



APOSTOLOS PIERRIS

OMOION OMOIΩ AND ΔΙΝΗ:
NATURE AND FUNCTION
OF LOVE AND STRIFE
IN THE EMPEDOCLEAN SYSTEM

καί γάρ ὄνπερ οἰηθείη λέγειν ἄν τις μάλιστα
ὁμολογουμένως αὐτῷ, Ἐμπεδοκλῆς...

Aristotle, *Metaphysica* B, 1000a24-5

There is a tripartite correspondence, not a binary one, that we should heed carefully when interpreting Empedocles, and indeed while studying Presocratic philosophy in general. *Religion, philosophy* and *physics* – or, in alternative formulation, dimensions of awareness *first* mythological / symbolic, *second* metaphysical / speculative and *third* scientific / experiential – must be kept in unison, considered as forming an integral of the manifestation of being, of the revelation of the hidden in reality.

Rationality (and thought) pertains to all three dimensions of awareness of reality: there is a logic of symbolism in myth and cult, a logic for the theory of first principles, and a logic of physical understanding. This triple rationality has also to be unified, if it is to be pragmatic and not chimaerial.

Such tripartite equivalence, finally, cuts in all possible ways. For the archaic world-view at least, a religion naturalized is, to the same exactly extent, a nature sacralized. A philosophical physics is, in the same

precisely degree, a physical metaphysics. And to speculative philosophy there answers catoptrically religious symbolism of word and act. To construe this equivalence in reductionist terms, according to one's preferred basic mode of comprehension, is to miss its nature. Such reductionism leads to serious misinterpretation directly and indirectly - as the vicissitudes of Empedoclean exegesis so characteristically expose with unerring cyclicity – true to Empedoclean spirit and to the model of the Cosmic Pendulum.

I

There is the theory of Principles in Empedocles, but there is also the analysis of physical processes that manifest the working of those principles. Central to the following inquiry will be the correspondence between the function of Friendship and Strife on the one hand, and the movement of the Cosmic *Δίνη* on the other. In other words, the issue is about the congruence of the metaphysical form of the world with its physical structure. And an apt point to start this investigation is by considering the connection of the Law of Attraction of Similar by Similar to the theory of Effluences (*ἀπόρροιαί*). But in order to do that, we must examine first the fundamental structure of being according to Empedocles.

There is no void in the World (B13 and B14. Cf. A86§13 p. 303.17). B13 in fact approaches the Parmenidean doctrine of absolute homogeneity of being: *οὐδέ τι τοῦ παντός κενεὸν πέλει οὐδέ περισσόν*.¹ If B 13 means that there is no more and less of being, no degree of beingness in reality, then how are the elements (*ριζώματα*) different from each other in concrete, physical terms?

Everything has a discreet texture: it comprises fuller and emptier parts; or rather compact parts and *πόροι*, i.e. it is bored throughout by *pores*.² These pores are not empty, but are occupied by the denser, solid parts of other, suitable bodies (A87; cf. Theophrastus A86 passim). This amounts to a *molecular* theory of the physical structure of being with *ὁμοιομερῆ στοιχεῖα πρὸ τῶν στοιχείων* (A43; A34; A43a), the *λεπτομερῆ σώματα* (A44). Now the elementary particles themselves are *ναστά* and *πυκνά* (the full and dense parts of being);

the pores Empedocles also called κοίλα (cavities) – A87. The elementary particles are solid, full atoms. For (as Aristotle explains, *De Generatione et Corruptione* 325b6-10): εἶναι γὰρ ἅττα στερεά, ἀδιαίρετα δέ, εἰ μὴ πάντῃ πόροι συνεχεῖς εἰσιν. τοῦτο δ' ἀδύνατον, οὐθὲν γὰρ ἔσται ἕτερον στερεὸν παρὰ τοὺς πόρους, ἀλλὰ πᾶν κενόν. ἀνάγκη ἄρα τὰ μὲν ἀπτόμενα εἶναι ἀδιαίρετα, τὰ δὲ μεταξὺ αὐτῶν κενά, οὓς ἐκεῖνος λέγει πόρους. The atomic particles are not strictly indivisible, but they are physically indivisible: ...διαιρετὸν μὲν, οὐ μέντοι διαιρεθσόμενον οὐδέποτε, καθάπερ Ἐμπεδοκλῆς βούλεται λέγειν (*de Caelo*, 305a1 = 31A 43a). In *de Gener. et Corr.* 325a6-13, Aristotle gives an Eleatic criticism of Empedocles. Things cannot be divided along the particles of fullness, but only along their cavities or pores. As these are occupied by other bodies (void being nonexistent) real division can only proceed along the interstices of different particles as they touch each other. Τὸ πᾶν ἄπτεσθαι διηρημένον is the Empedoclean position.³

There is no difference in beingness among the various particles of being. What makes for the physical difference among the roots, as they exist in this world, is, therefore, first, the *pattern* of fullness and cavity (of particle and pore) that defines each one of them. Cosmos is constituted as a kind of three-dimensional, complex, variegated *Net* (Δίκτυον, an *Orphic* idea). Secondly, there must, however be a qualitative difference among the particles of the four elements. Otherwise Empedocles would not so emphatically speak of four ριζώματα, roots of existence. Besides such qualitative difference is required metaphysically for the absolute and limiting conditions of existence, as we shall see. Empedocle's answer to the Parmenidean challenge is that there are four distinct roots in reality, *equal in beingness* although with a different character of being. B17.27: ταῦτα γὰρ ἰσά τε πάντα καὶ ἤλικα γένναν ἔασι. Cf. Parmenides 28B8.49: οἱ γὰρ πάντοθεν ἴσον (sc. τὸ ὄν).

There is a continuous flow of *effluences* from everything in this world (B89): γνούς, ὅτι πάντων εἰσὶν ἀπορροαί, ὅσσ' ἐγένοντο. It should be supposed that free particles or groups of particles together with the intervening cavities stream away from every thing – so that, in fact, should it not have been able to repair this continuous loss of substance by a corresponding growth, i.e. by the accretion of similar parts, it would pass away, i.e. be dissolved (*ibid.*; cf. Theophrastus,

A86§20 p. 304.31: ἔτι δ' εἰ ἡ φθίσις διὰ τὴν ἀπορροήν, ὥπερ χρήται κοινοτάτῳ σημείῳ). These effluences meet other things in their movement: they pass by or through things whose texture is unlike theirs, but they pass through and *mix up* with those whose texture is similar. When, that is, the fit is good, permanent contact is established, and this accounts for the stability of the mixture. This is a basic tenet of Empedoclean physical theory. In fact Theophrastus complains that it is made to explain too much and indiscriminately. For by this mechanism Empedocles explained action and interaction, sensation, understanding, nourishment, growth, pleasure and pain, all. Cf. A86§12 p. 303.10-11: πάντα τε αἰσθήσεται καὶ ταῦτὸν ἔσται μίξις καὶ αἰσθησις καὶ αὔξησης (πάντα γὰρ ποιεῖ τῇ συμμετρίας τῶν πόρων) ἐὰν μὴ προσθῆ τινα διαφορὰν. §17 p. 304.2: διὰ τῶν αὐτῶν γὰρ ποιεῖ τὴν αἰσθησιν καὶ τὴν ἡδονήν. §23 p. 305.18-20: καὶ συμβαίνει ταῦτὸν εἶναι τὸ φρονεῖν καὶ αἰσθάνεσθαι καὶ ἥδεσθαι καὶ <τὸ> λυπεῖσθαι καὶ <τὸ> ἀγνοεῖν· ἄμφω γὰρ ποιεῖ τοῖς ἀνομοίοις. ὥσθ' ἅμα τῷ μὲν ἀγνοεῖν ἔδει γίνεσθαι λύπην, τῷ δὲ φρονεῖν ἡδονήν. A rich string of fragments and doxographical information testify to the wide-ranging explanatory power intended for the molecular theory of being (matter) combined with the doctrine of effluences and textural adaptation (*συμμετρία πόρων*): B91, B92, B93, B100, B101, B109, B109a, A88, A89, A90. The key factor in this pervasive physical mechanism is *harmony* as fitting together, *ἀρμόττειν* (Theophrastus, *passim*). Mortal things, in all their variety, are παντοίοις ιδέησιν ἀρηρότα (B35.17), *fitted together* according to all kinds of forms (Cf. B96.4). And B107.1: ἐκ τούτων (sc. τῶν στοιχείων) <γὰρ> πάντα πεπήγασιν ἀρμοσθέντα. (Cf. B71.4: ὅσα νῦν γεγάασι συναρμοσθέντ' Ἀφροδίτῃ). The wedge that Theophrastus attempts to insert between the doctrine of similarity (similar acting, sensing, thinking, growing etc. upon similar) and that of adaptation (A86 §15 p. 303.28-36) will not hold: similar things are those whose texture is similar; and those whose texture is similar can better “touch” each other (solid parts of the one being easily brought into contact with solid parts of the other because of the *συμμετρία πόρων* and the mutual correspondence between cavities and solidities).

Thus we obtain the general doctrine of Ὅμοιον Ὅμοίῳ. So B90:

ὡς γλυκὺ μὲν γλυκὺ μάρπτει, πικρὸν δ' ἐπὶ πικρὸν ὄρουσεν,
 ὄξυ δ' ἐπ' ὄξυ ἔβη, δαερὸν δ' ἐποχεῖτο δαηρῶ
 (maybe δαελόν, δαηλῶ to fit with Syracusan usage).

This doctrine involves two theses: *one* is the theory of textural adaptation. The *other* is the theory of effluences, as it is by means of those that similar may find the similar and unite with it. We have one *structural* and one *processual* constituent of the general doctrine at its physical acceptance.

II

But how does this physical construal relate to the Empedoclean Metaphysics, i.e. Empedocles' theory of first principles?

As we know (B91):

ὕδωρ οἶνω μᾶλλον ἐνάρθμον, ἀντὰρ ἐλαίῳ
 οὐκ ἐθέλει κμίσγεσθαι.

The implication is clear: *two things mix willingly together, if their textures fit together*. (No doubt this is facilitated in the present case by the fact that wine is a direct transformation of water; B81: οἶνος ἀπὸ φλοιοῦ πέλεται σαπὲν ἐν ξύλῳ ὕδωρ). We may transpose this metaphysically by saying that water and wine exemplify more of the power of Friendship, whereas water and oil exhibit more of the power of Strife.

Ἄρθμός (from ἀραρίσκω) is a *bond* of adaptation, characteristically coupled to friendship as in the Homeric *Hymn to Mercury*, 524 (ἐπ' ἀρθμῶ καὶ φιλότῃτι); in Aeschylus, *Prometheus Vincit*, 191 εἰς ἀρθμὸν ἐμοὶ καὶ φιλότῃτα; or in Callimachus as explained by Erotianus, *voc. Hippocr.* p. 83.10 Nachmanson s.v. συναρθμοῦται· συναρμόζεται καὶ συννεοῦται. ἀρθμός γὰρ λέγεται ἡ εὐνοια καὶ ἡ φιλία ὡς καὶ Καλλιμάχος φησίν, Fr. 80.189 Pfeiffer:

ἀλλὰ σὺ τῆμος
 ἀμφοτέρων ἀρθμὸν καὶ φιλίην ἔταμες.

And so ἄρθμιος (fitting and united) and ἀρθμέω (to fit and be united). Homer, *Ilias*, 7, 302 ἐν φιλότῃτι ἀρθμήσαντε (where Apollonius *Lexicon* explains ἀρθμὸς γὰρ ἡ φιλία); the context provides precisely the Empedoclean opposition between enmity and friendship:

ἡμὲν ἐμαρνάσθην ἔριδος πέρι θυμοβόροιο,
ἡδ' αὐτ' ἐν φιλότῃτι διέτμαζεν ἀρθμήσαντε,

Hector and Ajax.

In *Odyssey*, 16.427:

...οἱ δ' ἡμῖν ἄρθμοι ἦσαν,

the Thesprotians were in friendly relations to the Ithacians. Cf. ἄρθμοι ἡδὲ φίλοι, *Theognis* 1312; and Herodotus 6, 83; 7, 101.

Thus Empedocles B17.23:

τῇ τε φίλα φρονέουσι καὶ ἄρθμια ἔργα τελοῦσι

they think and act friendly, in a fitting way, they are mutually adapted. He furthermore plays with ἄρθμια and ἄρθρα (B17.22-3):

ἥτις (sc. Φιλότης) καὶ θνητοῖσι νομίζεται ἔμφυτος ἄρθροισ
τῇ τε φίλα etc.

Φιλότης is believed by mortal men (θνητοῖσι) to inhere by nature (ἔμφυτος) in their members (ἄρθροισ), and by means of this inherence they think and act in love, calling her Γηθοσύνην and Ἀφροδίτην (which indicates that θνητοῖσι should not be taken with ἄρθροισ, or if so taken, it means human members specifically). This seems to give a sexual bias to l.23. In which case we understand why those very mortals who believe in the presence and workings of Love in their members, have not been aware of its winding immanence (ἐλισσομένην) in the elements: μετὰ τοῖσιν (l. 25) brings us back to ἐν τοῖσιν (l. 20), and in what follows the reference is to the elements (ll. 25-35, and further down a(i)6-a(ii)3).

Ἄρθρον is more than a member, it is a *joint*. So it involves two things joined together; B32:

... δύο δέει ἄρθρον.

Friendship, therefore, exists in human affairs as Joy and Aphrodite. But Empedocle's revelation (B17.25-6) consists in discerning it throughout the World, as a cosmic factor (*force and spirit*), in the elements (καὶ Φιλότης ἐν τοῖσιν, l. 20). How exactly?

The four elements are the roots of existence, the eternal substance of being. Things keep being composed out of them and dissolved into them. This composition and dissolution is being effected on the physical level by the elements *running through each other*, δι' ἀλλήλων δὲ θέοντα, B17.34; v. B21.13. *This is literal, according to the theory of the molecular structure of physical being.* By means of this movement, things are being brought into contact which, depending on whether they are fitting or unfitting to each other, yields sufficient force of attraction to keep them into more permanent configurations or, failing this adaptation, results in their being repelled and continuing their search for their similars. *Stability means better adaptation, i.e. more similarity.*

But stability is the work of Friendship. She makes things yearn for each other and be united. B21.7-8:

ἐν δὲ Κότῳ διάμορφα καὶ ἄνδιχα πάντα πέλονται,
σύν δ' ἔβη ἐν Φιλότητι καὶ ἀλλήλοισι ποθεῖται.

In Strife, things become different in form (dissimilar) and separate, distinct and segregate. The emphasis on the *separation* of the distinct and dissimilar is significant (δίχ' ἕκαστα, B17.8; B26.6). In Love, we are told here things yearn for each other and come together, they unite in copulation. By parity of reasoning, we should expect that this is being made possible by their becoming similar, assimilated (B22).

The principle of artistic creation whereby all kinds of forms similar to the real ones are being constituted in pictures is that of *harmonious mixing* of colours, of their *fitting* blending; B23.3-5:

οἷτ' ἐπεὶ οὖν μάρψωσι πολύχροα φάρμακα χερσίν,
ἁρμονίη μείξαντε τὰ μὲν πλέω, ἄλλα δ' ἐλάσσω,
ἐκ τῶν εἶδεα πᾶσιν ἀλίγκια πορσύνουσι,

etc.

III

In the crucial fragment B22 we have the meeting point of the theory of principles with the principle of similarity. In an exquisitely balanced set of two quadruplets we find explained that Aphrodite presides over things fitting to each other, while Strife governs those that are very different one to another. Parts of the elements (*ἑαυτῶν πάντα μέρεσσιν*), whether these elements form the world-masses (*ἡλέκτωρ τε χθών τε καὶ οὐρανός ἡδὲ θάλασσα*) or lie dispersed in the cosmos having wandered away (*ἀποπλαχθέντα*) from their wholenesses and have as a consequence become constitutive parts of mortal things (*ἐν θνητοῖσιν*), themselves being immortal, are *ἄρθμια* to each other according to their several natures. But so are (i.e. *ἄρθμια*) also mortal things that are to a higher degree adequate to mixture (*ὅσα κρήσιν ἐπαρκέα μᾶλλον ἔασιν*), are capable of, i.e. fit to, being mixed; for these, too, love each other *having become similar* by Aphrodite's action, *ἀλλήλοις ἔστερκεται ὁμοιωθέντ' Ἀφροδίτῃ*. (Or, with a harsher construal: for these, too, having become similar, love each other by Venus' action. The point is that Aphrodite causes things to love each other *which means* that she renders them well adapted to each other, i.e. fit to commingle; she has assimilated them). The composition of things that answer texturally to each other (and thus are made similar) is the result of Venereal influence. It is like people getting in love who are, to that extent and so long as it lasts, "*similarized*": their constitution, attitudes and behaviour are changed so that they can answer to each other; they become *fitting, well-suited*.

Contrariwise with things that are *ἐχθρά*, the opposite to *ἄρθμια*, one to another. These are the things that *differ* most from each other in origin, mixture (composition) and express form (ll. 6-7). They are *incogruous*. Such are first of all, the elements and their parts, each one to all the others. And then things incapable of, and unaccustomed to, mixing with each other, things baneful under Strife's tutelage, things that follow the suggestions of Strife (*Νείκεος ἐννεσίησιν*) since it gave rise to their constitution (*ὅτι σφίσι γένναν ἔοργεν*). Such things are *πάντῃ συγγίνεσθαι ἀήθεια*, in all respects *undisposed* and *unsuited* to mix. For they have their own very different character (*ἦθος*) each, just as we are told about the arch-different beings, the

elements themselves, that *τιμῆς δ' ἄλλης ἄλλο μέδει, πάρα δ' ἦθος ἐκάστω / ἐν δὲ μέρει κρατέουσι περιπλομένοιο χρόνιοιο* (B17.28-9).

Before following this line of thought to its furthest consequences, let us pause and reflect on the question of *harmonious blending*. Love *assimilates* things and thus renders them capable of uniting in compounds that are more or less stable depending on the degree of *congruity* achieved by their assimilation. For what is dissimilar in nature (and ultimately everything is dissimilar apart from parts of the same element) can become assimilated (*ὁμοιωθέντα*) by *suitable arrangement and disposition*. *Congruity is the second best similarity*. But how does this work in reality?

The work of Friendship is manifested as *fitness, suitability* (*ἄρθμιον*), we saw. Composition depends on the *crafty hands* (the devices) of Aphrodite (*Κύπριδος ἐν παλάμησιν*, B95). She wrought things with the bolts of thorough love (*γόμφοις ἀσκήσασα καταστόργοις Ἀφροδίτη*, B87). Her action is illustrated by that of the rennet curdling, riveting (the same word is employed as before *ἐγόμε-φωσεν*) and solidifying (bounding, *ἔδησε*) milk, B33. Another example used is that of *gluing* together intrinsically as in the case of barley-meal and water, *ἄλφιτον ὕδατι κολλήσας* B34. Plato speaks similarly of *gluing* together portions of the elements, welding them with numerous invisible, little *rivets* densely wrought so as to form the compound mortal bodies; *Timaeus* 42E-43A: *πυρὸς καὶ γῆς καὶ ὕδατός τε καὶ ἀέρος ἀπὸ τοῦ κόσμου* (from the World-masses of the elements) *δανειζόμενοι* (sc. the lesser gods) *μόρια... εἰς ταῦτὸν τὰ λαμβανόμενα συνεκόλλων, ... διὰ σμικρότητα ἀοράτοις πυκνοῖς γόμφοις ξυντήκοντες, ἐν ἑξ ἀπάντων ἀπεργαζόμενοι σῶμα ἕκαστον* etc.

From the elements all things have been fixed by *being fitted together*, *ἐκ τούτων <γὰρ> πάντα πεπήγασι ἄρμοσθέντα* (B107.1).⁴ Aphrodite fits and adapts the things together: *... ὅσα νῦν γεγάασι συναρμοσθέντ' Ἀφροδίτη... B71.4. Harmony as fitness and adaptation is the key factor. B23.4: ἁρμονίη μείξαντε (φάρμακα); Ἄρμονιή θεμερῶπις* (opposed to *Δῆρις αἱματόεσσα*, an avatar of the opposition *Φιλία - Νεῖκος*), B122.2; cf. Empedocles' use of the word *ἄρμόπτειν*, Theophrastus in 31A86 §§14-15. And this is the word employed by Plato in his brief account of the Empedoclean theory of

colours and vision, *Meno* 76C = 31A92. Above all, we possess in B96 (which came in the first book of Empedocle's work, and hence in the general metaphysical doctrine of reality, not in the physical theory of the second book) a splendid example of his masterful utilization of forms of expression in expressing his meaning:

ἡ δὲ χθῶν ἐπίηρος ἐν εὐστέρνοις χοάνοισι
 τῶ δύο τῶν ὀκτῶ μερέων λάχε Νήστιδος αἴγλης,
 τέσσαρα δ' Ἐφαίστιοι· τὰ δ' ὀστέα λευκὰ γέγοντο
 Ἄρμονίης κόλλησιν ἀρηρότα θεσπεσίηθεν.

They have been *fitted* together by means of *Harmony's glues*. (Cf. B35.17). Here then it is what it is all about: adhesion is a question of harmonious blending, and this of right proportion. Certain combinations of elements in suitable proportions yield stable mixtures, i.e. things mortal but enduring. Better proportioned elements give stabler concatenations of elements.⁵

What is a right proportion? One that gives a molecular texture that can keep together and last. And such is the one where the *particles* of the blending elements, in the proportion under which they enter into the mixture, are best adapted to fit into the *cavities* of each other. This is the *bond of harmony* (the *λόγος μείξεως*) that keeps together mortal things so long as they last. The constituents in such a bond do not have to change their nature, or suppress it, in order to form the composition. It is only a question of allowing alien particles to occupy in proper proportion their respective cavities. Their own particles, and even their characteristic pattern of dense matter and pores, remains intact – as it must, since the elements are indestructible. The elements, therefore, can mix *willingly* in the right proportion for their natures remain unaffected by the composition. (So under the rule of Friendship things ἀλλήλοισι ποθεῖται, B21.8. And in the cosmic phase of ascending Friendship, things enter into compositions *θελημά*, willingly, calmly, with a kind and quite disposition, B35.6). Love works *the gluing of good-will*, *κόλλησιν εὐνοίας*, which is a good mixture, *κράσις*, Plutarch, *De amicorum multitudine*, 95A-B (whence B33). *Εὔνοια* is rightly coupled with *Φιλία* in the restoration of d3 in the Pap.Stras. by the editors). The bonds of harmony do not violate their nature, only curb their insolent repugnance to let

anything different to *touch* them (literally). The assimilation that Love works on them in order to make them pliable to composition does not affect their precious and divine nature. It simply resides in their learning that mixture does not necessarily mean violence. It is even an agreeable state, if the proportion is right. And this admittedly is susceptible of degrees. But the important point is that the elements (and things generally) can be ruled by either Friendship or Strife without any essential change in their nature. It is only that with respect to the main fact, namely that identity and difference (otherness) go side by side as the two faces of the same coin, with respect to this fact one may emphasize either the identity or the otherness aspect. In the latter case being is possessed by blind Strife; in the former it is guided by discerning Friendship. For it is never a question of indiscriminate copulation, which is anyway ontologically excluded (so far at least as stable composition is concerned) by the mutual repugnance engendered through wrong proportioning and unsuitable combination, ultimately by the ineradicable difference in the nature of the being of the roots of all being. Interpenetration among the elements makes them (becoming) different at different times, but they are eternally throughout the same and similar to themselves; B17.34-5:

ἀλλ' αὐτ(ὰ) ἔστιν ταῦτα, δι' ἀλλήλων δὲ θέοντα
γίγνεται ἄλλοτε ἄλλα καὶ ἡνεκὲς αἰὲν ὁμοῖα.

Congruousness is a question of proper *disposition*.

IV

There is a major problem here involved, however, one crucial to Aristotle's worldview, the issue of what is a *natural* state, position, movement, tendency for the elements. But before coming to this (which will require for its unravelling a fuller understanding of the physical mechanism of the World), there is a more metaphysical query in our hands.

In fact, there is a clue here for the appropriate understanding of the Empedoclean position. The *ἀπορία* is this. Difference as such, and

robust difference in particular, in whatever respect, is the work of Strife. For the more things differ, the more they are repugnant to enter into any common configurations with others. So Strife is the principle of Otherness. Which is to say, it is equally the principle of Identity. The stronger and more characteristic an identity, the greater its difference from others, the bolder its tenacity to withhold alien influence, the less its willingness to compromise its self-determination by entering into coordination with other things. Friendship and enmity is not a question of will but of nature; or, rather, better formulated, will is a question of constitution: *πῦρ... θέλον πρὸς ὁμοῖον ἰκέσθαι* (B62.6).

On the other hand, the principle of all composition, be it Strife-minded and Strife-begotten, is Love. For even in the case of maximal identity and of maximal cohesion, with regard to the elements themselves in their own absolute and eternal self-willed, self-existence, Friendship lies *in them*, while nefarious Strife stands aloof, apart from them, a sphere (*ἀτάλαντον ἀπάντη*, equivalent in all respects and directions, isotropic and homogeneous) in awesome but morose isolation (B17.18-20):

*πῦρ καὶ ὕδωρ καὶ γαῖα καὶ ἥερος ἄπλετον ὕψος,
Νεῖκός τ' οὐλόμενον δῖχα των, ἀτάλαντον ἀπάντη,
καὶ Φιλότης ἐν τοῖσιν, ἴση μῆκός τε πλάτος τε.*

Friendship, unlike Strife, is archetypally a *square* (*ἴση μῆκός τε πλάτος τε*), or rather, in three-dimensional space, a *cube*.⁶ *Strife as sphere implies mobility; Friendship as cube entails stability and rest.* The context of B17.18-20 shows that the enumeration concerns the ultimate realities that remain imperishable in all cosmic vicissitudes, as they are to be conceived in abstraction from their variable world-constitutive conformations. *The principle of separation* is in itself *separate* and globular – and, we are led to expect, volatile and the origin of movement. The principle of composition is *in* the roots and cubic – and, by implication, the cause of rest. We shall see in the sequel the physical meaning of these metaphysical connections.

It goes without saying that what happens in the world at large, happens with everything in it. The principles and operations that rule over, and shape, Cosmos, apply all the same to every part and member

of it. Friendship accounts for all composition, Strife for all dissolution on the big scene: B17.7-8; B21.7-8; B26.5-6. Empedocles goes out of his way to emphasize that just the same holds good in the case of every thing in the World: B20=c.⁷ The genesis and growth of a man's individual being in a particular span of life is the work of Love; the decay and dissolution of his existence in (what people call) death is the work of Enmity.

But how are we to answer that query, to resolve this Empedoclean riddle: For anything to exist it must have a specific identity, hence a marked difference from other things; and this is due to Strife. Again, for anything to exist it must be composed together; and this is the result of Love. To exist is to make a difference. To exist is to be synthesized. Hence to make a difference is to be synthesized. Every act of Love creates a pole of Enmity.

To get a clearer picture of the issue let it be asked what the state of existence will be under the twin limiting conditions of total dominance by Friendship and Strife respectively. Since we have for the time being left over the physical dimension and are moving on the metaphysical plane, we should look at the general pattern of cosmic evolution according to Empedocles. Composition and decomposition of particular things is inscribed within a cycle (*κατὰ κύκλον* B17.13; B26.12; *κύκλοιο* B26.1) comprising two phases, one of universal unification, one of universal dissolution (*πάντων σύνοδος* B17.4; *συνερχόμεν' εἰς ἓν ἅπαντα* B17.7). In B17.16sq. the point is made explicit: the roots, under the action of the two principles, become at one time *one alone* (*ἓν ἠϋξήθη μόνον εἶναι*, B17.16), while at another time are separated so that *they* are many out of the one (B17.17). "They" are the elements (B17.18). There is no mention, nor talk, so far of the various mortal things of the world. This topic comes up later, at a(i)8 sq. (cf. a(ii)23 sq.): the mortal things come into being and pass away as a by-product of the Cosmic Rhythm, of the pulsation towards universal unification and universal separation (Cf. also B20; B21; B23; B26). This is the grand and loud point of B17.1-5:

δίπλ' ἔρέω· τοτὲ μὲν γὰρ ἓν ἠϋξήθη μόνον εἶναι
ἐκ πλεόνων, τοτὲ δ' αὖ διέφθυ πλέον' ἐξ ἑνὸς εἶναι

(sc. the elements).

δοιῇ δὲ θνητῶν γένεσις, δοιῇ δ' ἀπόλειψις·
 (θνητά are the passing things of the World)
 τὴν μὲν (sc. γένεσιν and ἀπόλειψιν) γὰρ πάντων σύνοδος
 τίκτει τ' ὀλέκει τε,
 ἣ δέ (sc. γένεσις and ἀπόλειψις) διαφυομένων θρεφθεῖσα
 διέπτῃ.

V

We do not have as yet the physical manifestation of this cosmic pulsation. (For Empedocles starts from Religion, moves on to Metaphysical Speculation and ends up with Physics). But we know the metaphysical, and can deduce the physical, state of one of the limiting cases, that of the total dominance of Love. This is clearly set apart (B26.7) as the privileged point of reference for the entire cycle. (Eschatological considerations may account for the preference, but there are presupposed metaphysical and physical reasons for this as we shall see). The elements in the state of total unification are totally *subdued* (τὸ πᾶν ὑπένερθε γένηται, B26.7). All enmity has been cancelled, all otherness, and hence identity, has been submerged into a stable synthesis under *the bonds not of necessity but of harmony*, and Friendship reigns supreme (B27, 27a, 28; cf. B29; cf. B134).

What is the “*dense hiddenness of Harmony*” (Ἀρμονίης πυκινῶ κρύφῳ B27.4) on which the Σφαῖρος of perfect unification is grounded (ἐστῆρικται)? This points in fact to the physical equivalence of the metaphysical description for this limiting (and reference) condition of existence. The elements are eternal (B35.14 does not contradict their eternity; it is explained by ll.15 sqq.). In order to subdue the elements, to break down their self-willed separate identity, their molecular structure has to be dissolved and their particles dispersed and rearranged so that every part of the new structure has an equal share of the four roots disposed according to the shapes of their dense bodies without any cavity remaining unfilled. Thus there obtains a homogeneous texture for Sphaeros (Cf. A34; A43). So Philoponus A41: ...τῆς Φιλίας κρατούσης τὰ πάντα ἐν γίγνεσθαι καὶ τὸν Σφαῖρον ἀποτελεῖν ἄποιον ὑπάρχοντα, ὡς μηκέτι μήτε τὴν τοῦ πυρὸς μήτε τῶν ἄλλων τινὸς σῶζεσθαι ἐν

αὐτῷ ιδιότητα, ἀποβάλλοντος ἐκάστου τῶν στοιχείων τὸ οἰκεῖον εἶδος. The last remark is of course inaccurate: no element loses ever its proper character, which is preserved in the dense particles of its substance, the minute bodies, τὰ λεπτομερῆ σώματα (A44), and even in the pattern of its discrete texture.

The homogeneity of Sphaeros cancels all separate identity in its parts (in all but the quantum space). Thus Strife has no room to exercise its power. Sphaeros' condition appears therefore stable. There can be no movement in it. The absolute homogeneity and isotropy of its constitution does not permit to any particle to move in this rather than in that direction in search of its own. The power of Strife has been broken, but together with it any affirmation of identity. The Goddess has absorbed and assimilated everything in her body. No violence has been done to the nature of the elements, and yet they are totally subdued. No eternal identity has been lost, and yet none appears as manifest. This is the wonderful work of Friendship effected through ἀρμονίης πυκινῶ κρύφω: harmony has got hold of the hidden depths in the molecular structure of substance by creating an appropriate dense texture on the atomic level.

VI

What can disturb this serene perfection? It would seem nothing. We commented on the homogeneity and isotropy of the Σφαῖρος, and the absence of movement in it. (As Simplicius says, B31, ἀρξαμένου δὲ πάλιν τοῦ Νείκουσ ἐπικρατεῖν τότε πάλιν κίνησις ἐν τῷ Σφαίρω γίνεται, and indeed a movement *propagating* from its initial point to the entire body of the God: πάντα γὰρ ἐξείης πελεμίζετο γυῖα θεοῦ). Furthermore, Strife is located, in this state of the Universe, outside the body of the fully blended elements. Aristotle emphasises the fact (*Metaphysica*, B1000b1-6; v. b5: τὸ γὰρ νεῖκος οὐκ ἔχει, sc. ὁ Σφαῖρος). But without the Strife working in the substance of the Σφαῖρος (B27a), how can its decomposition commence?

Aristotle finds no answer to this question in Empedocles. He explicitly criticises him on this score (1000b12-17) in a context marked by significant praise for him. He objects: καὶ ἅμα δὲ αὐτῆς τῆς μεταβολῆς αἴτιον οὐθὲν λέγει ἀλλ' ἢ ὅτι οὕτως πέφυκεν· (then

follows B30) *ὡς ἀναγκαῖον μὲν ὄν μεταβάλλειν· αἰτίαν δὲ τῆς ἀνάγκης οὐδεμίαν δηλοῖ.*

The passage adduced is the crucial one on the beginning of the dissolution of *Σφαῖρος* (B30):

*αὐτὰρ ἐπεὶ μέγα Νεῖκος ἐνὶ μμελέεσσιν ἐθρέφθη
εἰς τιμᾶς τ' ἀνόρουσε τελειομένοιοι χρόνοιοι,
ὅς σφιν ἀμοιβαῖος πλατέος παρ' ἐλήλαται ὄρκουοι...*

There is a mutual Oath between Friendship and Strife to rule in turn over the elements, with periods set for their alternating dominance. (One is reminded of the Anaximandrian *κατὰ τὴν τοῦ χρόνου τάξιν*). Are these periods of equal duration? But how can we conceive, and speak of, and reckon, time in the absolute cessation of all movement? Strife, however, has not disappeared. And as a principle of movement, as we shall see, it can supply the basis for an understanding of duration in Friendship's reign.

A mutual oath would imply equal periods of sovereignty for the two contracting powers. The one term seems clear: in *Σφαῖρος* the rule of Love is absolute, and Enmity has been banned outside, in exile. But what is the balancing reign? Following the train of the preceding development, perhaps the hesitation having been felt on this point may vanish. For just as Love is the principle of unity and rest; so Strife is the principle of otherness and movement. Once the majestic serenity of the *Σφαῖρος* is disrupted, once separation and movement occur in the World, the rule of Strife has begun, irrespective of the intensity and extent of their presence, and of the pattern of evolution established thereby: a phase of increasing degree of separation and movement, followed by a decreasing one. Aristotle comes closest to such construal in *Physica* Θ, 252a19-32: *διόπερ βέλτιον ὡς Ἐμπεδοκλῆς, ..., ἐν μέρει τὸ πᾶν ἡρεμεῖν καὶ κινεῖσθαι πάλιν· ...ἀλλὰ καὶ τοῦτο δεῖ τὸν λέγοντα μὴ φάναι μόνον, ἀλλὰ καὶ τὴν αἰτίαν αὐτοῦ λέγειν, καὶ μὴ τίθεσθαι μηδὲν μηδ' ἀξιοῦν ἀξίωμ' ἄλογον, ἀλλ' ἢ ἐπαγωγὴν ἢ ἀπόδειξιν φέρειν· αὐτὰ μὲν γὰρ οὐκ αἴτια τὰ ὑποτεθέντα, οὐδὲ τοῦτ' ἦν τὸ φιλότητι ἢ νεῖκει εἶναι, ἀλλὰ τῆς μὲν τὸ συνάγειν, τοῦ δὲ τὸ διακρίνειν etc.*

We see now why Aristotle describes Embedocles' cycle so as the two periods of ascending Friendship and ascending Strife to be

paramount (rather than the two periods of the *Σφαῖρος* on the one hand and of his dissolution and reconstitution on the other). For him the two Empedoclean principles are two principles of movement, one of unifying (*συνάγειν*), the other of separating (*διακρίνειν*). He then diagnose inconsistency in Empedocles for, in important respects, it is Strife which unites (perfect similarity with similarity, parts of elements with other parts of the same element), and Love that segregates (similar from similar); so *de gener. et corr.* 333b19-22: ὁ δὲ (sc. E.) τὴν μίξιν μόνον ἐπαινεῖ. καίτοι τά γε στοιχεῖα διακρίνει οὐ τὸ νεῖκος, ἀλλ' ἡ φιλία τὰ φύσει πρότερα τοῦ θεοῦ (sc. τοῦ Σφαίρου) - θεοὶ δὲ καὶ ταῦτα. Aristotle thus criticises Empedocles for not having adequately defined what kind of movement each of his two principles accounts for; *op. cit.* 333b22-26: ἔτι δὲ περὶ κινήσεως ἀπλῶς λέγει. οὐ γὰρ ἰκανὸν εἰπεῖν διότι ἡ φιλία καὶ τὸ νεῖκος κινεῖ, εἰ μὴ τοῦτ' ἦν Φιλία εἶναι τὸ κινήσει τοιαδί, νεῖκει δὲ τὸ τοιαδί· ἔδει οὖν ἢ ὀρίσασθαι ἢ ὑποθέσθαι ἢ ἀποδείξαι, ἢ ἀκριβῶς ἢ μαλακῶς ἢ ἄλλως γέ πως. Remarkable generosity, but the point is that Empedocles. did not conceive of his two *Spirits* or Forces in this way. For Empedocles. Love is the principle of Unity and Rest; Strife one of Disunity and Movement. Which fits better with the Pythagorean and Parmenidean context of these speculations, as well as with philosophical developments in the 5th and down to the 4th century (particularly in the Academy). Aristotle confesses as much in his own way, *Metaphysica* A, 984b32 sqq. (= A39), esp. εἰ γὰρ τις ἀκολουθοίη καὶ λαμβάνοι πρὸς τὴν διάνοιαν καὶ μὴ πρὸς ἃ ψελλίζεται (!) λέγων Ἐμπεδοκλῆς, εὐρήσει τὴν μὲν Φιλίαν αἰτίαν οὖσαν τῶν ἀγαθῶν, τὸ δὲ Νεῖκος τῶν κακῶν· ὥστ' εἴ τις φαίη τρόπον τινὰ καὶ λέγειν καὶ πρῶτον λέγειν τὸ κακὸν καὶ τὸ ἀγαθὸν ἀρχὰς Ἐμπεδοκλέα, τάχ' ἂν λέγοι καλῶς, εἴπερ τὸ τῶν ἀγαθῶν ἀπάντων αἴτιον αὐτὸ τὰγαθὸν ἐστὶ καὶ τῶν κακῶν τὸ κακόν. The basic antithesis is not between two kinds of movement, but between movement and rest. And this is taken up in the Pythagorean table of polar syzygies, answering to the opposition between κακόν and ἀγαθόν (*Metaphysica*, 986a22 sqq.). *Empedocles postulated besides the material substance of the World, two Cosmic Forces, one of Attraction, one of Repulsion. And he discerned their respective natures, in the contentedness of blessed Rest and the turmoil of cursed Agitation.*

What starts the dissolution of the *Σφαῖρος*? Of course, *die Zeit ist da* (τελειομένοιο χρόνοιο). Great Strife emerges from his state of total defeat and exile from the realm of substantive existence, from his condition of impotence: he grows stronger in himself (probable sense of ἐνὶ μμελέεσσιν) and assumes the honours due to him. These honours obviously refer to *how the elements view him*. Metaphysically speaking, the ground of Sphaeros' dissolution consists in the irremediable difference in identity of the four ultimate roots of being. The question is only about when the inherent potentiality for their separation from the bosom of Sphaeros' integral will be activated. Strife grows in the honours paid to him by the elements. This means that the elements grow restive of their cohabitation in the *Σφαῖρος*. They start to long for a form of existence that will answer better to a more resolute affirmation of their specific distinctness of natural identity. *They become weary of being subdued.*

VII

How is that metaphysical *restlessness* and *self-will* expressed and realised *physically*? Aristotle clearly states that it is *movement* which separates according to Empedocles the elements out of the one (= *Σφαῖρος*); *de Gener. et Corr.* 315a21-3: ἡ μὲν γὰρ ὡς ὕλη ὑπόκειται (sc. the One = *Σφαῖρος*), ἐξ οὗ μεταβάλλοντα διὰ τὴν κίνησιν γίνονται γῆ καὶ πῦρ τὸ ἐν στοιχείων. (Aristotle's problem here whether it is the *Σφαῖρος* or the roots truest elements is his own. But the point about movement as physical operative of separation is valuable). We happen to have the precise form of movement that started the dissolution of the *Σφαῖρος* in a doxographical piece from the Plutarchean *Stromateis*, stemming probably from Theophrastus. A30 p. 288.27-8: τὴν δὲ ἀρχὴν τῆς κινήσεως συμβῆναι ἀπὸ τοῦ τετυχηκέναι κατὰ <τι> τὸν ἀθροισμὸν ἐπιβρίσαντος τοῦ πυρός. It so happened (τετυχηκέναι) in the fullness of time, that fire (the most active element, and one against which all the others stand as a group for E. according to Aristotle) was collected and condensed together (ἀθροισμὸν) at some place (κατὰ <τι>), and with this dense collocation weighted down and pressed heavily *prevailing* (ἐπιβρίσαντος). This condensed pressure started the movement (and the

dissolution of the *Σφαῖρος*), the spherical movement of the World-Globe. A *necessary but accidental* collocation somewhere of fire creates a local anomaly in the perfect homogeneity of *Σφαῖρος*; *an impetus is created by the force of the collected fire and this momentum is translated, given the cohesive homogeneity of the Globe, into a rotating movement of the whole*. The fiery anomaly thus gives place to Strife to reaffirm itself as principle of movement. The Vortex has started its work, with Strife, presumably, at its eye. It is better to pose this movement at the very beginning of cosmic creation. For through it the initial separation of elements into the world-masses that constitute the overall framework of our world, takes place. (E.g. water is spouted out from what remained of the *Σφαῖρος* after the separation of masses of fire and air, as a result of the squeezing action exercised on it by force of the universal rotation; *περισφιγγομένης* (sc. *τῆς γῆς*) *τῆ ρύμη τῆς περιφορᾶς ἀναβλύσαι τὸ ὕδωρ*.⁸ This *γῆ* is the remainder of *Σφαῖρος* once air and fire have been previously secreted away, presumably by the operation of the same mechanism. It takes more of squeezing to extract water, than to obtain air and fire. And notice the report in A53 that *Ἐμπεδοκλῆς πύρινα* (sc. are the stars) *ἐκ τοῦ πυρώδους, ὅπερ ὁ αἰθήρ* (corrected from *ἀήρ*) *ἐν ἑαυτῷ περιέχων ἐξανέθλιψε κατὰ τὴν πρώτην διάκρισιν*. The stars are made from the fire, contained in the aether, which was squeezed out (*ἐξανέθλιψε*) of it during the first separation (that of aether from the *Σφαῖρος*). Squeezed out by the force of the rotation, certainly. For this earliest circumvolution, v. A49 p. 292.19). It was after all common (Aristotle explains) to the thinkers of the earliest philosophical phase who posited more than one principles of reality to ascribe to fire a quasi-efficient causality for movement, *χρῶνται γὰρ ὡς κινητικὴν ἔχοντι τῷ πυρὶ τὴν φύσιν, ὕδατι δὲ καὶ γῆ καὶ τοῖς τοιούτοις τοῦναντίον*, *Metaphysica* 984b6-8.

So we have the physical mechanism for the formation of the world of multiplicity, movement, change and variability out of *Σφαῖρος*. The action of Strife consists in the Global Revolution which it imparts on the *Σφαῖρος*. (This is the metaphysical formulation of the physical process by which fire locally collected generates momentum which in the circumstances effects the global rotation). Everything else follows suit. The primary physical manifestation of Strife is the *Gyrus Mirabilis* (A49 p. 292.26), that is the *Cosmic Whirl* (*Δίνη*).

And by the way we understand from this limiting case of world beginnings the force (about which Aristotle complains so expectedly) of the Empedoclean *Chance*, and its (unlikely) combination with *Necessity* (κατὰ τύχην ἐξ ἀνάγκης, Plato, *Laws*, 889B – A48 p. 292.11). What is ontologically given (necessity) as a real potentiality, it will be realized *some time or other* (chance). The power which intrinsically has to be activated, will be activated sometime. To the Aristotelian question, why now and not then, the answer is that it will happen according to the decrees of Fate and the occasion of Fortune.

The Cosmic Rotation is the physical mechanism of separation of the elements from their total mixture in the Σφαῖρος.⁹ (Religiously speaking, this World is Hades).

VIII

Aristotle confirms the impact of the rotating movement of the World on Earth's coaccervation in the middle of Cosmos during the early stages of cosmogony. He reckons this to be the common view of all those who generate the World (i.e. do not ascribe to it everlastingness). *De Caelo* B13, 295a9-14: ...καὶ συνῆλθεν ἐπὶ τὸ μέσον φερομένη διὰ τὴν δίνησιν· ταύτην γὰρ τὴν αἰτίαν πάντες λέγουσιν ἐκ τῶν ἐν τοῖς ὑγροῖς καὶ περὶ τὸν ἀέρα συμβαινόντων· ἐν τούτοις γὰρ αἰεὶ φέρεται τὰ μείζω καὶ βαρύτερα πρὸς τὸ μέσον τῆς δίνης. διὸ δὴ τὴν γῆν πάντες ὅσοι τὸν οὐρανὸν γεννῶσιν, ἐπὶ τὸ μέσον συνελεθεῖν φασίν. (This passage has not been included in Empedocles' doxography by D.-K., although it figures in Anaxagoras', A88). *The whirling motion therefore will tend to segregate the elements of the Σφαῖρος into masses whose distance from the center of the whirl will be inversely proportional to their compactness and largeness.*

It would seem, however, on a superficial reading, that Aristotle is unfair in criticizing Empedocles. on the basis that it is one thing to give a reason for Earth's coming together and being assembled in the middle of the World at the Beginning of Things, another to account for its staying that way all the time since. (Cf. 295a9-10; a13-5). In fact, Aristotle supplies us with Empedocles' view on why the Earth remains all the time at the universal center; and it turns out that this reason is *different* from the cause which, according to Empedocles, made the Earth to be collected there originally. This latter it did

because compacter (“larger and heavier”) things move to the middle of the whirl, to the eye of the cyclone. Whereas the Earth *remains* at the middle by reason of the force of the heavenly rotation which keeps it up countervailing any tendency of it to fall down (A67 = *de Caelo* B13, 295a16-21). Aristotle evidently considers the two facts and their two explanations as distinct. He makes indeed the point clear as daylight in a passage whose subtlety is usually missed, although it provides the clue to the proper understanding of a vexed and crucial Empedoclean formulation, B35.3-4. In *de Caelo* 295a32-b1 Aristotle explicitly castigates Empedocles. for failing to see that given that the earth-particles were “before” (i.e. nearer to the origin of our World) moving towards the cosmic center *because of the spinning motion*, this explanation *cannot* account for the fact that *now* all heavy things move towards the earth (the antithesis *πρότερον ... νῦν* is emphatic); “for certainly the whirl does not come near to us”: “Ατοπον δὲ καὶ τὸ μὴ συννοεῖν (sc. Empedocles) ὅτι πρότερον μὲν διὰ τὴν δίνησιν ἐφέρετο τὰ μόρια τῆς γῆς πρὸς τὸ μέσον· νῦν δὲ διὰ τίν’ αἰτίαν πάντα τὰ βάρους ἔχοντα φέρεται πρὸς αὐτήν; οὐ γὰρ ἢ γε δίνη πλησιάζει πρὸς ἡμᾶς. (This is *not* included in D.-K.). Why not? The Earth remains at the center of the rotation: is it not any more at the *eye of the whirl*? (For it is there that the compacter things tend to gather). It would seem not. And with good reason: for the location of the cyclonic eye depends on the velocity of the whirling movement.

The eye of the Great Vortex does not coincide with the middle of the cosmic Whirl, except in the beginning (and in the end). To correctly understand the *physical* events referred to by E., we should stick to the full and direct meaning of his words and images. A whirl is of great *depth*; cf. d8 πολυβενθ[έα Δίνον]. When the rotation started, it was a slow motion of the Universe, which, being spherical, and thoroughly homogeneous, was susceptible of one movement, a global revolution. The generating power of the Whirl, concentrated in its Eye, resided then at the center of the Globe. There it is that Strife’s *prerogatives* are made manifest at the beginning of the dissolution of Σφαῖρος. On the other hand, the motor of the rotation, lies initially where fire, being concentrated, creates the impetus for *movement*. There Strife’s *work* is being manifested.

The pace of the Universal rotation accelerates continually, as Strife affirms more and more his claims on World-Domination. At an early period of this world-evolution, one day lasted as ten of our months.

The cosmic rotation took to be completed as much time as ten lunar months consume now. Later, but still early enough, the ratio was 1 day to 7 months (A75). The fact that Empedocles used these particular postulated equivalences to explain why human generation is subject to those two periods of fertile gestation, does not mean that the increase in the velocity of the rotation was and is discontinuous. Evidently, those points corresponded to cardinal events in the formation of humankind, and thus determined, once and for all, basic regularities of the *ἀνθρώπειον γεννητόν*. The doxography refers the first correspondence to the time when man begun to be borne from the Earth (A.75: *ὅτε ἐγεννᾶτο τὸ τῶν ἀνθρώπων γένος ἐκ τῆς γῆς, τοσαύτην γενέσθαι τῷ μήκει τοῦ χρόνου διὰ τὸ βραδυπορεῖν τὸν ἥλιον τὴν ἡμέραν, ὅποση νῦν ἐστὶν ἢ δεκάμηνος* etc.). On the other hand, the rapidity of the rotation now seems not to allow enough time for the fullest development of human body and mind: thus men of today are as infants compared with men of the past (cf. “Aetius” 5.27.1; 5.26.4). The accelerating rotation resulted in the World’s egg-like shape: its breadth is greater than its height. A50: *Ἐμπεδοκλῆς τοῦ ὕψους τοῦ ἀπὸ τῆς γῆς εἰς τὸν οὐρανόν, ἣτις ἐστὶν ἀφ’ ἡμῶν ἀνάτασις, πλείονα εἶναι τὴν κατὰ τὸ πλάτος διάστασιν, κατὰ τοῦτο τοῦ οὐρανοῦ μᾶλλον ἀναπεπταμένου διὰ τὸ ὧρ παραπλησίως τὸν κόσμον κείσθαι*. The World is broadened along the ecliptic, as the N-S axis of circumvolution is shortened and the Cosmos compressed in that direction. One has to assume that this elliptical, ovoidal, cosmic shape gets more and more pronounced as the World evolves towards Strife’s absolute domination.¹⁰

The greater the rapidity of global circumvolution, the lower descends the eye of the Cosmic Vortex. Thus the eye *moves away* from the World-center. And so Aristotle is right to assume in his criticism that the whirl is *not approaching* us (= the earth) in the present world-phase. But then so is Empedocles to give two different explanations for the centrality of Earth at the beginning and afterwards.

We come now to the crux B35.3-5:

*ἐπεὶ Νεῖκος μὲν ἐνέρτατον ἴκετο βένθος
δίνης, ἐν δὲ μέσῃ Φιλότης στροφάλλιγι γένηται,
ἐν τῇ δὲ τὰδε πάντα συνέρχεται ἔν μόνον εἶναι* etc.

The description ἐν τῇ δὴ τάδε πάντα συνέρχεται ἐν μόνον εἶναι unambiguously refers to the beginning (ἐν τῇ δὴ) of a *cosmic* process whose end is the Σφαῖρος (where *all these* become *one only*). It is the moment of Strife's absolute dominion. Love has retreated to the cosmic center of a furiously revolving World (ἐν μέσῃ στροφάλιγγι). She is vanquished and exhausted; her weakened influence, from that position, extends only to the self-love of the elements which now lay totally segregated in superposed spherical masses distanced from the middle of the universe according to their compactness: earth, water, fire, air (or, rather, air-fire, on the model of the world masses in this period occupying each one hemisphere of the superior regions of the World). Strife, the principle of movement, resides in, and operates from, the eye of the Vortex. He has come by now to the lowermost depth (of the World): ἐνέρτατον ἵκετο βάθος. And there he stops: he has come to the limits of the World. He cannot go further down. Therefore the rotation cannot be any more accelerated. He bounces on the cosmic boundaries and starts the opposite movement towards the center of the World. Just as the Sun changes his course at the tropics by reason of his having come to the end of the World; A50: Ἐμπεδοκλῆς τὸν τοῦ ἡλίου περιδρομον εἶναι περιγραφὴν τοῦ πέρατος τοῦ κόσμου. And: Ἐμπεδοκλῆς δεξιὰ μὲν αὐτοῦ (sc. τοῦ κόσμου) τὰ κατὰ τὸν θερινὸν τροπικόν, ἀριστερὰ δὲ τὰ κατὰ τὸν χειμερινόν. Cf. A58: Ἐμπεδοκλῆς ὑπὸ τῆς περιεχούσης αὐτὸν σφαίρας κωλυόμενον ἄχρι παντὸς εὐθυπορεῖν καὶ ὑπὸ τῶν τροπικῶν κύκλων (sc. τὸν ἡλίον τρέπεσθαι). Not, by its own sphere (as in later cosmographies), but by the heavenly sphere proper.

This interpretation is confirmed by the parallel passage in the Strasbourg papyrus, a(ii)18-19, read as follows:

[Ἄλλ' ὅτ]ε δὴ Νεῖκος [τ' ἀνυ]πέρβατα βέν[θε' ἵκηται]
δ[ίνη]s, ἐν δὲ μέσ[τη] Φ[ιλ]ότης στροφάλιγγι γένηται, etc.

(Or: [γ' ἀνυ]πέρβατα. The edd.'s rendering, Νεῖκος [μὲν ὑ]περβατά, is laboured in form, and inappropriate in sense). B35 explicitly refers back to the papyrus text.

The velocity of the cosmic rotation is at this point maximal, under Disorder's absolute sway. This state of maximal speed and frantic

gyration seems to be described in the verses [a(ii)13-17] preceding the reference to the turning point. The force of the Cosmic Whirl has grasped even Earth, which now is being decomposed, while the chthonic element participates itself fully in the violent, shooting movement which hurries every element through the world and through each other to its place of segregation. The shooting, hurried movement is expressed by *ἀίσσω* [a(ii)3, 8, perhaps 12]. Probably, the section a(ii)3-17 pictures the last phase of our world, as it is going to be transformed into the Reign of Segregation under the absolute sway of Great Strife. The [*ὄρ*]μῆ τῆδε γέμου[σα] (or *ὄρμη* τῆδε) of a(ii)10 might refer to the force and impetus of an accelerating rotation towards the point of its reaching maximal velocity.¹¹

The velocity of the universal circumvolution starts now to decrease, once it has reached its maximum. The cause of segregation (the *Δίνη*) begins to be phased out of the World. Things begin to think of love and peace: they will accept mixture if well-adapted and well-proportioned. The period towards friendship's ascendancy has set in. It will end with *Σφαῖρος*, when the elements will stay content in rest, subdued and fully synthesized in a homogeneous whole.

The more Strife's eye during the new period withdraws towards the middle of the World, the more it loses power: the gyration is continually decelerated. When it reaches the center, it cannot move any more the world around. The World stops and Strife dies in the World. He exists in its circumference, outside *Σφαῖρος*, waiting for his new turn and time of honour. My construal therefore is compatible with Empedocles' picture of retreating Strife and advancing Love in the World (B35.7-13). The Cyclonic Eye represents the power of Strife. His power and dominion over the elements is maximal when his eye lies in the lowermost depth of the World's circumference. His influence is nil when his eye comes to the center of things – an unlikely place for him. Similarly Love's power is at its lowest ebb when she is confined to the middle of the World. But is maximal when she extends uniformly over the entire supreme mixture of the elements, through the whole of *Σφαῖρος*. However we should exercise proper discretion in our expressions, and proper discernment in our thinking of these things. is Love or Strife *in* the elements during their state of absolute Segregation? In a certain sense Love exists wherever there is anything (any *one* thing, any entity), whether homogeneous or

homogenised. Self-love of the elements is still at work during their Segregation. *In fact Strife, when effective, restricts Love to Self-Love alone.* But Love cannot also annihilate Strife. For the Spirit of animosity is given room to work by the objective multiplicity of existence (there are four roots of being and not one). On the whole it is better to speak of the locations of the *power* of Love or Strife, as in the paragraph before, rather than of Love or Strife themselves.

This is then is the physical structure and process manifesting the metaphysical pattern. The two dimensions of discourse reflect two aspects of one and the same reality. In understanding Empedocles' system of Cosmos both are equally needed, for one sheds light on the other.

IX

A major problem for Aristotle has been left over. He comes back to it again and again in various connections. What is the *natural* state, position, tendency, movement of the elements? Mighty questions hinge on the resolution of this knot. For instance, should it be natural for the similar to reach for the similar, then Strife would be the principle of this law of similarity. But then Love ought to be the Principle of Cosmic Coercion, of Unnatural Bondage, of Cruel Necessity. So emphatically in *de Generatione et Corruptione*, 333b30-3: ταύτην (sc. τὴν κατὰ φύσιν κίνησιν) οὖν ἡ φιλία κινεῖ; ἢ οὐ; τοῦναντίον γὰρ (sc. τὸ κατὰ φύσιν κινεῖσθαι, i.e. the natural movement of earth is opposite to that of air and fire), τὴν γῆν κάτω, καὶ διακρίσει ἔοικεν, καὶ μᾶλλον τὸ νεῖκος αἴτιον τῆς κατὰ φύσιν κινήσεως ἢ ἡ φιλία, ὥστε καὶ ὅλως παρὰ φύσιν ἡ φιλία ἂν εἴη μᾶλλον. On the other hand, how could one envisage Σφαῖρος' homogeneity as the *natural* state of affairs in a world with *radically* (ριζώματα) and irreducibly different realities?

There are the roots and there are the opposing *Spirits* (and Forces) of amicability and contention, or, in physical terms, of rest and movement. If the principle of movement is subtracted from reality, things will subside down by degrees into a state of total interfused homogeneity. Physically speaking, every heterogeneity constitutes a differential in potential which will at some time or other be activated and result in movement. Metaphysically speaking, beings under the

condition of rest are undisposed to contend with each other, which (given their equivalence) produces an equal mixture since no one of them resists the action of the other. If, on the other hand the principle of movement is allowed to reach its extremest manifestation, a total disjunction of reality will result (given the existence of ultimate roots). For, physically speaking, the more violent the movement, the higher the energy differential in the field, the stronger the identities and differences presupposed. Or, metaphysically speaking, powerful identities and differences spend large amounts of energy in their several affirmations and oppositions and thus cause heightened mobility in their field of interaction.

It is natural for the elements under the spirit of Love and the condition of Rest to mingle together in (finally) a homogeneous whole. And it is natural for the elements under the spirit of Strife and the condition of Movement to emphasize their separate identities and to intensify their mutual opposition: the result is a heterogeneous whole. Both Congregation and Segregation of the elements, relative or absolute, are natural under appropriate conditions. Aristotle senses the point, but refuses to countenance it. *De Gener. et Corr.* 333b33-5: ἀπλῶς δέ, εἰ μὴ ἡ φιλία ἢ τὸ νεῖκος κινεῖ (we saw that this already involves an inaccuracy), αὐτῶν τῶν σωματῶν οὐδεμία κινήσις ἐστὶ οὐδὲ μονή· ἀλλ' ἄτοπον. Far from absurd, it is Empedocles' point. This is why the Spirits are needed by the side of the material Roots to account for the World and its history. Why *Force* is required by the side of *Matter* to explain reality. What follows the above quoted passage is untypically confused. That the Elements would not be inclined to move or rest without the operation of the Spirits, is not only absurd, we are told, but Empedocles himself allows them to move independently (ἔτι δὲ καὶ φαίνεται κινούμενα). For διέκρινε μὲν γὰρ τὸ νεῖκος, ἠνέχθη δ' ἄνω ὁ αἰθήρ οὐχ ὑπὸ τοῦ νεῖκος, ἀλλ' ὅτε μὲν φησιν ὡσπερ ἀπὸ τύχης (“οὕτω γὰρ συνέκυρσε θεῶν τότε, πολλάκι δ' ἄλλως” B53) ὅτε δὲ φησι πεφυκέναι τὸ πῦρ ἄνω φέρεσθαι, ὁ δ' αἰθήρ, φησί, (B54) “μακρῆσι κατὰ χθόνα δύετο ρίζαις” (334a1-5). Well, clearly for Empedocles the elements can in principle be and go (and do are and go) everywhere, since there are no natural places and movements for them in the Aristotelian sense. (So much Aristotle admits for Empedocles, *Physica*, 196a20-3). Strife is the metaphysical aspect of the Movement that starts the dissolution of the Σφαῖρος.

And it is this movement that sets the way for the separation of the elements according to their intrinsic and ineradicable qualities. There is no real problem. *To have the principle "Ὅμοιον Ὅμοίω fully operative, you need a disturbance, a permanent disturbance and of the appropriate kind, in fact you need the Δίνη.* At the cessation of movement at Absolute Congregation, there are no effluences and no motion, and how can then the similar reach for the similar? The fitness and adaptability between various things may exist and yet it is not being activated, since everything exists in a totally homogeneous state of immobility. (Theophrastus drew the conclusion from this that in the Σφαῖρος there must be no, or less, perception since the elements are collocated together and there are no effluences; A86 §20 p. 304.24-5: *συμβαίνει δὲ καὶ ἐπὶ τῆς Φιλίας ὅλως μὴ εἶναι αἰσθησιν ἢ ἦπτον διὰ τὸ συγκρίνεσθαι τότε καὶ μὴ ἀπορρεῖν*). Also at the maximum of turbulence, at Absolute Segregation, the principle ὅμοιον ὁμοίω cannot actively operate: no more mixture has been left over to be dissolved in its elements.

X

Empedocles' cosmic *system* is an imposing one. We may expose it in seven steps.

- 1) *Differentiation* and *movement* go together. Without differing potential in space, there can be no power-field, and hence no motion. Universal Rest is possible only in a totally homogeneous state of existence. Create an anomaly in the homogeneous substance of the World and movement starts; or, introduce the slightest motion into the resting body of the World, and heterogeneity results.
- 2) The *initial* movement of a totally homogeneous substance *can only be periodic rotation*. Any other movement *within* the substance would already presuppose developed differentials. And there is no way the universal globe could move *away* from its position, as there is nothing where it might go. (That would be like a leap into non-being).
- 3) This *one* periodic rotating motion suffices to effect all the marvelous variagation of existence. For such a movement activates

(almost constitutes) the tendency of the elements in the perfect mixture (the *Σφαῖρος*) to segregate according to their several natures, in separate layers. And this resulting movement of the elements within the homogeneous whole, this literal “running through each other” (*δι’ ἀλλήλων θέοντα*), mixes them up in all sustainable and unsustainable combinations; B21.9-14:

ἐκ τούτων (sc. τῶν στοιχείων and not from the “spirits”)
 γὰρ πάνθ’ ὅσα τ’ ἦν ὅσα τ’ ἔστι καὶ ἔσται,
 δένδρα τ’ ἐβλάστησε καὶ ἀνέρες ἠδὲ γυναῖκες,
 θῆρες τ’ οἰωνοὶ τε καὶ ὕδατοθρέμμονες ἰχθύς,
 καὶ τε θεοὶ δολιχαίωνες τιμῆσι φέριστοι.
 αὐτὰ γὰρ ἔστιν ταῦτα (for these are what they are),
 δι’ ἀλλήλων δὲ θέοντα
 γίνεται ἀλλοιωπά (they become different in manifest form).
 τόσον διὰ κρήσις ἀμείβει (for such transformation does
 mixing achieve).

(Cf., albeit in the opposing context of creation through ascending Love, B35.16-7:

τῶν (sc. the four elements) δέ τε μισγομένων χεῖτ’ ἔθνεα
 μυρία θνητῶν,
 παντοίας ιδέησιν ἀρηρότα, θαῦμα ιδέσθαι).

- 4) As the velocity of the global rotation increases, so does the tendency of the elements to segregate into separate masses. Since there is no void, the elements, moving eagerly to congregate separately, and starting to do so from a state of total homogeneous interpenetration, “run through each other” in all possible combinations. This results in more, and more complicated, mixtures of varying forms and cohesions to be constituted. It is a phase of increasing *multiformity*, *heterogeneity*, and *complexity* in structures and functions. As the conditions become harsher for integrals to be maintained, only the fittest will survive with any pretensions to stability. Hence this is also a phase of increasing *integration* of disparate elements and their differing combinations (Phase A).

- 5) There is, however, an end to this phase and an optimum point in the balance between complexity and stability. In this state, you find highly *complex* (structurally and functionally) *integrals*. Herein lies the ultimate resolution of the riddle noticed before, regarding the roles of Love and Strife in the individuation of things. In the balance between these two principles we obtain the stablest and richest individuations. But when the velocity of the whirl passes a critical magnitude, integrated multiformity and complex heterogeneity cannot be maintained. Nothing can effectively control the elements in their furious pursuance of maximal self-affirmation (*Νείκεος ἐννεσίησιν*). The mixtures become less and less complex and integrated. They are now ill-fitted, monstrous, unstable. (Phase B).
- 6) At the maximum speed of the rotation we have absolute Segregation, the elements by themselves. The complexity in the heterogeneity of the cosmic structure is minimal.
- 7) The pendulum swings back. Phase C and D follow corresponding to phases B and A. In between there is again an optimal state of maximal stable complexity and integrated heterogeneity. In the end of phase D the cycle closes with the return of the *Σφαῖρος*. Physically speaking, the Sky then stands still (cf. Aristotle, *Metaphysica*, 1050b22-24: διὸ ἀεὶ ἐνεργεῖ ἥλιος καὶ ἄστρα καὶ ὄλος ὁ οὐρανός, καὶ οὐ φοβερὸν μὴ ποτε στήῃ, ὃ φοβοῦνται οἱ περὶ φύσεως. Empedocles, of course, would welcome it, for one).

From the point of view of the individual existence, the interphase conditions between A and B and between C and D are best. But I suspect Empedocles would *not* emphasize this aspect of reality. For these conditions still represent *Zagreus dismembered*. While *Dionysus Whole* is the *Σφαῖρος*, whom Regia Venus (*Κύπρις Βασίλεια*) reconstitutes in turn, eternally.¹² And this leads us naturally to the third (or first) homologue of reality in the tripartite distinction noted at the beginning of this paper. Correspondencies can now be drawn in detail. As, for example, that the dissolution of Sphaeros comes from a perjury committed by the elements when they violate their equal agreement to participate and merge in the total divine harmony os Sphaeros; and from their shedding the blood of Sphaeros, he being purest blood as supreme intelligence.

We observe that these very acts constitute the original sin in the Orphic-Bacchic mysteries, we have to pay penalties and atone for in all our lifes.

NOTES

1. Parmenides maintained that there is no gradation in beingness (B8.44-5: τὸ γὰρ οὔτε τι μείζον, οὔτε τι βαιότερον πελέναι χρεόν ἐστι τῆι ἢ τῆι), for this reason (vv. 46 sqq.):

οὔτε γὰρ οὐκ ἐὼν ἔστι, τό κεν παύοι μιν ἰκνεῖσθαι
εἰς ὁμόν, οὔτ' ἐὼν ἔστιν ὅπως εἶη κεν ἐόντος
τῆι μᾶλλον τῆι δ' ἦσσον, ἐπεὶ πᾶν ἔστιν ἄσυλον.

 Since there is no more and less in beingness, only non-being would impede being from being united with being. And since non-being does not exist being is one and whole.
2. Cf. *χοάναι* B84.9, *ἄλοκες* B100.3. The *χοάνοι* of B9.1 are crucibles, so hollows, cavities.
3. Aristotle's difficulty with the Empedoclean particles in 325b15-25, is pedantic. On the other hand we may well conceive that E. had not elaborated the constitution of elemental masses out of the particles and the pores.
4. Lysias' adage (Fr. 115 Thalheim) became proverbial (cf. A. Martin – O. Primavesi, *L'Empédocle de Strasbourg*, p. 181 and n. 4): ὤμην <δὲ> ἔγωγε τοσαύτη φίλια συνηρμόσθαι τὴν ἐμὴν καὶ τὴν σὴν εὔνοϊαν, ὥστε μηδ' ἂν τὴν Ἐμπεδοκλέους ἔχθραν ἐμποδῶν γενέσθαι ἡμῖν.
5. This explains the law of evolution in the period of ascending Love: it is the principle of the *survival of the fittest*. Fitting arrangements in the constitution of the mixtures are fit to survive, because, to begin with, they are stable. In this way, as Aristotle observes, you have teleology without teleology (*Physica*, 198b10-32, esp. b29-32: ὅπου μὲν οὖν ἅπαντα συνέβη ὥσπερ κἂν εἰ ἔνεκά του ἐγίγνετο, ταῦτα μὲν ἐσώθη ἀπὸ τοῦ αὐτομάτου συστάντα ἐπιτηδείως· ὅσα δὲ μὴ οὔτως, ἀπώλετο καὶ ἀπόλλυται, καθάπερ Ἐμπεδοκλῆς λέγει τὰ βουγενῆ ἀνδρόπρωρα).
6. Cf. the *μοναδικὸς διάπυρος κύβος* in the middle of the World according to (the) Pythagoreans, 28A44. Pythagorean tradition held the cube to represent the harmonic proportion, 6 surfaces, 8 angles, 12 sides, and called it *ἀρμονία*, 31B96 (The reference to earth in this connection represents a conflation of Pythagorean and ordinary world-structure); 44 (Philolaus) A24; cf. 14A8 p. 99.31 ὁ ἀπὸ ἑξ ψυχογονικὸς κύβος.

7. This testimony by itself should put to rest *both* interpretations that employ the entire Empedoclean apparatus in accounting for things and processes within the world alone *and* construals which would understand all that E. says with reference to cosmic phenomena and the world at large as a whole.
8. To the squeezing exercised by the impetus of the cosmic rotation, there answers the description of Titan Aether holding fast the entire Globe; B38.4: *Τιτάν ἤδ' αἰθήρ σφίγγων περὶ κύκλον ἅπαντα*. The celestial vault is meant, consisting in solidified air, the prime motor of the Universal Revolution. (The crux in the first verse of the fragment, may be resolved by understanding parenthetically v.2 and assuming a change of syntax in v.3 and 4: *λέξω ἥλιον* in the first place (as one of the elements out of which all that appears is constructed), and earth (nominative) etc.).
9. The Atomists took over, and elaborated in their own way, the idea. Which was also operative in Anaxagoras; v. A41 p.15.24-29: *ἐκείνος* (sc. Anaxagoras) *γάρ φησιν ἐν τῇ διακρίσει τοῦ ἀπείρου τὰ συγγενῆ φέρεσθαι πρὸς ἀλληλα, καὶ ὅτι μὲν ἐν τῷ παντὶ χρυσὸς ἦν, γίνεσθαι χρυσόν, ὅτι δὲ γῆ, γῆν· ὁμοίως δὲ καὶ τῶν ἄλλων ἕκαστον, ὡς οὐ γενομένων ἀλλ' ἐνυπαρχόντων πρότερον. τῆς δὲ κινήσεως καὶ τῆς γενέσεως αἴτιον ἐπέστησε τὸν νοῦν ὁ Ἀναξαγόρας, ὑφ' οὗ διακρινόμενα τοὺς τε κόσμους καὶ τὴν τῶν ἄλλων φύσιν ἐγέννησαν*. Cf. A42 p. 16.4 sqq. (*κινήσεως δὲ μετέχειν τὰ πάντα ὑπὸ τοῦ νοῦ κινούμενα συνελθεῖν τε τὰ ὅμοια. καὶ τὰ μὲν κατὰ τὸν οὐρανὸν κεκομησθαι ὑπὸ τῆς ἐγκυκλίου κινήσεως· τὸ μὲν οὖν πυκνὸν καὶ ὑγρὸν καὶ τὸ σκοτεινὸν καὶ ψυχρὸν* (Parmenidean-Empedoclean basic qualities of matter) *καὶ πάντα τὰ βαρέα συνελθεῖν ἐπὶ τὸ μέσον, ἐξ ὧν παγέντων τὴν γῆν ὑποστήναι· τὰ δ' ἀντικείμενα τούτοις, τὸ θερμὸν καὶ τὸ λαμπρὸν καὶ τὸ ξηρὸν καὶ τὸ κοῦφον εἰς τὸ πρόσω τοῦ αἰθέρος ὀρμησθαι* etc.). Movement, and in particular the whirling and periodical movement, segregates things according to their similarities; the *locus classicus*, Democritus B164: *καὶ γὰρ ζῶα ὁμογενέσι ζώοις συναγελάζεται ὡς περιστεραὶ περιστεραῖς καὶ γέρανοι γεράνοις καὶ ἐπὶ τῶν ἄλλων ἀλόγων ὡσαύτως. <ὡς> δὲ καὶ ἐπὶ τῶν ἀψύχων, καθάπερ ὄραν πάρεστιν ἐπὶ τε των κοσκινευομένων σπερμάτων καὶ ἐπὶ τῶν παρὰ ταῖς κυματωγαῖς ψηφίδων· ὅπου μὲν γὰρ κατὰ τὸν τοῦ κοσκίνου δῖνον διακριτικῶς φακοὶ μετὰ φακῶν τάσσονται καὶ κριθαὶ μετὰ κριθῶν καὶ πυροὶ μετὰ πυρῶν, ὅπου δὲ κατὰ τὴν τοῦ κύματος κίνησιν αἱ μὲν ἐπιμήκεις ψηφίδες εἰς τὸν αὐτὸν τόπον ταῖς ἐπιμήκεσιν ὠθοῦνται, αἱ δὲ περιφερεῖς ταῖς περιφερέσειν ὡς ἂν συναγωγῆν τι ἐχούσης τῶν πραγμάτων τῆς ἐν τούτοις ὁμοιότητος* (cf. A 128). Moreover the Atomists postulated an initial *Δίνη* (the cosmic rotation) as the principle of formation of this and every world. so Leucippus A1, pp. 70.28-71.2: *γίνεσθαι δὲ τοὺς κόσμους οὕτω*

φέρεσθαι κατὰ ἀποτομὴν ἐκ τῆς ἀπείρου πολλὰ σώματα παντοῖα τοῖς σχήμασιν εἰς μέγα κενόν, ἅπερ ἀθροισθέντα δίνην ἀπεργάζεσθαι μίαν, καθ' ἣν προσκρούοντα καὶ παντοδαπῶς κυκλοῦμενα διακρίνεσθαι χωρὶς τὰ ὅμοια πρὸς τὰ ὅμοια. (The entire account in Diogenes Laertius exhibits many affinities to the Empedoclean patterns, structural and processual). And so Democritus B167: δίνον ἀπὸ τοῦ παντὸς ἀποκριθῆναι παντοίων ἰδεῶν. In fact he both ascribed this whirling conformation to spontaneous and chance happening; A69: ἀπὸ ταυτομάτου γὰρ γίνεσθαι τὴν δίνην καὶ τὴν κίνησιν τὴν διακρίνασαν (separation) καὶ καταστήσασαν εἰς ταύτης τὴν τάξιν τὸ πᾶν (in this world-order). And affirmed the necessity of this arrangement; A83: ὥστε κατ' ἀνάγκην μὲν καὶ ὑπὸ δίνης, ὡς ἔλεγον οἱ περὶ Δημόκριτον etc. There are remarkable and characteristic similarities between E.'s cosmogonical and zoogonical theories and those of the Atomists; this subject stands in need of thorough investigation. Diodorus' Siculus general account of origins in I, 7 should better be associated to Empedoclean patterns, as are the general notions on the subject of Roman poets. Orphism, earlier and latter, should also be drawn into the picture, as well as original Pythagoreanism. The theory of membranes (ὑμένες) e.g. is a focal point of affinities in this connection, as much in the field of cosmogony as of zoogony. The starting point, also, of the Orphic Cosmogony according to Hieronymus and Hellanicus bears unmistakable affinities to the Empedoclean basic conception. Not to be left unattended is *in primis* Plato's utilization of the idea that κίνησις segregates (the elements of) things in vast homoiomerics in *Timaeus*, 52D-53A.

Before the formation of the Heavens, space (χώρα) as the nurse of becoming (τὴν δὲ δὴ γενέσεως Τιθήνην), receiving the forms of the basic elements "and undergoing all the conditions that attend thereupon displays to view all manner of semblances" (Archer-Hind's translation), διὰ δὲ τὸ μῆθ' ὁμοίων δυνάμεων μήτε ἰσορρόπων ἐμπίπλασθαι κατ' οὐδὲν αὐτῆς ἰσορροπεῖν, ἀλλ' ἀνωμάλως πάντη ταλαντούμενην σειέσθαι μὲν ὑπ' ἐκείνων αὐτήν, κινουμένην δ' αὖ πάλιν ἐκεῖνα σειεῖν· τὰ δὲ κινούμενα ἄλλα ἄλλοσε αἰεὶ φέρεσθαι διακρινόμενα, ὥσπερ τὰ ὑπὸ τῶν πλοκάνων τε καὶ ὀργάνων τῶν περὶ τὴν τοῦ σίτου κάθαρσιν σειόμενα καὶ ἀναλιγκώμενα τὰ μὲν πικρὰ καὶ βαρῆα ἄλλη, τὰ δὲ μανὰ καὶ κοῦφα εἰς ἑτέραν ἴξει φερόμενα ἔδραν· τότε οὕτω τὰ τέτταρα γένη σειόμενα ὑπὸ τῆς δεξαμενῆς, κινουμένης αὐτῆς ὅσον ὀργάνου σεισμὸν παρέχοντος, τὰ μὲν ἀνομοιότατα πλεῖστον αὐτὰ ἀφ' αὐτῶν ὀρίζειν, τὰ δὲ ὁμοιότατα μάλιστα εἰς ταυτὸν ζυνωθεῖν. To be sure, for Plato, this condition of existence, as preceding the imposition of harmonious order, must be chaotic (*ibid.* 53A-B). And it is this conception that guides Plutarch's description of the state of affairs obtaining under the dominance of Νεῖκος (*de facie in orbe lunae*, 926E-

927A). This Platonic construal is not meant as an Empedoclean interpretation (rather as its criticism; cf. Taylor's Commentary *ad loc.*). The utilization of an Empedoclean theory for Plutarch's (and Plato's) own purposes is indicated by the impropriety probably committed in assigning B27.1-2 to the *Σφαίρος*. ("Probably" I say, since a double application of the formulaic distich to both states of *Σφαίρος* and complete Strife domination, though unlikely, cannot be excluded). The Platonic and Plutarchean idea is, however, defective. How can *chaotic* movement, effect the segregation of like from unlike and with like? It is regular motion that brings the decomposition of a homogeneous mixture into its constituents, esp. *periodic* movement as in winnowing and with the sea-waves (the Atomists' examples). In the case of the Universe, the cosmic rotation is required – not the chaotic irritation of a disorderly manifestation of forms in space, as Plato describes and Plutarch repeats. Closer to the Empedoclean conception is the view in *de natura pueri* ascribing the discriminating, differentiating and separating agency in foetal development to pneumatic action. It is the *πνεῦμα* (spirit, breath) which causes the articulation of the embryo by making similar to reach for the similar (XVII, 1). So §3: *τούτων δὲ διαρθροῦται ὑπὸ τῆς πνοῆς ἕκαστα· φυσώμενα γὰρ δίσταται σύμπαντα κατὰ συγγένειαν*. The experimental analogy that follows in §4 is characteristically Empedoclean in content, form and tone: *καὶ γὰρ εἰ θέλοις αὐλίσκον προσδῆσαι πρὸς κύστιν, καὶ διὰ τοῦ αὐλίσκου ἐμβαλεῖν εἰς τὴν κύστιν γῆν τε καὶ ψάμμον καὶ μολίβου κνήσματα λεπτά, καὶ ὕδωρ ἐπιχέας φυσᾶν διὰ τοῦ αὐλίσκου, πρῶτον μὲν ἐκεῖνα ἀναμεμίζεται τῷ ὕδατι, ἔπειτα δὲ χρόνῳ φυσώμενα ἐλεύσεται ὃ τε μολίβος ὡς τὸν μολίβον καὶ ἡ ψάμμος ὡς τὴν ψάμμον καὶ ἡ γῆ ὡς τὴν γῆν· καὶ ἢν τις αὐτὰ ἀνανθήναι ἐάσῃ καὶ περιρρήξας τὴν κύστιν σκέψῃται, εὐρήσει αὐτῶν τὸ ὅμοιον ὡς τὸ ὅμοιον ἐληλυθός· οὕτω δὲ καὶ ἡ γονὴ καὶ ἡ σὰρξ διαρθροῦται, καὶ ἔρχεται ἕκαστον ἐν αὐτῇ τὸ ὅμοιον*. It is the *rhythmical movement* of water (caused by the breath of the spirit) which effects that.

Heracleitus B125 *καὶ ὁ κυκεὼν δίσταται <μῆ> κινούμενος*, with *<μῆ>* probably required by the context, represents the first and integrating result of movement as explained in the Hippocratean experiment and as corresponds to the middling state of the world according to Empedocles. With the continuation of the movement and especially by its rhythmical intensification, the second and separative effects are manifested.

10. The Empedoclean theory of an accelerating world pace was utilized by the learned monk Panodorus (5th century A.D.) to reduce the enormous expanses of past time at the beginning of history according to Chaldaean accounts, and to bring them into accord with sacred history and profane science. He reckoned one prehistorical Babylonian year as equivalent to one

day (24 hours). So that the Saros would last for 9 years 10 1/2 months, the Neros 1 year 7 5/6 months and the Sossos just 2 months (Egyptian). Cf. H. Gelzer, *Sextus Julius Africanus und die Byzantinische Chronographie*, II 1 p. 198. It is in this connection probably significant that Babylonian protohistory was replete with monstrous forms, as described by Berossos (Fr.Gr.H. 680F1 §4 (Ἰωάννης) and esp. §6: γενέσθαι φησὶ χρόνον, ἐν ᾧ τὸ πᾶν σκότος καὶ ὕδωρ εἶναι, καὶ ἐν τούτῳ ζῶα τερατώδη καὶ ἰδιοφυεῖς τὰς ἰδέας ἔχοντα ζωογονεῖσθαι. ἀνθρώπους γὰρ διπτέρους γεννηθῆναι, ἐνίους δὲ καὶ τετραπτέρους καὶ διπροσώπους· καὶ σῶμα μὲν ἔχοντας ἔν, κεφαλὰς δὲ δύο, ἀνδρείαν τε καὶ γυναικείαν, καὶ αἰδοῖα δὲ δισσά, ἄρρην καὶ θῆλυ· καὶ ἐτέρους ἀνθρώπους, τοὺς μὲν αἰγῶν σκέλη καὶ κέρατα ἔχοντας, τοὺς δὲ ἰππόποδας, τοὺς δὲ τὰ ὀπίσω μὲν μέρη ἵππων, τὰ δὲ ἔμπροσθεν ἀνθρώπων, οὓς ἵπποκενταύρους τὴν ἰδέαν εἶναι. ζωογονηθῆναι δὲ καὶ ταύρους ἀνθρώπων κεφαλὰς ἔχοντας καὶ κύνας τετρασωμάτους, οὐράς ἰχθύος ἐκ τῶν ὀπισθεν μερῶν ἔχοντας [as is the Alchemist picture figuring on the programme and poster of this Symposium from MS. Rh. 172 Zentralbibliothek Zürich (“Aurora consurgens, quae dicitur Aurea hora”); the work illustrated is attributed to Thomas Aquinas and bears on the problem of opposites in Alchemy], καὶ ἵππους κυνοκεφάλους καὶ ἀνθρώπους καὶ ἕτερα ζῶα κεφαλὰς μὲν καὶ σώματα ἵππων ἔχοντα, οὐράς δὲ ἰχθύων, καὶ ἄλλα δὲ ζῶα παντοδαπῶν θηρίων μορφάς ἔχοντα· πρὸς δὲ τούτοις ἰχθύας καὶ ἔρπετὰ καὶ ὄφεις καὶ ἄλλα ζῶα πλείονα θυμαστά καὶ παρηλλαγμένας τὰς ὄψεις ἀλλήλων ἔχοντα, ὧν καὶ τὰς εἰκόνας ἐν τῷ τοῦ Βῆλου ναῶ ἀνακεῖσθαι. ἄρχην δὲ τούτων πάντων γυναικα, ἣ ὄνομα Ὀμόρκα· εἶναι δὲ τοῦτο χαλδαῖστί μὲν Ἰθαλάτθ, Ἑλληνιστὶ δὲ μεθερμηνεύεσθαι Θάλασσα, κατὰ δὲ ἰσοψήφον σελήνην (Σελήνη = 200+5+30+8+50+8 = 301, Ὀμόρκα = 70+40+70+100+20+1 = 301. Ὀμόρκα Scaliger: ομορκα mss.). A Chaldaean connection in Empedocles cannot be excluded (via the Persian Empire). The real problem is that such monstrosities form there part of our own protohistory (something that fits with the various Greek mythological descriptions), and not of an altogether different and opposite phase of Cosmic development. The idea of an accelerating cosmic revolution must have been widespread in association with the doctrine of the End of Time. The notions were popular in apocalyptic literature concerning matters Eschatological. Cf. the elaborate account of the “conclusio temporum” or “consummatio temporum” in Lactantius, *Divinatum Institutionum*, VII, 95 sqq. In this context it is announced that: tunc annus breviabitur, et mensis minuetur, et dies in augustum coarctabitur (*ibid.* 16, 9). The shortening of year, month, day would be caused by the increasing velocity of the global circumvolution.

11. We must unfortunately contradict Aristotle here. He clearly believed that

Strife's complete dominance represents a state of rest for the World. Thus, *de Caelo*, 295a29-32 (in the same context that supplies us with the valuable hint as to the physical meaning of Strife's functioning): ἔτι δὲ πρὸς Ἐμπεδοκλέα κἂν ἐκεῖνό τις εἴπειεν. ὅτε γὰρ τὰ στοιχεῖα διεισθήκει χωρὶς ὑπὸ τοῦ νείκου, τίς αἰτία τῇ γῆ τῆς μονῆς ἦν; οὐ γὰρ δὴ καὶ τότε αἰτιάσεται τῇν δίνην. We are reluctantly obliged to take this as meaning that according to Aristotle there is no vortex in this case. For immediately afterwards he turns to criticising Empedocles in connection with the cause why earthy and heavy things fall to Earth in the present state of the World, and here he brings in to bear the above quoted observation that the (eye of the) Vortex is now receding away from us, from the middle of the World. On the other hand he does ascribe the central station of Earth in this World-phase to the cosmic rotation (A67; v. *supra*). Presumably, in consistency, the same cause would operate at the total segregation of the elements, *should the Whirl be then active*. And the question in the present passage concerns Earth's *μονή*. We can understand why Aristotle committed this interpretative error: he is the natural victim of his own theories and of a more basic misapprehension as to the nature and function of the Empedoclean Love and Strife. He took them as principles of (opposing) movements (towards integration and disintegration respectively). And he knew that in any change of movement to a contrary direction, there intervenes a moment of rest. His error is thereby explicable.

12. The core identity of the religious, metaphysical and physical Empedoclean theories is most tellingly illustrated by the construal of Σφαῖρος as the Great God dismembered by the Titans (*Πάντα γὰρ ἐξείλης πελεμιζετο γυῖα θεοῖο, Νείκεος ἐννεσίγησιν*) and rendered whole and regenerated by the Great Goddess (*Φιλία* in the end reconstitutes Σφαῖρος). The Orphic doctrine is given in philosophical interpretation. Everything else fits nicely in.

The Goddess is Φιλία - Ἀφροδίτη. The Σφαῖρος is Dionysus Zagreus. The God's dismemberment is the Original Peccatum, the *παλαιὸν πένθος* (Pindar Fr. 133 Snell). We are the Titanic seed, we come from the Titan's blood. We are, thus, the fallen daemons, who committed the sacrilege, and who pay back that gross iniquity with our life in this Hell-World.

The philosophical correspondence is complete. Σφαῖρος is the perfect intelligence of well-balanced blood (B134: the Σφαῖρος as *φρῆν ἱερή* shooting through the world in thought. B 105: thought as pericardic blood). Our souls are drops of blood, segregated parts of Σφαῖρος. Our sufferings in this World of Dolour atone for the monstrous dismemberment in pursuit of the Titanic spirit of separation (*Νείκος*). Pindar's Persephone (Fr. 133 Snell) is Empedocles' Φιλία - Ἀφροδίτη. Love and death are intimately

interconnected. The death of Godhead is our life and our death is the victory of Love.

So Heraclitus 22B62: ἀθάνατοι θνητοί, θνητοὶ ἀθάνατοι, ζῶντες τὸν ἐκείνων θάνατον, τὸν δὲ ἐκείνων βίον τεθνεῶντες.

We have come at the conclusion to the point where we began this paper *συνάπτοντες τὸ τέλος τῆ ἀρχῆ* (cf. Alcmaion, 24B2). The Presocratic awareness of the equivalence of the three dimensions of being (religious, metaphysical and physical) came at the Neoplatonic end of ancient philosophy to be construed as the identity in subject among three (or four) ways of discourse, of so many modes of theorizing (*τύποι* or *τρόποι*). Proclus (*Theologia Platonis*, I 3;4) enumerates four such manners of disclosing ultimate reality: symbolic, through representation, scientifically and by revelation. Cf. *ibid* I, 4, p.20.1sq. Saffrey-Westerink: οἱ μὲν γὰρ δι' ἐνδείξεως περὶ τῶν θεῶν λέγοντες ἢ συμβολικῶς καὶ μυθικῶς ἢ δι' εἰκόνων λέγουσιν, οἱ δὲ ἀπαρακαλύπτως τὰς ἑαυτῶν διανοήσεις ἀπαγγέλλοντες, οἱ μὲν κατ' ἐπιστήμην οἱ δὲ κατὰ τὴν ἐκ θεῶν ἐπίπνοιαν ποιοῦνται τοὺς λόγους. Ἔστι δὲ ὁ μὲν διὰ τῶν συμβόλων τὰ θεῖα μηνύειν ἐφιέμενος Ὀρφικὸς καὶ ὅλως τοῖς τὰς θεομυθίας γράφουσιν οἰκεῖος. Ὁ δὲ διὰ τῶν εἰκόνων Πυθαγόρειος, ἐπεὶ καὶ τοῖς Πυθαγορείοις τὰ μαθήματα πρὸς τὴν τῶν θεῶν ἀνάμνησιν ἐξηγήρητο καὶ διὰ τούτων ὡς εἰκόνων ἐπ' ἐκεῖνα διαβαίνειν ἐπεχείρουν. ... Ὁ δὲ ἐνθεαστικὸς μὲν αὐτὴν καθ' ἑαυτὴν ἐκφαίνων τὴν περὶ θεῶν ἀλήθειαν παρὰ τοῖς ἀκροτάτοις τῶν τελεστῶν μάλιστα καταφανής· οὐ γὰρ ἀξιούσιν οὗτοι διὰ δὴ τινων παραπετασμάτων τὰς θείας τάξεις ἢ τὰς ιδιότητας αὐτῶν τοῖς ἑαυτῶν γνωρίμοις ἀποδιδόναι, ἀλλὰ τὰς τε δυνάμεις καὶ τοὺς ἀριθμοὺς τοὺς ἐν αὐτοῖς ὑπ' αὐτῶν κινούμενοι τῶν θεῶν ἐξαγγέλουσιν. Ὁ δὲ αὖ κατ' ἐπιστήμην ἐξαιρέτος ἐστὶ τῆς τοῦ Πλάτωνος φιλοσοφίας· καὶ γὰρ τὴν ἐν τάξει πρόοδον τῶν θεῶν γενῶν καὶ τὴν πρὸς ἄλληλα διαφορὰν καὶ τὰς τε κοινὰς τῶν ὄλων διακόσμων ιδιότητας καὶ τὰς ἐν ἐκάστοις διηρημένας μόνος, ὡς ἐμοὶ δοκεῖ, τῶν ἡμῖν συνεγνωσμένων ὁ Πλάτων καὶ διελέσθαι καὶ τάξει κατὰ τρόπον ἐπιχείρησε.

Orphism, Pythagoreanism, physical science and divine revelation are all fused together in Empedocles' doctrinal sacred poetry. He stands between the Archaic and the Classical and combines the best of both.