Some LSJ Addenda and Corrigenda*)

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ἄμα LSJ s.v., Section A.2, claims a special sense, "partly ... partly ...," for the construction "ἄμα μέν ... ἄμα δέ ...," citing only Pl.Phd. 115 d: ταῦτά μοι δοκῶ αὐτῷ ἄλλως λέγειν, παραμυθούμενος ἄμα μὲν ὑμᾶς, ἄμα δ' ἐμαυτόν and X.HG 3.1.3: αἱ δὲ ἄμα μὲν ἐλεύθεραι βουλόμεναι εἶναι, ἄμα δὲ φοβούμεναι τὸν Τισσαφέρνην, ... εἰς μὲν τὰς πόλεις οὐκ ἐδέχοντο αὐτόν ... In both of these passages, however, there is no reason not to take the construction in the straightforward sense "both ... and at the same time ...," as it must be taken in Arist. GC 315 $^{\rm a}$ 3 ff.: Εμπεδοκλῆς μὲν οὖν ἔοικεν ἐναντία λέγειν καὶ πρὸς τὰ φαινόμενα καὶ πρὸς αὐτὸν αὐτός. ἄμα μὲν γὰρ οὔ φησιν ἔτερον ἐξ ετέρου γίνεσθαι τῶν στοιχείων οὐδέν, ἀλλὰ τἄλλα πάντα ἐκ τούτων, ἄμα δ' ὅταν εἰς εν συναγάγη τὴν ὅπασσαν φύσιν πλὴν τοῦ νείκους, ἐκ τοῦ ενὸς γίγνεσθαι πάλιν ἔκαστον. The special sense "partly ... partly ..." for "ἄμα μέν ... ἄμα δέ ..." is thus not adequately supported by LSJ s.v. and should be deleted.

ἄμβροτος To LSJ s.v., Section 1 ("poet. Adj. immortal, divine, of persons as well as things..."), should be added: "b. Subst., divine things (prob. heavenly bodies), Emp. 21.4." Emp. 21.3ff. reads as follows (in Diels/Kranz, the citation standard for LSJ Supplement):

ήέλιον μὲν λευκὸν ὁρᾶν καὶ θερμὸν ἀπάντη, ἄμβροτα δ' ὅσσ' εἴδει τε καὶ ἀργέτι δεύεται αὐγῆ, ὅμβρον δ' ἐν πᾶσι δνοφόεντά τε ριγαλέον τε ἐκ δ' αἴης προρέουσι θελεμνά τε καὶ στερεωπά. ἐν δὲ Κότω διάμορφα καὶ ἄνδιχα πάντα πέλονται, σὺν δ' ἔβη ἐν Φιλότητι καὶ ἀλλήλοισι ποθεῖται.

We have three hints concerning the referents of " $\check{a}\mu\beta\varrho\sigma\tau a$ ": (1) they are divine; (2) they are bathed in the sun's warmth and bright radiance; and (3) they probably constitute some manifestation of $a\check{t}\theta\eta\varrho$ (Empedocles' usual term for what later tradition almost al-

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ways calls "air" [ἀήρ]). This last point derives from the observation that the six verses here quoted seem intended to constitute a list of manifestations of the six fundamental elements of Empedocles' physical system: "sun" (Fire), "divine things" (Air), "rain" (Water), "earth" (Earth), "Wrath" (Strife), and "Love" (Love), in that order. All the heavenly bodies would presumably fulfill the first condition (of being divine). As for being bathed in the sun's warmth and bright radiance, the moon fits this description (cf. Emp. 43. 45; Plu. Strom. 10), as does also at least one hemisphere of the heaven itself (cf. Placit. 2.20.13). Both moon and heaven also fulfill the condition of being manifestations of air. They are made from it (cf. Placit. 2.6.3, 2.11.2, 2.25.15; Plu. 922c; Plu. Strom. 10).

ἀπολήγω LSJ s.v., Section I.2, includes "opp. γίνεται, Emp. 17.30." This should read: "opp. ἐπιγίνεται, Emp. 17.30." The difference is not trivial, for ἐπιγίνεται here is not just an intensified γίνεται, still less an equivalent (cf. infra s.v. ἐπιγίγνομαι). Emp. 17.30 ff. reads as follows:

καὶ πρὸς τοῖς οὖτ' ἄρ τι ἐπιγίνεται οὐδ' ἀπολήγει εἴτε γὰρ ἐφθείροντο διαμπερές, οὐκέτ' ἄν ἦσαν τοῦτο δ' ἐπαυξήσειε τὸ πᾶν τί κε; καὶ πόθεν ἐλθόν;

Emp. 17.30, as the verses following make clear, means "And to these (sc. Love, Strife, and the "elements") not anything comesadditionally-into-being, nor (does anything) leave-off-from-(being)."

ἀστερίζω LSJ s.v. misses entirely the sense turn into star(s), as attested in Placit. 2.12.3: ἀναξαγόρας τὸν περικείμενον αἰθέρα, πύρινον μὲν είναι κατὰ τὴν οὐσίαν, τῆ δ' εὐτονία τῆς περιδινήσεως ἀναρπάσαντα πέτρους ἀπὸ τῆς γῆς καὶ καταφλέξαντα τούτους ἠστερικέναι.

δέρκομαι Το LSJ s.v., Section I.2 ["c. acc. objecti, look on or at, Il. 13.86, etc.; τί ... ἤδιον δρ.; A.Ag. 602; ἐδέρχθης ὀλιγοδρανίαν Id.Pr. 547; so δ. εἴς τινα Hes.Sc. 169, E.HF 951; κατά τι A.Pr. 679; descry, perceive, Od. 10.197, E.Andr. 545; κτύπον δέδορκα A.Th. 103 (lyr.)."], should be added: "metaph., τὴν σὸ νόφ δέρκεν Emp. 17.21."

διαίφεσις In listing and illustrating various means by which exegetical difficulties may be overcome, Aristotle mentions τὰ δὲ διαιφέσει, οἶον Ἐμπεδοκλῆς "αἶψα δὲ θνήτ' ἐφύοντο τὰ πρὶν μάθον ἀθάνατ' εἶναι ζωρά τε πρὶν κέκρητο", Arist.Po. 1461 23 ff. Nearly all English translators have rendered διαιφέσει "by punctuation," despite the anachronism, as the best way to convey the intent of the Greek.

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Whether or not this gloss is to be preferred over a more literal "by separation" or "by spacing out," this special use of $\delta\iota a\iota\varrho\varepsilon\sigma\iota\varsigma$, omitted by LSJ and Supplement, clearly warrants specific mention s.v.

διάλλαξις LSJ s.v., Section 1, reads: "separation, μιγέντων Emp. 8.3, cf. Hp. Vict. I. 10." Emp. 8 reads as follows:

άλλο δέ τοι ἐρέω· φύσις οὐδενὸς ἔστιν ἁπάντων θνητῶν, οὐδέ τις οὐλομένου θανάτοιο τελευτή, ἀλλὰ μόνον μίξις τε διάλλαξίς τε μιγέντων ἔστι, φύσις δ' ἐπὶ τοῖς ὀνομάζεται ἀνθρώποισιν.

The meaning of διάλλαξίς τε μιγέντων is illuminated somewhat by the διαλλάξαντα κελεύθους of Emp. 35.15,

αίψα δὲ θνήτ' ἐφύοντο, τὰ πρὶν μάθον ἀθάνατ' είναι, 15 ζωρά τε τὰ πρὶν ἄκρητα διαλλάξαντα κελεύθους

(cf. infra s.v. $\zeta\omega\rho\delta\varsigma$) and its echo in Emp. 115.8

φυομένους παντοῖα διὰ χρόνου εἴδεα θνητῶν ἀργαλέας βιότοιο μεταλλάσσοντα κελεύθους.

LSJ's "separation" is apparently based on a wrongly construed complementarity with μίξις (as though διάλλαξις were equivalent to διάπρισις, ἀπόπρισις, or διάστασις, the term Aëtius uses—apparently going on a similar assumption—in introducing his quotation of the fragment). There is, of course, a complementarity with μίξις; but it is the complementarity of "combination and permutation" (cf. Lat. correl. permutatio) rather than of "mixing and separation." In the Hippocratic passage (Hp. Vict. 1.10) the word occurs in a list of things which are under the governance of fire: ψυχή, νόος, φρόνησις, αὔξησις, κίνησις, μείωσις, διάλλαξις, ἕπνος, ἔγερσις. Here the general context suggests reference to the cyclic exchanges or permutations which occur in the fanciful metabolism under discussion. LSJ s.v., Section 1, would better read: "permutation, exchange, Emp. 8.3, Hp. Vict. 1.10."

διαφύομαι LSJ's whole entry s.v. is poorly organized, and parts of it need correction. As it stands it reads: "Pass., fut. -φύσομαι Philostr.Jun.Im.13: with aor.2Act. διέφὖν: pf. διαπέφὖνα:—germinate, of seeds, Thphr.CP 2.17.7. II. to be disjoined, διαφύντος ένός Emp.17.10. III. grow between, Arist.Fr.335, Thphr.CP 3.7.9; intervene, χρόνος διέφυ καὶ πάντα ἐξήρτυτο Hdt.1.61; βαθὺς δ. αὐλών Eratosth.8. IV. to be different from, ἀπ' ἀλλήλων Philostr.Im.2.32.

V. to be inseparably connected with, τινός Philostr. Jun. l.c.; to identify oneself with, τυραννίδος Plu. Dio 12; to be intimately acquainted with, τῶν Ελληνικῶν D.C. 72.6, cf. 77.13; δι' δλης τῆς Ἰταλίας to pervade. leaven all Italy (of Sulla's veterans), Plu. Cic. 14." Now among the senses which διά exhibits in verbal compounds, four seem relevant here. And good lexicographic practice would reflect this by distinguishing four major senses of the compound verb. In the sense (I) "right through" [as in διϊππεύω, "ride through"] we have βαθὺς διαφύεται αὐλών ("a deep hollow runs through it"), Eratosth. 8; in the sense (II) "throughout" [as in διαπνίσκομαι, "suppurate throughout"] we have οἱ Σύλλα πάλαι στρατιῶται, διαπεφυκότες μὲν ὅλης τῆς Ἰταλίας ("the old soldiers of Sulla, pervading all of Italy"), Plu. Cic., 14.1, also Philostr. Jun. Im., 13.2; in the sense (III) "between," used both (a) connectively [as in διάχρυσος, "interwoven with gold"], we have (1), quite literally, αξ μεταξύ αύτῶν λεπτὸν ύμένα ἔγουσιν διαπεφυκότα ("they have a thin membrane growing between them"), Arist. Fr. 335, also Thphr. CP 3.7.9, and (2), in an extended sense, οὖτος μὲν οὖν εὐθὸς κατελθῶν διεπεφύκει τῆς τυραννίδος ("He, then, immediately after having returned, became connected with the tyranny"), Plu. Dio., 12.1, also D.C., 72.6.5, 77.13.2, and (b) disjunctively [as in $\delta \iota \alpha \iota \varphi \epsilon \omega$, "divide"], we have (1), in a temporal sense, χρόνος διέφυ καὶ πάντα σφι ἐξήρτυτο ἐς τὴν κάτοδον ("time passed ['came between'] and everything was ready for their return"), Hdt. 1.61, and (2), in an abstract sense, διαπέφυκε δὲ ἀπ' ἀλλήλων τὰ παλαίσματα ("Wrestling matches differ from one another"), Philostr. Im., 2.32.2; and in the sense (IV) "apart, in different directions" [as in διαλύω, "loose from one another, and διαπέμπτο, "send off in different directions"], we have the following uses of Empedocles and Theophrastus. Among pre-Aristotelian philosophers, Empedocles alone is attested as having used διαφύομαι: Emp. 17.2,5,10,17, and 26.9 (where 17.17 repeats 17.2, and 26.9 repeats 17.10). 17.1-2 (= 17.16-17):

δίπλ' ἐρέω· τοτὲ μὲν γὰρ ἕν ηὐξήθη μόνον εἶναι ἐχ πλεόνων, τοτὲ δ' αὖ διέφυ πλέον' ἐξ ἑνὸς εἶναι.

17.4-5:

τὴν μὲν γὰρ πάντων σύνοδος τίκτει τ' ὀλέκει τε, ή δὲ πάλιν διαφυομένων θρεφθεῖσα διέπτη.

 $26.8-9 (= 17.\langle 9 \rangle -10)$:

οὕτως ή μὲν εν ἐκ πλεόνων μεμάθηκε φύεσθαι ήδὲ πάλιν διαφύντος ένὸς πλέον' ἐκτελέθουσι.

While there can be no doubt that the physical motion envisaged here is a disjoining one (as LSJ correctly asserts s.v., Section II). it is a mistake to isolate this sense from the "germinating, sprouting" uses of Theophrastus, as in διαφύεται δ' οὐκ ἐν ἴσοις πάντα χρόνοις ("not all [herbs] germinate in the same length of time"), HP 7.1.3, and δει δε φυτεύειν προβρέχοντας δταν ήδη διαφύηται εν τῷ ὕδατι ("one should first soak the seed and sow it when it is already sprouting in the water," tr. Hort), HP 3.7.2, also CP 2.17.7. The developed image would be that of the swelling seed, breaking apart. becoming "organ-ized," and sending shoots and roots out in different directions. The image is certainly apt for what Empedocles clearly has in mind. And he is indeed given to biological metaphor. His own generic term for the "elements" is διζώματα, Emp. 6.1. And the words ' $\eta \dot{v} \xi \dot{\eta} \vartheta \eta$ ', ' $\varphi \dot{v} \varepsilon \sigma \vartheta \alpha i$ ', and ' $\dot{\varepsilon} \varkappa \tau \varepsilon \lambda \dot{\varepsilon} \vartheta o v \sigma i$ ' in the immediate context of the Empedoclean occurrences of διαφύομαι all naturally point to biological growth as the dominant metaphor of these verses. That διαφύντος in 17.10 (= 26.9) was understood as a biological metaphor by at least some medieval Latin translators seems likely. The otherwise unknown translation of Aristotle's Physics to which Aquinas refers in his Commentary has, for διαφύντος ενός πλέον' (at 250 b 31, where Empedocles is being quoted), ex uno geminato plurima, where geminato is almost certainly a misreading of either germinato or gemmato. (The slip is very easy. E. L. Brown has pointed out to me a recent instance in Latomus 31 (1972), 688.1, which reads: "and germinate (geminare) so to ..." where the text cited actually has "germinare." I suggest then that Empedocles' use of the term be incorporated into the same section with Theophrastus, as follows: "germinate, sprout, of seeds, Thphr. HP 3.7.2, 7.1.3, CP 2.17.7; metaph., Emp. 17.2 al."

δισκοειδής LSJ s.v. gives only "quoit-shaped" as the meaning. But this is misleading. In Placit. 2.27.2 (cited by LSJ), where it applies to the moon, the shape in question is clearly that of a disc, not a ring: Περὶ σχήματος σελήνης ... Εμπεδοκλῆς δισκοειδῆ.

ἔκλειψις In Pr. 937 a 13 "Aristotle" mentions a desiccation process wherein occurs an ἔκλειψις όγροῦ, a "departure of moisture": πότερον ὅτι τῆ τοῦ ὑγροῦ ἐκλείψει γίνεται λίθος, μᾶλλον δὲ ὑπὸ τοῦ θερμοῦ ἢ τοῦ ψυχροῦ ἐκλείπει τὸ ὑγρόν . . . LSJ misses this particular noun correlate of the intransitive verb, which should be added to Section II ["(from intr.)"], 2: "failing, cessation, τῶν δυνάμεων Plu. 2.433 f. (pl.), cf. Aret. SD 1.7; extinction of a race, Str. 9.5.12.

ἐκχωρέω In keeping with LSJ's later citation of the opposition between ἐκχωρέω and συγχωρέω in Anaxag. 15, s.v. συγχωρέω, add "go out, go off, opp. συγχωρέω, Anaxag. 15" to Section I.1: "depart, ἐκ χώρας SIG 679.53; leave a country, emigrate, Hdt. 1.56, Hecat. 30J.; withdraw, ἐκ τῆς οἰκίας PAmh. 2.30.44 (ii B.C.), etc.: metaph., ἐ. ἐκ τοῦ ζῆν Plb. 2.21.2: so abs., Id. 7.2.1." Cf. infra s.v. συγχωρέω.

ἐπαρκής The entry in LSJ s.v. reads as follows: "helpful, κρᾶσις Emp. 22.4; of remedies, effective, Nic. Al. 564. II. sufficient, οὐσία ταῖς δαπάναις ἐ. Plu. Cic. 7, cf. D.P. 1101. Adv. -κῶς IG 4.491 (Cleonae)." The citations in context are as follows: Emp. 22.4f.:

ώς δ' αὖτως ὅσα κρῆσιν ἐπαρκέα μάλλον ἔασιν, ἀλλήλοις ἔστερκται ὁμοιωθέντ' Αφροδίτη.

'μρῆσιν ἐπαρκέα' is rendered by English translators quite consistently as "suitable for mixture," "adapted for mixture," "fitted for mixture," etc. LSJ's "helpful" makes no sense. Nic. Al. 563 ff.:

καί τε σύ γ' ή γερύων λαιδρούς δαμάσαιο τοκήας ἄμμιγα δὲ ξίζας ἠρυγγίδας, ή καὶ ἐπαρκές θάλπε βαλών γύτρω σκαμμώνιον.

The translation in the edition of Gow & Scholfield reads: "Further, either you should bend to your service the tadpoles' impudent parents and eryngo roots with them, or you should throw into a pot a sufficient quantity of scammony and cook it." LSJ's "effective" makes little sense.—Plu.Cic.7.3. Οὐσίαν δὲ μικρὰν μέν, ἱκανὴν δὲ καὶ ταῖς δαπάναις ἐπαρκῆ κεκτημένος ἐθανμάζετο μήτε μισθοὺς μὴτε δῶρα προσιέμενος ἀπὸ τῆς συνηγορίας.—D.P.1101: ἀλλ' ἔμπης ζωοῖσιν ἐπαρκέες εἰσὶ κέλευθοι. LSJ's "sufficient" cannot be far off in these instances. (The Thesaurus Graecae Linguae lists but one meaning for ἐπαρκής: Sufficiens.) I suggest that all occurrences here cited might well be taken to carry the same basic meaning of being fitting, suitable, adapted, adequate, and that the partition in LSJ's entry is a mistake.

ἐπιγίγνομαι Emp. 17.30 ff. seems clearly to express an element conservation principle, together with its Parmenidean rationale:

καὶ πρὸς τοῖς οὖτ' ἄρ τι ἐπιγίνεται οὐδ' ἀπολήγει· εἴτε γὰρ ἐφθείροντο διαμπερές, οὐκέτ' ἄν ἦσαν· τοῦτο δ' ἐπαυζήσειε τὸ πᾶν τί κε; καὶ πόθενἐλθόν;

Here ' $\epsilon \pi i \gamma i \nu \epsilon \tau ai$ ' almost certainly means "comes additionally into being" (cf. supra s.v. $a\pi o \lambda i \gamma \omega$), a sense omitted from the LSJ entry s.v., which includes "I. of Time, to be born after, come into being after . . . II. of things, come at the end, come as fulfilment . . ., esp. of sudden changes of weather and the like, supervene . . . 2. come in after; come upon, assault, attack; freq. in Hp. of additional symptoms, supervene . . . etc."

ἐπίπεδον This noun, with the precise geometrical sense "face of a cube," has been overlooked by LSJ and Supplement. S. v. ἐπίπεδος I, the Supplement does add "'2. τὰ ἐ. (sc. γῆς) the surface of the earth, opp. τᾶς γᾶς ὑπένερθε, Pl. Tht. 173e'," where the reading is ἡ δὲ διάνοια . . . πανταχῆ φέρεται κατὰ Πίνδαρον, "τᾶς τε γᾶς ὑπένερθε" καὶ τὰ ἐπίπεδα γεωμετροῦσα . . . Fowler, whose understanding of the passage the Supplement seems to follow, translates: "his mind, . . . is borne in all directions, as Pindar says, "both below the earth," and measuring the surface of the earth . . .". Whether or not this quite captures the sense of τὰ ἐπίπεδα in Plato's substantive use, the six ἐπίπεδα of a cube, in Simp. in de An. 68.6f., are clearly its faces: τὸν γὰρ κύβον διὰ τὸ δώδεκα μὲν ἔχειν πλευρὰς ὀκτὰ δὲ γωνίας ἕξ δὲ ἐπίπεδα . . . And, like πλευρά and γωνία, ἐπίπεδον must be a noun.

ζωρός The LSJ Supplement s.v. includes the following addendum to the LSJ entry: "but in Emp. 35.15 ζωρά τε τὰ πρὶν ἄκρητα (s.v.l.) must mean 'a pure, i.e. homogeneous mixture of what had been heterogeneous unmixed elements'." This is the view of Supplement editor M. L. West, as advanced in CR n.s. 16 (1966), 135 f. Now the meaning of ζωρός was a problem even in antiquity (cf. discussion in Plu. 4.677 d, and Homer's problematic phrase, ζωρότερον . . . κέραιε, Π. 9.203). But West's suggestion seems dubious. Emp. 35.14 ff. reads

αἴφα δὲ θεήτ' ἐφύοντο, τὰ πρὶν μάθον ἀθάνατ' εἶναι, ζωρά τε τὰ πρὶν ἄκρητα διαλλάξαντα κελεύθους. τῶν δέ τε μισγομένων χεῖτ' ἔθνεα μυρία θνητῶν.

("And forthwith grew mortal what before learned to be immortal. And $\zeta\omega\varrho\dot{a}$, what before was unmixed, exchanging paths. And as these mingled, there poured forth countless companies of mortal things").

As F. Solmsen has more recently pointed out, "if ζωρά τε τὰ πρὶν ἄμρητα, not ζωρά τε τὰ πρὶν ἔμρητο (or something close to it), is the correct text, as O'Brien and West have made highly probable—for the recensio of the tradition favours it and the syntactic parallel

between v. 14 and v. 15 becomes complete—and if the context and trend of the argument require for this text the meaning 'mixed', —for, other considerations apart, v. 16 shows how μίσγεσθαι and the arising of θνητά go together—all we can do is to infer that Empedocles, rightly or wrongly, took Homer's ζωφότεφον to mean 'more mixed'." (CR n.s. 17 (1967), 245f.) In Emp. 35.15 ζωφός probably means mixed (not the Supplement's "pure, i.e. homogeneous . . .").

θέλυμα The complete entry in LSJ s.v. reads "θέλυμνα, ων, τά, =θέμεθλα, foundations or elements of things, θ. τε καὶ στερεωπά cj. for θελημνά, θελημά, Emp. 21.6. (Cf. προθέλυμνος, τετραθέλυμνος.)" The Supplement stipulates that "For 'θέλυμνα ... 21.6' read 'θελυμνός, $\dot{\eta}$, \dot{ov} , = θελεμνός (Suppl.), cj. Emp. 21.6.'' Then s. v. θελεμνός, ή, όν, the Supplement entry reads "well-founded, prob. in Emp. 21.6 (-λημν- or -λημ- codd.); -μνον· ὅλον ἐκ διζῶν, Hsch." D. O'Brien argues convincingly that "θέλυμνα . . . is probably correct, a derivation from Homer's προθέλυμνος and τετραθέλυμνος to mean 'thick', 'close packed', 'dense'. This meaning would accord with Aristotle's phrase, την δὲ γῆν βαρὸ καὶ σκληρόν [GC 315 a 10f.] which seems to be a paraphrase of this verse." (Empedocles' Cosmic Cycle (Cambridge, 1969), p. 267.) If so, then LSJ had the probably correct reading and suggested derivation, but selected the wrong sense, and the Supplement's θελεμνός should be demoted from "prob. in Emp. 21.6" to "cj. Emp. 21.6."

θερμομιγής LSJ s.v. has "half-hot, ἀήρ Placit. 2.20.13." The passage reads: Εμπεδοκλής δύο ήλίους: τὸν μὲν ἀρχέτυπον, πῦρ ἑν τῷ έτέρω ήμισφαιρίω τοῦ κόσμου, πεπληρωκὸς τὸ ήμισφαίριον, ἀεὶ καταντικοὺ τῆ ἀνταυγεία ξαυτοῦ τεταγμένον τὸν δὲ φαινόμενον, ἀνταύγειαν ἐν τῷ έτέρω ήμισφαιρίω τῷ τοῦ ἀέρος τοῦ θερμομιγοῦς πεπληρωμένω, . . . Guthrie translates: "Empedocles assumes two suns: (1) the archetype, which is fire in one hemisphere of the cosmos. It fills the hemisphere, and is always stationed opposite its own reflection; (2) the visible sun. This is a reflection in the other hemisphere, namely the hemisphere which is filled with air [or darkness, aer] mixed with heat ...". (Hist. Gk. Phil., II. 192.) Now one may infer that "air mixed with heat" should be "half-hot air." But it is anachronistic to understand $\vartheta \epsilon \rho \mu \rho \mu \nu \gamma \dot{\gamma} \varsigma$ as having so purely qualitative a meaning here. Heat in Empedocles is elemental and substantial. When Aëtius writes τοῦ ἀέρος τοῦ θερμομιγοῦς he should be taken quite literally as speaking "of air mixed with heat."

καί The LSJ Supplement editors apparently missed an important discussion of zai in W. J. Verdenius & J. H. Waszink. Aristotle on Coming-to-be and Passing-away (Leiden, 1946; 2nd ed. 1966). The immediate concern of Verdenius & Waszink here is Aristotle's use of xai in introducing quotations and references (usually following διό or ὅσπερ), as in GC 314 b 7, 20; Rh. 1367 a 8; Po. 1453 b 28; Cael. 268 a 10. GC 314 b 17-21, for example, reads: τὰ γὰρ πάθη . . . διαφοραὶ τῶν στοιχείων εἰσιν . . . ι ι ι καὶ φησὶν Έμπεδοκλῆς "ἡέλιον μὲν λευκὸν ὁρᾶν" κτλ. The discussion is supported by instances drawn from a wide range of earlier uses: Il. 1.249, 12.9; Od. 20.156; Ar. Th. 580, Nub. 612, 1474; Pl. La. 194a, Phdr. 258e, Phd. 73d, 108d, 110d, R. 350d. "In all these cases," Verdenius & Waszink convincingly argue (2nd ed., pp. 2ff.), "zai seems to emphasize the accordance of the contents of a subordinate clause with those of the main clause, or of those of a sentence with those of the preceding sentence. It conveys the idea of something natural or factual, which may be translated by 'indeed', 'really', 'actually', 'in fact' (in German 'denn auch'). Consequently, the terms διὸ καί etc. introducing the above quotations from Aristotle do not serve to give one example taken from many others, but to stress the factual accordance of an example with a general truth. Hence, in 314 b, 20, for example, we should translate: 'as indeed Empedocles says'." I suggest that a new Section 10 be added to Part B s.v. to reflect this use.

αρυσταλλοειδῶς Κρυσταλλοειδής often means "like ice," and LSJ lists the apparently unique adverbial form which occurs in Placit. 2.11.2 under this sense of the adjective. But this is surely a mistake. The passage reads: Εμπεδοκλῆς στερέμνιον εἶναι τὸν οὐρανὸν ἐξ ἀέρος (συμ)παγέντος ὑπὸ πυρὸς κρυσταλλοειδῶς, κτλ. One does not form ice by the action of fire. However, Empedocles does take heat to be active in the formation of at least some kinds of rock (Arist.Pr. 937 a 16 ff., cf. supra s.v. ἔκληψις). Since the adjectival form also frequently means "like [rock] crystal," it is clearly under this sense of the adjective that the adverb belongs, i.e. in Section II s.v.

κύκλος Section III.3 of LSJ s.v. reads: "in Rhet., a rounded period, περιόδου κύκλος D.H.Comp. 19, cf. 22, 23. b. period which begins and ends with the same word, Hermog. Inv. 4.8." The Supplement s.v. directs that, to this Section, "add 'c. roundabout phrasing, circumlocution, Plu. 2.408 f.'": ἡ δὲ τῆς Πυθίας διάλεκτος ... οὐ ποιοῦσα καμπὴν οὐδὲ κύκλον οὐδὲ διπλόην οὐδ' ἀμφιβολίαν ἀλλ' εὐθεῖα

ποὸς τὴν ἀλήθειαν οὖσα ... (Babbit [Loeb] translates: "And as for the language of the prophetic priestess, . . . her language makes no bend nor curve nor doubling nor equivocation, but is straight in relation to the truth"). This use of κύκλος is attested much earlier in Arist. Rh. 1407 a 36, where it is also clearer: (Aristotle is setting forth five rules of style) τρίτον, μη ἀμφιβόλοις· ταῦτα δέ, ἂν μη τἀναντία προαιρήται. ὅπερ ποιοῦσιν, ὅταν μηθέν μέν ἔχωσι λέγειν, προσποιῶνται δέ τι λέγειν οί γὰρ τοιοῦτοι ἐν ποιήσει λέγουσι ταῦτα, οἰαν Ἐμπεδοκλῆς. φενακίζει γὰρ τὸ κύκλω πολὺ ὄν, καὶ πάσχουσιν οἱ ἀκροαταὶ ὅπερ οἱ πολλοὶ παρὰ τοῖς μάντεσιν (Freese [Loeb] translates: "The third consists in avoiding ambiguous terms, unless you deliberately intend the opposite, like those who, having nothing to say, yet pretend to say something; such people accomplish this by the use of verse, after the manner of Empedocles. For the long circumlocution takes in the hearers, who find themselves affected like the majority of those who listen to the soothsayers.")

κύμβη (B) LSJ s.v. has "head, EM 545.27: hence, a kind of bird, perh. tumbler-pigeon (cf. κύμβαχος), πτεροβάμονες κύμβαι Emp. 20.7." D'Arcy Thompson, Glossary of Greek Birds, s.v. has "A very doubtful bird . . . Supposed by L. & S. to be a Tumbler-pigeon; and, though by mere coincidence, cumbo = columba in certain Italian dialects, e.g. the Genoese. But cf. κόμβα· κορώνη, Hesych., who also has κύμβαι· ὄρνιθες: κυμβ[ατ]ενταί· ὀρνιθενταί." It is odd that neither LSJ nor Thompson took Hesychius very seriously here, for he is clearly correct. Κύμβαι are simply birds (ὄρνιθες). The term is generic. This is indicated not only by the other generic terms in the context, Emp. 20.6f.:

ώς δ' αὔτως θάμνοισι καὶ ἰχθύσιν ὑδρομελάθροις θηρσί τ' ὀρειλεχέεσσιν ἰδὲ πτεροβάμοσι κύμβαις,

but also by the fact that Simplicius (our source for Emp. 20) substitutes for κύμβαι the more common generic term in introducing his quotation of the fragment, Simp. in Phys. 1124.10 f.: καὶ ἐνταῦθα τὸ Νεῖκος καὶ τὴν Φιλίαν παρὰ μέρος ἐπικρατεῖν ἐπί τε ἀνθρώπων καὶ ἰχθύων καὶ θηρίων καὶ ὀρνέων ὁ Ἐμπεδοκλῆς φησι τάδε γράφων ... Latte's edition of Hesychius is surely right in citing Empedocles: "κύμβαι ὄρνιθες (Empedocl. 20,7)." LSJ may have been right in suggesting the connection with κύμβαχος. One possible explanation for the use of κύμβη as a generic term, especially when modified by πτεροβάμων (so as to apply more particularly to flying birds, as opposed to ground birds and swimming birds) is that among wing-

borne creatures, what distinguishes flying birds from flying insects is that the former are pretty much restricted to forward motion, while the latter are often seen to hold station, dart sideways, and even move in reverse. (Cf. Aristotle's distinguishing flying birds from flying insects by the latter's lack of a rudder-like tail, IA 710°2 ff.) In other words, a common characteristic of flying birds, one which could thus have given rise to the use of $\kappa i \mu \beta \eta$ as a generic term in Empedoclean verse is that bird flight direction is always head foremost.

μέγεθος The long recognized use of μέγεθος in the substantial sense of "bulk, mass, or body having μέγεθος" is entirely missed by LSJ and Supplement. Over a century ago Bonitz, Index Aristotelicus, s.v. pointed out, "sed plerumque τὸ μέγεθος ubi ad unam potissimum speciem refertur, τὸ σῶμα significat," and he provided the following examples: μήτε κενὸν εἶναι τὸ σῶμα μήτε δύο ἐν τῷ αὐτῷ τόπῳ μεγέθη μήτε ἀσωμάτῳ αὐξάνεσθαι Arist. GC 321 b 16. μέγεθος ὁμοιοβαρές, ἀνομοιοβαρές Arist. Cael. 273 b 23. ὁ τῆς γῆς ὄγκος πηγίκος ἄν τις εἶη πρὸς τὰ περιέχοντα μεγέθη Arist. Mete. 339 b 7, 340 a 8. ὑπὸ μικροῦ οἶακος μεγάλα κινεῖσθαι μεγέθη πλοίων Arist. Mech. 850 b 31.

οὐλοφυής This word occurs only in Emp. 62.4 and in passages which allude to this verse. It reads: οὐλοφυεῖς μὲν πρῶτα τύποι χθονὸς ἐξανέτελλον. The literal sense of οὐλοφυής is clearly "whole-natured," as it is now usually translated: "First sprang up from the earth whole-natured forms" (Kirk & Raven, Presoc. Phil., corrected ed. (Cambridge, 1960), p. 338); "Whole-natured forms first sprang up from the earth" (Guthrie, *Hist. Gk. Phil.* II (Cambridge, 1965), p. 206). LSJ, however, has s.v. "rough, raw, undifferentiated, of lumps of earth (τύποι χθονός), Emp. 62.4." This misunderstanding of the verse is no doubt derived from Diels' rendering in the first four editions of Die Fragmente der Vorsokratiker: "Zuerst tauchten rohgeballte Erdklumpen auf" (in Freeman's Ancilla to the Pre-Socratic Philosophers, a translation of Diels' Fragmente, "At first, undifferentiated shapes of earth arose"). The LSJ Supplement went part way towards restoring the correct sense of the verse by emending: "for 'of lumps ... χθονός', read 'τύποι'," following Kranz's correction of Diels in the fifth edition of Fragmente: "Rohgeballte Formen von Erde tauchten zuerst aus ihr auf." (The case is discussed at some length by O'Brien, Empedocles' Cosmic Cycle (Cambridge, 1969), pp. 203ff.) Yet we are still left with LSJ's original "rough, raw, undifferentiated," Diels/Kranz's "rohgeballte." There is no linguistic warrant

for this interpretation of $oillowv\acute{\eta}\varsigma$, only Diels' notion of what the argumentative context required. Since this can no longer be regarded as authoritative, LSJ s.v. would be better off simply recording the obvious literal sense, "whole-natured," leaving the interpretation of this notion to extra-lexical scholarship.

περιγηθής The entry s.v. in LSJ reads simply "very joyful, A. R. 3.814, 4.888." The word is attested much earlier in Emp. 27.4, in the reading of that verse preserved by Simplicius, in Phys., 1184.1 and in Cael. 591.5: Σφαῖρος κυκλοτερής μονίη περιγηθέϊ γαίων. Diels/Kranz, the standard citation text for LSJ Supplement, assumes that Emp. 27.4 = 28.2, and prints περιηγέϊ for Simplicius' περιγηθέϊ. But this is probably wrong. Cf. D. O'Brien, Empedocles' Cosmic Cycle (Cambridge, 1969), pp. 22, 284f. Emp. 27.3f. reads:

οὕτως Αρμονίης πυκινῷ κρύφω ἐστήρικται Σφαῖρος κυκλοτερής μονίη περιγηθέϊ γαίων,

while Emp. 28 consists of the two verses:

άλλ' ὅ γε πάντοθεν Ισος ⟨έοῖ⟩ καὶ πάμπαν ἀπείρων Σφαῖρος κυκλοτερής μονίη περιηγέϊ γαίων.

πλευρά LSJ s.v., Section III. ["Math."] c., has "side of a square or cube, and root of a square or cubic number, Euc. 8.11,12 . . .". While "side" will do for plane figures, greater precision is needed in the case of solids, for "side" is ambiguous between "edge" and "face" for solid figures. That πλευρά means "edge" of a cube (and not "face") is indicated not only by Euc. 8.12, cited by LSJ: Καὶ ἐπεὶ κύβος ἐστὶν ὁ Α, πλευρὰ δὲ αὐτοῦ ὁ Γ, καὶ ὁ Γ ἑαυτὸν πολλαπλασιάσας τὸν Ε πεποίηκεν, ὁ Γ ἄρα ἑαυτὸν μὲν πολλαπλασιάσας τὸν Ε πεποίηκεν, τὸν δὲ Ε πολλαπλασιάσας τὸν Α πεποίηκεν. (κ.τ.λ.), but more particularly by Simp. in de An. 68.6f. (quoted supra s. v. ἐπίπεδον), where the twelve edges (πλευραί), eight corners (γωνίαι), and six faces (ἐπίπεδα) of a cube (κύβος) are each mentioned in the same clause. LSJ s.v., Section III. c. should read "side of a square, edge of a cube, and root of a square or cubic number, Euc. 8.11,12, Simp. in de An. 68.6, . . .".

στόλος In Section I.4 s.v., LSJ has "λόγον σ. a set narrative, Emp. 17.26." The verse, which seems to be a rebutting echo of Parm. 8.52, reads: . . . σὸ δ' ἄκονε λόγον στόλον οὖκ ἀπατηλόν. LSJ's "set narrative" is most implausible here, for it gives the word a sense without precedent or parallel when, among its ordinary senses, there is one which will do perfectly well: "course" (here, "course of

συγχωρέω LSJ s.v. includes "combine opp. ἐκχωρέω, Anaxag. 15" among the senses listed in Section I. But this is impossible. Anaxag. 15 reads: τὸ μὲν πυκνὸν καὶ διερὸν καὶ ψυχρὸν καὶ τὸ ζοφερὸν ἐνθάδε συνεχώρησεν, ἔνθα νῦν ⟨ἡ γῆ⟩, τὸ δὲ ἀραιὸν καὶ τὸ θερμὸν καὶ τὸ ξηρὸν ἐξεχώρησεν εἰς τὸ πρόσω τοῦ αἰθέρος. If συγχωρέω were to mean "combine" here, then it could hardly be "opp. ἐκχωρέω" ("go out"—cf. supra s.v. ἐκχωρέω); if it is "opp. ἐκχωρέω" (as seems to be the case), it can hardly mean "combine," but rather "come in, come together," as in other instances cited in Section I. The specially assigned sense, "combine," should be deleted. In Anaxagorean cosmogony, ἐκχωρέω, περιχωρέω, and συγχωρέω are all clearly used in their most literal, locomotive senses (Anaxag. 9, 12, 15, 16).

συνάγω LSJ s.v. misses the conceptual reduction sense of this verb (analogous to that of ἀνάγω in Arist. Metaph. 1001 a 13, A Pr. 46 b 40; cf. LSJ s.v. ἀνάγω, Section II. 2 & 4), as in ἔνιοι δ' εὐθὺς τέτταρα λέγουσιν, οἶον Ἐμπεδοκλῆς· συνάγει δὲ καὶ οὖτος εἰς τὰ δύο, τῷ γὰρ πυρὶ τἄλλα πάντα ἀντιτίθησιν Arist. GC 330 b 20 (Forster [Loeb] translates: "But (d) some declare that there are four from the start, for instance Empedocles, though he also reduces these to two, for he too opposes all the others to Fire."). I suggest, therefore, that to Section II. ["of things" as opp. "of persons, animals" in I.] 3. ["conclude from premisses, infer, prove, Arist. Rh. 1357 a 8, 1395 b 25, Metaph. 1042 a 3, Pol. 1299 b 12 . . . "] should be added (as a further Aristotelian, quasi-logical use), "b. συνάγει [sc. τὰ τέτταρα] εἰς τὰ δύο, he reduces the four to two, Arist. GC 330 b 20."

τέθηπα LSJ s.v., Section 1, has "intr., ...; mostly in part. τεθηπώς, amazed, astonied, Il.4.243, 21.64, Parm.6.7, Emp.17.21, etc." A modern student would very likely be misled here, for the relevant sense of amazed is obsolete, and astonied is archaic. There is no element of wonder or surprise in the passages cited; those in question are simply dazed. Il.4.243ff.:

τίφθ' οὕτως ἔστητε τεθηπότες ἠύτε νεβοοί, αἴ τ' ἐπεὶ οὖν ἔκαμον πολέος πεδίοιο θέουσαι, ἑστᾶσ', οὐδ' ἄρα τίς σφι μετὰ φοεσὶ γίγνεται ἀλκή.

Il. 21.64ff.:

'Ως ωθμαινε μένων' δ δέ οἱ σχεδὸν ἦλθε τεθηπώς γούνων ἄψασθαι μεμαώς, πεθὶ δ' ἤθελε θυμῷ ἐκφυγέειν θάνατόν τε κακὸν καὶ κῆθα μέλαιναν.

Parm. 6.6f.:

... οί δὲ φοροῦνται

κωφοί όμῶς τυφλοί τε, τεθηπότες, ἄκριτα φῦλα

Emp. 17.21:

την σύ νόω δέρκευ, μηδ' όμμασιν ήσο τεθηπώς:

For "amazed, astonied," LSJ s.v., Section 1, read "dazed."

υπεκπροθέω The entire entry in LSJ s.v. reads: "run forth from under, outstrip, "Ατη..πάσας (sc. τὰς Λιτὰς) πολλὸν ὑπεκπροθέει II. 9.506: abs., ὁ τὸν πεδίοιο διώκετο.. τυτθὸν ὑπεκπροθέοντα running on before, 21.604, cf. Od. 8.125, A.R. 4.937." To this should be added reference to Emp. 35.12, where ὑπεκπροθέω has the very literal sense, "run forth outward from below," as of a current in a fluid medium. Emp. 35.12f.:

δσσον δ' αιεν ύπεκπροθέοι, τόσον αιεν επήει ηπιόφρων Φιλότητος αμεμφέος αμβροτος δομή.

ύποφέρω LSJ s.v., Section V.1 includes "—Pass., to be borne down, τοῖς ποταμοῖς Plu. Alex. 63; slip down, κατὰ κρημνῶν Id. Mar. 23; of the legs, give way under a person, Hp. Int. 36." To these instances should be added "go underneath, pass below, as of the sun's going underneath the earth, τῷ ἡλίῳ περὶ αὐτὴν [sc. τὴν γὴν] ὑποφερομένῳ Plu. 3.1006e." In fuller context the passage reads: καὶ γὰρ οἱ τῶν ὡρολογίων γνώμονες οὐ συμμεθιστάμενοι ταῖς σκιαῖς ἀλλ' ἑστῶτες ὄργανα χρόνου καὶ μέτρα γεγόνασι, μιμούμενοι τῆς γῆς τὸ ἐπιπροσθοῦν τῷ ἡλίῳ περὶ αὐτὴν ὑποφερομένῳ. Guthrie, Hist. Gk. Phil. II (Cambridge, 1965), p. 195 translates: "The pointers of sundials by staying still and not changing their place with the shadows become instruments and measures of time, like the earth which intercepts the sun when the sun passes below it."

ύφίστημι The quotation just given from Plu. 3.1006e (supra s.v. ὑποφέρω) continues, καθάπερ εἶπεν Ἐμπεδοκλῆς [B 48] 'νύκτα δὲ γαῖα τίθησιν, ὑφισταμένη φαέεσσι.' (Guthrie tr.: "as Empedocles says: 'The earth makes night by blocking the lights.'") LSJ and Supplement miss the sense of ὑφίστημι here, which I suggest should be in-

cluded s.v., Section B. [Pass., ...] IV. 1 ["resist, withstand, c.dat ...] as: "block, as of earth's making night by blocking the luminations, νύκτα δὲ γαῖα τίθησιν, ὑφισταμένη φαέεσσι, Emp. 48."

χωρητικός LSJ s.v. has "able to contain, ύγρότητος Sch. Ptol. 19.2. capable of, ἄνθρωπος ζῷον λογισμοῦ χ. Ael. NA 2.11, cf. S. E. P. 3.121. Adv. -κῶς Suid. s.v. χανδόν." Into this entry should be inserted: 3. Subst., capacity, "χόανα" . . . ἀ καὶ "εὖστερνα" ὡς πλατέα διὰ τὸ χωρητικὸν καλεῖ, Simp. in de An. 68.8 ff.

ψηφολογικός, -λόγος, -παικτέω, -παίκτης LSJ s. vv. reads: "ψηφολογικός, ή, όν, juggling, Suid., f.l. in EM 535.1. -λογος, ον, playing juggling tricks, juggler, Suid. -παικτέω play juggling tricks, Artem. 3.55 2. ψ . τὸ δίκαιον juggle away right, Lys. Fr. 17 -παίκτης, ου, δ $(\pi a i \zeta \omega)$ one who juggles with pebbles, Eudox. Com. 1, S. E. P. 2.250." The two most informative passages of those cited read: Suid.: Ψηφολόγοι ψηφολόγοι είσιν οί ψηφοπαϊκται, ψηφολογικοί γοῦν οί πλανῶντες καὶ ἀπατῶντες, ὥσπερ οἱ ψηφολόγοι τοὺς ὀφθαλμοὺς τῷ τάχει τῆς μεταθέσεως τῶν ψήφων ἀπατῶντες συναρπάζουσι. Ψηφολόγοι: οί λόγον καὶ φροντίδα ποιούμενοι τῆς διὰ τῶν ψήφων ἀπάτης. S. Ε. Ρ. 2.250: ωσπερ γὰρ οὐδ' ὅτι ἀληθῆ ἐστὶ τὰ ὑπὸ τῶν ψηφοπαικτῶν γινόμενα συγκατατιθέμεθα, άλλ' Ισμεν δτι άπατῶσιν κὰν μὴ γινώσκωμεν δπως άπατῶσιν, οὕτως . . . LSJ's references to jugglers and juggling here are, today, very misleading. While the sense of "juggle" in Old and Middle English was, and in modern English used to be, quite broad (so as to include the performance of all sorts of magician's tricks, conjuring, sleight of hand, legerdemain) it is today normally taken by both professional entertainers and the general public in a much more restricted sense. A "juggler" today is an "entertainer who specializes in balancing and in feats of dexterity in tossing and catching balls, plates, knives, etc."—R. Toole-Scott, "Juggler," Ency. Brit., 1972, XIII, 126f. He actually does what he appears to do, and deception normally plays no role in his performance. The case is quite different with ψηφολόγοι and ψηφοπαῖκτα, whose performance is deceptive, whose skill is conjuring, "the art of entertaining by pretended performance of those things which cannot be done."— J. Mulholland, "Conjuring," Ency. Brit., 1972, VI, 344ff. LSJ s. vv. would better read: "ψηφολογικός, ή, όν, pertaining to conjuring, sleight of hand, legerdemain, Suid., f.l. in EM 535.1. -λόγος, or, playing sleight of hand tricks, Artem. 3.55 2. ψ. τὸ δίκαιον conjure away right, Lys. Fr. 17. - $\pi ai \pi \tau \eta \varsigma$, ov, δ ($\pi ai \zeta \omega$) one who does sleight of hand tricks with pebbles, Eudox. Com. 1, S. E. P. 2.250 (cf. Alciphr. 3.20)."