(1955) 364 and n. 56) that Diogenes was here exclusively indebted to Anaximenes; nor is it probable (as Karin Alt argued, *Hermes* 101 (1973), 129ff.) that Aetius in **160** has confused Anaximenes with Diogenes, at least in the οἷον ἡ ψυχή... statement. That is very different, in tone and sophistication, from e.g. **602**, even if Aetius' further comment (...δοκῶν συνεστάναι τὰ ζῷα) could apply to Diogenes.

CONCLUSION

Anaximenes is the last of the great Milesian thinkers. He was obviously indebted to Anaximander, but also probably to Thales, to whose concept of the originative stuff as an actual component of the world he was enabled to return by his great idea of condensation and rarefaction – an observable means of change by which quantity controls kind. This idea was probably accepted by Heraclitus and submerged in a system of a rather different nature; for after the Milesians the old cosmogonical approach, according to which the most important object was to name a single kind of material from which the whole differentiated world could have grown, was both enlarged and moderated. New problems, of theology and of unity in the arrangement, rather than the material, of things, exercised Anaximenes' successors Xenophanes and Heraclitus – although they too (even though the former migrated) were Ionians. Still more basic departures from the Milesian tradition were made in the west. But when the fifth-century thinkers of the east and the mainland (Anaxagoras, Diogenes, Leucippus and Democritus) had recovered from the western elenchus of the Eleatics, it was to the Milesians, and particularly to Anaximenes, that they chiefly turned for details of cosmology; not so much because of the great intuition of a kind of cosmic breath-soul, as because those details had been in part adapted from, and were still protected by, the popular, non-scientific tradition.

CHAPTER V

Xenophanes of Colophon

DATE AND LIFE

161 Diogenes Laertius IX, 18 (DK 21 A 1) Ξενοφάνης Δεξίου ἢ, ὡς Ἀπολλόδωρος, Ὀρθομένους Κολοφώνιος...οὗτος ἐκπεσὼν τῆς πατρίδος ἐν Ζάγκλῃ τῆς Σικελίας διέτριβε καὶ ἐν Κατάνῃ....γέγραφε δὲ ἐν ἔπεσι καὶ ἐλεγείας καὶ ἰάμβους καθ' Ἡσιόδου καὶ Ὁμήρου, ἐπικόπτων αὐτῶν τὰ περὶ θεῶν εἰρημένα. ἀλλὰ καὶ αὐτὸς ἐρραψῴδει τὰ ἑαυτοῦ. ἀντιδοξάσαι τε λέγεται Θαλῇ καὶ Πυθαγόρᾳ, καθάψασθαι δὲ καὶ Ἐπιμενίδου. μακροβιώτατός τε γέγονεν, ὡς που καὶ αὐτός φησιν·

(Fr. 8) ἤδη δ' ἑπτά τ' ἔασι καὶ ἑξήκοντ' ἐνιαυτοὶ
βλῃστρίζοντες ἐμὴν φροντίδ' ἀν' Ἑλλάδα γῆν·
ἐκ γενετῆς δὲ τότ' ἦσαν ἐείκοσι πέντε τε πρὸς τοῖς,
εἴπερ ἐγὼ περὶ τῶνδ' οἶδα λέγειν ἐτύμως.
...(20) καὶ ἤκμαζε κατὰ τὴν ἑξηκοστὴν ὀλυμπιάδα.

162 Clement *Strom.* I, 64, 2 τῆς δὲ Ἐλεατικῆς ἀγωγῆς Ξενοφάνης ὁ Κολοφώνιος κατάρχει, ὃν φησι Τίμαιος κατὰ Ἱέρωνα τὸν Σικελίας δυνάστην καὶ Ἐπίχαρμον τὸν ποιητὴν γεγονέναι, Ἀπολλόδωρος δὲ κατὰ τὴν τεσσαρακοστὴν ὀλυμπιάδα γενόμενον παρατετακέναι ἄχρι Δαρείου τε καὶ Κύρου χρόνων.

161 Xenophanes son of Dexios or, according to Apollodorus, of Orthomenes, of Colophon...he, being expelled from his native land, passed his time in Zancle in Sicily and in Catana...He wrote in epic metre, also elegiacs and iambics, against Hesiod and Homer, reproving them for what they said about the gods. But he himself also recited his own original poems. He is said to have held contrary opinions to Thales and Pythagoras, and to have rebuked Epimenides too. He had an extremely long life, as he himself somewhere says: 'Already there are seven and sixty years tossing my thought up and down the land of Greece; and from my birth there were another twenty-five to add to these, if I know how to speak truly about these things.'...And he was at his prime in the 60th Olympiad.

162 Of the Eleatic school Xenophanes the Colophonian is the pioneer, who Timaeus says lived in the time of Hieron, tyrant of Sicily, and the poet Epicharmus, while Apollodorus says that he was born in the 40th Olympiad and lasted until the times of Darius and Cyrus.

Xenophanes, as opposed to the Milesians, wrote in verse; and a number of fragments of his work have survived. If we assume that he left Colophon in Ionia about the time of its capture by the Medes in 546/5 B.C. (he certainly knew it before this time, since in fr. 3, DK 21 B 3, he referred to the corruption of the Colophonians by Lydian luxury), then from his own words in **161** he would have been born around 570 B.C., twenty-five years earlier. Even if this assumption is made, his great age – at least 92 from his words in **161** – makes it impossible to assign his extant poetry to any narrow period. He referred to Pythagoras (**260**) and Simonides (DK 21 B 21), as well as to Thales and Epimenides – no more is known than the bare fact of his reference to the last three – and was himself referred to by Heraclitus (**190**); and Parmenides was later supposed to be his pupil. All this is possible enough if he lived from *c.* 570 to *c.* 475 B.C. The statement of Timaeus (the fourth-/third-century B.C. historian of Sicily) in **162** is compatible with this assumption, since Hiero reigned from 478 to 467 B.C. and Epicharmus was at Syracuse during this time. Apollodorus is perhaps wrongly reported in **162**: Ol. 40 (620–617 B.C.) is improbably early for Xenophanes' birth, and 'until the times of Darius and Cyrus' is curious, since Cyrus died in 529 and Darius gained power in 521. Yet there is no absolutely positive evidence that Xenophanes died later than e.g. 525, when Pythagoras had not been long in Italy. However, Diogenes in **161**, after mentioning Apollodorus, put Xenophanes' *floruit* in Ol. 60 (540–537 B.C.); this seems to be the true Apollodoran dating, based on the epoch-year of the foundation of Elea (on which Xenophanes was said to have written a poem) in 540.

The details of Xenophanes' life are even more uncertain. Born and brought up in Ionia, and obviously acquainted with the trends of Ionian thought, he was compelled to leave when a young man, and from then on lived a wandering life, chiefly perhaps in Sicily; his connexion with Elea may have been a later invention (see pp. 165f.). He was a poet and sage, a singer of his own songs rather than those of others: he was certainly not, as some have mistakenly assumed from **161**, a Homeric rhapsode. In the longest of his extant elegies (fr. 1, an interesting poem with no immediate philosophical

relevance) he has authority enough to outline the rules of behaviour for the symposium that is to follow; he seems therefore to have been honourably received in aristocratic households.

THE ASSOCIATION OF XENOPHANES WITH ELEA

163 Plato *Sophist* 242D (DK 21 A 29) τὸ δὲ παρ' ἡμῖν Ἐλεατικὸν ἔθνος, ἀπὸ Ξενοφάνους τε καὶ ἔτι πρόσθεν ἀρξάμενον, ὡς ἑνὸς ὄντος τῶν πάντων καλουμένων οὕτω διεξέρχεται τοῖς μύθοις.

164 Aristotle *Met.* A 5, 986b18 Παρμενίδης μὲν γὰρ ἔοικε τοῦ κατὰ τὸν λόγον ἑνὸς ἅπτεσθαι, Μέλισσος δὲ τοῦ κατὰ τὴν ὕλην· διὸ καὶ ὁ μὲν πεπερασμένον, ὁ δ' ἄπειρόν φησιν εἶναι αὐτό· Ξενοφάνης δὲ πρῶτος τούτων ἐνίσας (ὁ γὰρ Παρμενίδης τούτου λέγεται γενέσθαι μαθητής) οὐθὲν διεσαφήνισεν... (For continuation see **174**.)

163 Our Eleatic tribe, beginning from Xenophanes and even before, explains in its myths that what we call all things are actually one.

164 For Parmenides seems to fasten on that which is one in definition, Melissus on that which is one in material; therefore the former says that it is limited, the latter that it is unlimited. But Xenophanes, the first of these to postulate a unity (for Parmenides is said to have been his pupil), made nothing clear...

It is commonly assumed in the doxographers that Xenophanes spent a part at least of his life in Elea, and that he was the founder of the Eleatic school of philosophy. This is exemplified in **162**. That he was Parmenides' master stems from Aristotle in **164**, and was categorically asserted by Theophrastus according to Simplicius (**165**). Yet Aristotle's judgement possibly arises from Plato's remark in **163**. This remark was not necessarily intended as a serious historical judgement (one may compare the statements in the *Theaetetus* (152D–E, 160D) that Homer and Epicharmus were the founders of the Heraclitean tradition), as is confirmed by the addition of the words καὶ ἔτι πρόσθεν, 'and even before'. The connexion between Xenophanes and Parmenides obviously depends on the superficial similarity between the motionless one deity of the former and the motionless sphere of Being in the latter – though it will be seen that Parmenides' theoretical construction was reached in a quite different way from Xenophanes', a way which is in fact incompatible. The extreme example of the treatment of Xenophanes as an Eleatic is seen in the pseudo-Aristotelian *de Melisso Xenophane Gorgia* (DK 21 A 28), a treatise

written probably about the time of Christ in which Xenophanes' god is explained in fully Eleatic terms, and the inference is drawn from Aristotle's judgement in **164** that it was neither limited as in Parmenides nor unlimited as in Melissus. Unfortunately Simplicius, who had not encountered this part of Xenophanes' poetry (*de caelo* 522, 7, DK 21 A 47), relied on this treatise and quoted far less than usual from Theophrastus. Other evidence connecting Xenophanes with Elea is slight: he is said by Diogenes Laertius (IX, 20, DK 21 A 1) to have written 2,000 lines on the foundation of Colophon and the colonization of Elea, but this probably comes from the stichometrist and forger Lobon of Argos and is unreliable; while Aristotle (*Rhet.* B 23, 1400b 5, DK 21 A 13) told an anecdote of some advice of his to the Eleans – but this was a 'floating' anecdote also connected with Heraclitus and others. It is not improbable that Xenophanes visited Elea; that was perhaps the extent of his connexion with it. He was not in any way typical of the new western trend in philosophy initiated by Pythagoras; nor was he typically Ionian, but since his ideas were a direct reaction from Ionian theories and from the originally Ionian Homer he is placed in this book with the Ionians, and not in his probable chronological place after Pythagoras – like him an emigrant from eastern to western Greece.

HIS POEMS

Some of Xenophanes' extant fragments are in elegiac metre, some are hexameters; while **167** consists of an iambic trimeter followed by a hexameter. This accords with Diogenes' mention of these three metres in **161**. Some at any rate of his poems were called Σίλλοι, 'squints' or satires, and the third-century B.C. 'sillographer' Timon of Phlius is said by Sextus (DK 21 A 35) to have dedicated his own Σίλλοι to Xenophanes, about whom he certainly wrote; see also DK 21 A 20–23. According to three late sources, Stobaeus (from an allegorizing author), the Geneva scholiast on the *Iliad*, and Pollux (DK 21 A 36, 21 B 30, 21 B 39), there was a physical work by Xenophanes called Περὶ φύσεως, *On Nature*. The value of this title has already been discussed (p. 102 and pp. 102–3 n. 1), and it is only to be expected that at least some later references to physical opinions in Xenophanes should occur in this form. It is notable that Aetius, who also quoted the passages cited in the first two cases above, said nothing about a Περὶ φύσεως (DK 21 A 36 and 46). That Xenophanes wrote a formal work on physical matters is highly improbable. Theophrastus, we may observe, said that Xenophanes' monistic

conception was not 'physical' in the normal sense.[1] Xenophanes was not, like Anaximenes or Heraclitus, primarily engaged in giving a comprehensive explanation of the natural world. He was particularly interested, without doubt, in theology, and many of his remarks on physical topics are connected with that; others may have been ironical rejections of previous theories, and others again would naturally reflect the interest which many educated Greeks must have felt in natural problems at this time. Such remarks, together with comments on particular poets and thinkers (e.g. **166**; cf. also DK 21 A 22), could have been expressed in separate poems in a variety of metres – though the extant theological and physical fragments are nearly all in hexameters. There may have been a separate collection of convivial songs in elegiacs.

[1] Cf. **165** Simplicius *in Phys.* 22, 26 μίαν δὲ τὴν ἀρχὴν ἤτοι ἓν τὸ ὂν καὶ πᾶν (καὶ οὔτε πεπερασμένον οὔτε ἄπειρον οὔτε κινούμενον οὔτε ἠρεμοῦν) Ξενοφάνην τὸν Κολοφώνιον τὸν Παρμενίδου διδάσκαλον ὑποτίθεσθαί φησιν ὁ Θεόφραστος, ὁμολογῶν ἑτέρας εἶναι μᾶλλον ἢ τῆς περὶ φύσεως ἱστορίας τὴν μνήμην τῆς τούτου δόξης. *(Theophrastus says that Xenophanes the Colophonian, the teacher of Parmenides, supposed the principle to be single, or that the whole of existence was one (and neither limited nor unlimited, neither in motion nor at rest); and Theophrastus agrees that the record of Xenophanes' opinion belongs to another study rather than that of natural philosophy.)* Theophrastus is here misled by Aristotle in **174** into thinking that Xenophanes' one god is definitely non-physical, and is the whole of existence like the Parmenidean Being. But he can hardly have thought this if there was a poem which in any way resembled the works of the Milesians.

HIS IMPORTANCE

Widely different views have been held on the intellectual importance of Xenophanes. Thus Jaeger (*Theology*, 52) writes of his 'enormous influence on later religious development', while Burnet (*EGP*, 129) maintained that 'he would have smiled if he had known that one day he was to be regarded as a theologian'. Burnet's depreciation is certainly much exaggerated. Yet it is plain that Xenophanes differed considerably from the Milesians or Heraclitus or Parmenides. He was a poet with thoughtful interests, especially about religion and the gods, which led him to react against the archetype of poets and the mainstay of contemporary education, Homer. His attacks on Homeric theology must have had a deep influence both on ordinary men who heard his poems and on other thinkers; Heraclitus' attack on blood-purification and images (**241**), for example, was presumably influenced by him. His positive description of deity conceivably lay behind Aeschylus' description of divine power in the *Supplices* (**173**).

The assessment of the true relative merits of poets and athletes (fr. 2) was developed by Euripides in the *Autolycus* (fr. 282 Nauck², DK 21 C 2); this is a less specialized instance of Xenophanes' rational intellectualism. Nor is it safe to exaggerate his non-scientific character on the grounds of his theological interest; the study of gods was not divorced from that of nature, and the deduction from fossils (pp. 177f.), whether or not it reflects original observation, shows careful and by no means implausible argument from observed fact to general hypothesis – a procedure notoriously rare among the Presocratics. Some of his other physical statements are unutterably bizarre, but we cannot tell how serious they were meant to be. He was a critic, primarily, with an original and often idiosyncratic approach; not a specialist but a true σοφιστής or sage, prepared to turn his intelligence upon almost any problem (though as it happens we know of no political pronouncements) – which is why Heraclitus attacked him in **190**. His opinions on almost all subjects deserve careful attention.

THEOLOGY

(i) *Attacks on (a) the immorality, (b) the anthropomorphic nature, of the gods of the conventional religion*

166 Fr. 11, Sextus *adv. math.* IX, 193

πάντα θεοῖς ἀνέθηκαν Ὅμηρός θ' Ἡσίοδός τε
ὅσσα παρ' ἀνθρώποισιν ὀνείδεα καὶ ψόγος ἐστίν,
κλέπτειν μοιχεύειν τε καὶ ἀλλήλους ἀπατεύειν.

167 Fr. 14, Clement *Strom.* V, 109, 2

ἀλλ' οἱ βροτοὶ δοκέουσι γεννᾶσθαι θεούς,
τὴν σφετέρην δ' ἐσθῆτα ἔχειν φωνήν τε δέμας τε.

168 Fr. 16, Clement *Strom.* VII, 22, 1

Αἰθιοπές τε ⟨θεοὺς σφετέρους⟩ σιμοὺς μέλανάς τε
Θρῆκές τε γλαυκοὺς καὶ πυρρούς ⟨φασι πέλεσθαι⟩.

169 Fr. 15, Clement *Strom.* V, 109, 3

ἀλλ' εἰ χεῖρας ἔχον βόες ⟨ἵπποι τ'⟩ ἠὲ λέοντες,
ἢ γράψαι χείρεσσι καὶ ἔργα τελεῖν ἅπερ ἄνδρες,
ἵπποι μέν θ' ἵπποισι βόες δέ τε βουσὶν ὁμοίας
καί ⟨κε⟩ θεῶν ἰδέας ἔγραφον καὶ σώματ' ἐποίουν
τοιαῦθ' οἷόν περ καὐτοὶ δέμας εἶχον ⟨ἕκαστοι⟩.[1]

166 Homer and Hesiod have attributed to the gods everything that is a shame and reproach among men, stealing and committing adultery and deceiving each other.

167 But mortals consider that the gods are born, and that they have clothes and speech and bodies like their own.

168 The Ethiopians say that their gods are snub-nosed and black, the Thracians that theirs have light blue eyes and red hair.

169 But if cattle and horses or lions had hands, or were able to draw with their hands and do the works that men can do, horses would draw the forms of the gods like horses, and cattle like cattle, and they would make their bodies such as they each had themselves.

[1] **168** is convincingly reconstructed by Diels from an unmetrical quotation in Clement. The supplements in **169** are respectively by Diels, Sylburg and Herwerden; the text as in DK. Line 1 of **167** is an iambic trimeter.

Xenophanes' criticisms are clear enough: first, the gods of Homer and Hesiod are often immoral – this is patently true; second, and more fundamental, there is no good reason for thinking that the gods are anthropomorphic at all. Xenophanes brilliantly perceives, first that different races credit the gods with their own particular characteristics (this is an early example of the new anthropological approach which is seen in Herodotus and culminated in the *physis/nomos* distinction); second, as a *reductio ad absurdum*, that animals would also do the same. The conclusion is that such assessments are subjective and without value, and that the established picture in Homer ('according to whom all have learned', fr. 10) of gods as men and women must be abandoned.

(ii) *Constructive theology: there is a single non-anthropomorphic deity*

170 Fr. 23, Clement *Strom.* V, 109, 1

εἷς θεός, ἔν τε θεοῖσι καὶ ἀνθρώποισι μέγιστος,
οὔτι δέμας θνητοῖσιν ὁμοίιος οὐδὲ νόημα.

171 Fr. 26 + 25, Simplicius *in Phys.* 23, 11 + 23, 20

αἰεὶ δ' ἐν ταὐτῷ μίμνει κινούμενος οὐδέν
οὐδὲ μετέρχεσθαί μιν ἐπιπρέπει ἄλλοτε ἄλλῃ,
ἀλλ' ἀπάνευθε πόνοιο νόου φρενὶ πάντα κραδαίνει.

172 Fr. 24, Sextus *adv. math.* IX, 144

οὖλος ὁρᾷ, οὖλος δὲ νοεῖ, οὖλος δέ τ' ἀκούει.[1]

[1] Diog. L. IX, 19 (DK 21 A 1) implies that the words οὐ μέντοι ἀναπνεῖ, 'but does not breathe', formed part of the quotation. This is probably a later version by someone interested in Pythagorean cosmology.

170 One god, greatest among gods and men, in no way similar to mortals either in body or in thought.

171 Always he remains in the same place, moving not at all; nor

is it fitting for him to go to different places at different times, but without toil he shakes all things by the thought of his mind.

172 All of him sees, all thinks, and all hears.

'Greatest among gods and men' in **170** should not be taken literally; men are mentioned by a 'polar' usage, as in Heraclitus fr. 30 (**217**), where this world-order was made by 'none of gods or men'. This is probably just an emphatic device, rather than (as Barnes claims, *The Presocratic Philosophers* I, 89–92) part of an argument that a hierarchy of gods is logically impossible. In fact Xenophanes wrote of 'gods' in other places also, e.g. in **188**; partly, no doubt, this was a concession, perhaps not a fully conscious one, to popular religious terminology. It seems very doubtful whether Xenophanes would have recognized other, minor deities as being in any way related to the 'one god', except as dim human projections of it. The one god is unlike men in body and thought – it has, therefore (and also in view of **172**), a body; but it is motionless,[1] for the interesting reason that it is 'not fitting' for it to move around. Xenophanes thus appears to accept the well-established Greek criterion of *seemliness*.[2] Not only is it unfitting for the god to move, but movement is actually unnecessary, for the god 'shakes all things by the active will proceeding from his insight' (**171**, line 3).[3] This insight is related to seeing and hearing, but like them is accomplished not by special organs but by the god's whole unmoving body. This remarkable description was reached, probably, by taking the very antithesis of the characteristics of a Homeric god. That thought or intelligence can affect things outside the thinker, without the agency of limbs, is a development – but a very bold one – of the Homeric idea that a god can accomplish his end merely by implanting, for example, Infatuation (Ἄτη) in a mortal. That it seemed a plausible idea is shown by its acceptance and expansion by Aeschylus.[4]

[1] It was probably because of its motionless unity that Xenophanes' god was identified with Parmenides' Being, and later absorbed some of its properties. As early as Timon of Phlius it is called 'equal in every way' (ἴσον ἀπάντῃ, cf. μεσσόθεν ἰσοπαλὲς πάντῃ in Parmenides, **299**), and so becomes credited with spherical shape. Xenophanes may have described it as 'all alike' (ὁμοίην in Timon fr. 59, DK 21 A 35), since this is implicit in the whole of it functioning in a particular way as in **172**; its sphericity goes beyond the fragments and is perhaps debatable.

[2] J. Barnes, *op. cit.* I, 85f., interestingly maintains that 'seemliness' is logical: 'it is not logically possible... that divinities locomote'.

[3] This translation is based on K. von Fritz, *CP* 40 (1945), 230, who has a good discussion of the sense of νόος and φρήν. The phrase νόου φρενί looks more curious than it is; it is obviously based on νόει φρεσί and νοέω φρεσί at *Iliad* IX, 600 and XXII, 235 respectively. Further, κραδαίνει can only mean 'shakes', which suggests that Xenophanes had in mind *Il.* I, 530, where Zeus shakes great Olympus with a nod of his head. These are other indications that Xenophanes' god is more Homeric (in a negative direction) than it seems.

[4] **173** Aeschylus *Supplices* 96–103 (Ζεύς) / ἰάπτει δ' ἐλπίδων / ἀφ' ὑψιπύργων πανώλεις / βροτούς, βίαν δ' οὔτιν' ἐξοπλίζει. / πᾶν ἄπονον δαιμονίων. / ἡμενος δν φρόνημά πως / αὐτόθεν ἐξέπραξεν ἐμ-/πας ἑδράνων ἀφ' ἁγνῶν. *([Zeus] hurls mortals in destruction from their high-towered expectations, but puts forth no force: everything of gods is without toil. Sitting, he nevertheless at once accomplishes his thought, somehow, from his holy resting-place.)* In some ways this reminds one of Solon; we cannot be quite sure that Xenophanes' view of deity was as original as it now seems to be.

(iii) *Is the one god coextensive with the world?*

174 Aristotle *Met.* A5, 986b21 (for what precedes see **164**) ...Ξενοφάνης δὲ πρῶτος τούτων ἐνίσας (ὁ γὰρ Παρμενίδης τούτου λέγεται γενέσθαι μαθητής) οὐθὲν διεσαφήνισεν, οὐδὲ τῆς φύσεως τούτων οὐδετέρας (*sc.* formal or material unity) ἔοικε θιγεῖν, ἀλλ' εἰς τὸν ὅλον οὐρανὸν ἀποβλέψας τὸ ἓν εἶναί φησι τὸν θεόν.

174 ...but Xenophanes, the first of these to postulate a unity (for Parmenides is said to have been his pupil), made nothing clear, nor does he seem to have touched the nature of either of these [*sc.* Parmenides' formal unity or Melissus' material unity]; but with his eye on the whole heaven he says that the One is god.

Xenophanes arrived at the concept of one god by reaction from Homeric anthropomorphic polytheism; Parmenides arrived at the sphere of Being by logical inference from a purely existential axiom. The processes are absolutely different, and, as has already been emphasized, Parmenides is unlikely to have been a pupil of Xenophanes, even though he might have noted the older poet's view with some interest. Aristotle obviously could not understand what Xenophanes meant by his one motionless god, but complained that he 'made nothing clear' and went on to dismiss both him and Melissus as being 'rather too uncouth' (μικρὸν ἀγροικότεροι). This puzzlement of Aristotle's suggests that Xenophanes did not produce a discursive elaboration of his theological views, which might not, indeed, have gone very far beyond the extant fragments on the subject. Aristotle's implication that the one god was neither immaterial (as he thought Parmenides' One to be) nor material like Melissus' One (cf. **164**) was due to the presence of both corporeal and apparently non-corporeal elements in Xenophanes' description – the body, δέμας, on the one hand (**170**), and the shaking of all things by intellect on the other (**171**). It is significant here that Aristotle did not adduce Anaxagoras' Nous (which was the ultimate source of

movement and the finest kind of body, and which permeated some but not all things) in illustration of Xenophanes' deity. Instead he made the cryptic remark that Xenophanes 'with his eye on the whole world said that the One was god' '(for οὐρανός can hardly mean 'first heaven' here). This clearly implies that god is identical with the world, which is what Theophrastus seems to have assumed (**165**). But Aristotle must be wrong here: how could the god be motionless if it is identical with a world which is itself implied to move (**171**)? It is probable, indeed, that although Xenophanes' god is not a direct development from the cosmogonical tradition, yet it is to some extent based upon the Milesian idea of a divine substance which, in the case of Thales and Anaximenes, was regarded as somehow permeating objects in the world and giving them life and movement. Yet Xenophanes cannot have precisely worked out the local relationship of the god on the one hand and the manifold world (which he cannot have intended to reject) on the other. Aristotle, by treating him as a primitive Eleatic, misled the whole ancient tradition on this point. The conclusion seems to be that Xenophanes' god was conceived as the negation of Homeric divine properties, and was not precisely located – any more than the old Homeric gods were thought by Xenophanes' contemporaries to be necessarily located on Olympus. It had a body of sorts because totally incorporeal existence was inconceivable, but that body, apart from its perceptual-intellectual activity, was of secondary importance, and so perhaps was its location.

PHYSICAL IDEAS

(i) *The heavenly bodies*

175 Hippolytus *Ref.* 1, 14, 3 τὸν δὲ ἥλιον ἐκ μικρῶν πυριδίων ἀθροιζομένων γίνεσθαι καθ' ἑκάστην ἡμέραν, τὴν δὲ γῆν ἄπειρον εἶναι καὶ μήτε ὑπ' ἀέρος μήτε ὑπὸ τοῦ οὐρανοῦ περιέχεσθαι. καὶ ἀπείρους ἡλίους εἶναι καὶ σελήνας, τὰ δὲ πάντα εἶναι ἐκ γῆς.

176 Ps.-Plutarch *Strom.* 4 (DK21A32) τὸν δὲ ἥλιόν φησι καὶ τὰ ἄστρα ἐκ τῶν νεφῶν γίνεσθαι.

177 Aetius II, 20, 3 Ξενοφάνης ἐκ νεφῶν πεπυρωμένων εἶναι τὸν ἥλιον. Θεόφραστος ἐν τοῖς Φυσικοῖς γέγραφεν ἐκ πυριδίων μὲν τῶν συναθροιζομένων ἐκ τῆς ὑγρᾶς ἀναθυμιάσεως, συναθροιζόντων δὲ τὸν ἥλιον.

178 Fr. 32, Σ bT *in Iliadem* XI, 27

ἣν τ' Ἶριν καλέουσι, νέφος καὶ τοῦτο πέφυκε,
πορφύρεον καὶ φοινίκεον καὶ χλωρὸν ἰδέσθαι.

179 Aetius II, 24, 9 Ξενοφάνης πολλοὺς εἶναι ἡλίους καὶ σελήνας κατὰ κλίματα τῆς γῆς καὶ ἀποτομὰς καὶ ζώνας, κατὰ δέ τινα καιρὸν ἐκπίπτειν τὸν δίσκον εἴς τινα ἀποτομὴν τῆς γῆς οὐκ οἰκουμένην ὑφ' ἡμῶν καὶ οὕτως ὥσπερ κενεμβατοῦντα ἔκλειψιν ὑποφαίνειν· ὁ δ' αὐτὸς τὸν ἥλιον εἰς ἄπειρον μὲν προϊέναι, δοκεῖν δὲ κυκλεῖσθαι διὰ τὴν ἀπόστασιν.

175 The sun comes into being each day from little pieces of fire that are collected, and the earth is infinite and enclosed neither by air nor by the heaven. There are innumerable suns and moons, and all things are made of earth.

176 He says that the sun and the stars come from clouds.

177 Xenophanes says that the sun is made of ignited clouds. Theophrastus in the *Physical Philosophers* wrote that it is made of little pieces of fire collected together from the moist exhalation, and themselves collecting together the sun.

178 What they call Iris [rainbow], this too is cloud, purple and red and yellow to behold.

179 Xenophanes said there are many suns and moons according to regions, sections and zones of the earth, and that at a certain time the disc is banished into some section of the earth not inhabited by us, and so treading on nothing, as it were, produces the phenomenon of an eclipse. The same man says that the sun goes onwards *ad infinitum*, but seems to move in a circle because of the distance.

There is a divergence in the doxographical accounts of the constitution of the heavenly bodies: were they a *concentration of fiery particles* as the sun is said to be in **175**, the second part of **177**, and ps.-Plutarch a few sentences before **176**; or *ignited clouds* as is said of sun and stars in **176**, of the sun in **177**, and of the stars, which are said to rekindle at night like embers, in Aetius II, 13, 14, DK21A38? Theophrastus is named in **177** as supporting the former view, but the latter also, which is widely represented in the doxographers, must somehow stem from him. It seems possible that the idea of the sun, at least, as a concentration of fire, which arose from the exhalation from the sea, is in part due to a conflation of Xenophanes with Heraclitus, who probably thought that the bowls of the heavenly bodies were filled with fire nourished in their courses by the exhalation (**224**). Heraclitus

also thought that the sun was new every day, which accords with Xenophanes in **175**. But Heraclitus was certainly influenced in other respects by Xenophanes, and the similarity here might be so caused. Yet are the two theories as different as they appear to be at first sight? It is conceivable that the concentrations of fire *resemble* fiery clouds, and that some such statement in Theophrastus became dissected in the epitomes. Alternatively, the sun alone, because of its special brightness, might be a 'concentration' of fire, the other heavenly bodies being merely ignited clouds. That Xenophanes explained the rainbow as a cloud (a development, perhaps, of Anaximenes, cf. p. 158) is demonstrated by **178**; according to Aetius II, 18, 1 (DK21A39) what we term St Elmo's fire was due to little clouds ignited by motion, and perhaps this explains the καί in **178** line 1. It is not safe to deduce from this particle that some heavenly bodies were clouds; though it seems possible that this was in fact Xenophanes' view. It is notable that this (as opposed to some of his other ideas) is an entirely reasonable physical theory, which proves that Xenophanes cannot be classified solely as a theologian; though it is possible enough that his motive for giving physical explanations of the heavenly bodies was to disprove the popular conception of them as gods. This is certainly implied by the phrase 'what men call Iris' in **178**.

Hippolytus' statement in **175** that there are 'innumerable suns and moons' seems to refer to the rekindling of the sun (and presumably also of the moon) each day; but in **179** a completely different and much more bizarre explanation is given. There are many suns and moons in different regions, zones or segments of the earth; eclipses of the sun are caused by our sun as it were treading on nothing and being forced into another segment not inhabited by 'us'. The concluding sentence of **179**, however, accords with the view of **175** that the sun is new every day. There is certainly a confusion here by Aetius or his source. It seems probable that the plurality of suns and moons is simply due to their being renewed each day; that Xenophanes explained eclipses as caused by the sun withdrawing to another region of the earth; and that the two ideas became confused. That the sun continues westward indefinitely looks like a deliberately naïve statement of the anti-scientific viewpoint (Heraclitus perhaps reacted in a similar way to excessive dogmatism about astronomy, cf. fr. 3). It is possible that the segments of the earth were regarded as hollow depressions, as in Plato's *Phaedo* myth; this might seem to account for the sun's apparent rising and setting, though not its disappearance at eclipses. Whatever is the true explanation, it is clear

that Xenophanes permitted himself a certain degree of fantasy here (and possibly, judging by the expression 'treading on nothing', of humour). Perhaps there was some kind of irony, too; at any rate the explanation of eclipses must be plainly distinguished from his more empirical, if not necessarily original, views on the actual constitution of the heavenly bodies.[1]

[1] The same combination of a bizarre original statement by Xenophanes and misunderstanding by the doxographers probably accounts for Aetius' mention (II, 24, 4, DK21A41) of a month-long, and a continuous, eclipse.

(ii) *The earth's roots*

180 Fr. 28, Achilles *Isag.* 4, p. 34, 11 Maass

γαίης μὲν τόδε πεῖρας ἄνω παρὰ ποσσὶν ὁρᾶται
ἠέρι προσπλάζον, τὸ κάτω δ' ἐς ἄπειρον ἱκνεῖται.[1]

[1] ἠέρι Diels, αἰθέρι Karsten, καὶ ῥεῖ MSS. Both suggested emendations are possible, but the former is in every respect preferable: -ει was written for -ι by a common misspelling, and then καὶ was substituted for what appeared to be an impossible disjunctive ἠὲ.

180 Of earth this is the upper limit which we see by our feet, in contact with air; but its underneath continues indefinitely.

Xenophanes seems to be reacting against the Homeric and Hesiodic descriptions of Tartarus (the underparts of the earth in some sense) as being as far below earth as sky is above it (*Il.* VIII, 16 **1**; *Theog.* 720). That picture is in any case not altogether clear, and at *Theog.* 727f., **2**, earth's 'roots' are said to be above Tartarus; but in any event the distances involved are huge, indefinitely large in fact. Yet Xenophanes' intention may not have been to amend or controvert Homer and Hesiod on this particular matter (as he had done over theology, cf. on **166** above), as to take issue, perhaps in the sceptical spirit of **186** below, with Milesian dogmatism on such points (cf. e.g. **84** (Thales), **122** (Anaximander), **150** (Anaximenes)). He was rebuked for his pains by Aristotle (*de caelo* B13, 294a21, DK21A47), for idleness in not seeking a proper explanation!

(iii) *Water, or sea, and earth*

181 Fr. 29, Simplicius *in Phys.* 189, 1

γῆ καὶ ὕδωρ πάντ' ἐσθ' ὅσα γίνοντ' ἠδὲ φύονται.

182 Fr. 33, Sextus *adv. math.* X, 34

πάντες γὰρ γαίης τε καὶ ὕδατος ἐκγενόμεσθα.

183 Fr. 30, Σ Genav. *in Iliadem* XXI, 196

πηγὴ δ' ἐστὶ θάλασσ' ὕδατος, πηγὴ δ' ἀνέμοιο·
οὔτε γὰρ ἐν νέφεσιν ⟨γίνοιτό κε ἴς ἀνέμοιο
ἐκπνείοντος⟩ ἔσωθεν ἄνευ πόντου μεγάλοιο
οὔτε ῥοαὶ ποταμῶν οὔτ' αἰ⟨θέρος⟩ ὄμβριον ὕδωρ,
ἀλλὰ μέγας πόντος γενέτωρ νεφέων ἀνέμων τε
καὶ ποταμῶν.

181 All things that come-to-be and grow are earth and water.
182 For we all came forth from earth and water.
183 Sea is the source of water, and source of wind; for neither ⟨would there be the force of wind blowing forth from⟩ inside clouds without the great ocean, nor river-streams nor the showery water from the upper air: but the great ocean is begetter of clouds and winds and rivers.

The idea that everything, men included, is composed of and originates from water and earth is a naïve popular one: flesh and bone may be compared with earth and stone, blood with water. Compare our burial service, 'earth to earth, ashes to ashes, dust to dust'; and *Iliad* VII, 99, 'but may you all become earth and water'. Further, the surface of the earth, that which lies by our feet (**180**), is obviously broadly composed of earth and sea. Xenophanes takes this simple apprehension and develops it into a rudimentary physical theory in **183** (where the main supplement is by Diels): sea, which is the most extensive form of water, is noted as the source of all rivers as in Homer (see **6**), but also of rain and of clouds (which Anaximander had assumed to be condensations of the exhalation from the sea) and of the winds which appear to issue from clouds. This importance attached to the sea gains significance from the observation and deduction to be described in the next section, that the earth's surface in its present form must have developed from sea.

(iv) *The earth's surface becomes sea once again*

184 Hippolytus *Ref.* 1, 14, 5 ὁ δὲ Ξενοφάνης μίξιν τῆς γῆς πρὸς τὴν θάλασσαν γίνεσθαι δοκεῖ καὶ τῷ χρόνῳ ὑπὸ τοῦ ὑγροῦ λύεσθαι, φάσκων τοιαύτας ἔχειν ἀποδείξεις, ὅτι ἐν μέσῃ γῇ καὶ ὄρεσιν εὑρίσκονται κόγχαι, καὶ ἐν Συρακούσαις δὲ ἐν ταῖς λατομίαις λέγει εὑρῆσθαι τύπον ἰχθύος καὶ φυκῶν [Gomperz; φωκῶν MSS], ἐν δὲ Πάρῳ τύπον δάφνης ἐν τῷ βάθει τοῦ λίθου, ἐν δὲ Μελίτῃ πλάκας συμπάντων τῶν θαλασσίων. (6) ταῦτα δέ φησι γενέσθαι ὅτε πάντα ἐπηλώθησαν πάλαι, τὸν δὲ τύπον ἐν τῷ πηλῷ ξηρανθῆναι. ἀναιρεῖσθαι δὲ τοὺς ἀνθρώπους πάντας ὅταν ἡ γῆ κατενεχθεῖσα εἰς τὴν θάλασσαν πηλὸς

γένηται, εἶτα πάλιν ἄρχεσθαι τῆς γενέσεως, καὶ ταύτην πᾶσι τοῖς κόσμοις γίνεσθαι καταβολήν [H. Lloyd-Jones; καταβάλλειν MSS, μεταβολήν Diels, DK].

185 Fr. 37, Herodian π. μον. λέξ. 30, 30

καὶ μὲν ἐνὶ σπεάτεσσί τεοις καταλείβεται ὕδωρ.

184 Xenophanes thinks that a mixture of the earth with the sea is going on, and that in time the earth is dissolved by the moist. He says that he has demonstrations of the following kind: shells are found inland and in the mountains, and in the quarries in Syracuse he says that an impression of a fish and of seaweed has been found, while an impression of a bay-leaf was found in Paros in the depth of the rock, and in Malta flat shapes of all marine objects. These, he says, were produced when everything was long ago covered with mud, and the impression was dried in the mud. All mankind is destroyed whenever the earth is carried down into the sea and becomes mud; then there is another beginning of coming-to-be, and this foundation happens for all the worlds.
185 And in some caves water drips down.

The deduction based upon fossils is a remarkable and impressive one. The enumeration of different occurrences is in itself unusually scientific; the assertion ascribed to Xenophanes in the Aristotelian *Mirabilia* (DK 21 A 48), that Stromboli tended to erupt in the seventeenth year, shows a similar method. Not that the poet himself need have observed fossils in all three places – fossil-impressions might naturally arouse popular curiosity, and so become known; though it is notable that two of the three places were in Xenophanes' Sicilian orbit. (Paros has been doubted on geological grounds; but its north-eastern part is neither marble nor schist, and could have contained fossils. The Director of the Institute for Geology, Athens, confirms that plant fossils have been found there.) We cannot be sure that the observations were first made in Xenophanes' lifetime; they might also have been available to Anaximander. However, Xenophanes may have been the first to draw attention to the real significance of fossils. The conjecture that the earth's surface had once been mud or slime was again not new; this was a Milesian theory possibly originating with Thales and certainly held by Anaximander, who believed that life started from mud. The fossils, however, seemed to be positive proof. It has been seen (pp. 139f.) that Alexander attributed to Anaximander (as well as to Diogenes) the belief that the sea is diminishing and will eventually dry up. In Anaximander,

however, there is no positive information that the process is a cyclical one. Hippolytus in **184** *ad fin.* definitely ascribes a cyclical theory to Xenophanes: the earth must once have been mud because plants once existed in what is now rock, fishes in what is now dry land, and men are destroyed when it turns back to mud; then they are produced anew, and this happens for all the arrangements of the earth's surface. Thus Xenophanes accepted that living creatures come from mud, after Anaximander; but while Anaximander seems to have seen their destruction as arising from extreme drought, for Xenophanes it was due to flood; it has already been suggested that myths of great catastrophes, notably the flood of Deucalion and Pyrrha and the earth-scorching of Phaethon, may have provided a precedent for this kind of theory. This divergence between the two thinkers was connected with divergent interpretations of the present trend of change in the earth's surface: for Anaximander it was drying up, for Xenophanes it was already turning back into sea or mud. This might have been a conscious correction on the part of the latter; for it may not be coincidence that the sea was receding round Miletus, but in Sicily was supposed to have engulfed the land-bridge which became the Messina strait.

The cyclical transformations between earth and sea – neither of which, however, can have been completely eliminated – were clearly related to the assertions in **181** and **182** that things come from earth and sea; while the products of sea in **183** showed that sea is surprisingly potent. **185**, fragmentary as it is, may be intended to illustrate the passage between the two basic materials; Diels and others have thought of stalactitic caves, i.e. of water turning to earth (rock not being clearly differentiated), while Deichgräber (*Rh. M.* 87 (1938), 16) considered that both this and the reverse process might be meant; certainly, damp caves can appear to produce moisture from earth. This, like much else, remains uncertain (for example, at what stage is the drying-up of the sea reversed?). The clear exposition of a cyclical theory supported by concrete evidence is indisputable, and once again shows that Xenophanes must be seriously reckoned with.[1]

[1] The way in which such a cyclical theory could encourage the doxographers in an innumerable-world interpretation is demonstrated by the ambiguous use of κόσμοις in **184** (there properly 'world-arrangements', i.e. of the earth's surface, but appearing to mean 'separate worlds').

THE LIMITATIONS OF HUMAN KNOWLEDGE

186 Fr. 34, Sextus *adv. math.* VII, 49 and 110, cf. Plutarch *Aud. poet.* 2, 17E

καὶ τὸ μὲν οὖν σαφὲς οὔτις ἀνὴρ ἴδεν οὐδέ τις ἔσται
εἰδὼς ἀμφὶ θεῶν τε καὶ ἅσσα λέγω περὶ πάντων·
εἰ γὰρ καὶ τὰ μάλιστα τύχοι τετελεσμένον εἰπών,
αὐτὸς ὅμως οὐκ οἶδε· δόκος δ' ἐπὶ πᾶσι τέτυκται.

187 Fr. 35, Plutarch *Symp.* IX, 7, 746B

ταῦτα δεδοξάσθω μὲν ἐοικότα τοῖς ἐτύμοισι...

188 Fr. 18, Stobaeus *Anth.* I, 8, 2

οὔτοι ἀπ' ἀρχῆς πάντα θεοὶ θνητοῖσ' ὑπέδειξαν,
ἀλλὰ χρόνῳ ζητοῦντες ἐφευρίσκουσιν ἄμεινον.

189 Fr. 38, Herodian π. μον. λέξ. 41, 5

εἰ μὴ χλωρὸν ἔφυσε θεὸς μέλι, πολλὸν ἔφασκον
γλύσσονα σῦκα πέλεσθαι.

186 No man knows, or ever will know, the truth about the gods and about everything I speak of; for even if one chanced to say the complete truth, yet oneself knows it not; but seeming is wrought over all things [*or* fancy is wrought in the case of all men].
187 Let these things be opined as resembling the truth...
188 Yet the gods have not revealed all things to men from the beginning; but by seeking men find out better in time.
189 If god had not made yellow honey, men would consider figs far sweeter.

It has been suggested by K. Deichgräber (*Rh. M.* 87 (1938), 23ff.) that Xenophanes in his utterances on the shortcomings of human knowledge is developing a common poetical contrast between the comparative ignorance of the poet and the all-knowledge of the Muse whom he calls on to assist him: cf. e.g. Homer *Il.* II, 485f., Pindar *Paean* 6, 51ff. Yet this contrast is merely a special form of that between the capacity of the gods in general and the limitations of men, which is restated, after Xenophanes, by Heraclitus in fr. 78 (**205**) and by Alcmaeon in fr. 1 (**439**). In Xenophanes himself it is implicit, too, in the assertion of **170** that the one god is unlike men either in body or in thought. Parmenides, when he came to propose dogmatic views which could not be corroborated from human experience, gave them the form of a divine revelation. Yet there is no indication that Xenophanes claimed anything like a revelation; **188** suggests that

arduous investigation is rewarded, and the probability is that he, like Heraclitus, felt himself to be in a special state of insight for this reason. Deichgräber also thought that **186** was intended as the prooemium of the physical doctrine, not of the constructive theology; but it seems most unlikely that the plural of ἀμφὶ θεῶν should be taken literally to mean 'about the gods of conventional religion'; the phrase means simply 'about theology'. The assumption of two distinct poems is, it has been suggested, a dubious one; and this is confirmed by the linking of 'theology' and 'what I say about all things'. The constructive description of the one god must ultimately have come within the scope of **186**; it was the antithesis of the mistaken Homeric concept, but, though it might be 'like the truth' in the words of **187**, it could not be taken as absolutely certain. Even Xenophanes' special position as one who had given much attention to the subject could not ensure that. However, Xenophanes did not suggest that one could not be certain that a belief was *wrong*; and his destructive criticism of the Homeric gods, based as it was on a demonstrated subjectivity, might be accepted as true.

189 shows that Xenophanes thought about problems of relationship, which were to be especially significant for Heraclitus (pp. 188f.). For Xenophanes the observation about honey (which may have been proverbial) presumably confirmed his beliefs about the limitation of knowledge – again the contrast between god, or gods, and men is conspicuously present. Once again Xenophanes was developing an idea already implicit in popular literature and giving it a special philosophical significance. After the dogmatism of the Milesians (and also of Pythagoras, mocked by Xenophanes in **260** for his extravagant theory of metempsychosis) an appeal to caution was salutary, and from this time on there was certainly more verbal reference to the broadest aspects of epistemology. But Xenophanes' revival of the traditional doctrine of human limitations, this time in a partly philosophical context, did little else that is noticeable to curb the naturally over-dogmatic tendency of Greek philosophy in its first buoyant stages.[1]

[1] See also J. Barnes, *op. cit.* I, ch. VIII, for a fuller and more exuberant discussion of Xenophanean 'scepticism' – although much of what he suggests is possible rather than probable.

CHAPTER VI

Heraclitus of Ephesus

DATE AND LIFE

190 Diogenes Laertius IX, 1 (DK 22 A 1) Ἡράκλειτος Βλόσωνος ἢ, ὥς τινες, Ἡράκωντος Ἐφέσιος. οὗτος ἤκμαζε μὲν κατὰ τὴν ἐνάτην καὶ ἑξηκοστὴν ὀλυμπιάδα. μεγαλόφρων δὲ γέγονε παρ' ὀντιναοῦν καὶ ὑπερόπτης, ὡς καὶ ἐκ τοῦ συγγράμματος αὐτοῦ δῆλον, ἐν ᾧ φησι· (Fr. 40) Πολυμαθίη νόον ἔχειν οὐ διδάσκει· Ἡσίοδον γὰρ ἂν ἐδίδαξε καὶ Πυθαγόρην αὖτίς τε Ξενοφάνεά τε καὶ Ἑκαταῖον... (3)...καὶ τέλος μισανθρωπήσας καὶ ἐκπατήσας ἐν τοῖς ὄρεσι διητᾶτο, πόας σιτούμενος καὶ βοτάνας. καὶ μέντοι καὶ διὰ τοῦτο περιτραπεὶς εἰς ὕδερον κατῆλθεν εἰς ἄστυ καὶ τῶν ἰατρῶν αἰνιγματωδῶς ἐπυνθάνετο εἰ δύναιντο ἐξ ἐπομβρίας αὐχμὸν ποιῆσαι· τῶν δὲ μὴ συνιέντων αὐτὸν εἰς βούστασιν κατορύξας τῇ τῶν βολίτων ἁλέᾳ ἤλπισεν ἐξατμισθήσεσθαι. οὐδὲν δὲ ἀνύων οὐδ' οὕτως ἐτελεύτα βιοὺς ἔτη ἑξήκοντα.

190 Heraclitus son of Bloson (or, according to some, of Herakon) of Ephesus. This man was at his prime in the 69th Olympiad. He grew up to be exceptionally haughty and supercilious, as is clear also from his book, in which he says: 'Learning of many things does not teach intelligence; if so it would have taught Hesiod and Pythagoras, and again Xenophanes and Hecataeus.'... Finally he became a misanthrope, withdrew from the world, and lived in the mountains feeding on grasses and plants. However, having fallen in this way into a dropsy he came down to town and asked the doctors in a riddle if they could make a drought out of rainy weather. When they did not understand he buried himself in a cow-stall, expecting that the dropsy would be evaporated off by the heat of the manure; but even so he failed to effect anything, and ended his life at the age of sixty.

The information that Heraclitus was at his *acme*, i.e. aged forty, in Ol. 69 (504–501 B.C.) was doubtless taken from the chronographer Apollodorus: Heraclitus' middle age is placed about forty years after Anaximenes' assumed *acme* and Xenophanes' departure from Colophon. There is no need seriously to doubt Apollodorus' dating