

NOTES ON AIR: FOUR QUESTIONS OF MEANING IN EMPEDOCLES AND ANAXAGORAS

I

In fragment 38 Diels–Kranz, Empedocles turns to describe the creation of ‘everything that we now see’:

γαῖά τε καὶ πόντος πολυκύμων ἥδ’ ὑγρὸς ἀήρ
Τιτὰν ἥδ’ αἰθήρ σφίγγων περὶ κύκλον ἅπαντα.

Here, as so often with Empedocles, the influence of Zeller and Diels has proved decisive in determining later interpretations of the text. They understood the words *Τιτὰν ἥδ’ αἰθήρ* as meaning ‘and Titan *aither*’; the text has been mistranslated ever since.¹ In fact the conjunction ἥδέ is never postponed.² This means that—as scholars earlier in the nineteenth century well understood—‘Titan’ must be an item on its own, distinct from the *aither*:

earth and wavy sea and moist *aer*,
Titan and *aither* binding everything in its circular grip.³

There is no reason to doubt that Empedocles intended ‘Titan’ here as a reference to the fiery sun.⁴ The strangeness of being left with a seeming reference in these lines to five elements—earth, water, *aer*, fire, *aither*—when Empedocles taught a doctrine of no more or less than four is certainly remarkable, but not so remarkable as to justify misconstruing the Greek. As a matter of fact, much the same peculiarity of five apparent elements being listed instead of four also occurs in pseudo-Plutarch’s account of Empedocles’ cosmology.⁵ I have shown elsewhere⁶ what this double

¹ E. Zeller, *Die Philosophie der Griechen*, ed. W. Nestle, i.ii⁶ (Leipzig, 1920), 979 n. 5; H. Diels, *Poetarum philosophorum fragmenta* (Berlin, 1901), 123. So J. Bollack, *Empédocle* i (Paris, 1969), 263, D. O’Brien, *Empedocles’ Cosmic Cycle* (Cambridge, 1969), 292, M. R. Wright, *Empedocles: The Extant Fragments* (New Haven, 1981), 169, 196–7, etc.

² Study of the numerous examples from Homer and Hesiod onwards shows there are no exceptions. In the grammars, cf. e.g. R. Kühner and B. Gerth, *Ausführliche Grammatik der griechischen Sprache* ii.ii⁴ (Hannover, 1955), 299.

³ For the frequent omission of the copula before the first item in a line where proper or common nouns are being listed cf. e.g. *Il.* 2.498–502, Hes. *Theog.* 339, and further references in M. L. West’s note on *Theog.* 245. The apparent structural imbalance, of an unqualified noun at the start of the line being followed by another noun which is qualified, is no problem at all: cf. e.g. the line immediately above (γαῖά...), *Il.* 2.501–2, 739, Hes. *Theog.* 245, 246. The alternative of linking *Τιτὰν* with *ἀήρ* at the end of the previous line is highly implausible: *ἀήρ* already has a defining adjective, and the parallels in earlier—and later—epic for omission of the connective must be considered decisive. For the correct translation cf. S. Karsten, *Philosophorum graecorum veterum fragmenta* ii (Amsterdam, 1838), 107; F. W. A. Mullach, *Fragmenta philosophorum graecorum* i (Paris, 1860), 6.

⁴ Cf. *Il.* 19.398, *Od.* 1.24, Hes. *Theog.* 371–4 with West’s notes on 134 (Ὑπερίονα) and 371, Virg. *Aen.* 4.119 with A. S. Pease’s note *ad loc.*; R. G. Austin on Virg. *Aen.* 6.725 and the further refs in R. Merkelbach and M. Totti, *Abraxas* ii (Opladen, 1991), 73; F. W. Sturz, *Empedocles Agrigentinus* (Leipzig, 1805), 587, W. Kranz, *Philologus* 105 (1961), 291–5.

⁵ Ps.-Plutarch, *Placita philosophorum* 2.6.3 (82.16–19 Mau) = Emp. A49b Diels–Kranz (*aither* fire, earth, water, *aer*); below, §III.

⁶ *Ancient Philosophy, Mystery and Magic: Empedocles and Pythagorean Tradition* (Oxford, 1995), ch. 3.

anomaly—both in pseudo-Plutarch and in Empedocles himself—has to tell us not just about how he used his element theory to explain the world around us, but also about the specific terminology he employed.

II

Empedocles' fragment 78 has caused continual trouble since the start of the nineteenth century. This is not surprising, considering the form in which it is usually presented: *καρπῶν ἀφθονίησι κατ' ἥερα πάντ' ἐνιαυτόν*. The basic idea—of trees 'with abundance of fruits all year round'—is clear, but the problem lies in the words *κατ' ἥερα*. Here it seems necessary to go over ground already more or less covered by Günther Zuntz in 1971, because editors of Empedocles over the past twenty years have unanimously ignored his findings.⁷ Zuntz justifiably rejected these words as a corruption of the text by taking them in their obvious sense—'in the air', 'throughout the air'—and pointing out that 'Empedokles' trees did not grow "in the air"'.⁸ Numerous times the attempt has been made to explain *κατ' ἥερα* as meaning 'according to the air', but this produces an expression—trees 'with abundance of fruits in accordance with the air all year round'—which even with a great deal of forcing fails to yield a satisfactory sense: hence the need frequently felt by translators to provide a paraphrase instead.⁹ Either way, the text as given can hardly be defended. Add to this the fact¹⁰ that the verse is overloaded with details and needs a verb or verbal adjective to bring them together, and the obvious conclusion is that the words *κατ' ἥερα* are wrong.

In spite of this, editors have held resolutely to the given text. The word *ἥερα* must, they argue, be genuine because Theophrastus repeatedly refers to *ἀήρ* in the immediate context of quoting this verse from Empedocles.¹¹ Superficially the argument is persuasive. In fact, of course, it can with equal ease be turned on its head by arguing that the original text of Empedocles was at some stage changed to read *κατ' ἥερα* precisely *because* of Theophrastus' context. Theophrastus quoted the line only because of the reference to trees bearing fruit all year round; his use of the word *ἀήρ* does not spring from the quotation, but is part of his own vocabulary.¹² Some correction of the text is needed, and there can be no possible objection to Scaliger the elder's emendation *κατήρεα*, 'provided' or 'supplied', which gives the perfect sense of trees 'provided with abundance of fruits all year round'.¹³

The irony is that *κατ' ἥερα* is not even the reading of the manuscripts. It is a sixteenth-century emendation, roughly contemporary with Scaliger's, of the manu-

⁷ See below, n. 14 *ad fin.*

⁸ *Persephone* (Oxford, 1971), 210–11.

⁹ 'With fine weather', Dengler; 'so mild the air', Einarson–Link. The natural implication of *κατ' ἥερα* if taken in this sense would be that the trees bear different fruits in accordance with changes in the air, but that of course is not Empedocles' point. Theophrastus' discussion (*De caus. plant.* 1.13.1–3) confirms the plain sense of the fragment, which is that each tree constantly bore the same fruit throughout the year; any attempt to water down or rationalize this sense (as e.g. Wright [above, n. 1], 224: 'It is botanically impossible...') is illegitimate.

¹⁰ Noted by Zuntz (above, n. 8), 211.

¹¹ So e.g. Diels (above, n. 1), *ad loc.* ('propter Theophrasti conexum necessarium'); Bollack (above, n. 1), iii. 516 and n. 4.

¹² Both of these points refute Bollack's assertion that 'c'est pour cette expression [i.e. *κατ' ἥερα*] que Théophraste cite le vers' (op. cit., iii. 516). For Theophrastus' repeated use of the term *aer* in the same context compare e.g. *De caus. plant.* 1.13.5–11.

¹³ An even more imposing parallel than the one cited by Zuntz (Euripides, *Electra* 498) is Nicander, *Theriaca* 69, ἀεὶ φύλλοισι κατήρης, of tufted thyme 'always provided with leaves'. The alternative conjecture *κατήρορα* (see C. A. Lobeck, *Pathologiae sermonis graeci* [Leipzig, 1843], 269 and n. 35; Wilamowitz, *Kl. Schr.* i [Berlin, 1935], 501) is also a possibility but, as Zuntz notes, not so immediately attractive.

scripts' meaningless *κατήρα*.¹⁴ Scaliger's *κατήρεα* is not only immeasurably superior in sense but also, if anything, closer to the manuscript reading. Any reference to air in B78 must once and for all be dismissed.

III

The *Placita* of pseudo-Plutarch tells us (2.6.3) that, according to Empedocles, at the start of our universe

aither was the first element to be separated off. The second was fire, and then came earth. Next, as the earth was constricted by the force of the rotation, water gushed up out of it; and out of the water as it turned into steam, *aer* was produced. Heaven was created out of *aither*, the sun was created out of fire, and the regions around the earth (*τὰ περίγεια*) were created out of the others by compression.

τὸν μὲν αἰθέρα πρῶτον διακριθῆναι, δεύτερον δὲ τὸ πῦρ, ἐφ' ᾧ τὴν γῆν, ἐξ ἧς ἄγαν περισφιγγομένης τῇ ῥύμῃ τῆς περιφορᾶς ἀναβλύσαι τὸ ὕδωρ, ἐξ οὗ θυμιαθῆναι τὸν ἀέρα, καὶ γενέσθαι τὸν μὲν οὐρανὸν ἐκ τοῦ αἰθέρος, τὸν δὲ ἥλιον ἐκ τοῦ πυρός, πιληθῆναι δὲ ἐκ τῶν ἄλλων τὰ περίγεια.

The same term that we find here, *τὰ περίγεια*, also occurs elsewhere in the *Placita* tradition in Stobaeus' account of Parmenides' cosmology.¹⁵ Tarán has correctly protested against its being understood on either occasion as meaning 'the surface of the earth', and pointed out that it must mean 'the region surrounding the earth'.¹⁶ However, his claim that in the passage relating to Empedocles' cosmology—after the reference to the sun—'*τὰ περίγεια* refers to other heavenly bodies like the moon' is incorrect, as is his further inference that in the Parmenides passage it 'refers to the sun and the moon'. Firstly, according to Empedocles the moon was formed out of air and fire,¹⁷ and so cannot be among *τὰ περίγεια* which are the products of earth, water and steamy *aer*. Secondly, and even more importantly, the expression *τὰ περίγεια* was a semi-technical term in late antiquity for the region surrounding the earth but *beneath* the moon.¹⁸

IV

It was once held to be 'well attested'¹⁹ that Anaxagoras equated *aither* with fire. Recent scholars have shown themselves more cautious,²⁰ but it is worth marshalling the evidence so as to resolve any remaining uncertainties.

¹⁴ It first seems to have appeared in the 1550 Paris edition of *De causis plantarum* I. I follow the information provided in their 1976 Loeb edition by B. Einarson and G. Link; see also Lobeck, loc. cit. ('codices praebent *κατήρα*'). Zuntz's slightly inaccurate statement (as above, n. 8, 210 and n. 4) that the MSS. read *κατ' ἥρα* was a result of his being misled by the apparatus to R. E. Dengler's edition (*Theophrastus: De causis plantarum* I [Philadelphia, 1927]). In spite of Dengler's edition, and even after the publication of Zuntz's *Persephone*, editors of Empedocles persist in giving *κατ' ἥρα* as the reading of the MSS. (J. Bollack, C. Gallavotti, M. R. Wright, B. Inwood, G. Imbraguglia *et al.*).

¹⁵ Stob. i. 195.18 Wachsmuth (not in ps.-Plutarch) = Parmenides A37a Diels-Kranz.

¹⁶ L. Tarán, *Parmenides* (Princeton, 1965), 240 n. 31. Cf. also H. Daiber, *Aetius Arabus* (Wiesbaden, 1980), 382.

¹⁷ Emp. A30, A60.

¹⁸ See esp. Stob. i. 196.29–197.1 Wachsmuth = Philolaus A16 (*τὸ ὑποσέληνόν τε καὶ περίγειον μέρος*); Plutarch, *Quaest. conviv.* 745b with R. Heinze, *Xenokrates* (Leipzig, 1892), 75–8 and E. Pfeiffer, *Studien zum antiken Sternglauben* (Leipzig, 1916), 119–20; Olympiodorus, *In Gorg.* 245.7–10 Westerink; and for the origins of the tripartite division of the cosmos in Stobaeus' report on Parmenides—sublunar world (*τὰ περίγεια*), heaven and the region beyond heaven—W. Burkert, *Lore and Science in Ancient Pythagoreanism* (Cambridge, MA, 1972), 245 with n. 36.

¹⁹ C. H. Kahn, *Anaximander and the Origins of Greek Cosmology* (New York, 1960), 148.

²⁰ See D. Lanza's judicious comments, *Anaxagora: testimonianze e frammenti* (Florence, 1966), 67, 131–2, 192–3.

The evidence in fact boils down to a few statements by Aristotle accusing Anaxagoras of incorrectly equating fire and *aither*: for Aristotle, of course, *aither* was a separate element from fire. Certainly his assertions that this is what Anaxagoras did are dogmatic enough in *On the Heavens*.²¹ However, when he refers to the matter again in his *Meteorology* he is revealingly cautious—and he also explains what led him to his conclusion.

It seems to me that Anaxagoras reckoned *aither* and fire are one and the same: for the upper regions are full of fire and he was accustomed to call the elementary quality of that region *aither*.

Ἀναξαγόρας μὲν τῷ πυρὶ ταῦτόν ἡγήσασθαι μοι δοκεῖ σημαίνειν [sc. τὸν αἰθέρα]: τὰ τε γὰρ ἄνω πλήρη πυρὸς εἶναι, κακείνους τὴν ἐκεί δύναμιν αἰθέρα καλεῖν ἐνόμισεν.²²

So it is a question of an interpretation by Aristotle, not of a direct statement by Anaxagoras; and once due allowance is made for Aristotle's highly dubious application of his own concept of *dynamis* or 'elementary quality', his interpretation starts to fall apart at the seams. In fact, underneath his superficial argumentation Aristotle is telling us nothing we did not know: we have Anaxagoras' own words equating *aither* with 'the regions above'.²³ On the other hand, even the few fragments of Anaxagoras which survive reveal a basic symmetry to his ideas: a symmetry which clearly implies that—whereas *aer* is damp air which tends downwards—*aither* is dry air which tends upwards, and that fire is a development of *aither* in just the same way that water and earth are developments of *aer*.²⁴

Already in antiquity there were commentators on Aristotle who took exception to the way that he hypercritically attacked Anaxagoras on other points of detail, and who even turned the tables by defending Anaxagoras against his accuser.²⁵ In recent times it has become routine to reprimand Aristotle severely for misrepresenting aspects of Anaxagoras' teaching and repeatedly misleading later writers by doing so.²⁶ Even when attempting to take a more conciliatory stance, scholars are obliged to draw attention to the alarming way that Aristotle's inferences oscillate between cautious statement and sweeping generalization, between dogmatic assertion and mere conjecture.²⁷ As we have seen, this same oscillation recurs in his criticisms of Anaxagoras for falsely equating *aither* and fire: his dogmatism needs to be viewed in the light of his hesitations, not the other way round. As for the *form* of Aristotle's reasoning in the crucial passage of his *Meteorology*, it is strikingly reminiscent of the kind of logic he uses elsewhere to force Presocratic philosophers into a corner and make them responsible for absurd or self-contradictory statements. This is a ruse that Theophrastus also learned to master.²⁸ It tells us something about the interests and level of argument exhibited in the school of Aristotle, but little about anything else.

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²¹ 270^b24–5, 302^a31–^b5.

²² *Meteor.* 339^b21–4. Thurot's now popular κακείνους for κακείνους ruins the argument and, anyway, the MSS. reading is corroborated by the parallel ἐκείνους in 369^b14–15.

²³ DK 59 B15; cf. also Arist. *Meteor.* 369^b14–15, *De caelo* 270^b22.

²⁴ M. Schofield, *An Essay on Anaxagoras* (Cambridge, 1980), 71.

²⁵ Simplicius, *Phys.* 171.31–177.17 Diels.

²⁶ Cf. e.g. the papers in *Studies in Presocratic Philosophy*, ed. R. E. Allen and D. J. Furley, ii (London, 1975), 276, 305–11, 314–15 (F. M. Cornford), 333–41 (G. Vlastos), 371–2 (C. Strang).

²⁷ Cornford (as in n. 26), 308, Schofield (as in n. 24), 128.

²⁸ For Aristotle cf. e.g. O'Brien (above, n. 1), 63, 208–9, P. Kingsley, *Bulletin of the School of Oriental and African Studies* 53 (1990), 250 n. 30; for Theophrastus, G. M. Stratton, *Theophrastus and the Greek Physiological Psychology before Aristotle* (London, 1917), 60–2 and, in general, H. Baltussen, *Theophrastus on Theories of Perception* (Utrecht, 1993), 132–94, plus Kingsley, *Phronesis* 39 (1994), 235–54 with n. 2, and *CQ* 44 (1994), 316–24.