that “Epicurus himself does not seem to have been conscious of the difficulty.”<sup>45</sup>

As we have already seen, Bailey also argues that Epicurus privileges certain perceptions—‘clear and immediate’ perceptions—over others, the former having been obtained through *epibolē*, an apprehension of the senses or the mind “which alone is of scientific value.”<sup>46</sup> Bailey relates this conception of a privileged set of perceptions to Epicurus’ theory of verification. The privileged perceptions are provided by the ‘nearer view;’ they alone are *enargēs* (evident) and are used to assess other perceptions.<sup>47</sup> As later scholars note, Bailey’s rich interpretation of the role played by the apprehension (*epibolēs*) of the senses and the mind goes beyond well the evidence.<sup>48</sup>

Thus Bailey argues for an interpretation of the truth of perceptions with reference to their correspondence to the object represented in a perception: “its truth to the external object which it represents.” While he attempts to save Epicurus from embarrassment by suggesting, improbably, that the problem of conflicting perceptions did not occur to him, Bailey also argues

<sup>43</sup> Bailey, ed., *Epicurus: The Extant Remains*, 177, commentary on 38 (4).

<sup>44</sup> Bailey, *The Greek Atomists and Epicurus*, 256-7.

<sup>45</sup> *Ibid.*, 256. Based on Epicurus’ statement that the size of the sun is “for us what it appears to be”, Bailey also raises the possibility, but does not develop the point, that the particular circumstances of our perceptions are to be taken into account in the judgment of our opinions regarding them. Asmis argues for an Epicurean distinction between perceptions of an object ‘in relation to us’ and ‘in itself’ (Asmis, “Epicurean Epistemology,” 274).

<sup>46</sup> Bailey, *The Greek Atomists and Epicurus*, 243.

<sup>47</sup> See *Ibid.*, 257. Bailey’s designation of a class of ‘clear and immediate (or distinct)’ perceptions was adopted by Long who nevertheless critiques Bailey’s interpretation of *epibolē*. Long, *Hellenistic Philosophy: Stoics, Epicureans, Sceptics*, 22.

<sup>48</sup> See chapter one, ‘*Epibolē tēs dianoias*.’

that the only class of perceptions which are useful for Epicurus' scientific investigations are those 'clear and immediate' (*enargēs*) perceptions which are obtained by the apprehension (*epibolē*) of the senses: "All 'images' perceived by the sight are true, because they correspond to an external reality, but it is only the 'clear image' obtained by 'apprehension of the senses' which can be used as the basis of scientific knowledge."<sup>49</sup>

Bailey recognizes the simple nature of what he names the 'content' of perceptions: "the sensation itself...is only an isolated vision of a certain shape and colour."<sup>50</sup> He notes, further, that "what we actually perceive is not the single 'idols' [*eidola*], but the image produced by their agglomeration in the eye."<sup>51</sup> For Bailey, then, the perception is a representation of the external object's property (such as its colour), and not the property of the external object as such. Bailey further speculates that it was Epicurus' followers, and not Epicurus himself, who in response to the critiques of their contemporary philosophical competitors held that "the image of sensation...is true, because it corresponds always to the 'idols' which reach the eye" rather than to the object itself. However, Bailey's own interpretation of Epicurus likewise problematically refers to a representation of the object, and not to the object itself.<sup>52</sup> Both Epicurus and his followers, however, insist that it is not a representation of the object that is perceived, but a property of the object itself.

### **Norman DeWitt**

Where Bailey attempts to excuse Epicurus from treating the argument from contrary perceptions by speculating that Epicurus "was not perhaps sufficiently attacked with regard to it to cause him to elaborate a reply," Norman DeWitt, writing in the 1940s and 1950s, frames the defence of the

<sup>49</sup> Bailey, *The Greek Atomists and Epicurus*, 243.

<sup>50</sup> *Ibid.*, 244. Bailey cites Sextus VII 207.

<sup>51</sup> *Ibid.*, 242.

<sup>52</sup> *Ibid.*, 256-7. The reading is with reference to Sextus' interpretation of the truth of all perceptions.

truth of all perceptions as Epicurus' response to the critiques of his contemporaries. Based on criticisms from everyday experience, DeWitt argues that Epicurus could not have held that all perceptions are true in the sense of corresponding to external objects. Thus, while Bailey attempts to connect the methodological role of perceptions ("all our investigation... must be controlled by [them]") with their true correspondence to objects, DeWitt rejects the reliability of perceptions in the process of investigation as well as their correspondence to perceptible objects.<sup>53</sup>

DeWitt's terminological distinctions involving '*aisthēsis*,' '*phantasia*,' and '*epaisthēsis*' are key to his interpretation of the statement 'all perceptions are true.' According to DeWitt, *phantasia* are "immediate presentations", presenting themselves in "combinations of color, shape, size, smell, and so on."<sup>54</sup> To the extent that perceptions are immediate presentations, says DeWitt, they are all true.<sup>55</sup> The second type of perceptions DeWitt differentiates is *aisthēsis*, which he takes to be the perceptions which serve as criteria of truth. *Aisthēseis*, for DeWitt, are involved in an act of recognition. The evidence for this reading of *aisthēseis* is Diogenes' sentence in X 32, translated in Bailey as "the fact of apperception (*epaisthēmata*) confirms the truth of the sensations (*aisthēseon alēthian*)." DeWitt takes the sentence, which he translates as "the fidelity of the recognitions guarantees the truth of the sensations", as proof that *aisthēseis*, a reaction secondary to the immediate *phantasia*, involves recognition.<sup>56</sup>

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<sup>53</sup> DeWitt, "Epicurus: All Sensations Are True," 19.

<sup>54</sup> DeWitt, *Epicurus and His Philosophy*, 140.

<sup>55</sup> *Ibid.*

<sup>56</sup> *Ibid.*

Thus DeWitt argues that “the Epicurean theory of perception or apperception is essentially one of recognition.”<sup>57</sup> He goes on to explain that, unlike *phantasia*, the “immediate presentations” which are all true, *aisthēseis*, which are criteria and evidence, cannot all be true:

The sensations are consistently regarded as witnesses in court. Their evidence may be false, as in the case of the oar half-immersed in the water, which appears to be bent. False evidence is to be corrected by that of other sensations.<sup>58</sup>

“All such sensations may possess value,” says DeWitt, and “their values...range all the way from totality to zero.”<sup>59</sup> Yet as we have seen, it is not the evidence furnished by perception which is corrected, but the opinion regarding the perception.

DeWitt’s translation and reading of ‘*epaisthēmata*’ (‘the recognitions’), the term in Diogenes’ statement on which DeWitt’s distinction between the immediacy of *phantasia* and the complexity of *aisthēseis* largely hangs, is far from uncontroversial. The term also appears in the *Letter to Herodotus* (52), in the discussion on hearing.<sup>60</sup> In that passage, Epicurus explains that the unity of *eidola*, “stretch[ing] right back to the object which emitted the sound... in most cases produces comprehension (*epaisthēsin*) in the recipient, or, if not, merely makes manifest the presence of the external object.” The translation is Bailey’s, who predates DeWitt in associating the term with an activity of awareness, or comprehension richer than a simple perception (though, unlike DeWitt, Bailey separates this activity from perception as such).<sup>61</sup>

As I showed in the discussion of this passage in the context of Sextus’ argument regarding the truth of sounds, *epaisthēsin* in the context of hearing could simply mean that the sound we hear accurately captures the sound as it was emitted by the object when there is no disturbance in

<sup>57</sup> DeWitt, “Epicurus: All Sensations Are True,” 20.

<sup>58</sup> DeWitt, *Epicurus and His Philosophy*, 141.

<sup>59</sup> *Ibid.*, 139.

<sup>60</sup> Bailey, ed., *Epicurus: The Extant Remains*, 415, commentary on 32 (5).

<sup>61</sup> See Bailey, *The Greek Atomists and Epicurus*, 420.

the transmission of *eidola* from the object to the ear.<sup>62</sup> Moreover, in an analysis partly based on the texts of some later Epicureans, Asmis associates the term appearing in Diogenes' statement with the irrational activity of perception. This reading is consistent with the other elements of perceptions described by Diogenes in DL X 31-32 such as the *alogos* nature of perceptions. Asmis makes the connection between the sentence under consideration and the one immediately following, translating as follows: "The fact that there are underlying *epaisthēmata* confirms the truth of perceptions; our seeing and hearing are underlying [experiences], just like having a pain."<sup>63</sup>

Another controversial point in DeWitt's reading is his distinction between the terms *aisthēsis* and *phantasia* on the basis of which he attempts to reconcile the criterial and evidential roles of perceptions (*aisthēseis*) with the truth of all perceptions (*phantasia*). Whether Epicurus made a distinction between *aisthēseis* and *phantasia* is a point of scholarly controversy.<sup>64</sup> Epicurus and the ancient sources use both terms. A distinction between the two terms was later made by the Stoics. While it is convenient, for the purposes of his interpretation, for DeWitt to separate the two terms into two distinct types of perceptions, one of which is always true and the other not, there is not enough in the evidence of the extant texts to support making the distinction.<sup>65</sup>

Once DeWitt settles on *phantasia*, the immediate presentations, as the true Epicurean perceptions, he turns to a line in Diogenes' evidence: "And the visions of the insane and those in dreams are true (*alēthē*), for they cause movement, and that which does not exist cannot cause

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<sup>62</sup> See Annas, *Hellenistic Philosophy of Mind*, 162, n. 20.

<sup>63</sup> Asmis, *Epicurus' Scientific Method*, 162-63 and n. 51. Asmis surveys the previous scholarly interpretations of the term found in Bailey, DeWitt, Rist and Long, and notes that the "the term...has traditionally been interpreted as denoting a secondary type of perception involving some mental interpretation or understanding, as opposed to a purely irrational sensory experience" (Asmis, *Epicurus' Scientific Method*, 162).

<sup>64</sup> See discussion in chapter 1, 'Terminology.'

<sup>65</sup> See also discussion of Striker's position, below.

movement.” Based on this line, it appears that the truth of perceptions may simply refer to the fact that perceptions takes place. Yet, in the same passage, Diogenes also points to the role of perceptions as the basis of reason and reasoning even as he describes their *alogos* nature.

One way of treating Diogenes’ evidence is to argue that in this particular section of the passage, Diogenes is continuing his description of the simple and *alogos* nature of perceptions. Thus, just as he reports that perceptions are as basic, raw, and immediate as feeling pain; that they are caused by an “irrational activity”; and that, for this reason, they cannot be contradicted by each other, so too he may be reporting that, again, perceptions cannot be doubted because they are caused by a mechanistic *eidolic* impact.

We have already seen that while dreams and the visions of the insane may not be of real objects, they are still caused by *eidola* which, in turn, originate from real external objects. We have also seen that the structure and function of the percipient’s sense organs also play a role in perception. If an opinion is formed that the objects of the visions of madmen are themselves real, that opinion is false. The correct explanation of the opinion based on the evidence is ‘this is merely a dream vision of a centaur,’ or ‘my mind was not right when I had a vision of this creature.’

We can therefore say that Epicurus both took the perceptual process to be real and argued that all the evidence of perceptions is reliable. There is no contradiction between the two positions; indeed, they are perfectly compatible.<sup>66</sup> Rather than acknowledging, in addition to the reality of the process of perception, the ultimate reality of the objects of perceptions and the reliability of perceptions as data, DeWitt strictly separates the reliability of one class of perceptions (*aisthēsis*) from the truth (reality) of another class (*phantasia*). DeWitt thus

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<sup>66</sup> Jackson points to the possibility of there being “a close connection between the thesis that sensation is a veridical process and the thesis that the products of such a process are true” (Jackson, “Studies in the Epistemology of Ancient Greek Atomism”, 253).

maintains that Epicurus “maintained the doctrine all sensations are true in the sense of real.”<sup>67</sup>

As one later scholar notes, “DeWitt’s treatment of the subject goes far beyond the evidence.”<sup>68</sup>

Indeed, his treatment of Diogenes’ and Lucretius’ arguments for the non-refutation of one perception by another is dismissive.<sup>69</sup>

### **Gisela Striker**

The interpretation of ‘all perceptions are true’ as some version of ‘all perceptions are real’ was adopted in the early 1970’s by Rist, the early Long, and the early Furley.<sup>70</sup> Striker, writing in the mid and late 1970’s, broke with this interpretation and focused instead on the role of perceptions as criteria of truth.<sup>71</sup> After considering the textual instances of the terms *aisthēsis* and *phantasia* in the texts of Epicurus and the ancient sources, Striker maintains that, in postulating the truth of all perceptions, Epicurus is referring to *phantasia*, “‘sense-impression’ or ‘presentation,’ meaning the result of the process of sensation,” rather than to *aisthēsis* (in one of its senses), “the process of being acted upon by a sensible object.”<sup>72</sup> Thus Striker follows DeWitt in making the distinction between *aisthēsis* and *phantasia*. But, unlike DeWitt, she focuses on only one sense of ‘perceptions’ in her interpretation, noting that “it seems unlikely that Epicurus should have made two parallel statements, one about *aisthēsis*, the other about *phantasia*.”<sup>73</sup>

As Striker makes her choice between *aisthēseis* (which she translates into English, as most commentators before her, as ‘sensations’) and *phantasia* (which she translates as ‘sense-

<sup>67</sup> DeWitt, "Epicurus: All Sensations Are True," 32.

<sup>68</sup> Rist, *Epicurus: An Introduction*, 19, n. 2.

<sup>69</sup> N. DeWitt, *Epicurus and His Philosophy* (Minneapolis: University of Minnesota Press, 1943), 26. DeWitt also rejects Cicero’s “reckless verdict...’ that the Epicureans boldly said that every impression of sense is true and trustworthy.” The reference appears to be to *On Academic Scepticism II* (79).

<sup>70</sup> Long, "Aisthesis, Prolepsis, and Linguistic Theory in Epicurus"; Furley, "Knowledge of Atoms and Void in Epicureanism." Furley specifically addresses the point in Furley, "Democritus and Epicurus on Sensible Qualities," 91, n. 35.

<sup>71</sup> Striker’s position remains unchanged in Striker, "The Problem of the Criterion," originally published in 1990.

<sup>72</sup> Striker, "Epicurus on the Truth of Sense Impressions," 77-78.

<sup>73</sup> Striker, "Epicurus on the Truth of Sense Impressions," 78.

impressions'), she notes that while *phantasia* "may plausibly be called true or false because they are expressed in language, this is at least doubtful for sensations."<sup>74</sup> This statement characterizes a key aspect to Striker's approach to interpreting the statement 'all perceptions are true': her commitment to propositional truth. In Striker's terminology, sensations, because they are *alogos*, cannot "produce propositions" as *phantasia*, or sense-impressions, might, and, as such "cannot be true or false in a propositional sense."<sup>75</sup>

Aside from anticipating her conclusions, however, Striker's choice of *phantasia* over *aisthēsis* and, indeed, her distinction between the two terms, is not convincingly defended. Striker acknowledges both that the distinction between the two terms was a later Stoic convention and that Hellenistic philosophers did not "identify sense impressions with propositions."<sup>76</sup> She does, however, point to a serious deficiency in her contemporaries' interpretation of *alēthēs* as real, namely, that the so-called 'reality interpretation' robs the statement 'all perceptions are true' of its potential epistemological significance as regards the foundational role of perceptions as evidence.<sup>77</sup>

While Striker skillfully explores the connection between the role of perceptions as criteria of truth and the truth of all perceptions, her analysis is coloured from the start by the contextual assumption that in defending the truth of all perceptions Epicurus was primarily responding to his philosophical contemporaries and, in particular, the Skeptics. On this hypothesis, Epicurus did not develop arguments based on his own independent analysis of perceptions, but "his initial

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<sup>74</sup> Ibid.

<sup>75</sup> Ibid., 80.

<sup>76</sup> Ibid., 79, 84-5. For an in-depth treatment of the Stoic usage, see Rubarth, "The Stoic Theory of Aisthēsis".

<sup>77</sup> Striker, "Epicurus on the Truth of Sense Impressions," 85. See also Jackson, "Studies in the Epistemology of Ancient Greek Atomism", 260.

arguments for the thesis were independent of such analysis, and the analysis was developed later to defend the thesis against obvious objections.”<sup>78</sup>

Striker correctly points out that on the Epicurean account, “(i) all knowledge must ultimately be based on sense perception”; and “(ii) all sense impressions have the same status with respect to their reliability.”<sup>79</sup> The reason Epicurus held these positions, according to Striker’s reconstruction, is related to the role the second condition played in Skeptical arguments.<sup>80</sup> The Skeptics used the argument from contrary perceptions to demonstrate that no perception is reliable. Striker suggests that Epicurus engaged in a counter-skeptical strategy. In light of the two conditions, says Striker, Epicurus “says that either all [sense perceptions] be taken as true, or all as false. Hence if there is to be any knowledge, all sense impressions must be (known to be) true.”<sup>81</sup>

Striker takes the statement ‘all perceptions are true’ to mean “all propositions expressing no more nor less than the content of a given sense impression are true.”<sup>82</sup> Her interpretation is informed by the following two assumptions: that by truth Epicurus must have referred to propositional truth; and that the doctrine was constructed as a response to the Skeptical challenge which forced Epicurus to “adopt [a] rather uncomfortable epistemological position.”<sup>83</sup> Striker’s first assumption is questionable on the point of the textual evidence; the second assumption is uncharitable because it makes Epicurus out to be defending a position which he knew to be absurd.

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<sup>78</sup> Striker, "Epicurus on the Truth of Sense Impressions," 86.

<sup>79</sup> Ibid.

<sup>80</sup> Ibid.

<sup>81</sup> Striker, "Epicurus on the Truth of Sense Impressions," 86. Striker, "The Problem of the Criterion," 156. See also Long and Sedley, *The Hellenistic Philosophers*, Vol. 1, section (16) commentary.

<sup>82</sup> Striker, "Epicurus on the Truth of Sense Impressions," 90.

<sup>83</sup> Striker, "Epicurus on the Truth of Sense Impressions," 86.

### Christopher Taylor

The last modern interpretations left to examine individually are Taylor's and Everson's commentaries, published in 1980 and 1990, respectively. Both commentators argue that the truth of all perceptions is related to the mechanism underlying perception, *eidola*. Taylor follows Striker in considering the relationship between the statement 'all perceptions are true' and the criterial role of perceptions. The result of his analysis is a useful forensic model featuring the evidentiary value of perceptions. Thus Taylor argues that

the sort of criterion in question is *evidence*. *Aisthēseis* are used in discriminating truth from falsehood in that they provide evidence on the basis of which we judge (*krinomen*) what is true and what is false, just as the evidence of witnesses in a court is used by the judge to determine the truth of the matter in dispute. And just as the evidence of the witnesses must itself be true in order that a sound verdict be arrived at, so the evidence of *aisthēseis* must be true if we are to attain to knowledge of the world.<sup>84</sup>

While rejecting the interpretation of 'all perceptions are true' as 'all perceptions are real', Taylor still maintains that there is a connection in the Epicurean account between *alēthēs* and reality. Based on the evidence of Sextus Empiricus, Taylor points to the relation between the truth reported by perceptions and the reality of the report:

Sextus' report moves immediately from the claim that all *aisthēta* are *alēthē kai onta* to the assertion that *aisthēsis* always tells the truth, since it represents the reality which impinges on it exactly as it is, without addition or diminution.<sup>85</sup>

Taylor's interpretation remains very much in line with Sextus' account. He again follows Sextus in identifying the object of perception with physical cause of perception:

The Epicurean thesis that all *aisthēseis* are *alētheis*...is the thesis that every instance of *aisthēsis* consists in the stimulation of the sense-organ by a real object which is represented in *aisthēsis* exactly as it is in reality.<sup>86</sup>

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<sup>84</sup> Taylor, "All Perceptions Are True," 109.

<sup>85</sup> *Ibid.*, 113.

<sup>86</sup> Taylor, "All Perceptions Are True," 117.

In following Sextus' account, Taylor's interpretation also faces the same problems. The first problem is textual. Sextus' testimony notwithstanding, both Epicurus and Lucretius affirm that we do not perceive *eidola*, but the properties of external objects. The second problem is the nature of reality which, if Taylor's account is correct, perceptions would be used to infer. If Epicurus merely holds "that sense-contents exactly mirror the physical stimuli which excite them," those physical stimuli being *eidola*, there appears to be no way for us to get at real external objects.<sup>87</sup>

### Stephen Everson

Following Striker and Taylor, Everson also rejects the reading of 'true' as 'real' or 'existent.'<sup>88</sup>

While observing that in some contexts it may be appropriate to take *alēthēs* as signifying "reality rather than truth [and] that Epicurus seems to have treated these two senses as very closely related," Everson notes that "if we always understand *alēthēs* to designate reality rather than truth, Epicurus' claim loses its interest."<sup>89</sup>

Everson also rejects Striker's approach of treating the truth of perceptions in propositional terms. Instead, Everson draws from the texts showing the analogous relationship between perceptions and the primary feelings (*pathē*). Both perceptions and feelings are "the result of being *affected* by something."<sup>90</sup> Everson also maintains that in claiming that 'all perceptions are true', Epicurus was making a statement about objects in the world: "When he claims that a perception is true, he does not mean by this that it reports how the world is *for the individual* observer but, precisely, how the world really is."<sup>91</sup> Thus Everson also recognizes that, on the

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<sup>87</sup> This is Furley's objection in Furley, "Democritus and Epicurus on Sensible Qualities," 91-92.

<sup>88</sup> Everson, "Epicurus on the Truth of the Senses," 165.

<sup>89</sup> Ibid., 167, n. 10.

<sup>90</sup> Ibid., 168.

<sup>91</sup> Everson's emphasis: Ibid., 165. Everson, "Epicurus on the Truth of the Senses," 165.

Epicurean account, perceptions are evidence. Indeed, he argues that the statement ‘all perceptions are true’ requires that all perceptions have absolute evidential value.<sup>92</sup>

Everson relies on Sextus’ analogy between perceptions and feelings according to which the causes of either are exactly as they appear. Sextus reports as follows:

Just as the primary effects on us – that is, pleasure and pain – are produced from certain things liable to bring them about, and in accordance with the very things that are liable to bring them about...so too in the case of appearances, which are effects that happen to us, the thing that is liable to bring each one about is in every way and entirely a thing that appears. And it is not possible for it, being a thing that appears, not to be in truth such as it appears.<sup>93</sup>

Sextus, as we have seen, collapses the distinction between the cause of perception—*eidola*—and the object of perception. For Sextus, the object of perception is also the causal mechanism behind it. Everson follows Sextus’ line in claiming that “what perception is produced is entirely determined by the nature of the external object which gives rise to it by affecting the sense-organ.”<sup>94</sup> Like Sextus, then, and much like Taylor, Everson attempts to do away with the distinction between the *eidola* as the mechanical cause of, and medium through which, a perception takes place and the object of a perception. Everson thus argues that the truth of perceptions is related to the causal mechanism underlying them: “since every perception is produced in the same way, they will all be true.”<sup>95</sup>

Everson is correct, I think, in pointing to the relation between the basic nature of perceptions and the mechanical process of perception on the one hand, and the truth of all perceptions on the other. No perception can be contradicted by another because perceptions are *alogos* and each sense has its sphere of perceptible properties. Everson adds to these elements

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<sup>92</sup> Ibid., 171-2.

<sup>93</sup> SE M VII (203).

<sup>94</sup> Everson, "Epicurus on the Truth of the Senses," 173-4.

<sup>95</sup> Ibid., 174.

the mechanistic nature of the *eidolic* causal process underlying perception as another reason that each perception has absolute evidential value.

But Everson goes farther than this and, like Taylor and along with Sextus, posits that the objects of perceptions are *eidola*, rather than external bodies: “it is only if the objects of perception are indeed the *eidola* rather than the solid objects themselves that the claim that all perceptions are true could stand a chance of being plausible.”<sup>96</sup> *Eidola*, however, are imperceptible and do not share with perceptible objects all of the secondary properties (such as taste or smell) which we perceive.

Everson does acknowledge some of the textual evidence which states that it is external objects, rather than *eidola*, which are perceived. He attempts to reconcile his position with the textual evidence by referring to contemporary naturalistic accounts of intentional states, in effect arguing that perceptions can encompass multiple levels of content. Epicurus, says Everson, “provides explanations both of how it is that the senses never lie and of how, although our perceptions are brought about by *eidola*, they nevertheless represent to the subject the nature of solid objects.” Neither *eidola* nor perceptions, however, are representations of objects. While perceptions are *caused* by *eidola*, *eidola* are not the objects of perceptions.

### **Perceptions and Knowledge**

In the previous two chapters I addressed the mechanism and nature of perception. Based on an analysis of the textual evidence in Epicurus, Diogenes Laertius, Lucretius, and Sextus Empiricus, I concluded that perceptions are raw, *alogos*, unpropositional data of special properties of external objects; that all perceptions ultimately originate from real objects; and that perceptions are caused by the interaction of *eidola*, collections of atoms originating from an external object,

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<sup>96</sup> Ibid., 177.

with the sense organs, which are also comprised of atoms. Diogenes' analogy with *pathē* is apt: doubting a perception would be the same as doubting a pain. An analysis often takes place following a perception. The analysis, however, is distinct from the perception which gave rise to it, just as the truth or falsity of an opinion is different than the truth of all perceptions.

There appear to be three possible, and compatible, interpretations of the statement 'all perceptions are true' that can be squared with the evidence. First, Diogenes' description of perceptions supports the reading 'all perceptions are real.' This is a non-controversial reading: it is indeed the case that perceptions are real events, and that they take place by means of a physical causal mechanism. Sextus extends this reading to the sense-content of all perceptions—and erroneously ascribes to *eidola* the occasional role of objects of perceptions. Thus, although a feature of Sextus' testimony must be rejected, his contribution lies in attempting to account not only for the reality of perception as process, but also for the reality of the specific content of every perception. This attempt points us to the second plausible interpretation of the statement 'all perceptions are true,' i.e., that the content of every perception ultimately originates from a real material object. This is perhaps what Epicurus meant when he said, according to Sextus' report, "that everything perceptible is true, and that every appearance is from a real thing."<sup>97</sup>

The following points concerning the Epicurean position of the truth of all perceptions should be considered in unison: on the one hand, the content, character, and objects of perceptions (the texts show that perceptions are raw and unpropositional data of special qualities of real, external objects); and, on the other, the evidential roles of perceptions. The shortcomings of modern interpretations often follow from an insufficient consideration of one or the other of these points.

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<sup>97</sup> SE M VIII (62); see also SE M VII (205). Furley comes close to this reading; see Furley, "Democritus and Epicurus on Sensible Qualities," 92-3.

The point of departure of this thesis, which advances a third interpretation, is that the truth of perceptions complements their role as criteria of truth. How are perceptions criteria of truth? In her seminal article on the topic, Striker shows that the terms '*kritērion*' and '*kritēria tēs alētheias*' (criteria of truth) can be used quite broadly as "a means or instrument... for evaluating" anything "which can be characterized as true or false."<sup>98</sup> Long and Sedley add that criteria are "ultimate arbiters of truth, themselves not subject to any higher authority."<sup>99</sup> Epicurus, for his part, tells us that "if you fight against all" perceptions "you will have no standard by which to judge even those of them which you say are false."

Thus, as criteria of truth, perceptions are used to assess, or evaluate, the truth of opinions. The analogy of a carpenter's ruler, a *kanon* in Greek (and the title of Epicurus' lost work on epistemology), is apt: in order to assess the straightness or crookedness of an object, the ruler itself must be straight. As Striker observes,

the truth of a criterion of this kind cannot be determined or tested in the same way as the truth or falsity of what is tested by it. Admittedly one can test the straightness of a new ruler by comparison with another, but this procedure must come to an end at some point: the straightness of the first ruler must have been determined without the help of another ruler.<sup>100</sup>

Since there is nothing more basic than perceptions and no perception can be refuted, all perceptions must be taken as incorrigible evidence.

In the context of Epicurus' method, perceptions are both constructive and criterial evidence. The reason that perceptions are reliable evidence is that they are basic and irrefutable data. Thus, understood in the context of the evidential roles of perceptions in Epicurus' method, the statement 'all perceptions are true' means that the evidence of perceptions is authoritative:

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<sup>98</sup> Striker, "Kritērion Tēs Alēthias," 24.

<sup>99</sup> Long and Sedley, *The Hellenistic Philosophers*, Vol. I, 88.

<sup>100</sup> Striker, "Kritērion Tēs Alēthias," 33.

perceptions are both irreducible and irrefutable, and thus a basic and reliable basis for inference-making and a reliable standard for assessing judgments.

The endorsement of the evidence of perceptions may not be sufficient for a defence of the possibility of knowledge. Indeed, there may not be a satisfactory rebuttal to the ancient Skeptics who claimed that we cannot ultimately know whether our beliefs about objects in the world are true. Thus it appears that Epicurus is forced to presuppose the existence and objective reality of material, external objects. There are many other challenges facing the Epicurean account, and it has not been my purpose to defend it wholesale. Rather, I hope to have advanced a substantive interpretation of the truth of all perceptions which makes sense of the claim in a manner consistent with what we know of the nature of perceptions and of their role in Epicurean epistemology.

## Conclusion: The ethics of Epicurean epistemology

The reliability of all perceptions as explicated in this thesis is tied to Epicurus' method of acquiring knowledge about the perceptible and imperceptible world. Instead of revisiting my discussions on Epicurean epistemology and my interpretation of the Epicurean postulate 'all perceptions are true,' I will devote this concluding section to a brief overview of the importance of knowledge acquisition to Epicurean ethics.

The *Letter to Herodotus* contains the outlines of a scientific system which orders the universe and accounts for all that exists in it in materialistic terms. Once the physics is explicated (as it presumably is in Epicurus' work in 37 volumes, *On Nature*), little innovation would be necessary. Thus modern conception of science as a method for continual questioning resulting in a growing but always incomplete body of knowledge would be rejected by the practising Epicurean whose articles of faith have been carefully revealed by the master. Thus, in their self-contained system, the Epicureans "lived as in a safety deposit vault, protected against worry and pain."<sup>1</sup>

To conceive of Epicurean physics as a system whose sole purpose is to provide a comforting pill to disturbed souls is to simplify the matter. Epicurus was concerned with making his philosophy accessible to all, not only to the educated or those with a strong predilection for intellectual pursuits. This is witnessed in the pithy statements which members of the school were encouraged to memorize and in the missionary character of the school.<sup>2</sup> At the same time, Epicurus himself was continually engaged in study and academic discussions with other prominent members of the school; subsequent prominent Epicureans, in turn, were committed to

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<sup>1</sup> Kleve, "Empiricism and Theology in Epicureanism," 39.

<sup>2</sup> See DL X 12 and *Letter to Menoecus* (135). On the missionary character of the Epicurean school, see DeWitt, *Epicurus and His Philosophy*, 329 ff.

the elucidation and development of his system.<sup>3</sup> The purpose of such study was to achieve a state of peace. In the opening remarks to Herodotus in the letter, Epicurus notes the relationship between the ethical goal of being at peace and the study of nature: "I who urge upon others the constant occupation in the investigation of nature...find my own peace chiefly in a life so occupied."<sup>4</sup>

The pursuit of pleasure was a principal aim in Epicurus' system. Epicurus delineates two types of pleasure: katastematic pleasure, which is experienced as the absence of bodily or mental pain; and kinetic pleasure, which is experienced through mental and bodily stimulation. The term denoting the absence of mental pain, freedom from disturbance, or tranquility in Epicurean ethics is *ataraxia*. "Tranquility," as Sedley explains, "depends above all on an understanding of the universe, which will show that contrary to the beliefs of the ignorant it is unthreatening: and this is, strictly speaking, the sole justification for studying physics."<sup>5</sup>

Thus the aim of Epicurean physics is to remove one's worries about the death and the gods by exhaustively accounting for every feature of the universe. Any phenomenon must be explainable, as doubt may open the door to worry, and it is the aim of the system to banish both worry about what is not properly understood and ignorance of the true nature of things. In this context, Lucretius' practical advice may seem curious:

And even if reason fails to resolve the problem of why objects, which close at hand were square, have a round appearance when viewed from a distance, it is better, if one is ignorant of the reason, to give an erroneous explanation of the difference in shape than to let manifest facts slip from one's grasp and to

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<sup>3</sup> Indeed, book XXVIII of *On Nature*, in which Epicurus refers to the views of Metrodorus, has the form of a "pseudo-dialogue" (Sedley, "Epicurus, on Nature Book XXVIII," 13). (Metrodorus was one of the founding members of the school, along with Epicurus himself and the contemporary prominent Epicureans Hermarchus and Polyaeus.)

<sup>4</sup> *Letter to Herodotus* (37).

<sup>5</sup> D. Sedley, "The Inferential Foundations of Epicurean Ethics," in *Companions to Ancient Thought: Ethics*, ed. S. Everson (Cambridge: Cambridge University Press, 1998), 129-30. The same text was used as the source for the summary of the ethical system. See also DL X 136, *Letter to Menoeceus* (127-8).

undermine the first principles of belief and tear up all the foundations upon which our life and safety are based.<sup>6</sup>

But Lucretius here is not advocating the abdication of reason but rather explaining that a distrust of the senses would have consequences not only for reasoning, but also for living. He continues, “For if you were not prepared to trust the senses, not only would all reason fall in ruin, but life itself would collapse.”<sup>7</sup>

In principle, then, if the Epicurean system is understood and the epistemological steps are properly followed, the problem of the square towers, and all other problems, can be resolved with reference to perceptions of real objects, which allow us to infer the ultimate constituents of the universe, atoms and void. A most interesting class of Epicurean problems is that of imperfectly perceptible phenomena—the heavenly bodies and meteorological phenomena—which are discussed in detail in the *Letter to Pythocles*. Epicurus was apparently concerned that because these phenomena cannot be perfectly observed, no one explanation for them can be ascertained. It is essential for our peace of mind, however, that doubt concerning the cause of such phenomena be alleviated, especially as the gods may otherwise be thought responsible for them. Thus Epicurus establishes that investigations concerning the heavenly bodies must proceed from our perceptions which lead us to “probable theories” based on analogies between the heavenly phenomena and earthly ones. Of these probable causes, no one explanation is to be rejected. The knowledge that the phenomenon occurs in one way or another which is consistent with our observations is sufficient for disarming our doubts and assuaging our fears.<sup>8</sup>

In all cases, then, whether of perceptible, imperceptible, or imperfectly perceptible phenomena, Epicurus endorses the reliability of perceptions as the means for acquiring

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<sup>6</sup> DRN IV.500-509.

<sup>7</sup> DRN IV.510-513.

<sup>8</sup> See *Letter to Herodotus* (79-80); *Letter to Pythocles* (87).

knowledge and the trust in that knowledge to alleviate all of our fears. Epicurus delivers this message to Herodotus near the end of the *Letter* in these words:

We must pay attention to internal feelings (*pathesi*) and to perceptions (*aisthēsesi*)<sup>9</sup>.... For if we pay attention to these, we shall rightly trace the causes whence arose our mental disturbance and fear, and, by learning the true causes of celestial phenomena and all other occurrences that come to pass...we shall free ourselves from all which produces the utmost fear in other men.<sup>10</sup>

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<sup>9</sup> Bailey translates '*aisthēsesi*' as 'external sensations.'

<sup>10</sup> *Letter to Herodotus* (82).

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