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THE BIOGRAPHICAL TRADITION OF THE PRESOCRATICS

The secondary evidence for Presocratic philosophy has been the subject of much investigation and comment, and its main characteristics have been fairly well established. The late doxographers, who were once treated as independent authorities, are now known to have derived many of their reports directly or indirectly from the Physical Opinions of Theophrastus. He in turn appears to have compiled his work in large part from the interpretations and criticisms of Aristotle. This means not only that the doxographical tradition has been limited in a general way by the questions that Aristotle asks and by the presuppositions on which he seeks answers to them; it also means that the details of the tradition must be scrutinized so that we may know how far the influence of Aristotle extends and how far Theophrastus and the doxographers may have used evidence from other sources.

One such detail is the link between philosophers as teacher and student. Thales is said to have been the teacher of Anaximander. Anaximander is said to have had two students. One of them, Anaximenes, carries on Ionian monism and is the teacher of Anaxagoras, who is the teacher of Archelaus, who is the teacher of Socrates. Anaximander's other student, Xenophanes, is said to have been the teacher of Parmenides, who is the teacher of Empedocles, Zeno, and Leucippus. The last of these is the teacher of Democritus, who is the teacher of Metrodorus. This is the scheme presented in the excerpts from the Opinions of Theophrastus; with some variations and additions it is found throughout the doxographers. It provides the framework for modern histories of the Presocratics; and it has been used not only to establish the historical relationship between individual philosophers and schools, but also -- when this relationship has been established -- to fill in gaps in the evidence for the philosophers' doctrines.

The influence of it on our thinking about the Presocratics becomes apparent if we imagine constructing an ordered account of them without its aid. We may reject it in part and favor one of several variants; we may treat it cursorily in introductory footnotes; but it must be reckoned with and in a real sense is a starting-point.

Thus, for example, in one of the introductory paragraphs of his chapter on Leucippus, Burnet has this to say: "Theophrastus found Leukippos described as an Eleate in some authorities, and, if we may trust analogy, that means he had settled in Elea. It is possible that his emigration was connected with the revolution at Miletos in 450-49 B. C. In any case, Theophrastus says distinctly that he had been a member of the school of Parmenides, and his words suggest that the founder of that school was then still at its head. He may well have been so, if we accept Plato's chronology" (E.G.P. pp. 331-2). From this Burnet goes on to an argument by which he reconciles the relationship between Parmenides and Leucippus with the fact that the doctrine attributed to Leucippus by Theophrastus is "prima facie just the opposite of that maintained by Parmenides." He says that "we must not suppose Theophrastus himself believed the theories to be as far apart as they seem," and as proof he refers to the reconstruction of atomism given by Aristotle in the De Generatione. Now, a comparison of Aristotle with Theophrastus will show that this passage of Aristotle was probably the source for most of what Theophrastus says about Leucippus' doctrine. (Cf. Theophr. P.O. fr. 8 and Arist. Gen. Corr. 324B35-325A34.) What Burnet has done, then, is to show that the biographical connection reported by Theophrastus is not inconsistent with the reconstruction borrowed by Theophrastus from Aristotle. By accepting this reconstruction, Burnet is able to accept the affiliation of Parmenides and Leucippus as teacher and student; in return, this affiliation lends credibility to the interpretation and enables Burnet to distinguish Leucippus as an individual philosopher whose theories and motives can be reconstructed. Burnet says that no one later than Theophrastus

was able to separate the doctrines of Leucippus from those of Democritus (op. cit. p. 337); actually, even before Theophrastus Aristotle was apparently unable to do so -- at least with regard to their fundamental concepts -- for he assigns the same theory now to one, now to the other, and now to both (Meta. B 4-5; Gen. Corr. 325 A 1, 23; fr. 208 Rose).

The statement about the relationship of Leucippus and Parmenides, we may suspect, owes its acceptance as much to the lack of our knowledge about the life of Leucippus as it does to the authority of Theophrastus. What is involved in accepting Theophrastus' statement of biographical facts uncritically will become clearer if we examine another biographical statement for which there is more evidence from other quarters. Theophrastus says that Xenophanes was the student of Anaximander and the teacher of Parmenides (P.O. fr. 6a). As far as authority is concerned, this statement has just as much claim as the one about Parmenides and Leucippus; but scholars have generally rejected it as confidently as they have accepted the other. The arguments against the relationship between Xenophanes and Parmenides are familiar, but it seems advisable to review the whole question again because this case appears to be typical.

Xenophanes' work has been preserved in some forty fragments, of which only two are as much as twenty verses long and most are from one to four verses. In none does he allude to either his teacher or his students. One is reported to be a reference to Pythagoras (Fr. 7); but, since the dates of Pythagoras are questionable, this is of little help even for determining when Xenophanes lived. Two quotations from Xenophanes' poems may, however, refer to a historical event that is known from other sources. In one he asks: "How old were you when the Mede came?" (Fr. 22,5) In the other he gives what has been thought to be his own answer:

"Already now have sixty years and seven
Tossed my thoughts about Hellenic land;
Ere that, there were twenty-five from my birthday,
If I know to speak the truth on this" (Fr. 8, trans, Bowra).

It has been suggested that the coming of the Mede is the capture of Asia Minor by Harpagus in 540 B. C. and that in the second quotation Xenophanes means that then, at the age of twenty-five, he began a life of exile from his native city Colophon. If this is so, Xenophanes was born in 565 B. C., left Colophon in 540, and was still alive and writing in 473 at the age of ninety-two. This interpretation of the fragments may for our purpose be allowed to stand; but it should be pointed out that the fragments are in different metres, are, therefore, from different poems, and may refer to entirely different events. The philosophic journey is common enough in early Greek writings that we do not need to take Xenophanes' words as a literal description of exile.

The secondary evidence about Xenophanes is authors before Aristotle is meagre. The only mention of him by another Presocratic is found in one fragment of Heraclitus, who gives him -- along with Hesiod, Pythagoras and Hecataeus -- as proof that much learning does not teach understanding (Fr. 16). Heraclitus refers to Xenophanes in the past tense and so was presumably later.

Plato makes one brief allusion to Xenophanes as a member of the Eleatic sect. He implies that Xenophanes was somewhat earlier than Parmenides, but he does not say that the two men were associated in any way (Sophist 242D).

For the biography of Anaximander the teacher of Xenophanes there is no pre-Aristotelian evidence.

For Parmenides his student the only early evidence is a statement by Plato that Parmenides came to Athens in his sixty-fifth year when Socrates was a young man (Parm. 127B). Socrates was put to death when he was seventy in 399. So, if we assume him to have been twenty at the time of Parmenides' visit, the visit would have taken place in 449, Parmenides would have been born in 514, and he would have been fifty-one years Xenophanes' junior.

In brief then, up to and including Plato no writer says who the teacher and the student of Xenophanes were, and no writer associates him personally with any other philosopher. With regard to chronological possibility, if we leave aside the question of Anaximander's dates, if we take the two

fragments of Xenophanes mentioned above as referring to the invasion of Harpagus in 540 and as fixing Xenophanes' birth in 565, and if finally on the testimony of Plato we fix the birth of Parmenides in 514 -- then there is no known evidence ruling out the possibility that Xenophanes studied with Anaximander before leaving Asia Minor at the age of twenty-five and that some forty-five to fifty years later he became the teacher of Parmenides.

If Xenophanes was the student of Anaximander and the teacher of Parmenides, he was a link between two of the main philosophical currents of antiquity, and we may reasonably expect to find in his writings some indication of what he received from the one and contributed to the other. Instead, we find that in one of the two longest fragments he describes the ritual of a symposium and urges the banqueters to honor the gods, while in the other he denounces the excessive honors paid to Olympic victors. In shorter fragments he inveighs against the luxurious ways of the Colophonians; he ridicules -- but does not argue against -- the Pythagorean belief in the transmigration of the soul; he condemns the anthropomorphic gods of Homer and Hesiod; and he shows the absurd consequences that follow if each race of man and beast apotheosizes its own type. In few of the fragments does he say anything about the nature of the physical world. One, in which he asserts that the earth reaches downward without limit, could be a reply to Thales' doctrine that the earth rests on water; but they could all, like the criticism of the Homeric gods, be part of an attack on early mythology.

In four brief fragments he appears to strike new ground.

"One god, the greatest among gods and man, neither in form like mortals nor in thought" (Fr. 23).

"He sees all over, thinks all over, and hears all over" (Fr. 24).

"Without toil he sways all things by the power of his mind" (Fr. 25).

"He abides ever in the same place, moving not at all; nor does it befit him to go now hither now thither" (Fr. 26).

In these fragments is apparently the first statement of monotheism in Greek literature. It is an expression of the discontent that must have been felt with the anthropomorphic gods of Homer when these gods were scrutinized in the light of Ionian physical philosophy. Such discontent may have preceded the philosophical conception of Being put forward by Parmenides. But Xenophanes' denial of anthropomorphic polytheism and his assertion of God's omniscience and omnipotence are far from the rigorous argument of Parmenides. And among the Ionian physicists on the other hand -- unless the current view of them is entirely mistaken -- Homer's gods must long ago have ceased to be a live problem. We look in vain among Xenophanes' fragments for the philosophical link between Ionian physics and Eleatic logic. Further, we cannot suppose that what we seek was once to be found in the portions of his work now lost; for, as Burnet noted (E.G.P. p. 122), "a very few additional hexameters would amply account for the whole doxography." After examining the fragments of Xenophanes, we no longer ask what philosophical connection he had with Anaximander and Parmenides but rather whether he was a philosopher at all.

This question has been asked and answered many times. Theophrastus, immediately after identifying Xenophanes as the teacher of Parmenides, states that his doctrine has no place in the investigation (of causes) since Xenophanes declared that the One, i.e., the Universe, is God. He had, according to Theophrastus, held that God is motionless and omnipotent; for he had said: "He abides ever in the same place, moving not at all; nor does it befit him to go hither now thither," and "Without toil he sways all things with the power of his mind" (P.O. fr. 6a).

This is indeed paradoxical, that Theophrastus, who is in large part responsible for the place of Xenophanes in later histories of philosophy, starts out by denying him this place. What Theophrastus means may have been clearer

in the original form of his account. At any rate it becomes quite clear in the passage of Aristotle's Metaphysics that has apparently been his source. I shall quote it in full because the exact wording of it is important both for Xenophanes' doctrine and for the question of his relationship to Parmenides.

On the Eleatics, Aristotle has this to say:

"Discussion of them is in no way appropriate to our present investigation of causes, for they do not like some natural philosophers [i.e., the Ionians] assume being to be one and yet generate things out of matter, but they speak in another way; for those others add motion, since they generate the universe, but these say that the universe is motionless. Yet this much is germane to the present inquiry: Parmenides seems to fasten on what is one in definition [i.e., the formal cause] and Melissus what is one in matter [i.e., the material cause]; and that is why Parmenides says that the one is finite and Melissus that it is infinite; but Xenophanes, the first of these partisans of the one (for Parmenides is said to have been his student) gave no clear statement, nor does he seem to have grasped the nature of either of these causes [i.e., formal and material], but fixing his gaze on the whole heaven he said that the One is God" (Metaphysics 986 B 14-24), (The matter in square brackets is my addition.)

The similarities between this passage and the account of Theophrastus speak for themselves. The objection of Theophrastus to Xenophanes is not merely that he identified the One or Universe with God; by holding that God is motionless he had eliminated change and had therefore excluded himself from consideration among the physicists.

More important are the differences between Theophrastus and Aristotle. Theophrastus gives the relationship of Xenophanes to Parmenides a prominent place in the opening sentence of his account, and he states it without qualification, as if it were a simple fact. Aristotle, on the other hand, touches on it only in a parenthesis and reports it as a matter of hearsay: "Parmenides is said to have been his student." Secondly, by removing Aristotle's report from its context, Theophrastus has altered its meaning. When Aristotle says that discussion of the Eleatics is not appropriate to the investigation of causes, he certainly includes Xenophanes along with Parmenides

and Melissus. But it is against the latter two that his objection is primarily directed; for he knows enough of their doctrines to criticize them. All that he appears to know of Xenophanes is that Xenophanes said that the One is God and that Parmenides was said to have been his student. Indeed, this hearsay report seems to be his chief --if not sole -- reason for mentioning Xenophanes among the Eleatics at all.

It has long been recognized that the source of Aristotle's report is Plato's Sophist. In that dialogue the Eleatic Stranger says: "In our part of the world the Eleatic sect, who hark back to Xenophanes and even earlier, unfold their tale on the assumption that what we call 'all things' are really one" (242D). The best commentary on this sentence is a similar passage in the Theaetetus, in which it is stated that the Heraclitean doctrine of flux goes back as far as Homer and even earlier poets (179E)--In both instances Plato is joking. In the Theaetetus (152E) he proves that Homer was a Heraclitean by quoting the verse of the Iliad in which Homer speaks of "Ocean and Tethys, the parents of the gods" (XIV, 202). No one would on this evidence consider that Homer was a Heraclitean or that Plato thought him to be. The evidence for the Eleaticism of Xenophanes may have been of the same sort, and we may still have it.

The starting point of the Eleatics was the unity of Being, and from its unity they derived its immobility. We have already noted that in one fragment Xenophanes speaks of "One god, the greatest among gods and men" and that in one of the quotations given by Theophrastus he says, "God abides ever in the same place, moving not at all." These verses certainly do not permit the identification of Xenophanes' one god and Eleatic Being; but they come as close to proving Xenophanes an Eleatic as the quotation from the Iliad comes to proving Homer a Heraclitean, and that is all that Plato requires.

The supposed biographical connection between Xenophanes and Parmenides may, then, be reduced to this. Aristotle starts by taking the remark in the Sophist at its face value. And having counted Xenophanes among the Eleatics, he has concluded that by his one motionless god Xenophanes must have meant something like the one motionless Being of Parmenides and Melissus and that, therefore, by saying that "God is one" Xenophanes really meant that the one Being is God. Sharing what seems to have been a general Greek dislike for leaving great discoveries in anonymity, Aristotle has neglected Plato's qualification that the Eleatic sect harks back even earlier than Xenophanes and he has established Xenophanes as its founder. And apparently believing that philosophy is handed down through a succession of teachers and students, he has reasoned that, since Parmenides is the earliest Eleatic of whom anything is really known, he must have been the student of Xenophanes and that this relationship was implied by Plato. That he knows himself to be on unsure ground is clear from the caution with which he speaks both of Xenophanes' biography and of his doctrine. In the account of Theophrastus, at least as given by Simplicius, and in accounts of the later doxographers caution has been replaced by the flat assertion that Xenophanes was the teacher of Parmenides; and to support the interpretation of him as an Eleatic Theophrastus has supplied what appears to him to be evidence from Xenophanes' own writings.

The source of the link between Xenophanes and Anaximander is not at once so evident. Aristotle omits Anaximander from the outline of earlier doctrines in Metaphysics A, and his few other references to Anaximander indicate little knowledge of Anaximander's work and none at all of his personal history. Theophrastus' account of Anaximander is compounded from two interpretations in the Physics. In one of these interpretations Aristotle classes Anaximander not, as might be expected, with the Ionian monists but

with the pluralists Empedocles and Anaxagoras. He says that, while the monists explain the generation of things by a process of rarefaction and condensation, these other three explain it by the separation of contraries from their mixture (Phys. 187 A 20-23). The result of his argument is that the pluralists turn out to be monists, for their mixture proves to be a single homogeneous body similar to his own prime matter, in which the four contraries inhere. Aristotle is clearly interpreting the doctrines of Anaxagoras and Empedocles in his own terms and it is obvious from what he says elsewhere that he is aware of the plurality of their material principles; and in view of the fact that Anaximander does not appear with the Ionian monists in the Metaphysics we may suspect that Aristotle has as little reason to consider him a monist as he has in the case of the other two.

What is important for our present purpose is that this monistic interpretation is the basis for Theophrastus' account of Anaximander and has apparently prompted him to do what Aristotle would not -- or could not -- do, namely, to fit Anaximander into the schematic outline of causal theories in Metaphysics A. According to that outline, Thales and Hippo held that the material principle of all things is water; Anaximenes and Diogenes, that it is air; Hippasus and Heraclitus, that it is fire; Empedocles, adding earth, that it is all four elements; and Anaxagoras that it is the infinite homoeomeries (Meta. 983 B 20 - 984 A 16). Thus, one after another, each of Aristotle's four simple bodies finds a champion until with Empedocles the list is complete. It was Aristotle's fixed belief that all earlier doctrines were groping toward his own. If, therefore, the development of the material cause is to end in the Aristotelian matter, the logical step after the Ionians, who each put forward one element as the material principle, must be a doctrine which recognizes that the material principle cannot be one of the elements (which are already composite in Aristotle's theory) but must be some other

prior material principle in which the elements are contained. It is just such a principle that Aristotle attributes to Anaximander, Empedocles, and Anaxagoras in the Physics passage referred to above. In another passage he states what he believes to have been the reason behind theories that make this principle infinite. Some philosophers, he says, posit the Infinite as one simple body from which the elements are generated; and they hold that it is something other than the elements, for, since the elements are contrary, if one of them were infinite, the others would be destroyed by it (Phys. 204 B 22-29). More definitely, Theophrastus says that it was Anaximander who held that his Infinite was not one of "the so-called elements" but some qualitatively and quantitatively infinite thing apart from them (P.O. fr. 2). The expression "the so-called elements" is intended both as criticism of the other Ionians and as praise of Anaximander; and, if I understand Theophrastus' account of Anaximander rightly, it was the discovery of the Infinite as something apart from the elements that Theophrastus regards as Anaximander's important contribution. On this interpretation of Anaximander's theory and its relationship to the other Ionian theories, Anaximander had, within the scheme of Metaphysics A, advanced material monism to its farthest point; he had seen and met the difficulties that come from positing one of the opposed elements as primary matter; it remained for Empedocles to give a new formulation to the elements and to combine them with Anaximander's indeterminate mixture;

The final passage to be noted is that which follows Aristotle's discussion of earlier notions of the material cause in Metaphysics A.

"From the foregoing (he says) one might think that the only cause is what is called the material cause; but as men thus advanced, the very facts opened the way for them and joined in forcing them to investigate the subject. However true it may be that all generation and destruction proceed from some one or more elements, why does this happen and what is the cause? For at least the substratum does not make itself change; neither the wood nor the bronze causes the change of either of them, nor does wood manufacture a bed and bronze

a statue, but something else is the cause of the change. And to seek this is to seek the second cause, as we should say -- that from which comes the source of movement. Now those who at the very beginning set themselves to this kind of inquiry, and said that the substratum was one, were not at all dissatisfied with themselves; but some at least of those who maintain it to be one -- as though defeated by this search for the second cause -- say that the one and nature as whole is unchangeable not only in respect of generation and destruction (for this is a primitive belief, and all agreed to it) but also of all other change: and this view is peculiar to them" (984 A 16 - B1).

The two groups of philosophers meant here are the Ionian monists and the Eleatics. Aristotle pictures the history of philosophy as a journey in search of the truth. The road, we must imagine, is steep and hard to discern, and it may at times seem to come to an end. But then once more the truth shows the way and drives men on again to the next height. The Ionians had seen as far as the material cause, had explored to its limit, and were satisfied that there was nothing beyond. Then the Eleatics were compelled to see that if there is change there must be a cause of change. They could not themselves reach this second cause, but they pointed out the route that their successors must take.

Aristotle does not say which of the Eleatics discovered the need for the efficient cause. But since on the reconstruction he gives here of the Eleatic motives there could be no Eleatic doctrine without this discovery, the discoverer must have been the first of the Eleatics. In a later passage, as we have seen, he identifies Xenophanes as the first of the Eleatics, but it is questionable that he has Xenophanes in mind here. To be sure, he begins his discussion of efficient cause by saying that Parmenides was the only Eleatic who made any use of it (984 B 1-4). From this, along with the last sentence of the passage just quoted, it would follow that Xenophanes and the other Eleatics denied change altogether. But the fragments of Xenophanes show that he did not do so (Frs. 27 and 29). It is not necessary to suppose that Aristotle was unacquainted with these or similar fragments. A more probable explanation is that he regards the doctrine of Xenophanes as too doubtful or too trivial for comment and that he is in this context treating Parmenides,

not Xenophanes, as the first Eleatic.

Here again Theophrastus seems to have gone farther than Aristotle intended. He appears to have reasoned that, since Anaximander was the most advanced of the Ionian monists and since Xenophanes was the first of the Eleatics, it must have been Xenophanes who arrived at the Eleatic doctrine in consequence of his realization that the single principle of Anaximander could not account for change. And, just as Parmenides was the student of Xenophanes, so Xenophanes was the student of Anaximander.

In short, I would suggest that the teacher-student relationship of Anaximander and Xenophanes, like that of Xenophanes and Parmenides, is due to an overinterpretation of the Metaphysics by Theophrastus.

These are not the only supposed biographical facts that may have such an explanation. The tradition that Thales was the first physicist goes back through Theophrastus to Metaphysics A where Aristotle reports what Thales "is said" to have declared about the material principle. Aristotle remarks that "some think" that even the ancients who first framed accounts of the gods held a similar view since they made Ocean and Tethys the parents of creation and described the oath of the gods as water (983 A 27-34). The source of this remark is the humorous passage in the Theaetetus (152E) where Plato is attempting to trace the antiquity of the Heraclitean doctrine of flux. To Aristotle's literal interpretation of this passage Thales may owe his position as the first Greek philosopher. Aristotle may have reasoned that since the earliest known doctrine about the physical universe was that of Homer and the cosmologists, the first physicist must have started from where they left off and that, therefore, the earliest physicist must have been one who held that water was the source of all things.

The tradition that Leucippus was the student of Parmenides has apparently no other basis than the reconstruction of atomism made by Aristotle

in the De Generatione. Aristotle links the beginning of atomism to Eleatic monism, but significantly he does not say that any of the Atomists was the student of any of the Eleatics. It is Theophrastus who makes the relationship explicit. Theophrastus says, too, that Leucippus was, according to two reports, an Eleatic and a Milesian (Dox. p. 483, 11-12). On the strength of this statement Burnet and others have conjectured that Leucippus was born in Asia Minor and emigrated to Elea. The source of this statement, however, seems to be the two Aristotelian interpretations from which Theophrastus has derived his account: the De Generatione passage mentioned above, where the atomists are related to the Eleatics, and a passage in the Metaphysics (985 B 4-13, 19-20) where the Eleatic theory is treated as being essentially the same as that of the Ionians. (For a fuller discussion of these passages see paper by writer in HSCP LXI (1953), pp. 123-129.)

Theophrastus reports that Socrates was said to have associated with Archelaus (Dox. p. 479, 17); and some later doxographers say simply that Socrates was the student of Archelaus (Vors. II, pp. 44, 28; 45, 20 and 25-30; 46, 35). In Metaphysics A (987A32-B9) Aristotle says that when Plato was young he became acquainted with the Heraclitean doctrine; when, however, Socrates concerned himself with morals, sought universals in morals, and fixed attention for the first time on definitions, Plato accepted his teaching and thought that definition must be of non-sensible things, which he called Forms. In the Phaedo (96A - 99E) Socrates says that when he was young he was interested in the theories of the physical philosophers but was not satisfied with their explanations. He once heard "someone" reading from a book of Anaxagoras and was delighted to learn of a theory that made Mind a cause of things; but he was disappointed when he found that Anaxagoras, like the other physical philosophers, resorted to purely mechanical explanations; and so he abandoned the study of physical phenomena and took refuge in accounts

or definitions. Some of the physical theories mentioned by Socrates have been identified as those of Archelaus, and it has been suggested that the "someone" whom he heard reading from Anaxagoras' book was Archelaus (Burnet ad. Phaedo 97B8). This suggestion has apparently no other basis than the fact that Theophrastus reports that Archelaus was the student of Anaxagoras and that Socrates was the associate of Archelaus. It may well be, however, that Theophrastus himself in the first place identified the reader as Archelaus. At any rate the function of the link between Socrates and Archelaus in the history of causes is clear enough. According to the Phaedo, Socrates was led to the theory of Forms through his dissatisfaction with the doctrine of Anaxagoras. According to Metaphysics A, it was Socrates' interest in morals and definitions that led Plato to the theory of Forms, which was the first, although inadequate, expression of Aristotle's formal cause (988A7-10, A34 - B1). If the Phaedo passage is interpreted within the scheme of Metaphysics A, then, the dissatisfaction of Socrates with the physical explanations of Anaxagoras is analogous to the dissatisfaction of Xenophanes with Ionian monism; for, as the dissatisfaction of Xenophanes led ultimately to the discovery of the efficient cause, that of Socrates led to the formal cause. Since from the Phaedo it appears that Socrates had no direct contact with Anaxagoras, Theophrastus may well have thought that he learned of Anaxagoras' doctrines from hearing them expounded by Archelaus.

Other examples could be added, but these will perhaps be enough to show that in the biographical tradition of the Presocratics we may not be dealing with a body of independent facts that can be used as external evidence for or against Aristotelian interpretations. These supposed facts have their origin in interpretations and are an integral part of them. They are an elaboration and more concrete expression of the schematic arrangement of doctrines in Metaphysics A, and they are to be understood and evaluated in

terms of the suppositions Aristotle makes there about the historical structure of philosophy. Aristotle believes that his own causal theory is conclusive and that it is the result of an inevitable progress. All men, he believes, naturally desire to know, and the facts compel them to carry on their search; philosophy arose out of wonder at obvious difficulties and advanced little by little to questions about greater matters; and one by one the four causes were discovered until with his theory the evolution was complete. This evolution was for the most part orderly; each philosopher or group of philosophers started with the preceding doctrine, built on it, and corrected it. It is only one step more to see in the causal relationship between doctrines not merely the acquaintance of a philosopher with his predecessor's writings but also personal association with him as a student.

It may be objected that Theophrastus must have had evidence about the lives of the Presocratics that has since been lost or that, even if the relationships between their lives has no foundation, the relationships between their doctrines is essentially correct. In the first place, if Theophrastus had such evidence, we must explain why Aristotle seemingly did not. Aristotle's purpose in Metaphysics A is to find historical proof of this theory; here if anywhere biographical data are appropriate. As we have seen with regard to Xenophanes and Parmenides, he is quick to use such evidence when he has it. His doubt about the affiliation of these two men and his failure to adduce biographical evidence in other cases where it would confirm his reconstruction can hardly be due to anything but lack of information. Secondly, the grouping of doctrines in the Metaphysics is dictated solely by the question of causes. When Aristotle is dealing with a different subject he interprets and relates doctrines differently. So, for example, when he is setting out the antecedents of his theory of generation and destruction, he gives an

explanation of the Eleatic doctrine that contradicts the explanation in Metaphysics A and suggests an entirely different relationship of the Eleatics to their predecessors (Gen. Corr. 325 A 2-29). This sort of shift in Aristotle's interpretation makes it impossible to attach special value to the grouping of doctrines in the Metaphysics. There, as throughout his comments on earlier doctrines, he is presenting a dialectical argument for his own theory.

The difference between the argument of Metaphysics A and the others is that there he gives his most comprehensive summary of earlier doctrines. It was probably this that led Theophrastus to use the Metaphysics as the basis for his own outline. To say this is not to say that Theophrastus was unable to distinguish between fact and logical reconstruction. It has generally been taken for granted that Theophrastus intended to write an objective history of philosophy. This view is favored only by the use to which the doxographers put his work and not by any indication within the fragments themselves. Theophrastus was, like Aristotle, a creative philosopher, was greatly influenced by him, and shared many of his theories. It is more than likely that when he excerpted and adapted material from Aristotle's works for his own outline, his purpose was, like Aristotle's, to show the relationship of earlier philosophers to Peripatetic doctrine. If the biographical details of his outline are more elaborate and more definite than they are in Aristotle, this is a sign not, that he was a poor historical scholar but rather that he was a thoroughly convinced Aristotelian.

Once the pattern has been set by the Physical opinions, later doxographers have only to fill in the gaps in both biography and doctrine. Thus, although Xenophanes was little more than an embarrassing puzzle to Aristotle, he emerges from the doxography with a certain birth-date and floruit and with numerous clear-cut philosophical opinions, some undoubtedly culled from his poems and others interpolated from the works of his supposed teacher and

student. The ramifications of this process, which is by no means ended, are too numerous and complicated for discussion here. It is clear that if biographical and doctrinal relationships were confused from the very beginning of the doxographical tradition and if the doctrinal relationships were derived from Peripatetic interpretations, the biographical relationships do not become any more trustworthy facts by virtue of being isolated from the interpretations and repeated with embellishments by later authors. It does not follow that all later statements about the lives of the Presocratics are the same sort and that no use can be made of the biographical material in the doxographers. But if we are to use this material, our first question must not be whether it agrees with and supports Aristotle's interpretation but whether it can be adequately explained as a construct based on the interpretation.

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