

Cambridge University Press

978-0-521-10037-3 - Empedocles' Cosmic Cycle: A Reconstruction from the
Fragments and Secondary Sources

D. O'Brien

Excerpt

[More information](#)

CHAPTER I

THE PROPOSED RECONSTRUCTION

Empedocles' world is made of four elements, earth, air, fire and water. These are ruled by two forces, Love and Strife. Love is the cause of happiness and unity. Strife is the cause of separation and misery.

These two forces rule in turn. Strife makes the elements many, and so long as the elements are many they are moving. Love makes the elements into a single whole, the Sphere. In the Sphere the elements are at rest. The period of unity and rest under Love lasts for as long as the period of plurality and movement under Strife.

During the period of plurality and movement the elements are first increasingly separated by Strife and then, as soon as they have been fully separated into four distinct wholes, they begin to be increasingly united by Love. In this way the elements pass through varying stages of separation and of combination. In one of these is the world in which we are living now.

There are thus two great alternations in the life of the world. First there is the major alternation between one and many, rest and movement. Secondly there is the minor alternation within the period of movement and plurality. This is the alternation between the world of increasing Strife which leads away from the Sphere, and the world of increasing Love which leads back to the Sphere.

Accompanying the minor alternation there is a difference of speed. For some time after the Sphere has been disrupted the elements still move slowly. They gather speed as Strife prevails more and more, until their maximum speed is reached with the total victory of Strife, when the elements are fully separated. As the elements start returning to the Sphere under Love's influence, their speed gradually decreases, until finally they sink to rest again in the Sphere.

During the time of her complete power Love is extended throughout the Sphere in which all the elements are evenly

Cambridge University Press

978-0-521-10037-3 - Empedocles' Cosmic Cycle: A Reconstruction from the Fragments and Secondary Sources

D. O'Brien

Excerpt

[More information](#)

THE PROPOSED RECONSTRUCTION

mingled. Strife is outside the Sphere, spread in an even layer all over its outer surface. When the reign of the Sphere comes to an end, Strife begins to break into the Sphere from the outside. Love is forced increasingly towards the centre, as the elements are separated more and more into four concentric spheres of fire, air, water and earth, passing through the condition in which we see them now. At the end of this period Strife is totally dominant. The elements are completely separated into their concentric spheres. Love is confined to the centre and isolated there.

Without delay, the opposite world of increasing Love begins. Love moves outwards from the centre. As she does so, she unites the elements, binding them into mortal combinations that as time goes on approximate more and more to the perfect unity of the Sphere. Strife is forced outwards towards the circumference of the world. Finally Love has regained full control of the elements. They are fully mingled and made into the Sphere. Strife is on the outside.

Our own world falls in the period of movement when the power of Strife is on the increase. This makes it a time of ever greater separation and unhappiness. At the beginning of the period of increasing Strife, after the disruption of the Sphere, there were formed whole-natured creatures. Since Love was then still powerful, these creatures were more harmonious beings than we are. The elements in them were more harmoniously mingled, and in particular they had an equal share of fire and water, the male and female element respectively. As the power of Strife increased, these whole-natured creatures were separated into men and women. As time goes on, and the power of Strife in the world becomes even greater, the different parts of our bodies will no longer be able to hold together. They will be torn into separate pieces. For a time perhaps they will cling together in monstrous combinations. Then separate limbs will wander disconsolately about the world on the eve of the dissolution of all things into four separate elements.

After this catastrophe the world of increasing Love will begin. The same events will now be repeated but in the reverse order. First there will grow up from within the earth the separate parts of living bodies: bones and flesh, eyes, heads and so forth. These

Cambridge University Press

978-0-521-10037-3 - Empedocles' Cosmic Cycle: A Reconstruction from the
Fragments and Secondary Sources

D. O'Brien

Excerpt

[More information](#)

THE PROPOSED RECONSTRUCTION

will then cling together as Love increases the desire of all things for unity. The combinations they form will be monstrous at first: human heads on a cow's body, creatures trailing hundreds of hands and arms, and so on. The power of Love continues to increase, and monsters will give way to creatures no different from ourselves, but with a happier fate ahead of them. For with the power of Love still increasing, men and women then will unite into whole-natured forms and finally be assumed into the blissful Sphere.

When the time allowed for the Sphere has come to an end, the world of increasing Strife will begin again. And so the two alternations, between being one and being many and between becoming one and becoming many, will continue endlessly.

Cambridge University Press

978-0-521-10037-3 - Empedocles' Cosmic Cycle: A Reconstruction from the Fragments and Secondary Sources

D. O'Brien

Excerpt

[More information](#)

CHAPTER 2

REST AND MOVEMENT

INTRODUCTION

The first question is the place of rest and movement in the cosmic cycle.¹ It is obvious that in our present world the elements are moving, and so too that they will have been moving in the world parallel to ours under the influence of increasing Love. But what were the elements doing in the intervening times: was the Sphere moving or at rest? Were the elements moving or at rest when Strife had separated them most fully?²

The answer which will be given here is that the Sphere was alone at rest and that at all other times the elements were moving. In this way Empedocles' world alternated between rest and movement at the same time as it alternated between being one and being many.

Bignone would apparently subscribe to this view. He refers to an alternation of this kind several times in a general way.³ But his evidence is scattered and given more or less incidentally.⁴ Consequently he has been ignored. Robin perhaps has Bignone's view in mind.⁵

¹ This question is taken first, because to do so affords the clearest way of disentangling the ancient evidence on the cosmic cycle as a whole. Recently some doubts have been cast on the very existence of a cosmic cycle in Empedocles. Readers who feel that this question should be primary may like to turn first to chapter 8, pp. 156–95.

² There has recently been a tendency to use the word 'Sphere' to mean the world at any time, e.g. by Raven, in Kirk and Raven, *The Presocratic philosophers, a critical history with a selection of texts* (Cambridge, 1957), p. 353 n. 2. This practice has presumably arisen either through a loose translation and a questionable understanding of κύκλος in fr. 35. 10; or perhaps on the grounds that even after the Sphere described in fr. 27 the world continues to be spherical, or roughly spherical, in shape (cf. p. 173 n. 6 below); or perhaps from the misuse of fr. 27 as a description of the οὐρανός by later commentators, Achilles *Isag.* 6, p. 37. 10–13 Maass, Anon. 1 in *Aratum* 6, p. 97. 24–9 Maass. Throughout the present work 'Sphere' will be used exclusively in Empedocles' sense, to mean the elements bound together by Love in a non-cosmic state, as described in fr. 27.

³ *Empedocle, studio critico, traduzione e commento delle testimonianze e dei frammenti* (Torino, 1916), pp. 129–30, 223, 234, 423.

⁴ Pp. 526 n. 2, 562 n. 3, 592 n. 1, 600 n. 1, 604.

⁵ *La pensée grecque et les origines de l'esprit scientifique* (Paris, 1923), p. 125.

Cambridge University Press

978-0-521-10037-3 - Empedocles' Cosmic Cycle: A Reconstruction from the Fragments and Secondary Sources

D. O'Brien

Excerpt

[More information](#)

INTRODUCTION

The notion that the separated elements were moving is part of Tannery's interpretation,¹ followed with some reservations by Ferrari.² But this feature of Tannery's interpretation is not worked up into a full reconstruction of rest and movement in Empedocles, and is part of Tannery's general view that total Strife is a time of chaos following closely on the disruption of the Sphere. This view, we shall argue later, is doubly erroneous (pp. 146ff. and 158ff.).

Zeller's view was that both the Sphere and the separated elements were at rest.³ In this he is followed by Winnefeld,⁴ Martin,⁵ Cornford,⁶ and apparently by Minar, in so far as he follows an orthodox view of the cycle.⁷ Zeller's view has the support of Simplicius, whose testimony on this point however proves to be of no value, as we shall see (pp. 26–30).

Zeller also suggested the possibility that Empedocles spoke of the Sphere as at rest, but failed to describe the condition of the elements separated under Strife.⁸ This interpretation has been adopted by Millerd, with some reservations,⁹ and by Cherniss.¹⁰

More generally, Kranz claims that total Strife cannot have been described at all.¹¹ Kranz gives as his reason: 'Das ergibt sich aus

¹ *Pour l'histoire de la science hellène*, 2nd edition by A. Diès (Paris, 1930) (henceforward *Science hellène*), p. 319.

² 'La filosofia di Empedocle', *Rivista Italiana di Filosofia* anno 6 (1891), vol. 2, p. 62.

³ *Die Philosophie der Griechen in ihrer geschichtlichen Entwicklung*, Teil 1, Hälfte 2, 6th edition by W. Nestle (Leipzig, 1920) (henceforward ZN), p. 971.

⁴ *Die Philosophie des Empedokles*, in *Beilage zum Programm des Grossherzoglichen Gymnasiums in Donaueschingen* (Rastatt, 1862), p. 22.

⁵ 'Mémoire sur les hypothèses astronomiques des plus anciens philosophes de la Grèce étrangers à la notion de la sphéricité de la terre', *Mémoires de l'Institut National de France, Académie des Inscriptions et Belles-Lettres*, 29, 2ème partie (1879), pp. 213–19.

⁶ Loeb edition of Aristotle's *Physics* (1934), notes on 250b22 and 26, vol. 2, pp. 268–71.

⁷ 'Cosmic periods in the philosophy of Empedocles', *Phronesis*, 8 (1963), 130 and 135, cf. below, pp. 160–1.

⁸ ZN, p. 971 n. 1.

⁹ *On the interpretation of Empedocles* (Dissertation, Chicago, 1908), pp. 53–4.

¹⁰ *Aristotle's criticism of Presocratic philosophy* (Baltimore, 1935) (henceforward *ACP*), p. 175 n. 130.

¹¹ *Empedokles, antike Gestalt und romantische Neuschöpfung* (Zürich, 1949), p. 49.

Cambridge University Press

978-0-521-10037-3 - Empedocles' Cosmic Cycle: A Reconstruction from the Fragments and Secondary Sources

D. O'Brien

Excerpt

[More information](#)

REST AND MOVEMENT

der Sache selbst: Ungeformtes kann man nicht schildern.¹ Empedocles' description of the world under total Strife, apart from the question of movement, we shall consider separately in chapter 7 (pp. 146 ff.).

It has also been thought that there was no time of rest in Empedocles' world, that movement there was continuous. This is the view of Karsten,² and in a doubtful and confused manner of Sturz.³ Karsten's interpretation is essentially part of a larger thesis which in one way or another would exclude the whole interpretation of Empedocles' cosmic system as an alternation in the literal sense between the one and the many. This thesis has recently been revived. The questions which it involves we shall again treat separately, in chapter 8 (pp. 156 ff.).

Thus it has been held:

1. That there was no time of rest: Karsten, Sturz.
2. That there were two times of rest: Zeller, Winnefeld, Martin, Cornford, perhaps Minar.
3. That there was one time of rest, the Sphere, with the fully separated elements left undescribed: Zeller, Millerd, Cherniss.
4. That there was one time of rest, the Sphere, and that at all other times, including total Strife, the elements were moving: Bignone and the present work.

The evidence is fairly diverse, and has not previously been studied in its entirety. The outline of our argument will be as follows. Aristotle says in the *Physics* that Empedocles' world alternated between rest and movement. The precise meaning of this statement has to be determined from passages elsewhere in Aristotle's works. These show that Aristotle thought that the Sphere alone was at rest. Aristotle's testimony receives confirmation from the fragments, confirmation that is nearly but not quite conclusive. Simplicius unknowingly contradicts Aristotle. But Eudemus and in part Plutarch share Aristotle's view. There is

¹ P. 354 n. 45.

² *Empedoclis Agrigentini carminum reliquiae, de vita eius et studiis disseruit, fragmenta explicuit, philosophiam illustravit S.K.* (Amstelodami, 1838), pp. 363-9, cf. pp. 381-5.

³ *Empedocles Agrigentinus, de vita et philosophia eius exposuit carminum reliquias ex antiquis scriptoribus collegit recensuit illustravit praefationem et indices adiecit M.F.G.S.* (Lipsiae, 1805), pp. 271-2.

Cambridge University Press

978-0-521-10037-3 - Empedocles' Cosmic Cycle: A Reconstruction from the Fragments and Secondary Sources

D. O'Brien

Excerpt

[More information](#)

INTRODUCTION

some worthless evidence in *De MXG*. The conclusion that the Sphere alone was at rest and that at all other times the elements were moving fits in well with the common fifth-century association of rest with unity and of movement with plurality.

The correct division of the cycle between rest and movement, besides being important in itself, is essential for much of what comes later. For that reason it is treated here exhaustively.

ARISTOTLE 'PHYSICS'

In the preliminaries to his analysis of movement and its cause in the last book of the *Physics*, Aristotle several times says that Empedocles' world moved and was at rest in turn:

250b21–251a5. ὅσοι δ' ἓνα (sc. κόσμον εἶναι φασιν) <ἢ αἰεὶ Ross> ἢ μὴ αἰεὶ, καὶ περὶ τῆς κινήσεως ὑποτίθενται κατὰ λόγον. εἰ δὴ ἐνδέχεται ποτε μηδὲν κινεῖσθαι, διχῶς ἀνάγκη τοῦτο συμβαίνειν· ἢ γὰρ ὡς Ἀναξαγόρας λέγει. . . ἢ ὡς Ἐμπεδοκλῆς ἐν μέρει κινεῖσθαι καὶ πάλιν ἡρεμεῖν, κινεῖσθαι μὲν ὅταν ἡ φιλία ἐκ πολλῶν ποιῆι τὸ ἐν ἢ τὸ νεῖκος πολλά ἐξ ἑνός, ἡρεμεῖν δ' ἐν τοῖς μεταξύ χρόνοις, λέγων

οὕτως ἢ μὲν ἐν ἐκ πλεόνων μεμάθηκε φύεσθαι,
ἢ δὲ πάλιν διαφύντος ἑνός πλέον' ἐκτελέθουσιν,
τῆι μὲν γίγνονταί τε καὶ οὐ σφισιν ἔμπεδος αἰών·
ἢ δὲ τὰδ' ἀλλάσσοντα διαμπερές οὐδαμὰ λήγει,
ταύτῃ δ' αἰὲν ἔασιν ἀκίνητοι κατὰ κύκλον.

δεῖ γὰρ ὑπολαβεῖν λέγειν αὐτὸν 'ἢ δὲ τὰδ' ἐνθὲνδε [τὰ] ἀλλάσσοντα'.¹

252a3–10. εἰ δὴ ταῦτ' ἀδύνατα, δῆλον ὡς ἔστιν αἰδῖος κίνησης, ἀλλ' οὐχ ὅτε μὲν ἦν ὅτε δ' οὐ· καὶ γὰρ ἔοικε τὸ οὕτω λέγειν πλάσματι μᾶλλον. ὁμοίως δὲ καὶ τὸ λέγειν ὅτι πέφυκεν οὕτως καὶ ταύτῃ δεῖ νομίζειν εἶναι ἀρχήν, ὅπερ ἔοικεν Ἐμπεδοκλῆς ἂν εἶπειν, ὡς τὸ κρατεῖν καὶ κινεῖν ἐν μέρει τὴν φιλίαν καὶ τὸ νεῖκος ὑπάρχει τοῖς πράγμασιν ἐξ ἀνάγκης, ἡρεμεῖν δὲ τὸν μεταξύ χρόνον.

252a19–21. διόπερ βέλτιον ὡς Ἐμπεδοκλῆς, κἂν εἴ τις ἕτερος εἴρηκεν οὕτως ἔχειν, ἐν μέρει τὸ πᾶν ἡρεμεῖν καὶ κινεῖσθαι πάλιν.

There are two difficulties in Aristotle's evidence here.

1. The elements move when they are coming together or being drawn apart, and they are at rest 'in the between time(s)', ἐν τοῖς

¹ For the reading of the sentence δεῖ. . . ἀλλάσσοντα see pp. 259–60 below.

Cambridge University Press

978-0-521-10037-3 - Empedocles' Cosmic Cycle: A Reconstruction from the Fragments and Secondary Sources

D. O'Brien

Excerpt

[More information](#)

REST AND MOVEMENT

μεταξύ χρόνοις, 250b29, or τὸν μεταξύ χρόνον, 252a9. These phrases are ambiguous, for there are two possible in between times, the Sphere and the complete victory of Strife. It is not clear whether Aristotle means that the elements are at rest in one in between time or in both in between times, and if in one only then in which in between time.

Von Arnim argued from the use of the singular that the Sphere alone was intended to be at rest.¹ Millerd replied that the singular meant each in between time, and that Aristotle intended there to be two periods of rest in each cycle.² Millerd is followed in more detail by Bignone,³ and briefly by Capelle.⁴

In fact the difference between singular and plural is no evidence either way. The singular could mean each in between time, and so two in every cycle, as well as one in between time. The plural could mean an endless series of single in between times, as well as both in between times.

2. The second difficulty is that Aristotle has been said to misunderstand the verses which in the first passage he quotes from Empedocles, fr. 26. 8–12. In these lines Empedocles says that the elements are always ἀκίνητοι κατὰ κύκλον. By this he means—the preceding lines make it clear—that the movement of the elements is constantly repeated, so that their movement is as it were motionless. But Aristotle is said to have taken ἀκίνητοι to mean literally motionless, and so to refer to a time of rest in between movement. Otherwise, it is argued, the lines cannot have been thought to illustrate what they are intended to illustrate, the alternation of movement and rest.

If Aristotle has misunderstood the lines in this way, then the value of his evidence on this point is somewhat diminished. For his statement that Empedocles' world included a time of rest might conceivably have had no other foundation than his misunderstanding of this verse.

Neither of these difficulties in Aristotle's evidence proves insurmountable.

¹ 'Die Weltperioden bei Empedokles', *Festschrift Th. Gomperz dargebracht* (Wien, 1902), pp. 17–18.

² (1908), p. 54 n. 1.

³ Pp. 591–2.

⁴ *Die Vorsokratiker, die Fragmente und Quellenberichte übersetzt und eingeleitet* (Leipzig, 1935), p. 199 n. 2.

Cambridge University Press

978-0-521-10037-3 - Empedocles' Cosmic Cycle: A Reconstruction from the Fragments and Secondary Sources

D. O'Brien

Excerpt

[More information](#)

ARISTOTLE 'PHYSICS'

It is unlikely in itself that Aristotle should so crudely misunderstand the language of Empedocles, and a close examination of his remarks at this point will show that most likely Aristotle has not simply misunderstood ἀκίνητοι, though he may have misunderstood the lines in a less obvious way. The question is somewhat complicated, and since it bears only indirectly on the reconstruction of the cycle it is best reserved for separate discussion.¹

The other difficulty, the precise meaning of 'in the between time(s)', is more important for the reconstruction of Empedocles. Aristotle's intention can be determined by reference to other passages where Aristotle speaks of movement or rest in Empedocles' world, from the *De generatione et corruptione* and the *De caelo*.

ARISTOTLE 'DE GENERATIONE ET
CORRUPTIONE'

That Aristotle thought of the Sphere as motionless is suggested by a passing remark that the elements arose from the Sphere 'through movement', 315a19–23:

ἄδηλον δὲ καὶ πρότερον ἀρχὴν αὐτῶι² θετέον τὸ ἐν ἧ τὰ πολλά, λέγω δὲ πῦρ καὶ γῆν καὶ τὰ σύστοιχα τούτων. ἦι μὲν γὰρ ὡς ὕλη ὑπόκειται, ἐξ οὗ μεταβάλλοντα διὰ τὴν κίνησιν γίνονται γῆ καὶ πῦρ, τὸ ἐν στοιχείῳ.

This would seem to imply that before the elements arose from the Sphere there was no movement. It would be possible to suppose that movement existed in the Sphere without having a separative force. But that would not seem to be the most direct implication of Aristotle's words.

That Aristotle's words do in fact imply that the Sphere is at rest will be confirmed by the passages that follow from the *De caelo*. For these, so we shall argue, imply that the fully separated elements were moving; and therefore there is no time other than the Sphere for the period of rest spoken of in the *Physics* (cf. p. 15 below).

¹ See note 1, pp. 252–61, where full references to previous views are given.

² αὐτῶι, sc. Empedocles, E.J. αὐτῶν, sc. the elements and their specific differences, H.L. αὐτὰ fecit F. For a similar doxographical αὐτῶι see *Met.* 985a24 and 1000b3 and 10.

Cambridge University Press

978-0-521-10037-3 - Empedocles' Cosmic Cycle: A Reconstruction from the Fragments and Secondary Sources

D. O'Brien

Excerpt

[More information](#)

REST AND MOVEMENT

ARISTOTLE 'DE CAELO'

Two remarks from a passage in the *De caelo* indicate that at the opposite end of the world cycle, the time of total Strife, Aristotle thought of the elements as being in movement.

'DE CAELO' 301a11–20

In the course of his demonstration that the movement of the elements is natural and eternal Aristotle praises Anaxagoras for having started his cosmogony from a unity that was at rest. By this Anaxagoras shows that he appreciates the primacy of natural movement. For unnatural movement cannot exist without natural movement, and natural movement cannot exist without giving rise to an ordered universe. Thus without a world or before a world began there could not be disordered movement on its own, as Plato and the Atomists thought: there could not be any movement, only rest.

Most other cosmogonists, Aristotle now says, followed Anaxagoras in bringing their elements together somehow and then introducing movement and diversity. It would be illogical, he continues, to go against this and try to make the world arise from elements that were separate and in movement. That is why Empedocles leaves out a description of the origin of the heavens at the beginning of the period of increasing Love. For he could not have formed the heavens from elements that were separate to start with, and were then joined together by Love. The elements in a completed world are already separated. They must have arisen therefore from a unity where they were not separated:

ἔοικε δὲ τοῦτό γε αὐτὸ καλῶς Ἀναξαγόρας λαβεῖν· ἔξ ἀκινήτων γὰρ ἄρχεται κοσμοποιεῖν. πειρῶνται δὲ καὶ οἱ ἄλλοι συγκρίνοντές πως πάλιν κινεῖν καὶ διακρίνειν. ἐκ διεστώτων δὲ καὶ κινουμένων οὐκ εὐλογον ποιεῖν τὴν γένεσιν. διὸ καὶ Ἐμπεδοκλῆς παραλείπει τὴν ἐπὶ τῆς φιλότητος (*sc.* τοῦ οὐρανοῦ γένεσιν).¹ οὐ γὰρ ἂν ἠδύνατο συστήσαι τὸν οὐρανὸν ἐκ κεχωρισμένων μὲν κατασκευάζων, σύγκρισιν δὲ ποιῶν διὰ τὴν φιλότητα· ἐκ διακεκριμένων γὰρ συνέστηκεν ὁ κόσμος τῶν στοιχείων, ὥστ' ἀναγκαῖον γίνεσθαι ἔξ ἑνὸς καὶ συγκεκριμένου.

¹ Bignone, p. 560 n. 2, see pp. 175–6 below.