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COSMIC PERIODS IN THE PHILOSOPHY OF EMPEDOCLES

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I

Empedocles thought of the world-process as the product of the combination and separation of the four elements earth, air, fire, and water, under the influence of Love and Strife. The elements, as well as Love and Strife themselves, are both material, in the usual sense, and divine. The process is cyclical, and consists of a succession of phases, in each of which either Love or Strife is predominant, or gaining predominance, over the other:

I will set forth a double doctrine: sometimes one grows out of many to exist alone, and sometimes several separate themselves out of the one to exist. Twofold is the birth of mortal things, twofold their demise; for the coming together of all things begets and kills the former, and the latter in turn, as things are separated, is nourished and flies apart. And these never cease their interchange, as sometimes all things come together, by Love, into one, and sometimes, in turn, everything is borne apart by the hate that is in Strife. So insofar as one has learned to be born from several and several, again, have emerged as one is divided up, to this extent they are born and their life is not lasting. But insofar as they never cease constantly interchanging, to this extent they are always unmoved throughout the cycle. (Fr. 17. 1-13.)

It is clear that, in the ordinary course of things, both Love and Strife are at work, though at any moment one may be gaining over the other; but what is the nature of the transition from the period of one's growth to that of the other? There must be a moment at least, or an era, when each of the two reaches, or enjoys, the apogee of its influence, before beginning to decline. If these are moments, one will speak of two cosmic phases, if eras, of four. This problem has been answered in both ways, for unfortunately the evidence from the fragments of Empedocles' poems is not unambiguous.¹ It is not proposed to discuss this question here; it is enough to note that whether the periods in question are eras or moments, they should have some definable characteristics.

Empedocles makes it clear that the effect of Love is increasingly close association among the elements, so that they voluntarily seek combination with each other, while the opposite tendency of Strife is to make them hate and withdraw from one another. There is no evidence as to what phase Empedocles used as the starting-point of his exposition, and no likelihood that any of them was thought of as primary. The

period of Strife's growing influence brings the progressive disintegration of things, culminating in a state in which the four elements are completely separated from each other, and Love is presumably excluded. Her re-entry, however, and growth in power, bring about a more and more thorough mixture of the elements, and a steadily increasing unity in the world.

What would be the culmination of this process? Parmenides had said, of that which exists,

Motionless within the limits of mighty bonds, it is without beginning or end, since coming into being and perishing have been driven far away, cast out by true belief. Abiding the same in the same place it rests by itself, and so abides firm where it is; for strong Necessity holds it firm within the bonds of the limit that keeps it back on every side.... But since there is a furthest limit, it is bounded on every side, like the bulk of a well-rounded sphere....(Fr. 8. 26-31, 42-43, tr. Kirk and Raven.)

This picture must have been in Empedocles' mind, and many have assumed that it provided him with a pattern of perfection and that at the triumph of Love the world becomes a thoroughly uniform mixture, motionless and spherical. The really early evidence for such an interpretation is scanty, but it is stated by some of the commentators on Aristotle. Philoponus, for example, writes:

Again, [Empedocles] says that during the dominance of Love, all things become one and produce the sphere, which is without quality, so that neither the peculiar character of fire nor of any of the others is any longer preserved in it, each of the elements shedding its particular form.²

Here it appears that Empedocles regarded the present era as one in which Strife is gaining in strength, at the expense of Love; and corroborating evidence on this point will be mentioned later. What does it mean about the cosmic, and cultural, process? Surely, for one thing, that the present is a period of decline and that the past was better--both the reign of Love, if it was an extended period, and the early part of the period of Strife's gain, when of course Love would still be very powerful. It is not surprising, then, to find Empedocles speaking nostalgically of a past Golden Age (fr. 128-130). To those recent scholars who see his thought as a unity this is one of the indications of the general parallelism between the two poems. But where precisely does the Golden Age belong? The best suggestion, along these lines, seems to be that of Kahn, who puts it "very early in the present phase of the world cycle, when the Sphere has given way to individual creatures but Strife has not gained full mastery over Love."³ Presumably, then, there would be another similar or identical condition just before Love's complete triumph. We should have the picture, then, of "countless tribes of mortal things", and blessed daemons, living an increasingly rich and complex life, till one day they fuse into a single mass--divine to be

sure--spherical but otherwise without form or quality, without motion or any other sign of life. Then, after an indeterminate period, the nearly-ideal situation--the Golden Age--suddenly reappears, or restores itself, and the long process of decadence begins. This is certainly a strange doctrine, and though it is dangerous to expect great and original minds to conform to canons of "common sense" or consistency, it may be suggestive to consider the possibility that we have misunderstood the poet's meaning.

The crucial fragment of Empedocles is 27, whose text is given as follows by Diels-Kranz:

ἔνθ' οὐτ' ἡελίοιο διείδεταί ὠκέα γυῖα
 οὐδὲ μὲν οὐδ' αἴης λάσιον μένος οὐδὲ θάλασσα·
 οὕτως Ἀρμονίης πυκινῷ κρύφῳ ἐστήρικται
 Σφαῖρος κυκλοτερῆς μονίῃ περιηγεί γαίων.

Lines 1 and 3-4 are quoted by Simplicius, in the context of a discussion of motion and rest, as referring to the rule of Love:

But Eudemus understands the state of rest to exist during the dominance of Love, in the Sphere, when everything is combined: 'The sun's swift limbs are not there descried', but as he says, 'So he lay steady in the close-built hiding place of Harmony, Sphere well-rounded, rejoicing in surrounding solitude.'⁴

Plutarch, however, cites lines 1 and 2 as referring to the world of Strife:

So look out and reflect, good sir, lest in rearranging and removing each thing to its 'natural' location you contrive a dissolution of the cosmos and bring upon things the 'Strife' of Empedocles--or rather lest you arouse against nature the ancient Titans and Giants and long to look upon that legendary and dreadful disorder and discord when you have separated all that is heavy and all that is light. 'The sun's bright aspect is not there descried, / No, nor the shaggy might of earth, nor sea' as Empedocles says. Earth had no part in heat, water no part in air; there was not anything heavy above or anything light below; but the principles of all things were untempered and unamiable and solitary.... So they were until desire came over nature providentially, for Affection arose or Aphrodite or Eros, as Empedocles says and Parmenides and Hesiod....⁵

Diels combined the two citations into a single fragment, choosing Simplicius' ὠκέα γυῖα over Plutarch's ἀγλαὸν εἶδος in line 1. Bignone gave the lines cited by Plutarch as fr. 26a, and thought that

while they referred to the reign of Strife, fr. 27. (Simplicius' version) came from the section on Love. Kirk and Raven would insert between lines 2 and 3 the line

ἀλλ' ὁ γε πάντοθεν ἴσος ἐοῖ καὶ πάμπαν ἀπείρων,

which is quoted by Stobaeus along with line 5, making a couplet given as fr. 28 by Diels-Kranz. Given the uncertainty of the tradition, it is difficult to say which testimony we should prefer. Simplicius of course deserves great respect as an intelligent scholar who presumably had the whole poem before him.⁶ And the same may be said for Plutarch. It is quite possible that, as Bignone thought, this is one of the cases of repeated lines in Empedocles, and a similar description was given, in two parts of his book, of the state of the world at the two extremes.⁷ In many respects the two periods would indeed be very similar--as is understandable since Love and Strife are equal in "rights"--only that in one the elements are perfectly mixed, in the other perfectly separated. Thus the evidence of this fragment seems to refer at least as easily, or as fully, to the world of perfect Strife as to that of perfect Love. One might suppose that sun, earth, and sea are here three of the four elements, "descried"--or rather distinguished and separated--during the period of strife but in that of Love thoroughly mixed; but the expressions "sun's swift limbs" (or "shining face") and "earth's shaggy might" would in that case seem odd. He must be referring to the earth, sun, and sea as physical aggregates, components of the world as we know it, so that there is no warrant here for thinking of the "disappearance of the elements".⁸ It is precisely the elements which are permanent, as the poet says many times. They "run through each other" but remain themselves. Their orderly arrangement, εἰς ἓνα κόσμον, is the work of Love, their separation into ἀκοσμία (Plutarch's word) that of Strife. Is it possible that fr. 27. 1-2, of which only line 1 is quoted by Simplicius, referred in the original only to the reign of Strife? It is hard to see why an increasingly orderly cooperation of the elements, in the proper proportions, should lead to the disappearance of earth, sea, and sun.

What do lines 3-4 mean? It is commonly assumed that Harmony means Love, which provides the πυκινὸς κρύφος in which the god Sphere, who equals the rounded totality of things, is ensconced. But it is by no means certain that we should capitalize ἀρμονίης. Harmony is one of the nymphs in the catalogue of fr. 122, paired with Δῆρις; but neither here nor in fr. 96.4 is it certainly a synonym for Φιλία. Does the passage perhaps refer more appropriately to Strife's reign? Even that has its own appropriate kind of "fitting-together"; at least we learn in fr. 26. 5 that a process of "growing into one" (ἐν συμφύοντα) accompanies the utter destruction (τὸ πᾶν ὑπένερθε γένηται) which Strife brings.

In any case the interpretation of line 3 is difficult. What is it to be "firmly fixed in the close-packed hiding place of fitting-togetherness" and at the same time to be the whole of things, spherical, solitary (or motionless) and happy? Could it be that this refers to Strife, the Empedoclean force which works for separation and hence would naturally

exult in solitude? Could the poet here be reflecting satirically the views of Parmenides, and showing that the static world he had prized is really only appropriate to Strife? The latter is in fact not only bad but, in spite of his status, stupid. Intelligence, we learn from other fragments, belongs to all living things (fr. 110. 10), but increases as the mixture which Love causes becomes more perfect.⁹ Strife is now victorious; segregation is complete, but what seems to him a cozy nook is in fact a prison. He does not know better than to rejoice, forsooth, in a solitude which gregarious Love would abhor.¹⁰

In fr. 29. 1-2, the world (under Love's rule, according to Hippolytus) is described as without wings, feet, nimble knees, or sex-organs, and as being "a sphere, and equal to itself in all directions". In fr. 134, speaking of Apollo in particular and of "the divine" in general, according to Ammonius, the poet gives a somewhat fuller description repeating two lines of fr. 29. He does not have a human head, no wings, feet, nimble knees, or sex-organs, "but was solely a sacred and ineffable mind, darting through the whole cosmos with swift thoughts." To Empedocles all the elements, as well as Love and Strife, are divine, and this would well apply to Love. It is quite appropriate, indeed inevitable, to think of Love as permeating the whole of the cosmic order (κόσμον ἅπαντα) of which she is the creator; but she is not the same as the spherical divinity of fr. 29, who seems to be the same as the aloof personage of 27 and 28, "rejoicing in circular solitude".¹¹ The parallelism of 29 and 134 suggests, too, that the idea of sphericity, as applied to gods, was for Empedocles related rather to an anti-anthropomorphic ideal, to the self-equality, consistency, and actual or potential omnipresence of divinity than to any homogeneous or motionless quality.

There are no other passages in which the word σφαῖρος or any of its derivatives is used in the actual fragments of Empedocles. It is not found in Aristotle, who in his references to the stage of Love's dominance uses the colorless expressions τὸ μίγμα or τὸ ἕν.¹²

"Sphere" is normally feminine in Greek and it might be thought that Empedocles' use of the masculine suggests a personification. We learn from Simplicius, however (Phys. 1124; DK I⁶ 324. 16) that somewhere in the poem the neuter form was used. Thus there is little or nothing to suggest the divine Sphere, as equivalent with the totality of things, at the apogee of Love, in the fragments themselves, in Aristotle or Theophrastus, and also not in the Peripatetic doxographical tradition through which most of our information about his physical philosophy is transmitted.¹³ Neither is it attested in the partly independent tradition about Empedocles' religious views as expressed in the Purifications.

In fr. 26, Empedocles summarizes the cosmic processes:

These things themselves exist, and running through one another they become men and the tribes of other beasts, at one time coming together by Love into a single cosmos, at other times, in turn,

each being borne apart through the hatred in Strife, till growing together into one they are completely subdued (lines 3-7).

The latter part of this seems to be paraphrased by Aristotle: "When the whole is dissolved into the elements by Strife, then fire is aggregated into one, as is each of the other elements" (*Met.* A 985 a 25; DK 31 A 37). Thus the elements at this time are collected into homogeneous masses. It has been suggested that the world was now spherical, and indeed that it may have consisted of a set of concentric spheres, presumably with Love as the outermost of them, and with Strife permeating the whole.¹⁴

What was the shape of the cosmos produced by Love? Empedocles would have had precedent for thinking of it as spherical. If the drum-shaped earth of Anaximander hangs free in its place because it is equidistant from the circumference, a spherical world is implied.¹⁵ But in fr. 35, which describes the growing influence of Love, the shape is by no means unambiguous. Strife apparently has arrived "at the lowest depth of the whirl", and Love is "at the center" of it (if *ιδίνη* and *στροφάλιγξ* are synonyms). "All these things" (the elements) come together voluntarily to make a unity. Strife passes "out", "to the furthest bounds of the circle" (*ἐπ' ἔσχατα τέρματα κύκλου*). In addition, a passage of Aetius suggests an elliptical or egg-shaped world:

Empedocles said that the horizontal extent is greater than the upward measurement from the earth to the sky, that is the distance from us, the world being, according to this, more spread out because the cosmos is like an egg" (DK 31 A 50).

Perhaps the world is elliptical under the more dynamic rule of Love and spherical under the static influence of Strife, and there is truth in Simplicius' isolated comment (inconsistent with his general interpretation) that Empedocles distinguished the *σφαῖρος* from the *κόσμος*.¹⁶

The world is to be sure a living and divine being,¹⁷ which at this stage attains a state of peace--of cosmos. What is more, in a protest against anthropomorphism that is reminiscent of Xenophanes, Empedocles specifies that it not only does not have members like ours but is equal to itself in every direction and "endless", which may mean spherical in shape; but that is not to say that it is completely homogenized, nor that it does not have "members" at all. (Indeed this would be quite inconsistent with fr. 31: *πάντα γὰρ ἐξείης πελεμίζετο γυῖα θεοῖο*.) The divinity of the world as a whole was a quite general assumption in these times. Perhaps the question is best left undecided whether the whole was spherical, either all the time or at the two extreme states. The main point to be made here is the unlikelihood that there was anything unique about the sphericity of Love's world, and the inappropriateness of the supposition that "the Sphere" was a new contribution to theology. Simplicius speaks of "Love, by unification making the sphere, which he also calls a god, though he somewhere uses the neuter: 'It was a sphere'" (*Phys.* 1124.1; DK I⁶ 324. 16). This expression seems

to mean that in Simplicius' mind, though Empedocles speaks of the world as spherical, he would not have used the neuter if its name were Sphere. Elsewhere Simplicius speaks of "the sphere" in a way that scarcely seems to justify modern editors in capitalizing it, and there is nothing about the god Sphere in the doxographical reports about Empedocles' theology. Even if there were a god Sphere, he would be an Augenblicksgott, existing only for a while at a time, at one, or two, stages in the cyclic cosmic process. It seems misleading, therefore, to speak of him as in some way different from other gods, or occupying a special transcendent position.¹⁸

Any interpretation of his cosmic periods must take account, it would seem, of the fact that for Empedocles the effects of Love are desirable, those of Strife noxious. Professor Vlastos emphasizes the equality in prerogatives of the two, and concludes that by the "equalitarian justice" which Empedocles conceives as prevailing in the cosmos, "were not Harmony matched to its perfect equal in Strife, there would be no created world, only the nondescript mixture of the Sphairos."¹⁹ This would require us to see the complete prevalence of either one as an unfortunate though luckily temporary episode in cosmic history. The reign of Love would be as much an ἀκοσμία as that of Strife. It is of course true that they are "equal" in force and in rights, sealed by broad oaths. And Empedocles accepts the world as such a world; but this is acceptance of the ineluctable necessities of life. It is this affirmation of a heroic and tragic and characteristically Greek view which gives the tone of tender melancholy which so many readers detect in the poet, rather than any rejection of life or yearning to be free of it. The period of the growth of Love is characterized by an increasing tendency for "things" to "come together", and Empedocles makes quite clear that the things he means here are the elements.²⁰ Fire, water, earth, and air, that is, work together more and more congenially under Love's tutelage, in the formation of a more and more nearly perfect universe. It never achieves complete perfection, perhaps, in the usual sense, because that might seem to imply permanence, or lasting immunity to Strife. On the other hand, Empedocles may have been less enamoured of this sort of static perfection than some others. Perhaps the gay and rather complicated world to which fr. 128 (quoted below) seems to refer was more to his liking. For the kind of unity to which Love leads is precisely the complex unity in which diverse elements cooperate to form a "cosmos". On the other hand, though the primary effect of Strife is "separation", it is the elements which are separated from one another, and in this process they "grow together" into separate and, this time, really homogeneous masses, and this is tantamount to the destruction of everything save the elements themselves (fr. 26.7, quoted above).

One of the supports of the conventional interpretation of the rule of Love is the famous couplet, fr. 17. 7-8:

ἄλλοτε μὲν φιλότῃτι συνερχόμεν' εἰς ἓν ἅπαντα,
ἄλλοτε δ' αὖ δίχ' ἕκαστα φορεύμενα Νείκεος ἔχθει.

Here it is clear, as remarked above, that the "unity" described is the opposite of the separation of the elements. In fr. 20. 2, line 17. 7 recurs. The context is different, however: ἅπαντα modifies γυῖα in the following line (εἷς ἔν ἅπαντα/γυῖα, τὰ σῶμα λέλογχε, βίου θαλέθοντος ἐν ἀκμῇ), and the unity referred to is that of a single human body. In 17. 7 the text is uncertain. Some manuscripts give εἷς ἕνα πάντα, where the masculine is hard to interpret, but suggests what might have been the original reading here, found in fr. 26. 5, where these two lines are both quoted again: εἷς ἕνα κόσμον.

That the progressive development of a cosmos is one of growing complication can be seen from the following lines of fr. 17 (9-13):

So insofar as they learn to grow into one out of many, and again, with the disintegration of the one, to become many, to this extent they are subject to birth, and have a temporary life; but insofar as they never cease their constant interchange, to this extent they exist forever, motionless in the cycle.

In the context the word ἀκίνητοι seems peculiar until we realize that this is a piece of anti-Parmenidean polemic. The motionlessness or changelessness of the elements means not that they are immobile, but that they are not altered qualitatively.

During the growing influence of Love,

who is worshiped by mortals, too, as inborn in their members, and by whom they think thoughts of amity and perform the works of concord, calling her Joy by name, or Aphrodite (fr. 17. 22-24),

are produced

all trees, and men and women, beasts and birds,
and fishes nourished in deep waters, aye,
the long-lived gods, in honors excellent

(fr. 21. 10-12, tr. Leonard), "men and the tribes of other beasts" (fr. 26. 4), those "myriad tribes of mortal things" (fr. 35. 16) of which the poet speaks so often and with such affection. In fr. 128 we seem to have an actual description of the reign of Love:

nor unto them
was any Ares god, nor Kydoimos,
nor Zeus, the king of gods, nor Kronos, nor
Poseidon then, but only Kypris queen...
whom they with holy gifts were wont to appease.²¹

What impresses in the "unifying" effect of Love is not a tendency to growing uniformity; things are not melting together or "fusing", but becoming increasingly individual, unique, and multifarious:

παντοίαις ἰδέησιν ἀρήροτα, θαῦμα ἰδέσθαι

We can tell something of Empedocles' ideal world from his eschatological notions. He adopts from the Orphics and Pythagoreans the idea of transmigration, and with it a part of the idea of the unhappiness of man's lot. It is also clear that the soul is disadvantaged by being relegated from a realm where Love rules to this world in which Strife is unhappily so prominent (fr. 118). But Kahn is right in emphasizing that "Empedocles is no more a Buddhist than he is a Christian. The terms he uses suggest the continued, harmonious coexistence of discrete individuals."²²

In the Purifications, Empedocles represents himself in striking terms as having attained an exalted state:

Friends who dwell throughout the great town of golden Acragas, up by the citadel, men mindful of good deeds, unversed in wickedness, havens of respect for strangers, all hail. I go about among you all an immortal god, mortal no more, honoured as is my due and crowned with garlands and verdant wreaths. Whenever I enter the prosperous townships with these my followers, men and women both, I am revered; they follow me in countless numbers, asking where lies the path to gain, some seeking prophecies, while others, for many a day stabbed by grievous pains, beg to hear the word that heals all manner of illness. (Fr. 112, tr. Kirk and Raven.)

The god that is each one of us (fr. 115. 5), then, if he has achieved the degree of purification which the poet thought he had reached, will in times like these, when Strife is on the increase, do the sort of thing Empedocles is doing, associating with his beloved fellows, alleviating their misery and improving their lot as best he can. Though he may feel himself an exile (φυγὰς θεόθεν καὶ ἀλήτης, fr. 115. 3), repine at his temporary lot (κλαῦσά τε καὶ κώκυσα ἰδὼν ἀσυνήθεα χῶρον, fr. 118), and long to return to the society of Love's reign (fr. 146-147), there is no reason to suppose that this would be a permanent state of bliss or salvation--or that he will wish to dissolve, or devote himself to rotating, or to contemplating complacently the circumambient solitude.

Excellent testimony as to the sort of result Empedocles attributed to the increasingly good (not necessarily more thorough) mixture of elements is provided in Theophrastus' summary of his doctrine of perception:

Those in whom the elements are mixed equally or nearly so and not at great intervals nor in particles too small or too large, are the most intelligent and most keen in sense-perception, and proportionately those closest to them in this respect, and those in the opposite condition are least intelligent. Those in whom the elements are combined in loose and light texture are torpid and easily-tired. Those in whom the elemental particles are close-fitting and broken down into small bits,

such persons are considered keen, and though projecting many things they accomplish few because of the speed of the blood's movement. But those in each of whose parts the mixture is even will be wise by virtue of this; this is why some are good speakers, some good artisans, because some have such a mixture in their hands, others in their tongues. And it is the same with the other faculties. (De sensu 11; DK 31 A 86. 11.)

The result of a "good" mixture, in other words, under the influence of Love, is the farthest thing from a homogeneous mass. This is what produces the finest distinctions and the most highly articulated relationship of the parts of the universe. Rather than melting together, the organs become more and more keen and competent, and human beings develop more and more skills and specialties. Incidentally, such a situation is not necessarily inconsistent with a spherical shape for the universe as a whole.

Empedocles seems to prize harmony, cosmos, the meaningful articulation of parts into a whole--which he does not hesitate to call a single whole. But he does not emphasize the aspect of harmony or cosmos which most pleased the Pythagoreans: the orderliness of each thing assuming and keeping its proper place. There is very little about the majesty of law, or the pleasures of hierarchy, in our poet. It is Strife that sorts things according to their kind, and endeavors to keep them in isolation. Strife is thus in a sense more orderly, in its procedures and effects, than Love is. Of course there are different kinds of harmony: Anaximander, no Pythagorean, liked $\kappa\acute{o}\sigma\mu\omicron\varsigma$; Protagoras saw value in $\nu\acute{o}\mu\omicron\varsigma$.

In general, one wonders whether Empedocles is as close to the Pythagoreans as is sometimes supposed. He takes a polemical posture toward their (partly heretical) follower Parmenides, and is certainly very un-Pythagorean in the open way in which he publishes his doctrines. He also seems to have shown much more interest in empirical knowledge, the details of physical and zoological science--to say nothing of his democratic politics. He is not keen on Pythagorean numerology; to be sure he speaks in terms of quantitative comparison and even of proportion, but the distinctive thing about his analysis of organic compounds is the emphasis on the qualitative.²³ The Pythagorean cosmology, on the other hand, scarcely concerns itself with qualitative distinctions but is very explicit about quantitative relationships. The Purifications show an influence of Orphic and Pythagorean ideas, though here too there are differences.²⁴

II

Some of the difficulty in the usual interpretation of Empedocles' cosmic periods becomes more sharply apparent if we consider what correlation they may have had with his analysis of organic evolution. For while the four cosmic periods will not of course correspond exactly to the four stages of biological evolution of which we have some reflection

in the fragments (57-62) and a fairly clear account in a paragraph of Aetius it seems very likely that in a system worked out in such detail the two sorts of periods were in some way correlated. Aetius' account, which doubtless stems from Theophrastus, may be translated as follows:

Empedocles believed that the first births of animals and plants were by no means complete, but were disjunct, consisting of parts that were not grown together. The second group, though with limbs that were grown together, were like creatures in dreams. The third group of births were of the whole-natured; the fourth group came no longer from the same kind of source, as for example from earth and water, but from one another, in some cases because of the condensation of their nourishment, in others because the beauty of the females caused an excitation of the movement of sperm. (DK 31 A 72.)

Recapitulating, the four stages are characterized by the appearance of (1) separate members or parts of animal and plant bodies (the "neckless heads" and "browless eyes" of fr. 57), (2) creatures having more than one "part" each, but sometimes in monstrous combination (the "creatures with countless hands and trailing feet" of fr. 60 and the "man-faced ox-breed" of fr. 61), (3) "whole-natured" forms, and (4) plants and animals that reproduce as now. This seems most naturally interpreted as a continuous series of stages showing the increasing complication of modes of generation during the increasing influence of Love.²⁵

The cryptic description of the creatures of the third stage as "whole-natured" can best be explained by reference to fr. 62, where the same word is used:

Now come, hear how fire, separating out, brought forth the night-clad shoots of men and tearful women; for the tale is not wide of the mark nor without knowledge. First there rose whole-natured forms from earth, having their proportion of both water and warmth. For fire sent them up, wishing to reach its like, not yet showing the lovely form of limbs nor voice nor sex-organs such as are usual for men.

Here Empedocles is describing especially the origin of human beings (as is shown by the first, and confirmed by the last line), but it is natural to assume that the same sort of description would apply to other creatures, and plants as well.²⁶ They spring from earth, and this is only one of many reflections of that age-old mythical idea in Greek scientific thought.²⁷ They will have earth in their makeup, then, and they also "have their proportion of both water and warmth" (lines 4-5). Empedocles' attention does not stray far from the mixture of elements; air is not mentioned, but it is obvious that when these creatures emerged into the air they began to partake of it, i.e. to breathe. And though the propelling force behind their origin may be Strife (for this is what causes things to seek their like, as fire does here), will they not now also begin to partake of the influence of Love? This is foreshadowed in the $\pi\omega$ of line 7: they do not yet show the

perfection of form or voice, or the power of sexual reproduction which we think of as characteristic of men and women, but the tendency of development is in that direction. Though still very "primitive", these people are surely not the shapeless lumps or masses of which some scholars speak.²⁸ In other words, the "whole-natured forms" represent a further stage in cosmic evolution beyond what might well be called the "part-natured forms" of stages 1 and 2.

It is not clear whether stages 1 and 2 are interdependent, as they would have to be if the system were to be described as truly evolutionary, in the Darwinian sense, though a comment of Aristotle shows that in the second stage those creatures tended to survive whose accidental combination of parts was such that they were fit to do so.²⁹ They could not, however, propagate their kind, as would be necessary for a truly evolutionary system. Not even the "whole-natured forms" of stage 3 could do that. In addition, stage 3 clearly does not depend on stage 2.

Zeller saw this process of the development of organic life as a continuous one, but most of the recent commentators have believed that the four stages must be divided between two cosmic eras: the first two in that of the growth of Love, the third and fourth in that of the growth of Strife.³⁰ Most, however, have avoided mentioning the absurd consequences for the detail of the system. It is reasonable enough to think of the development from scattered members to combined members as brought about by the influence of Love, and perhaps a case could be made for assigning the "whole-natured forms" to the period of Strife. But can we attribute to Empedocles the cynicism required to place the entire phenomenon of generation by sexual reproduction, under the impulsion of Aphrodite, in the epoch of Strife--and indeed the latter part of that epoch, when the whole world is approaching disintegration? There is reason to believe he thought the present a period of Strife's growth, in the statement of Aristotle that "the world is the same now in the era of Strife as it formerly was in the era of Love" (*De gen. et corr.* 334 a 5; DK 31 A 42, B 53, B 54). But surely "the same" (ὁμοίως) is as significant a word here as "now" (νῦν). He means that we have the same kind of world as then existed; and this is natural since both forces are at work in both periods.

Zeller finds it a "surprising gap" in the system that Empedocles did not have more to say about the distinguishing character of each period; but, apart from the fragmentary nature of our tradition, there was not really much to say about the process of degeneration under Strife.³¹ I would suggest that in Empedocles' conception, the period of Strife's growing dominance saw the same four stages or types of organic "birth", but in reverse order. We have ample evidence that in this part of the cycle the elements cooperate less and less with each other. The constant tendency is to disintegration--from the perfect and intricate organisms we know, to forms that are "whole-natured" but much less complex, then to the "dream-like" monster forms, and last, just before the complete separation of the elements by Strife, when the

combinatory influence of Love is very weak, to the pathetic "browless eyes" and "neckless heads".

In a somewhat pessimistic spirit Empedocles diagnosed his own world as one of decay. Perhaps he thought he saw evidence of this in the increase of war or divorce or sterility, or even in an apparent increase in the incidence of monstrous births. A cyclical view of history is not necessarily pessimistic; according to temperament one may emphasize the sense of entrapment or the eventual improvement always ahead. Empedocles' doctrine of transmigration is surely inconsistent at one point with his cyclical physical theory, if fr. 147 is correctly interpreted as promising escape from the round of rebirth: "sharing with the other immortals their hearth and their table, without part in human sorrows or weariness" (tr. Kirk and Raven). This may, however, only refer to a temporary state. To be sure, ἀθάνατοις seems unambiguous, but other passages suggest that Empedocles' attitude to mortality was rather unusual. We read of "long-lived gods" in fr. 21. 12 and 23. 8, of the "springing up" of gods in fr. 146. 3 And in fr. 35 he clearly takes a favorable view of the growing power of Love, which brings forth the ἔθνεα μυσία θνητῶν as well as causing things to grow, as mortal, that "previously had learned to be immortal" (line 14). The aspect of the transmigration theory that appealed most to Empedocles was the kinship of all things, and this forms the rationale for his dietary restrictions, whatever religious or superstitious background they may have had (frs. 130, 136-141). There is not much about "sin", as a theological concept, in his thought, and the ἀμπλακίαι by which the δαίμων may involve himself in the cycle of transmigration are moral or social rather than ritual: the shedding of kindred blood or the violation of an oath, and reliance on "raving Strife" (fr. 115. 3, 14).³²

The highest human types or "lives", which one may go through before attaining the divinity and immortality of fr. 147, are those of benefactors of their fellow man: "and finally they come as seers and bards and physicians and leaders among men on earth."³³ The humanistic motive that led Empedocles to see as the ruling forces in nature Love and Strife, which are most familiar to us as forces in the life of man, is also the leading spirit of his physical philosophy.

- 1 Aristotle thought there were four periods, two of activity, when Love or Strife is gaining, set apart by two intermediate periods of rest; but the lines he quotes in support do not seem to bear this meaning. (Phys. 8. 1. 250 b. 26; cf. Zeller-Nestle I^o 971 n. 1.)
- 2 De gen. et corr. 19. 3; DK 31 A 41. This is not an independent testimony, but merely a paraphrase of Aristotle De gen. et corr. 315 2 3, and "very inaccurate in its inferences", as E. Millerd points out (On the interpretation of Empedocles, p. 61 n. 5). His word ἀποτόν is not found elsewhere in the tradition.
- 3 C. H. Kahn, "Religion and natural philosophy in Empedocles' doctrine of the soul", AGP 42 (1960), 3-35, at p. 21 n. 54. This does not fully satisfy Kahn, who finally pronounces a verdict of non liquet on the connexion between the unity of the sphere and that of "the company of the blessed daimons" (p. 26).
- 4 Simpl. Phys. 1183. 28; Eudemus fr. 110 Wehrli; DK 31 B 27.
- 5 De facie 926 D-927A, tr. Cherniss (Moralia, Loeb ed., XII p. 83).
- 6 It is very clear from various Neoplatonizing explanations that Simplicius was influenced in his general interpretation of Empedocles by his own philosophical predilections. The whole system was allegorical to him, the chronological account given by Empedocles was διδασκαλία χάριν and represented coexisting aspects of the world. In particular "the Sphere" was the symbol of the κόσμος νοητός or intelligible world. (DK 31 A 52, esp. Simpl. De caelo 304. 4, and ibid. 141. 10, 305. 10, Phys. 1121. 17, 25ff., 1186. 30 ff. Cf. Bignone, pp. 589ff.) "The Sphere" was also, by various of the later commentators, interpreted as meaning formless matter, efficient cause, the Stoic original fire (Zeller-Nestle I^o 975).
- 7 See E. Bignone, Empedocle, pp. 220 ff., and the other references cited by Cherniss, op. cit., p. 82 note c.
- 8 E.g., F. Solmsen, Aristotle's system of the physical world (Ithaca, 1960), p. 372 n. 16, 375 n. 31.
- 9 "Only the delight of the Sphairos in his solitude is out of keeping with Empedocles' conception of the god," says Jaeger, Theology of the early Greek philosophers p. 141. His proposal to take μόνιη as "rest" rather than "solitude" does not affect the present argument. The concept of the sphere as Love's product leads Jaeger to say, "In this way Empedocles retains the Eleatic Being as one stage in the cycle: it is the stage when the divine Love which keeps the world going has realized its dominion and become fully achieved" (ibid.) The supreme achievement of the power which "keeps the world going" is to bring it to a full stop!

- 10 κρύφω (line 3) is variously interpreted. Is it equivalent to κρυφίότης, as LSJ think, thus meaning something like "secrecy" (Freeman), "obscurity", and hence "lurking-place", "cave" (antre, Zafiriopulo), whether entered voluntarily, as γαίωv in line 4 might suggest, or involuntarily, as ἐσθηρικται suggests (so Verliess, "dungeon", DK)? Or is it parallel to κρυφὸν θέμεν (a conjectural reading for κρύφιον) in Pind. Ol. 2. 97, in which case it might mean something like "covering" (Burnet, Kirk and Raven)? If the interpretation suggested here is correct, the ambiguity may be intentional.
- 11 There is no reason to attribute 134 to the Purifications, except Diels' assumption that anything to do with religion is from that poem. In fact Tzetzes refers to the poem On nature in citing lines 4-5. Cf. C. H. Kahn, "Religion..." (n. 3), p. 6 n. 8.
- 12 Bonitz lists the references, Index aristotelicus 242 a 23. That Aristotle refers to "the Sphere" with the words τοῦ θεοῦ, De gen. et corr. 333 b 21 (DK 31 A 40) is an assumption that begs the question at issue here. In the context of Aristotle's argument it need not mean more than "the Deity", as the Oxford translation has it. Aristotle understands Empedocles' εἰς κόσμος in the light of later metaphysical concepts of τὸ ἓν, and is thus able to castigate him for not defining adequately the relation between "the one" and the plural elements (as at De gen. et corr. 315 a 3ff.). Similarly, he supposes that in bringing things together into a unity Love "destroys" everything else συνάγουσα γὰρ εἰς τὸ ἓν φθείρει τὰ ἄλλα, Met. B 1000 b 11). But there is nothing in his comments to indicate that the world's shape is spherical. Perhaps this is odd, if that was so, or was clearly expressed by Empedocles; Aristotle has a good deal to say, especially in the De caelo, about the properties of spheres.
- 13 Hippolytus Ref. 7. 29 (DK I⁶ 324. 12-16, introducing fr. 29) implies a relation between Love and the sphere, but the implication may well be that of Hippolytus himself, following the conventional interpretation. Aetius 1.7.26 (Dox. 303) described the divinity according to Parmenides as σφαιροειδής, but no such word appears in the section (28) on Empedocles. Diels however proposed two conjectural restorations which are printed in DK 31 A 32, introducing both the words σφαιροειδής and Σφαιρος. It is obvious from the text as it stands that the doxographers were concerned with the peculiar relationship of the one and many in Empedocles' cosmology and theology, and the absorption of the many into (or separation out of) the one (ἀναλυθήσεται). Usener's conjecture (DK I⁶ 289. 11 n.) does justice to this. But there is no positive justification for inclusion of the idea of sphericity. (Indeed the first restoration is given "beispielsweise" in Rhl. 36 [1881] 345.) The phrase τὸ μὲν ἓν τὴν ἀνάγκην (DK I⁶ 289.9) is obviously wrong. For Empedocles' deity Necessity see frs. 115-116. She is an eternal oracular power, doubtless the guarantor of the oath that

assures the equal rights of Love and Strife (fr. 30. 3) and so far from being identical with the "one cosmos" of Love's reign that Charis "hates unbearable Necessity" (fr. 116).

- 14 E.g., Kirk and Raven, pp. 345f.
- 15 DK 12 A 11, etc.; cf. C. H. Kahn, Anaximander and the origins of Greek cosmology (New York, 1960), pp. 53, 77.
- 16 De caelo 139 b 16 (Schol. in Ar. 489 b 22; Zeller-Nestle I⁶ 975 n. 7; not in DK).
- 17 "But when Strife had grown great within its limbs, and sprang to its privileges as the time was fulfilled, which is fixed for them as alternate by a broad oath" (fr. 30; cf. 31, 35. 11). Fr. 27a οὐ στάσις οὐδέ τε δῆρις ἀναίσιμος ἐν μελέεσσιν) does not apply to the world as a whole, or to the god Sphere, but as Plutarch's introductory words show, to an individual human being, presumably at the time of the predominance of Love. (If it is an Empedoclean fragment at all, as Milamowitz conjectured, and as the language seems to indicate.)
- 18 E.g., Jaeger, Theology of the early Greek philosophers, pp. 142, 153; cf. Kahn, "Religion...", p. 21.
- 19 G. Vlastos, "Equality and justice in early Greek cosmologies" CP 42 (1947) 156-178, at p. 160.
- 20 Line 7 ἔν , line 9 ἔν , line 10 ἐνός πλέον' , line 16 ἔν , line 17 πλέον' ἐξ ἐνός are all explicitly explained by lines 18-20: the "more" are the four elements plus Hate and Love. And the "one" is the "one cosmos".
- 21 Lines 1-4, tr. Leonard. If this fragment is from the Purifications, as is usually assumed, Kirk and Raven are right in seeing it as an indication of the parallelism between the two poems. However, it comports poorly with their picture of the rule of Love as an undifferentiated mass (p. 345).
- 22 "Religion..." (cited above n. 3), p. 25.
- 23 Here I should disagree with Prof. Solmsen (Aristotle's system of the physical world 372f. and "Tissues and the soul", Phil. Rev. 59 [1950] 446ff.), and with Kirk and Raven, who speak of "the exact proportion in which these substances are compounded" (p. 335; my italics). This is to ignore the line εἴτ' ὀλίγον μείζων εἴτε πλεόνεσσιν ἔλασσων "either a little more of it or less of it with more of the others" (fr. 98. 4), as well as the word μάλιστα "about" (line 1). Empedocles seems to give an exact ratio in 96 and in the paraphrase of Aetius (DK 31 A 78), but 98 shows that, though he thought there was a certain ratio in each case, he did not place great importance on stating it with mathematical precision.

- 24 He may be referring to Pythagoras in fr. 129, though the κείνοισιν of line 1 is more likely the people of the golden age of Love; cf. ἦν δέ τις ἐν κείνοισιν with fr. 128. 1: οὐδέ τις ἦν κείνοισιν. (Jaeger doubts the identification, Theology p. 151.)
- 25 "Die Entstehung der Tiere und Menschen dachte sich Empedokles durch mehrere aufeinanderfolgende Vorgänge vermittelt, die ebensoviele Versuche einer immer vollkommeneren Vereinigung ihrer Teile darstellen", Zeller-Nestle I⁶ 986.
- 26 This seems to follow from the parallel with the Aetius passage, where "animals and plants" are mentioned. Cf. Zeller-Nestle I⁶ 987 n. 2.
- 27 W. K. C. Guthrie, In the beginning, (London, 1957), ch. 2.
- 28 E.g. Bignone, Empedocle, p. 450 et passim: masse integre. Diels-Kranz have rohgeballte Formen, Zeller-Nestle unförmliche Klumpen (I⁶ 987), Tannery formes indistinctes (Pour l'histoire de la science hellène p. 344). Similarly Holwerda (Commentatio de vocis quae est φύσις usu..., p. 69): "μελεῶν φύσις [fr. 63] significat 'membrorum globus horribilis' idemque designat atque ούλοφυῆς τύπος, qui homo, ut e fragmenti versu ultimo apparet, incerti erat sexus." I do not find the examples persuasive by which Holwerda seeks to show (pp. 68-70) that φύσις may mean not only statura, but also monstrum, massa, moles. These are τύποι; τύπος is primarily a blow, then the impression made by the blow--a seal-impression, an engraving, or the like. It is used by extension of many kinds of "types", but always of a shape. Sometimes the shape may be vague or undetermined, but never shapeless. The word ούλοφυῆς is given the suitably ambiguous translation "whole-natured" by Burnet (EGP⁴ 214, 243), and he is followed in this by Kirk and Raven (p. 338). Whether the root φυ- here has the sense of "existence", "being", "nature", or of "growth", the compound should mean something like "existing as a whole" or "single-growing". Simplicius' definition of it (Phys. 382. 17ff.) is clearly influenced by his general interpretation. The only authority cited by LSJ for the word from the classical period, than Empedocles, is Aristotle PA 693 a 25, where Peck's translation is "one uninterrupted whole".
- 29 Ar. Phys. B 198 b 29; DK 31 B 61. Cf. Simpl. Phys. 371.33.
- 30 Zeller-Nestle I⁶ 988 n. 2.
- 31 Ibid., 978f. We need not worry about the "Ausscheidung der Elemente aus dem Sphairos" (p. 979); Zeller himself, when he discussed the details of Weltbildung, noted that the separation ἐκ πρώτης...τῆς τῶν στοιχείων κράσεως (Ps. -Plut. Strom. ap. Eus. PE 1. 8. 10; DK 31 A 30) must refer to the beginning of Love's mixing activity. (κράσις would seem an odd word to denote the totally-separated world of Strife; but the whole phrase,

including the late word στοιχείων reads like a generally-phrased introduction to the main part of the sentence, reflecting the summarizer's views.) Aristotle is simply wrong in stating that Empedocles omits to discuss world-formation under Love (De caelo 301 a 14; DK 31 A 42), as Cherniss points out (Pre-socratics, p. 194).

- 32 This is of course not to deny that these concepts are frequently important in religious thought; but it seems misleading for Kirk and Raven (p. 350f.) to generalize this into a doctrine of "the primal sin and fall of man".
- 33 Fr. 146. 1-2. There seems slight warrant for rendering πρόμοι as "princes", giving a monarchist ring to this democrat's sentence. (Freeman, Companion p. 174, cites this line as showing "aristocratic bias"). It is a poetic word in which the etymological connexion with πρό seems to have remained strong. According to LSJ it always is equivalent to πρόμαχος in Homer.