

# CHAPTER V., EMPEDOKLES OF AKRAGAS

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## 97. Pluralism

THE belief that all things are one was common to the early Ionians; but now Parmenides has shown that, if this one thing really *is*, we must give up the idea that it can take different forms. The senses, which present to us a world of change and multiplicity, are deceitful. There seemed to be no escape from his arguments, and so we find that from this time onwards all the thinkers in whose hands philosophy made progress abandoned the monistic hypothesis. Those who still held by it adopted a critical attitude, and confined themselves to a defence of the theory of Parmenides against the new

views. Others taught the doctrine of Herakleitos in an exaggerated form; some continued to expound the systems of the early Milesians; but the leading men are all pluralists. The corporealist hypothesis had proved unable to bear the weight of a monistic structure.

#### 98. Date of Empedocles

Empedokles was a citizen of Akragas in Sicily. He was the only native citizen of a Dorian state who plays an important part in the history of philosophy.<sup>1</sup> His father's name, according to the best accounts, was Meton.<sup>2</sup> His grandfather, also called Empedokles, had won a victory in the horse-race at Olympia in Ol. LXXI. (496-95 B.C.),<sup>3</sup> and Apollodoros fixed the *floruit* of Empedokles himself in Ol. LXXXIV. I (444-43 B.C.). That is the date of the foundation of Thourioi; and it appears from the quotation in Diogenes that the fifth-century biographer, Glaukos of Rhegion,<sup>4</sup> said Empedokles visited the new city shortly after its foundation. But we are not bound to believe that he was just forty years old at the time. That is the usual assumption of Apollodoros; but there are reasons for thinking that his date is considerably too late.<sup>5</sup> It is more likely that Empedokles did not go to Thourioi till after his banishment from Akragas, and he may well have been more than forty years old when that happened. All, therefore, we can be said to know is, that his grandfather was still alive in 496 B.C.; that he himself was active at Akragas after 472, the date of Theron's death; and that he died later than 444.

#### 99. Empedocles as a Politician

Empedokles certainly played an important part in the political events which followed the death of Theron. The Sicilian historian Timaios seems to have treated these fully, and tells some stories which are obviously genuine traditions picked up about a hundred and fifty years afterwards. Like all popular traditions, however, they are a little confused. The picturesque incidents are remembered, but the essential parts of the story are dropped. Still, we may be thankful that the "collector of old wives' tales,"<sup>6</sup> as his critics called him, has enabled us to measure the historical importance of Empedokles for ourselves by showing us how he was pictured by the great-grandchildren of his contemporaries.<sup>7</sup> All the tales are intended to show the strength of his democratic convictions, and we are told, in particular, that he broke up the assembly of the Thousand—perhaps some oligarchical association or club.<sup>8</sup> It may have been for this that he was offered the kingship, which Aristotle tells us he refused.<sup>9</sup> At any rate, we see that Empedokles was the great democratic leader at Akragas in those days, though we have no clear knowledge of what he did.

#### 100. Empedocles as a Religious Teacher

But there is another side to his public character which Timaios found it hard to reconcile with his political views. He claimed to be a god, and to receive the homage of his fellow-citizens in that

capacity. The truth is, Empedokles was not a mere statesman; he had a good deal of the "medicine-man" about him. According to Satyros,<sup>10</sup> Gorgias affirmed that he had been present when his master was performing sorceries. We can see what this means from the fragments of the *Purifications*. Empedokles was a preacher of the new religion which sought to secure release from the "wheel of birth" by purity and abstinence. Orphicism seems to have been strong at Akragas in the days of Theron, and there are even some verbal coincidences between the poems of Empedokles and the Orphicising Odes which Pindar addressed to that prince.<sup>11</sup> On the other hand, there is no reason to doubt the statement of Ammonios that fr. 134 refers to Apollo;<sup>12</sup> and, if that is so, it points to his having been an adherent of the Ionic form of the mystic doctrine, as we have seen (§39) Pythagoras was. Further, Timaios already knew the story that Empedokles had been expelled from the Pythagorean Order for "stealing discourses,"<sup>13</sup> and it is probable on the whole that fr. 129 refers to Pythagoras.<sup>14</sup> It seems most likely, then, that Empedokles preached a form of Pythagoreanism which was not considered orthodox by the heads of the Society. The actual marvels related of him seem to be mere developments of hints in his poems.<sup>15</sup>

#### 101. Rhetoric and Medicine

Aristotle said that Empedokles was the inventor of Rhetoric;<sup>16</sup> and Galen made him the founder of the Italian School of Medicine, which he puts on a level with those of Kos and Knidos.<sup>17</sup> Both these statements must be considered in connexion with his political and scientific activity. It is probable that Gorgias was his disciple, and also that the speeches, of which he must have made many, were marked by that euphuism which Gorgias introduced to Athens at a later date, and which gave rise to the idea of an artistic prose.<sup>18</sup> His influence on the development of medicine was, however, far more important, as it affected not only medicine itself, but, through it, the whole tendency of scientific thinking. It has been said that Empedokles had no successors,<sup>19</sup> and the remark is true if we confine ourselves strictly to philosophy; but the medical school he founded was still living in the days of Plato, and had considerable influence on him, and still more on Aristotle.<sup>20</sup> Its fundamental doctrine was the identification of the four elements with the hot and the cold, the moist and the dry. It also held that we breathe through all the pores of the body, and that the act of respiration is closely connected with the motion of the blood. The heart, not the brain, was regarded as the organ of consciousness.<sup>21</sup> A more external characteristic of the medicine taught by the followers of Empedokles is that they still clung to ideas of a magical nature. A protest against this by a member of the Koan school has been preserved. He refers to them as "magicians and purifiers and charlatans and quacks, who profess to be very religious."<sup>22</sup>

#### 102. Relation to Predecessors

In the biography of Empedokles, we hear nothing of his theory of nature. The only hints we get are some statements about his teachers. Alkidamas, who had good opportunities of knowing, made him a fellow-student of Zeno under Parmenides. Theophrastos too made him a follower and imitator of Parmenides. But the further statement that he had "heard" Pythagoras cannot be right. No doubt Alkidamas said "Pythagoreans."<sup>23</sup>

Some writers hold that certain parts of the system of Empedokles, in particular the theory of pores and effluvia (§ 118), were due to the influence of Leukippos.<sup>24</sup> We know, however, that Alkmaion (§ 96) spoke of "pores" in connexion with sensation, and it was more probably from him that Empedokles got the theory. Moreover, this is more in accordance with the history of certain other physiological views which are common to Alkmaion and the later Ionian philosophers. We can generally see that those reached Ionia through the medical school which Empedokles founded.<sup>25</sup>

### 103. Death

We are told that Empedokles leapt into the crater of Etna that he might be deemed a god. This appears to be a malicious version<sup>26</sup> of a tale set on foot by his adherents that he had been snatched up to heaven in the night.<sup>27</sup> Both stories would easily get accepted; for there was no local tradition. Empedokles did not die in Sicily, but in the Peloponnese, or, perhaps, at Thourioi. It is not at all unlikely that he visited Athens.<sup>28</sup> Plato represents Sokrates as familiar with his views in early life, and the elder Kritias adopted one of his characteristic theories.<sup>29</sup>

### 104. Writings

Empedokles was the second philosopher to expound his system in verse, if we leave the satirist Xenophanes out of account. He was also the last among the Greeks; for the forged Pythagorean poems may be neglected. Lucretius imitates Empedokles in this, just as Empedokles imitated Parmenides. Of course, the poetical imagery creates a difficulty for the interpreter; but it cannot be said that it is harder to extract the philosophical kernel from the verses of Empedokles than from the prose of Herakleitos.

### 105. The Remains

We have more abundant remains of Empedokles than of any other early Greek philosopher. If we trust our manuscripts of Diogenes and of Soudas, the librarians of Alexandria estimated the *Poem on Nature* and the *Purifications* together as 5000 verses, of which about 2000 belonged to the former work.<sup>30</sup> Diels gives about 350 verses and parts of verses from the cosmological poem, or not a fifth of the whole. It is important to remember that, even in this favourable instance, so much has been lost. The

other poems ascribed to Empedokles by the Alexandrian scholars were probably not his.<sup>31</sup> I give the remains as they are arranged by Diels:

(1) And do thou give ear, Pausanias, son of Anchitos the wise!

(2) For straitened are the powers that are spread over their bodily parts, and many are the woes that burst in on them and blunt the edge of their careful thoughts! They behold but a brief span of a life that is no life,<sup>32</sup> and, doomed to swift death, are borne up and fly off like smoke. Each is convinced of that [5] alone which he had chanced upon as he is hurried every way, and idly boasts he has found the whole. So hardly can these things be seen by the eyes or heard by the ears of men, so hardly grasped by their mind! Howbeit, thou, since thou hast found thy way hither, shalt learn no more than mortal mind hath power. R. P. 163.

(3) . . . to keep within thy dumb heart.

(4) But, O ye gods, turn aside from my tongue the madness of those men. Hallow my lips and make a pure stream flow from them! And thee, much-wooded, white-armed Virgin Muse, do I beseech that I may hear what is lawful for the children of a day! Speed me on my way from the abode of Holiness and drive [5] my willing car! Thee shall no garlands of glory and honour at the hands of mortals constrain to lift them from the ground, on condition of speaking in thy pride beyond that which is lawful and right, and so to gain a seat upon the heights of wisdom.

Go to now, consider with all thy powers in what way each thing is clear. Hold not thy sight in greater credit as compared [10] with thy hearing, nor value thy resounding ear above the clear instructions of thy tongue;<sup>33</sup> and do not withhold thy confidence in any of thy other bodily parts by which there is an opening for understanding, but consider everything in the way it is clear. R. P. 163.

(5) But it is all too much the way of low minds to disbelieve their betters. Do thou learn as the sure testimonies of my Muse bid thee, when my words have been divided<sup>34</sup> in thy heart.

(6) Hear first the four roots of all things: shining Zeus, life-bringing Hera, Aidoneus and Nestis whose tear-drops are a well-spring to mortals. R. P. 164.<sup>35</sup>

(7) . . . uncreated.

(8) And I shall tell thee another thing. There is no substance<sup>36</sup> of any of all the things that perish, nor any cessation for them of baneful death. They are only a mingling and interchange of what has been mingled. Substance is but a name given to these things by men. R. P. 165.

(9) But they (hold?) that when Light and Air (chance?) to have been mingled in the fashion of a man, or in the fashion of the race of wild beasts or of plants or birds, that that is to be born, and when these things have been separated once more, they call it (wrongly?) woeful death. I follow the custom and call it so myself.<sup>37</sup>

(10) Avenging death.

(11, 12) Fools!—for they have no far-reaching thoughts—who deem that what before was not comes into being, or that aught can perish and be utterly destroyed. For it cannot be that aught can arise from what in no way is, and it is impossible and unheard of that what *is* should perish; for it will always *be*, wherever [5] one may keep putting it. R. P. 165 a.

(13) And in the All there is naught empty and naught too full.

(14) In the All there is naught empty. Whence, then, could aught come to increase it?

(15) A man who is wise in such matters would never surmise in his heart that as long as mortals live what they call their life, so long they are, and suffer good and ill; while before they were formed and after they have been dissolved they are just nothing at all. R. P. 165 a.

(16) For even as they (Strife and Love) were aforetime, so too they shall be; nor ever, methinks, will boundless time be emptied of that pair. R. P. 166 c.

(17) I shall tell thee a twofold tale. At one time it grew to be one only out of many; at another, it divided up to be many instead of one. There is a double becoming of perishable things and a double passing away. The coming together of all things brings one generation into being and destroys it; the other grows [5] up and is scattered as things become divided. And these things never cease continually changing places, at one time all uniting in one through Love, at another each borne in different directions by the repulsion of Strife. Thus, as far as it is their nature to grow into one out of many, and to become many once more [10] when the one is parted asunder, so far they come into being and their life abides not. But, inasmuch as they never cease changing their places continually, so far they are ever immovable as they go round the circle of existence.

...

But come, hearken to my words, for it is learning that [15] increaseth wisdom. As I said before, when I declared the heads of my discourse, I shall tell thee a twofold tale. At one time it grew together to be one only out of many, at another it parted asunder so as to be many instead of one;—Fire and Water and Earth and the mighty height of Air; dread Strife, too, apart [20] from these, of equal weight

to each, and Love in their midst, equal in length and breadth. Her do thou contemplate with thy mind, nor sit with dazed eyes. It is she that is known as being implanted in the frame of mortals. It is she that makes them have thoughts of love and work the works of peace. They call [25] her by the names of Joy and Aphrodite. Her has no mortal yet marked moving round among them,<sup>38</sup> but do thou attend to the undeceitful ordering of my discourse.

For all these are equal and alike in age, yet each has a different prerogative and its own peculiar nature, but they gain the upper [30] hand in turn when the time comes round. And nothing comes into being besides these, nor do they pass away; for, if they had been passing away continually, they would not be now, and what could increase this All and whence could it come? How, too, could it perish, since no place is empty of these things? There [35] are these alone; but, running through one another, they become now this, now that,<sup>39</sup> and like things evermore. R. P. 166.

(18) Love.

(19) Clinging Love.

(20) This (the contest of Love and Strife) is manifest in the mass of mortal limbs. At one time all the limbs that are the body's portion are brought together by Love in blooming life's high season; at another, severed by cruel Strife, they wander each [5] alone by the breakers of life's sea. It is the same with plants and the fish that make their homes in the waters, with the beasts that have their lairs on the hills and the seabirds that sail on wings. R. P. 173 d.

(21) Come now, look at the things that bear witness to my earlier discourse, if so be that there was any shortcoming as to their form in the earlier list. Behold the sun, everywhere bright and warm, and all the immortal things that are bathed in heat and bright radiance.<sup>40</sup> Behold the rain, everywhere dark and cold; [5] and from the earth issue forth things close-pressed and solid. When they are in strife all these are different in form and separated; but they come together in love, and are desired by one another.

For out of these have sprung all things that were and are and shall be—trees and men and women, beasts and birds and [10] the fishes that dwell in the waters, yea, and the gods that live long lives and are exalted in honour. R. P. 166 i.

For there are these alone; but, running through one another, they take different shapes—so much does mixture change them. R. P. 166 g.

(22) For all of these—sun, earth, sky, and sea—are at one with all their parts that are cast far and wide from them in mortal things. And even so all things that are more adapted for mixture are like to one another and united in love by Aphrodite. [5] Those things, again, that differ most in origin, mixture and the forms imprinted on each, are most hostile, being altogether unaccustomed to unite and very sorry by the bidding of Strife, since it hath wrought their birth.

(23) Just as when painters are elaborating temple-offerings, men whom wisdom hath well taught their art,—they, when they have taken pigments of many colours with their hands, mix them in due proportion, more of some and less of others, and [5] from them produce shapes like unto all things, making trees and men and women, beasts and birds and fishes that dwell in the waters, yea, and gods, that live long lives, and are exalted in honour,—so let not the error prevail over thy mind,<sup>41</sup> that there is any other source of all the perishable creatures that appear in [10] countless numbers. Know this for sure, for thou hast heard the tale from a goddess.<sup>42</sup>

(24) Stepping from summit to summit, not to travel only one path of words to the end . . . .

(25) What is right may well be said even twice.

(26) For they prevail in turn as the circle comes round, and pass into one another, and grow great in their appointed turn. R. P. 166 c.

There are these alone; but, running through one another, they become men and the tribes of beasts. At one time they [5] are all brought together into one order by Love; at another, they are carried each in different directions by the repulsion of Strife, till they grow once more into one and are wholly subdued. Thus in so far as they are wont to grow into one out of many, [10] and again divided become more than one, so far they come into being and their life is not lasting; but in so far as they never cease changing continually, so far are they evermore, immovable in the circle.

(27) There (in the sphere) are distinguished neither the swift limbs of the sun, no, nor the shaggy earth in its might, nor the sea,—so fast was the god bound in the close covering of Harmony, spherical and round, rejoicing in his circular solitude.<sup>43</sup> R. P. 167.

(27a) There is no discord and no unseemly strife in his limbs.

(28) But he was equal on every side and quite without end, spherical and round, rejoicing in his circular solitude.

(29) Two branches do not spring from his back, he has no feet, no swift knees, no fruitful parts; but he was spherical and equal on every side.

(30, 31) But when Strife was grown great in the limbs of the god and sprang forth to claim his prerogatives, in the fulness of the alternate time set for them by the mighty oath, . . . for all the limbs of the god in turn quaked. R. P. 167.

(32) The joint binds two things.

(33) Even as when fig juice rivets and binds white milk . . . .

(34) Cementing<sup>44</sup> meal with water . . . .

(35,36) But now I shall retrace my steps over the paths of song that I have travelled before, drawing from my saying a new saying. When Strife was fallen to the lowest depth of the vortex, and Love had reached to the centre of the whirl, in it do all things come together so as to be one only; not all at once, but coming together [5] at their will each from different quarters; and, as they mingled, strife began to pass out to the furthest limit. Yet many things remained unmixed, alternating with the things that were being mixed, namely, all that Strife not fallen yet retained; for [10] it had not yet altogether retired perfectly from them to the outermost boundaries of the circle. Some of it still remained within, and some had passed out from the limbs of the All. But in proportion as it kept rushing out, a soft, immortal stream of blameless Love kept running in, and straightway those things became mortal which had been immortal before, those things [15] were mixed that had before been unmixed, each changing its path. And, as they mingled, countless tribes of mortal creatures were scattered abroad endowed with all manner of forms, a wonder to behold.<sup>45</sup> R. P. 169.

(37) Earth increases its own mass, and Air swells the bulk of Air.

(38) Come, I shall now tell thee first of all the beginning of the sun,<sup>46</sup> and the sources from which have sprung all the things we now behold, the earth and the billowy sea, the damp vapour and the Titan air that binds his circle fast round all things. R. P. 170 a.

(39) If the depths of the earth and the vast air were infinite, a foolish saying which has been vainly dropped from the lips of many mortals, though they have seen but a little of the All . . . .<sup>47</sup> R. P. 103 b.

(40) The sharp-darting sun and the gentle moon.

(41) But (the sunlight) is gathered together and circles round the mighty heavens.

(42) And she cuts off his rays as he goes above her, and casts a shadow on as much of the earth as is the breadth of the pale-faced moon.<sup>48</sup>

(43) Even so the sunbeam, having struck the broad and mighty circle of the moon, returns at once, running so as to reach the sky.

(44) It flashes back to Olympos with untroubled countenance. R. P. 170 c.

(45,46) There circles round the earth a round borrowed light, as the nave of the wheel circles round the furthest (goal).<sup>49</sup>

(47) For she gazes at the sacred circle of the lordly sun opposite.

(48) It is the earth that makes night by coming before the lights.

(49) . . . of solitary, blind-eyed night.

(50) And Iris bringeth wind or mighty rain from the sea.

(51) (Fire) swiftly rushing upwards . . .

(52) And many fires burn beneath the earth. R. P. 171 a.

(53) For so it (the air) chanced to be running at that time, though often otherwise. R. P. 171 a.

(54) But the air sank down upon the earth with its long roots. R. P. 171 a.

(55) Sea the sweat of the earth. R. P. 170 b.

(56) Salt was solidified by the impact of the sun's beams.

(57) On it (the earth) many heads sprung up without necks and arms wandered bare and bereft of shoulders. Eyes strayed up and down in want of foreheads. R. P. 173 a.

(58) Solitary limbs wandered seeking for union.

(59) But, as divinity was mingled still further with divinity, these things joined together as each might chance, and many other things besides them continually arose.

(60) Shambling creatures with countless hands.

(61) Many creatures with faces and breasts looking in different directions were born; some, offspring of oxen with faces of men, while others, again, arose as offspring of men with the heads of

oxen, and creatures in whom the nature of women and men was [5] mingled, furnished with sterile<sup>50</sup> parts. R. P. 173 b.

(62) Come now, hear how the Fire as it was separated caused the night-born shoots of men and tearful women to arise; for my tale is not off the point nor uninformed. Whole-natured forms first arose from the earth, having a portion both of water and fire.<sup>51</sup> These did the fire, desirous of reaching its like, send up, [5] showing as yet neither the charming form of the limbs, nor yet the voice and parts that are proper to men. R. P. 173 c.

(63) . . . But the substance of (the child's) limbs is divided between them, part of it in men's (and part in women's body).

(64) And upon him came desire reminding him through sight.

(65) . . . And it was poured out in the purified parts; and when it met with cold women arose from it.

(66) The divided meadows of Aphrodite.

(67) For in its warmer part the womb brings forth males, and that is why men are dark and more manly and shaggy.

(68) On the tenth day of the eighth month it turns to a white putrefaction.<sup>52</sup>

(69) Double bearing.<sup>53</sup>

(70) Sheepskin.<sup>54</sup>

(71) But if thy assurance of these things was in any way deficient as to how, out of Water and Earth and Air and Fire mingled together, arose the forms and colours of all those mortal things that have been fitted together by Aphrodite, and so are now come into being . . . .

(72) How tall trees and the fishes in the sea . . .

(73) And even as at that time Kypris, preparing warmth,<sup>55</sup> after she had moistened the Earth in water, gave it to swift fire to harden it . . . . R. P. 171.

(74) Leading the songless tribe of fertile fish.

(75) All of those which are dense within and rare without, having received a flaccidity of this kind at the hands of Kypris . . . .

(76) This thou mayest see in the heavy-backed shell-fish that dwell in the sea, in sea-snails and the stony-skinned turtles. In them thou mayest see that the earthy part dwells on the uppermost surface of the skin.

(77,78) It is moisture<sup>56</sup> that makes evergreen trees flourish with abundance of fruit the whole year round.

(79) And so first of all tall olive trees bear eggs . . . .

(80) Wherefore pomegranates are late-born and apples succulent.

(81) Wine is the water from the bark, putrefied in the wood.

(82) Hair and leaves, and thick feathers of birds, and the scales that grow on mighty limbs, are the same thing.

(83) But the hair of hedgehogs is sharp-pointed and bristles on their backs.

(84) And even as when a man thinking to sally forth through a stormy night, gets him ready a lantern, a flame of blazing fire, fastening to it horn plates to keep out all manner of winds, and they scatter the blast of the winds that blow, but the light leaping out through them, shines across the threshold with unfailing [5] beams, as much of it as is finer;<sup>57</sup> even so did she (Love) then entrap the elemental fire, the round pupil, confined within membranes and delicate tissues, which are pierced through and through with wondrous passages. They keep out the deep water that surrounds the pupil, but they let through the fire, as [10] much of it as is finer. R. P. 177 b.

(85) But the gentle flame (of the eye) has but a scanty portion of earth.

(86) Out of these divine Aphrodite fashioned unwearying eyes.

(87) Aphrodite fitting these together with rivets of love.

(88) One vision is produced by both the eyes.

(89) Know that effluences flow from all things that have come into being. R. P. 166 h.

(90) So sweet lays hold of sweet, and bitter rushes to bitter; acid comes to acid, and warm couples with warm.

(91) Water fits better into wine, but it will not (mingle) with oil. R. P. 166 h.

(92) Copper mixed with tin.

(93) The bloom of scarlet dye mingles with the grey linen.<sup>58</sup>

(94) And the black colour at the bottom of a river arises from the shadow. The same is seen in hollow caves.

(95) Since they (the eyes) first grew together in the hands of Kypriis.

(96) The kindly earth received in its broad funnels two parts of gleaming Nestis out of the eight, and four of Hephaistos. So arose white bones divinely fitted together by the cement of proportion. R. P. 175.

(97) The spine (was broken).

(98) And the earth, anchoring in the perfect harbours of Aphrodite, meets with these in nearly equal proportions, with Hephaistos and Water and gleaming Air—either a little more of it, or less of them and more of it. From these did blood arise and the manifold forms of flesh. R. P. 175 c.

(99) The bell . . . the fleshy sprout (of the ear).<sup>59</sup>

(100) Thus<sup>60</sup> do all things draw breath and breathe it out again. All have bloodless tubes of flesh extended over the surface of their bodies; and at the mouths of these the outermost surface of the skin is perforated all over with pores closely packed together, so as to keep in the blood while a free passage is cut [5] for the air to pass through. Then, when the thin blood recedes from these, the bubbling air rushes in with an impetuous surge; and when the blood runs back it is breathed out again. Just as when a girl, playing with a water-clock of shining brass, puts the [10] orifice of the pipe upon her comely hand, and dips the water-clock into the yielding mass of silvery water—the stream does not then flow into the vessel, but the bulk of the air<sup>61</sup> inside, pressing upon the close-packed perforations, keeps it out till she uncovers the compressed stream; but then air escapes and an equal [15] volume of water runs in,—just in the same way, when water occupies the depths of the brazen vessel and the opening and passage is stopped up by the human hand, the air outside, striving to get in, holds the water back at the gates of the ill-sounding neck, pressing upon its surface, till she lets go with her hand. [20] Then, on the contrary, just in the opposite way to what happened before, the wind rushes in and

an equal volume of water runs out to make room.<sup>62</sup> Even so, when the thin blood that surges through the limbs rushes backwards to the interior, straightway [25] the stream of air comes in with a rushing swell; but when the blood runs back the air breathes out again in equal quantity.

(101) (The dog) with its nostrils tracking out the fragments of the beast's limbs, and the breath from their feet that they leave in the soft grass.<sup>63</sup>

(102) Thus all things have their share of breath and smell.

(103, 104) Thus have all things thought by fortune's will . . . . And inasmuch as the rarest things came together in their fall.

(105) (The heart), dwelling in the sea of blood that runs in opposite directions, where chiefly is what men call thought; for the blood round the heart is the thought of men. R. P. 178 a.

(106) For the wisdom of men grows according to what is before them. R. P. 177.

(107) For out of these are all things formed and fitted together, and by these do men think and feel pleasure and pain. R. P. 178.

(108) And just so far as they grow to be different, so far do different thoughts ever present themselves to their minds (in dreams).<sup>64</sup> R. P. 177 a.

(109) For it is with earth that we see Earth, and Water with water; by air we see bright Air, by fire destroying Fire. By love do we see Love, and Hate by grievous hate. R. P. 176.

(110) For if, supported on thy steadfast mind, thou wilt contemplate these things with good intent and faultless care, then shalt thou have all these things in abundance throughout thy life, and thou shalt gain many others from them. For these things grow of themselves into thy heart, where is each man's true [5] nature. But if thou strivest after things of another kind, as it is the way with men that ten thousand sorry matters blunt their careful thoughts, soon will these things desert thee when the time comes round; for they long to return once more to their own kind; for know that all things have wisdom and a share of [10] thought.

(111) And thou shalt learn all the drugs that are a defence against ills and old age; since for thee alone will I accomplish all this. Thou shalt arrest the violence of the weariless winds that arise to sweep the earth and waste the fields; and again, when thou so desirest, thou shalt bring back their blasts in return. Thou [5] shalt cause for men a seasonable drought after the dark rains, and again thou shalt

change the summer drought for streams that feed the trees as they pour down from the sky. Thou shalt bring back from Hades the life of a dead man.

#### PURIFICATIONS

(112) Friends, that inhabit the great town looking down on the yellow rock of Akragas, up by the citadel, busy in goodly works, harbours of honour for the stranger, men unskilled in meanness, all hail. I go about among you an immortal god, no mortal [5] now, honoured among all as is meet, crowned with fillets and flowery garlands. Straightway, whenever I enter with these in my train, both men and women, into the flourishing towns, is reverence done me; they go after me in countless throngs; [10] asking of me what is the way to gain; some desiring oracles, while some, who for many a weary day have been pierced by the grievous pangs of all manner of sickness, beg to hear from me the word of healing. R. P. 162 f.

(113) But why do I harp on these things, as if it were any great matter that I should surpass mortal, perishable men?

114

(114) Friends, I know indeed that truth is in the words I shall utter, but it is hard for men, and jealous are they of the assault of belief on their souls.

(115) There is an oracle of Necessity, an ancient ordinance of the gods,<sup>65</sup> eternal and sealed fast by broad oaths, that whenever one of the daemons, whose portion is length of days, has sinfully polluted his hands with blood,<sup>66</sup> or followed strife and forsworn [5] himself, he must wander thrice ten thousand seasons from the abodes of the blessed, being born throughout the time in all manners of mortal forms, changing one toilsome path of life for another. For the mighty Air drives him into the Sea, and the [10] Sea spews him forth on the dry Earth; Earth tosses him into the beams of the blazing Sun, and he flings him back to the eddies of Air. One takes him from the other, and all reject him. One of these I now am, an exile and a wanderer from the gods, for that I put my trust in insensate strife. R. P. 181.

(116) Charis loathes intolerable Necessity.

(117) For I have been ere now a boy and a girl, a bush and a bird and a dumb fish in the sea. R. P. 182.

(118) I wept and I wailed when I saw the unfamiliar land. R. P. 182.

(119) From what honour, from what a height of bliss have I fallen to go about among mortals here on earth.

(120) We have come under this roofed-in cave.<sup>67</sup>

(121) . . . the joyless land, where are Death and Wrath and troops of Dooms besides; and parching Plagues and Rottennesses and Floods roam in darkness over the meadow of Ate.

(122,123) There were<sup>68</sup> Chthonie and far-sighted Heliopé, bloody Discord and gentle-visaged Harmony, Kallisto and Aischre, Speed and Tarrying, lovely Truth and dark-haired Uncertainty, Birth and Decay, Sleep and Waking, Movement and Immobility, crowned Majesty and Meanness, Silence and Voice. R. P. 182 a.

(124) Alas, O wretched race of mortals, sore unblessed: such are the strifes and groanings from which ye have been born!

(125) From living creatures he made them dead, changing their forms.

(126) (The goddess) clothing them with a strange garment of flesh.<sup>69</sup>

(127) Among beasts they<sup>70</sup> become lions that make their lair on the hills and their couch on the ground; and laurels among trees with goodly foliage. R. P. 181 b.

(128) Nor had they<sup>71</sup> any Ares for a god nor Kydoimos, no nor King Zeus nor Kronos nor Poseidon, but Kypris the Queen . . . Her did they propitiate with holy gifts, with painted figures<sup>72</sup> and perfumes of cunning fragrancy, with offerings of [5] pure myrrh and sweet-smelling frankincense, casting on the ground libations of brown honey. And the altar did not reek with pure bull's blood, but this was held in the greatest abomination among men, to eat the goodly limbs after tearing out the life. R. P. 184.

(129) And there was among them a man of rare knowledge, most skilled in all manner of wise works, a man who had won the utmost wealth of wisdom; for whensoever he strained with all his mind, he easily saw everything of all the things that are, in [5] ten, yea, twenty lifetimes of men.<sup>73</sup>

(130) For all things were tame and gentle to man, both beasts and birds, and friendly feelings were kindled everywhere. R. P. 184 a.

(131) If ever, as regards the things of a day, immortal Muse, thou didst deign to take thought for my endeavour, then stand by me once more as I pray to thee, O Kalliopeia, as I utter a pure discourse concerning the blessed gods. R. P. 179.

(132) Blessed is the man who has gained the riches of divine wisdom; wretched he who has a dim opinion of the gods in his heart. R. P. 179.

(133) It is not possible for us to set God before our eyes, or to lay hold of him with our hands, which is the broadest way of persuasion that leads into the heart of man.

(134) For he is not furnished with a human head on his body, two branches do not sprout from his shoulders, he has no feet, no swift knees, nor hairy parts; but he is only a sacred and unutterable mind flashing through the whole world with rapid thoughts. R. P. 180.

(135) (This is not lawful for some and unlawful for others;) but the law for all extends everywhere, through the wide-ruling air and the infinite light of heaven. R. P. 183.

(136) Will ye not cease from this ill-sounding slaughter? See ye not that ye are devouring one another in the thoughtlessness of your hearts? R. P. 184 b.

(137) And the father lifts up his own son in a changed form and slays him with a prayer. Infatuated fool! And they run up to the sacrificers, begging mercy, while he, deaf to their cries, slaughters them in his halls and gets ready the evil feast. In [5] like manner does the son seize his father, and children their mother, tear out their life and eat the kindred flesh. R. P. 184 b.

(138) Draining their life with bronze.<sup>74</sup>

(139) Ah, woe is me that the pitiless day of death did not destroy me ere ever I wrought evil deeds of devouring with my lips! R. P. 184 b.

(140) Abstain wholly from laurel leaves.

(141) Wretches, utter wretches, keep your hands from beans!

(142) Him will the roofed palace of aegis-bearing Zeus never rejoice, nor yet the house of . . .

(143) Wash your hands, cutting the water from the five springs in the unyielding bronze. R. P. 184 c.

(144) Fast from wickedness! R. P. 184 c.

(145) Therefore are ye distraught by grievous wickednesses, and will not unburden your souls of wretched sorrows.

(146, 147) But, at the last, they appear among mortal men as prophets, song-writers, physicians, and princes; and thence they rise up as gods exalted in honour, sharing the hearth of the other gods and the same table, free from human woes, safe from destiny, [5] and incapable of hurt. R. P. 181 c.

(148) . . . Earth that envelops the man.

#### 106. Empedocles and Parmenides

At the very outset of his poem, Empedocles speaks angrily of those who professed to have found the whole (fr. 2); he even calls this "madness" (fr. 4). No doubt he is thinking of Parmenides. His own position is not, however, sceptical. He only deprecates the attempt to construct a theory of the universe off-hand instead of trying to understand each thing we come across "in the way in which it is clear" (fr. 4). And this means that we must not, like Parmenides, reject the assistance of the senses. We soon discover, however, that Empedokles too sets up a system which is to explain everything, though that system is no longer a monistic one.

It is often said that this system was an attempt to mediate between Parmenides and Herakleitos. It is not easy, however, to find any trace of Herakleitean doctrine in it, and it would be truer to say that it aimed at mediating between Eleaticism and the senses. Empedokles repeats, almost in the same words, the Eleatic argument for the sole reality and indestructibility of "what *is*" (frs. 11-15); and his idea of the "Sphere" seems to be derived from the Parmenidean description of reality.<sup>75</sup> Parmenides had held that what underlies the illusory world of the senses was a corporeal, spherical, continuous, eternal, and immovable *plenum*, and it is from this Empedokles starts. Given the sphere of Parmenides, he seems to have said, how are we to get from it to the world we know? How are we to introduce motion into the immovable *plenum*? Now Parmenides need not have denied the possibility of motion within the Sphere, though he was bound to deny all motion of the Sphere itself; but such an admission would not have served to explain anything. If any part of the Sphere were to move, the room of the displaced body must at once be taken by other body, for there is no empty space. This, however, would be of precisely the same kind as the body it had displaced; for all "that *is*" is one. The result of the motion would be precisely the same as that of rest; it could account for no change. But is this assumption of perfect homogeneity in the Sphere really necessary? Evidently not; it is simply the old unreasoned feeling that existence must be one. Nevertheless, we cannot regard the numberless forms of being the senses present us with as ultimate realities. They have no *φύσις* of their own, and are always passing

away (fr. 8), so the only solution is to assume a limited number of ultimate forms of reality. We may then apply all that Parmenides says of *What is* to each one of these, and the transitory forms of existence we know may be explained by their mingling and separation. The conception of "elements" (στοιχεῖα), to use a later term,<sup>76</sup> was found, and the required formula follows at once. So far as concerns particular things, it is true, as our senses tell us, that they come into being and pass away; but, if we have regard to the ultimate elements of which they are composed, we shall say with Parmenides that "what is" is uncreated and indestructible (fr. 27). The elements are immortal, just as the single φύσις of the Milesians was "ageless and deathless."

#### 107. The "Four Roots"

The "four roots" of all things (fr. 6) which Empedokles assumed—Fire, Air, Earth, and Water—seem to have been arrived at by making each of the traditional "opposites"—hot and cold, wet and dry—into a thing which is real in the full Parmenidean sense of the word. It is to be noticed, however, that he does not call Air ἀήρ but αἰθήρ<sup>77</sup>, and this must be because he wished to avoid confusion with what had hitherto been meant by the former word. He had, in fact, made the discovery that atmospheric air is a distinct corporeal substance, and is not to be identified with empty space on the one hand or rarefied mist on the other. Water is not liquid air, but something quite different.<sup>78</sup> This truth Empedokles demonstrated by means of the *klepsydra*, and we still possess the verses in which he applied his discovery to the explanation of respiration and the motion of the blood (fr. 100). Aristotle laughs at those who try to show there is no empty space by shutting up air in water-clocks and torturing wineskins. They only prove, he says, that air is a thing.<sup>79</sup> That, however, is exactly what Empedokles intended to prove, and it was one of the most important discoveries in the history of science. It will be convenient for us to translate the αἰθήρ Empedokles by "air"; but we must be careful in that case not to render the word ἀήρ in the same way. Anaxagoras seems to have been the first to use it of atmospheric air.

Empedokles also called the "four roots" by the names of certain divinities—"shining Zeus, life-bringing Hera, Aidoneus, and Nestis" (fr. 6)—though there is some doubt as to how these names are to be apportioned among the elements. Nestis is said to have been a Sicilian water-goddess, and the description of her shows that she stands for Water; but there is a conflict of opinion as to the other three. This, however, need not detain us.<sup>80</sup>

We are already prepared to find that Empedokles called the elements gods; for all the early thinkers had spoken in this way of whatever they regarded as the primary substance. We must only

remember that the word is not used in its religious sense. Empedokles did not pray or sacrifice to the elements.

Empedokles regarded the "roots of all things" as eternal. Nothing can come from nothing or pass away into nothing (fr. 12); what is *is*, and there is no room for coming into being and passing away (fr. 8). Further, Aristotle tells us, he taught that they were unchangeable.<sup>81</sup> This Empedokles expressed by saying that "they are always alike." Again, the four elements are all "equal," a statement which seemed strange to Aristotle,<sup>82</sup> but was quite intelligible in the days of Empedokles. Above all, the four elements are ultimate. All other bodies might be divided till you came to the elements; but Empedokles could give no further account of these without saying (as he did not) that there is an element of which Fire and the rest are in turn composed.<sup>83</sup>

The "four roots" are given as an exhaustive enumeration of the elements (fr. 23 *sub fin.*); for they account for all the qualities presented by the world to the senses. When we find, as we do, that the school of medicine which regarded Empedokles as its founder identified the four elements with the "opposites," the hot and the cold, the moist and the dry, which formed the theoretical foundation of its system,<sup>84</sup> we see at once how the theory is related to previous views of reality. We must remember that the conception of quality had not yet been formed. Anaximander had no doubt regarded his "opposites" as things; though, before the time of Parmenides, no one had fully realised how much was implied in saying that anything is a thing. That is the stage we have now reached. There is still no conception of quality, but there is a clear apprehension of what is involved in saying a thing *is*.

Aristotle twice<sup>85</sup> makes the statement that, though Empedokles assumes four elements, he treats them as two, opposing Fire to all the rest. This, he says, we can see for ourselves from his poem. So far as the general theory goes, it is impossible to see anything of the sort; but, when we come to the origin of the world (§ 112), we shall find that Fire plays a leading part, and this may be what Aristotle meant. It is also true that in the biology (§§ 114-116) Fire fulfils a unique function, while the other three act more or less in the same way. But we must remember that it has no pre-eminence over the rest: all are equal.

#### 108. Strife and Love

The Eleatic criticism had made it necessary to explain motion.<sup>86</sup> Empedokles starts, we have seen, from an original state of the "four roots," which only differs from the Sphere of Parmenides in so far as it is a mixture, not a homogeneous and continuous mass. It is this that makes change and motion possible; but, were there nothing outside the Sphere which could enter in, like the Pythagorean "Air," to separate the elements, nothing could ever arise from it. Empedokles accordingly assumed the

existence of such a substance, and he gave it the name of Strife. But the effect of this would be to separate all the elements in the Sphere completely, and then nothing more could possibly happen; something else was needed to bring the elements together again. This Empedokles found in Love, which he regarded as the same impulse to union that is implanted in human bodies (fr. 17, 22 *sqq.*). He looks at it, in fact, from a physiological point of view, as was natural for the founder of a medical school. No mortal had yet marked, he says, that the very same Love men know in their bodies had a place among the elements.

The Love and Strife of Empedokles are no incorporeal forces. They are active, indeed, but they are still corporeal. At the time, this was inevitable; nothing incorporeal had yet been dreamt of. Naturally, Aristotle is puzzled by this characteristic of what he regarded as efficient causes. "The Love of Empedokles," he says,<sup>87</sup> "is both an efficient cause, for it brings things together, and a material cause, for it is a part of the mixture." And Theophrastos expressed the same idea by saying<sup>88</sup> that Empedokles sometimes gave an efficient power to Love and Strife, and sometimes put them on a level with the other four. The fragments leave no room for doubt that they were thought of as spatial and corporeal. All the six are called "equal." Love is said to be "equal in length and breadth" to the others, and Strife is described as equal to each of them in weight (fr.17).

The function of Love is to produce union; that of Strife, to break it up again. Aristotle, however, rightly points out that in another sense it is Love that divides and Strife that unites. When the Sphere is broken up by Strife, the result is that all the Fire, for instance, which was contained in it comes together and becomes one; and again, when the elements are brought together once more by Love, the mass of each is divided. In another place, he says that, while Strife is assumed as the cause of destruction, and does, in fact, destroy the Sphere, it really gives birth to everything else in so doing.<sup>89</sup> It follows that we must carefully distinguish between the Love of Empedokles and that "attraction of like for like" to which he also attributed an important part in the formation of the world. The latter is not an element distinct from the others; it depends on the proper nature of each element, and is only able to take effect when Strife divides the Sphere. Love, on the contrary, produces an attraction of unlikes.

#### 109. Mixture and Separation

But, when Strife has separated the elements, what determines the direction of their motion? Empedokles seems to have given no further explanation than that each was "running" in a certain direction (fr. 53)., Plato severely condemns this in the *Laws*,<sup>90</sup> on the ground that no room is thus left for design. Aristotle also blames him for giving no account of the Chance to which he ascribed so much importance. Nor is the Necessity, of which he also spoke, further explained.<sup>91</sup> Strife enters into

the Sphere at a certain time in virtue of Necessity, or "the mighty oath" (fr. 30); but we are told no more about that.

The expression used by Empedokles to describe the movement of the elements is that they "run through each other" (fr. 17, 34.). Aristotle tells us<sup>92</sup> that he explained mixture in general by "the symmetry of pores." And this is the true explanation of the "attraction of like for like." The "pores" of like bodies are, of course, much the same size, and these bodies can therefore mingle easily. On the other hand, a finer body will "run through" a coarse one without becoming mixed, and a coarse body will not be able to enter the pores of a finer one at all. As Aristotle says, this really implies something like the atomic theory; but there is no evidence that Empedokles himself was conscious of that. Another question raised by Aristotle is even more instructive. Are the pores, he asks, empty or full? If empty, what becomes of the denial of the void? If full, why need we assume pores at all?<sup>93</sup> These questions Empedokles would have found it hard to answer.

#### 110. The Four Periods

It will be clear from what has been said that we must distinguish four periods in the cycle. First we have the Sphere, in which all the elements are mixed together by Love. Secondly, there is the period when Love is passing out and Strife coming in, when, therefore, the elements are partially separated and partially combined. Thirdly comes the complete separation of the elements, when Love is outside the world, and Strife has given free play to the attraction of like for like. Lastly, we have the period when Love is bringing the elements together again, and Strife is passing out. This brings us back to the Sphere, and the cycle begins afresh. Now a world such as ours can exist only in the second and fourth of these periods. It seems to be generally supposed that we are in the fourth period;<sup>94</sup> I hope to show that we are in the second, that when Strife is gaining the upper hand.

#### 111. Our World the Work of Strife

That a world of perishable things (*θνητῶν*) arises both in the second and fourth period is distinctly stated by Empedokles (fr. 17), and it is inconceivable that he had not made up his mind which of these worlds is ours. Aristotle is clearly of opinion that in our world Strife is increasing. In one place, he says that Empedokles "holds that the world is in a similar condition now in the period of Strife as formerly in that of Love."<sup>95</sup> In another, he tells us that Empedokles omits the generation of things in the period of Love, just because it is unnatural to represent this world, in which the elements are separate, as arising from things in a state of separation.<sup>96</sup> This remark can only mean that Empedokles assumed the increase of Strife, or, in other words, that he represented the course of evolution as the disintegration of the Sphere, not as the coming together of things from a state of separation.<sup>97</sup> That is

what we should expect, if we are right in supposing that the problem he set himself to solve was the origin of this world from the Sphere of Parmenides, and it is also in harmony with the tendency of such speculations to represent the world as getting worse rather than better. We have only to consider, then, whether the details of the system bear out this general view.

#### 112. Formation of the World by Strife

To begin with the Sphere, in which the "four roots of all things" are mixed together, we note that it is called a god in the fragments just as the elements are, and that Aristotle more than once refers to it in the same way.<sup>98</sup> we must remember that Love itself is a part of this mixture,<sup>99</sup> while Strife surrounds or encompasses it on every side just as the Boundless encompasses the world in earlier systems. Strife, however, is not boundless, but equal in bulk to each of the four roots and to Love.

At the appointed time, Strife begins to enter into the Sphere and Love to go out of it (frs. 30, 31). The fragments by themselves throw little light on this; but Aetios and the Plutarchean *Stromateis* have between them preserved a very fair tradition of what Theophrastos said on the point.

Empedokles held that Air was first separated out and secondly Fire. Next came Earth, from which, highly compressed as it was by the impetus of its revolution, Water gushed forth. From the water Mist was produced by evaporation. The heavens were formed out of the Air and the sun out of the Fire, while terrestrial things were condensed from the other elements. Aet. ii. 6. 3 (*Dox.* p. 334; R. P. 170).

Empedokles held that the Air when separated off from the original mixture of the elements was spread round in a circle. After the Air, Fire running outwards, and not finding any other place, ran up under the solid that surrounded the Air.<sup>100</sup> There were two hemispheres, revolving round the earth, the one altogether composed of fire, the other of a mixture of air and a little fire. The latter he supposed to be the Night. The origin of their motion he derived from the fact of fire preponderating in one hemisphere owing to its accumulation there. Ps.-Plut. *Strom.* fr. 10 (*Dox.* p. 582; R. P. 170 a).

The first of the elements to be separated out by Strife then, was Air, which took the outermost position surrounding the world (cf. fr. 38). We must not, however, take the statement that it surrounded the world "in a circle" too strictly. It appears that Empedokles regarded the heavens as shaped like an egg.<sup>101</sup> Here, probably, we have a trace of Orphic ideas. At any rate, the outer circle of the Air became solidified or frozen, and we thus get a crystalline vault as the boundary of the world. We note that it was Fire which solidified the Air and turned it to ice. Fire in general had a solidifying power.<sup>102</sup>

In its upward rush Fire displaced a portion of the Air in the upper half of the concave sphere formed by the frozen sky. This air then sunk downwards, carrying with it a small portion of the fire. In this way, two hemispheres were produced: one, consisting entirely of fire, the diurnal hemisphere; the other, the nocturnal, consisting of air with a little fire.

The accumulation of Fire in the upper hemisphere disturbs the equilibrium of the heavens and causes them to revolve; and this revolution not only produces the alternation of day and night, but by its rapidity keeps the heavens and the earth in their places. This was illustrated, Aristotle tells us, by the simile of a cup of water whirled round at the end of a string.<sup>103</sup> This experimental illustration is much in the manner of Empedokles. It has nothing to do with "centrifugal force," but is intended to show that rapid motion may counteract a tendency to fall.

### 113. The Sun, Moon, Stars, and Earth

It will be observed that day and night have been explained without reference to the sun. Day is the light of the fiery diurnal hemisphere, while night is the shadow thrown by the earth when the fiery hemisphere is on the other side of it (fr. 48). What, then, is the sun? The Plutarchean *Stromateis*<sup>104</sup> again give us the answer: "The sun is not fire in substance, but a reflexion of fire like that which comes from water." Plutarch himself makes one of his personages say: "You laugh at Empedokles for saying that the sun is a product of the earth, arising from the reflexion of the light of heaven, and once more 'flashes back to Olympos with untroubled countenance.'"<sup>105</sup> Aetios says:<sup>106</sup> "Empedokles held that there were two suns: one, the archetype, the fire in one hemisphere of the world, filling the whole hemisphere always stationed opposite its own reflexion; the other, the visible sun, its reflexion in the other hemisphere, that which is filled with air mingled with fire, produced by the reflexion of the earth, which is round, on the crystalline sun, and carried round by the motion of the fiery hemisphere. Or, to sum it up shortly, the sun is a reflexion of the terrestrial fire."

These passages, and especially the last, are by no means clear.<sup>107</sup> The reflexion we call the sun cannot be in the hemisphere opposite the fiery one; for that is the nocturnal hemisphere. We must say rather that the light of the fiery hemisphere is reflected by the earth on to the fiery hemisphere itself in one concentrated flash. It follows that the appearance which we call the sun is the same size as the earth. We may perhaps explain the origin of this view as follows. It had just been discovered that the moon shone by reflected light, and there is always a tendency to give any novel theory a wider application than it really admits of. In the early part of the fifth century B.C., men saw reflected light everywhere; some of the Pythagoreans held a similar view (§ 150).

It was probably in this connexion that Empedokles announced that light takes some time to travel, though its speed is so great as to escape our perception.<sup>108</sup>

"The moon was composed of air cut off by the fire; it was frozen just like hail, and had its light from the sun." It is, in other words, a disc of frozen air, of the same substance as the solid sky which surrounds the heavens. Diogenes says that Empedokles taught it was smaller than the sun, and Aetios tells us it was only half as distant from the earth.<sup>109</sup>

Empedokles did not explain the fixed stars by reflected light, nor even the planets. They were made out of the fire which the air carried with it when forced beneath the earth by the upward rush of fire at the first separation. The fixed stars were attached to the frozen air; the planets moved freely.<sup>110</sup>

Empedokles was acquainted (fr. 42) with the true theory of solar eclipses, which, along with that of the moon's light, was the great discovery of this period. He also knew (fr. 48) that night is the conical shadow of the earth, and not a sort of exhalation.

Wind was explained from the opposite motions of the fiery and airy hemispheres. Rain was caused by the compression of the Air, which forced any water there might be in it out of its pores in the form of drops. Lightning was fire forced out from the clouds in much the same way.<sup>111</sup>

The earth was at first mixed with water, but the increasing compression caused by the velocity of its revolution made the water gush forth, so that the sea is "the sweat of the earth," a phrase to which Aristotle objects as a mere poetical metaphor. The saltness of the sea was explained by this analogy.<sup>112</sup> It is taken for granted that the earth shares in the rotation of the vortex (δίνη).

#### 114. Organic Combinations

Empedokles went on to show how the four elements, mingled in different proportions, gave rise to perishable things, such as bones, flesh, and the like. These, of course, are the work of Love; but this in no way contradicts the view taken above as to the period to which this world belongs. Love is by no means banished from the world yet, though one day it will be. At present, it is still able to form combinations of elements; but, just because Strife is ever increasing, they are all perishable. The important part played by proportion (λόγος) here is no doubt due to Pythagorean influence.

The possibility of organic combinations depends on the fact that there is still water in the earth, and even fire (fr. 52). The warm springs of Sicily were a proof of this, not to speak of Etna. These springs Empedokles appears to have explained by one of his characteristic images, drawn this time

from the heating of warm baths.<sup>113</sup> His similes are nearly all drawn from human inventions and manufactures.

#### 115. Plants

Plants and animals were formed from the four elements under the influence of Love and Strife. The fragments which deal with trees and plants are 77-81; and these, taken along with certain Aristotelian statements and the doxographical tradition, enable us to make out pretty fully what the theory was. The text of Aetios is very corrupt here; but it may, perhaps, be rendered as follows:

Empedokles says trees were the first living creatures to grow up out of the earth, before the sun was spread out, and before day and night were distinguished; from the symmetry of their mixture, they contain the proportion of male and female; they grow, rising up owing to the heat which is in the earth, so that they are parts of the earth just as embryos are parts of the uterus; fruits are excretions of the water and fire in plants, and those which have a deficiency of moisture shed their leaves when that is evaporated by the summer heat, while those which have more moisture remain evergreen, as in the case of the laurel, the olive, and the palm; the differences in taste are due to variations in the particles contained in the earth and to the plants drawing different particles from it, as in the case of vines; for it is not the difference of the vines that makes wine good, but that of the soil which nourishes them. Aet. v. 26, 4 (R. P. 172).

Aristotle finds fault with Empedokles for explaining the double growth of plants, upwards and downwards, by the opposite natural motions of the earth and fire contained in them.<sup>114</sup> For "natural motions" we must, of course, substitute the attraction of like for like (§ 109). Theophrastos says much the same thing.<sup>115</sup> The growth of plants, then, is to be regarded as an incident in the separation of the elements by Strife. Some of the fire still beneath the earth (fr. 52) meeting in its upward course with earth, still moist with water and "running" down so as to "reach its own kind," unites with it, under the influence of the Love still left in the world, to form a temporary combination, which we call a tree or a plant.

At the beginning of the pseudo-Aristotelian *Treatise on Plants*,<sup>116</sup> we are told that Empedokles attributed desire, sensation, and the capacity for pleasure and pain to plants, and he rightly saw that the two sexes are combined in them. This is mentioned by Aetios, and discussed in the pseudo-Aristotelian treatise. If we may so far trust that Byzantine translation from a Latin version of the Arabic,<sup>117</sup> we get a hint as to the reason. Plants, we are there told, came into being "in an imperfect state of the world,"<sup>118</sup> in fact, at a time when Strife had not so far prevailed as to differentiate the sexes. We shall see that the same thing applies to the original race of animals. It is strange that Empedokles never observed the

actual process of generation in plants, but simply said they spontaneously "bore eggs" (fr. 79), that is to say, fruit.

#### 116. Evolution of Animals

The fragments which deal with the evolution of animals (57-62) must be understood in the light of the statement (fr. 17) that there is a double coming into being and a double passing away of mortal things. The four stages are accurately distinguished in a passage of Aetios,<sup>119</sup> and we shall see that there is evidence for referring two of them to the second period of the world's history and two to the fourth.

The first stage is that in which the various parts of animals arise separately. It is that of heads without necks, arms without shoulders, and eyes without foreheads (fr. 57). It is clear that this must be the first stage in what we have called the fourth period of the world's history, that in which Love is coming in and Strife passing out. Aristotle distinctly refers it to the period of Love, by which, as we have seen, he means the period when Love is increasing.<sup>120</sup> It is in accordance with this that he also says these scattered members were subsequently put together by Love.<sup>121</sup>

The second stage is that in which the scattered limbs are united. At first, they were combined in all possible ways (fr. 59). There were oxen with human heads, creatures with double faces and double breasts, and all manner of monsters (fr. 61). Those of them that were fitted to survive did so, while the rest perished. That is how the evolution of animals took place in the period of Love.<sup>122</sup>

The third stage belongs to the period when the unity of the Sphere is being destroyed by Strife. It is, therefore, the first stage in the evolution of our world. It begins with "whole-natured forms" in which there is not any distinction of sex or species.<sup>123</sup> They are composed of earth and water, and are produced by the upward motion of fire seeking to reach its like.

In the fourth stage, the sexes and species have been separated, and new animals no longer arise from the elements, but are produced by generation.

In both these processes of evolution, Empedokles was guided by the idea of the survival of the fittest. Aristotle severely criticises this. "We may suppose," he says, "that all things have fallen out accidentally just as they would have done if they had been produced for some end. Certain things have been preserved because they had spontaneously acquired a fitting structure, while those which were not so put together have perished and are perishing, as Empedokles says of the oxen with human faces."<sup>124</sup> This, according to Aristotle, leaves too much to chance. One curious instance has been preserved. Vertebration was explained by saying that an early invertebrate animal tried to turn round and broke its back in so doing. This was a favourable variation and so survived.<sup>125</sup> It should be noted that it clearly

belongs to the period of Strife, and not, like the oxen with human heads, to that of Love. The survival of the fittest was the law of evolution in both periods.

#### 117. Physiology

The distinction of the sexes was a result of the differentiation brought about by Strife. Empedokles differed from the theory given by Parmenides in his Second Part (§ 95) in holding that the warm element preponderated in the male sex, and that males were conceived in the warmer part of the uterus (fr. 65). The foetus was formed partly from the male and partly from the female semen (fr. 63): and it was just the fact that the substance of a new being's body was divided between the male and the female that produced desire when the two were brought together by sight (fr. 64). A certain symmetry of the pores in the male and female semen is necessary for procreation, and from its absence Empedokles explained the sterility of mules. The children resemble that parent who contributed most to their formation. The influence of statues and pictures was also noted, however, as modifying the appearance of the offspring. Twins and triplets were due to a superabundance and division of the semen.<sup>126</sup>

Empedokles held that the foetus was enveloped in a membrane, and that its formation began on the thirty-sixth day and was complete on the forty-ninth. The heart was formed first, the nails and such things last. Respiration did not begin till the time of birth, when the fluids round the foetus were withdrawn. Birth took place in the ninth or seventh month, because the day had been originally nine months long, and afterwards seven. Milk arises on the tenth day of the eighth month (fr. 68).<sup>127</sup>

Death was the final separation by Strife of the fire and earth in the body, each of which had all along been striving to "reach its own kind." Sleep was a temporary separation to a certain extent of the fiery element.<sup>128</sup> At death the animal is resolved into its elements, which either enter into fresh combinations, or are permanently united with "their own kind." There can be no question here of an immortal soul.

Even in life, we may see the attraction of like to like operating in animals just as it did in the upward and downward growth of plants. Hair is the same thing as foliage (fr. 82); and, generally speaking, the fiery part of animals tends upwards and the earthy downwards, though there are exceptions, as may be seen in the case of certain shellfish (fr. 76), where the earthy part is above. These exceptions are only possible because there is still a great deal of Love in the world. We also see the attraction of like for like in the habits of different species of animals. Those that have most fire in them fly up into the air; those in which earth preponderates take to the earth, as did the dog which always sat

upon a tile.<sup>129</sup> Aquatic animals are those in which water predominates. This does not, however, apply to fishes, which are very fiery, and take to the water to cool themselves.<sup>130</sup>

Empedokles paid great attention to respiration, and his explanation of it has been preserved in a continuous form (fr. 100). We breathe, he held, through all the pores of the skin, not merely through the organs of respiration. The cause of the alternate inspiration and expiration of breath was the movement of the blood from the heart to the surface of the body and back again, which was explained by the *klepsydra*.

The nutrition and growth of animals is, of course, to be explained from the attraction of like to like. Each part of the body has pores into which the appropriate food will fit. Pleasure and pain were derived from the absence or presence of like elements, that is, of nourishment which would fit the pores. Tears and sweat arose from a disturbance which curdled the blood; they were, so to say, the whey of the blood.<sup>131</sup>

#### 118. Perception

For the theory of perception held by Empedokles we have the original words of Theophrastos:

Empedokles speaks in the same way of all the senses, and says that perception is due to the "effluences" fitting into the passages of each sense. And that is why one cannot judge the objects of another; for the passages of some of them are too wide and those of others too narrow for the sensible object, so that the latter either hold their course right through without touching or cannot enter at all. R. P. 177 b.

He tries, too, to explain the nature of sight. He says that the interior of the eye consists of fire, while round about it is earth and air,<sup>132</sup> through which its rarity enables the fire to pass like the light in lanterns (fr. 84.). The passages of the fire and water are arranged alternately; through those of the fire we perceive light objects, through those of the water, dark; each class of objects fits into each class of passages, and the colours are carried to the sight by effluence. R. P. *ib.*

But eyes are not all composed in the same way; some are composed of like elements and some of opposite; some have the fire in the centre and some on the outside. That is why some animals are keen-sighted by day and others by night. Those which have less fire are keen-sighted in the daytime, for the fire within is brought up to an equality by that without; those which have less of the opposite (i.e. water), by night, for then their deficiency is supplemented. But, in the opposite case, each will behave in the opposite manner. Those eyes in which fire predominates will be dazzled in the daytime, since the fire being still further increased will stop up and occupy the pores of the water. Those in which water

predominates will, he says, suffer the same at night, for the fire will be obstructed by the water. And this goes on till the water is separated off by the air, for in each case it is the opposite which is a remedy. The best tempered and the most excellent vision is one composed of both in equal proportions. This is practically what he says about sight.

Hearing, he holds, is produced by sound outside, when the air moved by the voice sounds inside the ear; for the sense of hearing is a sort of bell sounding inside the ear, which he calls a "fleshy sprout." When the air is set in motion it strikes upon the solid parts and produces a sound.<sup>133</sup> Smell, he holds, arises from respiration, and that is why those smell most keenly whose breath has the most violent motion, and why most smell comes from subtle and light bodies.<sup>134</sup> As to touch and taste, he does not lay down how, nor by means of what they arise, except that he gives us an explanation applicable to all, that sensation is produced by adaptation to the pores. Pleasure is produced by what is like in its elements and their mixture; pain, by what is opposite. R. P. *ib.*

And he gives a precisely similar account of thought and ignorance. Thought arises from what is like and ignorance from what is unlike, thus implying that thought is the same, or nearly the same, as perception. For after enumerating how we know each thing by means of itself, he adds, "for all things are fashioned and fitted together out of these, and it is by these men think and feel pleasure and pain" (fr. 107). And for this reason we think chiefly with our blood, for in it of all parts of the body all the elements are most completely mingled. R. P. 178.

All, then, in whom the mixture is equal or nearly so, and in whom the elements are neither at too great intervals nor too small or too large, are the wisest and have the most exact perceptions; and those who come next to them are wise in proportion. Those who are in the opposite condition are the most foolish. Those whose elements are separated by intervals and rare are dull and laborious; those in whom they are closely packed and broken into minute particles are impulsive, they attempt many things and finish few because of the rapidity with which their blood moves. Those who have a well-proportioned mixture in some one part of their bodies will be clever in that respect. That is why some are good orators and some good artificers. The latter have a good mixture in their hands, and the former in their tongues, and so with all other special capacities. R. P. *ib.*

Perception, then, is due to the meeting of an element in us with the same element outside. This takes place when the pores of the organ of sense are neither too large nor too small for the "effluences" which all things are constantly giving off (fr. 89). Smell was explained by respiration. The breath drew in along with it the small particles which fit into the pores. Empedokles proved this by the example of people with a cold in their head,<sup>135</sup> who cannot smell, just because they have a difficulty in breathing. We also see from fr. 101 that the scent of dogs was referred to in support of the theory. Empedokles

seems to have given no detailed account of smell, and did not refer to touch at all.<sup>136</sup> Hearing was explained by the motion of the air which struck upon the cartilage inside the ear and made it swing and sound like a bell.<sup>137</sup>

The theory of vision<sup>138</sup> is more complicated; and, as Plato makes his Timaios adopt most of it, it is of great importance in the history of philosophy. The eye was conceived, as by Alkmaion (§ 96),<sup>139</sup> to be composed of fire and water. Just as in a lantern the flame is protected from the wind by horn (fr. 84); so the fire in the iris is protected from the water which surrounds it in the pupil by membranes with very fine pores, so that, while the fire can pass out, the water cannot get in. Sight is produced by the fire inside the eye going forth to meet the object.

Empedokles was aware, too, that "effluences," as he called them, came from things to the eyes as well; for he defined colours as "effluences from forms (or 'things') fitting into the pores and perceived."<sup>140</sup> It is not quite clear how these two accounts of vision were reconciled, or how far we are entitled to credit Empedokles with the theory of Plato's *Timaeus*. The statements quoted seem to imply something very like it.<sup>141</sup>

Theophrastos tells us that Empedokles made no distinction between thought and perception, a remark already made by Aristotle.<sup>142</sup> The chief seat of perception was the blood, in which the four elements are most evenly mixed, and especially the blood near the heart (fr. 105).<sup>143</sup> This does not, however, exclude the idea that other parts of the body may perceive also; indeed, Empedokles held that all things have their share of thought (fr. 103). But the blood was specially sensitive because of its finer mixture.<sup>144</sup> From this it naturally follows that Empedokles adopted the view, already maintained in the Second Part of the poem of Parmenides (fr. 16), that our knowledge varies with the varying constitution of our bodies (fr. 106).

### 119. Theology and Religion

The theoretical theology of Empedokles reminds us of Xenophanes, his practical religious teaching of Pythagoras and the Orphics. We are told in the earlier part of the poem that certain "gods" are composed of the elements; and that therefore though they "live long lives" they must pass away (fr. 21). The elements and the Sphere are also called gods, but that is in quite another sense of the word, and the elements do not pass away.

If, we turn to the religious teaching of the Purifications, we find that everything turns on the doctrine of transmigration. On the general significance of this enough has been said above (§ 42); the details given by Empedokles are peculiar. According to a decree of Necessity, "daimons" who have sinned are forced to wander from their home in heaven for three times ten thousand seasons (fr. 115).

He himself is such an exiled divinity, and has fallen from his high estate because he put his trust in raving Strife. The four elements toss him from one to the other with loathing; and so he has not only been a human being and a plant, but even a fish. The only way to purify oneself from the taint of original sin is by the cultivation of ceremonial holiness, by purifications, and abstinence from animal flesh. For the animals are our kinsmen (fr. 137), and it is parricide to lay hands on them. In all this there are certain points of contact with the cosmology. We have the "mighty oath" (fr. 115; cf. fr. 30), the four elements, Hate as the source of original sin, and Kypris as queen in the Golden Age (fr. 128). But these points are not fundamental, and the cosmological system of Empedokles leaves no room for an immortal soul, which is presupposed by the *Purifications*. All through this period, there seems to have been a gulf between men's religious beliefs, if they had any, and their cosmological views. The few points of contact we have mentioned may have been enough to hide this from Empedokles himself.

1. See, however, Introd. § II (p. 3).

2. Aet. i. 3, 20 (R. P. 164), Apollodoros *ap.* Diog. viii. 52 (R. P. 162). The details of the life of Empedokles are discussed, with a careful criticism of the sources, by Bidez, *La Biographie d'Empedocle* (Gand, 1894).

3. For this we have the authority of Apollodoros (Diog. viii. 51, 52; R. P. 162), who follows the *Olympic Victors* of Eratosthenes, who followed Aristotle. Herakleides, in his *Περὶ νόσων* (see below, p. 200, *n.* 5), spoke of the elder Empedokles as a "breeder of horses" (R. P. 162 a); and Timaios mentioned him in his Fifteenth Book. Satyros confused him with his grandson.

4. Glaukos wrote *Περὶ τῶν ἀρχαίων ποιητῶν καὶ μουσικῶν*, and is said to have been contemporary with Demokritos (Diog. ix. 38). Apollodoros adds (R. P. 162) that, according to Aristotle and Herakleides, Empedokles died at the age of sixty. It is to be observed, however, that the words ἔτι δ' Ἡρακλείδης are Sturz's conjecture, the MSS. having ἔτι δ' Ἡράκλειτον, and Diogenes certainly said (ix. 3) that Herakleitos lived sixty years. On the other hand, if the statement of Aristotle comes from the *Περὶ ποιητῶν*, it is not obvious why he should mention Herakleitos at all; and Herakleides was one of the chief sources for the biography of Empedokles. The names are often confused.

5. See Diels, "Empedokles and Gorgias," 2 (*Berl. Sitzb.*, 1884). Theophrastos said (*Dox.* p. 477, 17) that Empedokles was born "not long after Anaxagoras," *i.e.* not long after 500 B.C. (see below, §120). As he was certainly later than Parmenides, this is a fresh ground for following Plato in making Parmenides some fifteen years older than Apollodoros does (see above, §84). In general it should be noted that the epoch of Thourioi has misled Apollodoros in many cases. Almost every one who had anything to do with Thourioi (*e.g.* Herodotos, Protagoras) is said to have been born in 484 B.C.

6. He is called γρασουλλέκτρια in Soudas, *s.v.*

7. For instance Timaios (*ap.* Diog. viii. 64) said that once he was invited to sup with one of the magistrates. Supper was well advanced, but no wine was brought in. The rest of the company said nothing, but Empedokles was indignant, and insisted on its being served. The host, however, said he was waiting for the Sergeant of the Council. When that official arrived, he was appointed ruler of the feast. The host, of course, appointed him. Thereupon he began to give signs of an incipient tyranny. He ordered the company either to drink or have the wine poured over their heads. Empedokles said nothing, but next day he brought both of them before the court and had them put to death—both the man who asked him to supper and the ruler of the feast! The story reminds us of an accusation of *incivisme* under the Terror.

8. Diog. viii. 66, ὕστερον δ' ὁ Ἐμπεδοκλῆς καὶ τὸ τῶν χιλίων ἄθροισμα κατέλυσε συνεστῶς ἐπὶ ἔτη τρία. The word ἄθροισμα hardly suggests a legal council, and συνίστασθαι suggests a conspiracy.

9. Diog. viii. 63. Aristotle probably mentioned this in his *Sophist*. Cf. Diog. viii. 57.

10. Diog. viii. 59 (R. P. 162). Satyros probably followed Alkidamas. Diels suggests (*Emp. u. Gorg.* p. 358) that the φυσικός of Alkidamas was a dialogue in which Gorgias was the chief speaker.

11. See Bidez, p. 115, *n.* 1.

12. See below, note *in loc.*

13. Diog. viii. 54 (R. P. 162).

14. See below, note *in loc.*

15. Timaios told, for instance (*ap.* Diog. viii. 60), how he weakened the force of the etesian winds by hanging bags of asses' skins on the trees to catch them. In fr. 111 he says that knowledge of science as taught by him will enable his disciples to control the winds. We are also told how he brought back to life a woman who had been breathless and pulseless for thirty days. In fr. 111 he tells Pausanias that his teaching will enable him to bring the dead back from Hades. The story of the ἄπνοους was given at length in the *Περὶ νόσων* of Herakleides of Pontos, and Diogenes says that it was related to Pausanias by Empedokles. That gives us a hint of the way in which these stories were worked up. Cf. the very similar anecdotes about Herakleitos, p. 131, n. 4.

16. Diog. viii. 57 (R. P. 162 g).

17. Galen, *Meth. Med.* i. 1, ἤριζον δ' αὐτοῖς (the schools of Kos and Knidos) . . . καὶ οἱ ἐκ τῆς Ἰταλίας ἰατροὶ Φιλιστίων τε καὶ Ἐμπεδοκλῆς καὶ Πωσανίας καὶ οἱ τούτων ἑταῖροι. Philistion was the contemporary and friend of Plato; Pausanias is the disciple to whom Empedokles addressed his poem.

18. See Diels, "Empedokles and Gorgias" (*Berl. Sitzb.*, 1884, pp. 343 *sqq.*). The oldest authority for saying that Gorgias was a disciple of Empedokles is Satyros *ap.* Diog. viii. 58 (R. P. 162); but he seems to have derived his information from Alkidamas, who was the disciple of Gorgias himself. In Plato's *Meno* (76 c 4-8) the Empedoklean theory of effluvia and pores is ascribed to Gorgias.

19. Diels (*Berl. Sitzb.*, 1884, p. 343).

20. See M. Wellmann, *Fragmentsammlung der griechischen Ärzte*, vol. i. (Berlin, 1901). According to Wellmann, both Plato (in the *Timaeus*) and Diokles of Karystos depend upon Philistion. It is impossible to understand the history of philosophy from this point onwards without keeping the history of medicine constantly in view.

21. For the four elements, cf. Anon. Lond. xx. 25 (Menon's *Iatrika*), Φιλιστίων δ' οἶεται ἐκ δ' ἰδεῶν συνεστάναι ἡμᾶς, τοῦτ' ἔστιν ἐκ δ' στοιχείων πυρός, ἀέρος, ὕδατος, γῆς. εἶναι δὲ καὶ ἐκάστου δυνάμεις, τοῦ μὲν πυρός τὸ θερμόν, τοῦ δὲ ἀέρος τὸ ψυχρόν, τοῦ δὲ ὕδατος τὸ ὑγρόν, τῆς δὲ γῆς τὸ ξηρόν. For the theory of respiration, see Wellmann, pp. 82 *sqq.*; and for the heart as the seat of consciousness, *ib.* pp. 15 *sqq.*

22. Hippokr. *Περὶ ἱερῆς νόσου*, C 1, μάγοι τε καὶ καθάρται καὶ ἀγύρται καὶ ἀλαζόνες. The whole passage should be read. Cf. Wellmann, p. 29 n.

23. Diog. viii. 54-56 (R. P. 162).

24. Diels, *Verhandl. d. 35 Philologenversammlung*, pp. 104 *sqq.*, Zeller, p. 767. It would be fatal to the main thesis of the next few chapters if it could be proved that Empedokles was influenced by Leukippos. I hope to show that Leukippos was influenced by the later Pythagorean doctrine (Chap. IX. § 171), which was in turn affected by Empedokles (Chap. VII. § 147).

25. For πόροι in Alkmaion, cf. Arist. *De gen. an.* B, 6. 744 a 8; Theophr. *De sens.* 26; and for the way in which his embryological and other views were transmitted through Empedokles to the Ionian physicists, cf. Fredrich, *Hippokratische Untersuchungen*, pp. 126 *sqq.*

26. R. P. 162 h. The story is always told with a hostile purpose.

27. R. P. *ib.* This was the story told by Herakleides of Pontos, at the end of his romance about the ἄπνοους.

28. Timaios refuted the common stories at some length (Diog. viii. 71 *sqq.*; R. P. *ib.*). He was quite positive that Empedokles never returned to Sicily after he went to Olympia to have his poem recited to the Hellenes. The plan for the colonisation of Thourioi would, of course; be discussed at Olympia, and we know that Greeks from the Peloponnese and elsewhere joined it. He may very well have gone to Athens in connexion with this.

29. See my edition of the *Phaedo*, 96 b 4 n., and, for Kritias, Arist. *De anima*, 405 b 6. This is the Kritias who appears in Plato's *Timaeus*, and he is certainly not the Kritias who was one of the Thirty, but his grandfather. The Kritias of the *Timaeus* is a very old man, who remembers the events of his boyhood quite well, but forgets what happened the other day (*Tim.* 26 b). He also tells us that the poems of Solon were a novelty when he was a boy (*ib.* 21 b). It is hard to understand how he was ever supposed to be the oligarch, though Diels, Wilamowitz, and E. Meyer seem to have felt no difficulty in the identification. It is clear too that it must have

been the grandfather who exchanged poetical compliments with Anakreon (Diels, *Vors.* 3 ii. p. 81 B 1). Kritias of the Thirty did not live to be an old man.

30. Diog. viii. 77 (R. P. 162); Soudas s.v. Ἐμπεδοκλήης· καὶ ἔγραψε δι' ἐπῶν Περὶ φύσεως τῶν ὄντων βιβλία β', καὶ ἔστιν ἔπη ὡς δισχίλια. It hardly seems likely, however, that the *Katharmoi* extended to 3000 verses, so Diels proposes to read πάντα τρισχίλια for πεντακισχίλια in Diogenes. See Diels, "Über die Gedichte des Empedokles" (*Berl. Sitzb.* 1898, pp. 396 sqq.).

31. Hieronymos of Rhodes declared (Diog. viii. 58) that he had met with forty-three tragedies by Empedokles; but see Stein, pp. 5 sqq. The poem on the Persian wars, which he also refers to (Diog. viii. 57), seems to have arisen from a corruption in the text of Arist. *Probl.* 929 b 16, where Bekker reads ἐν τοῖς Περσικοῖς. The same passage, however, is said to occur ἐν τοῖς φυσικοῖς, in *Meteor.* Δ, 4. 382 a 1, though there too E has Περσικοῖς.

32. The MSS. of Sextus have ζωῆσι βίου. Diels reads ζωῆς ἰδίου. I still prefer Scaliger's ζωῆς ἀβίου. Cf. fr. 15, τὸ δὴ βίοντον καλέουσι.

33. The sense of taste, not speech.

34. Clement's reading διατμηθέντος may perhaps stand if we take λόγιοι as "discourse," "argument" (cf. διαρπῆν). Diels conjectures διασηθέντος and renders "when their speech has penetrated the sieve of thy mind."

35. The four "elements" are introduced under mythological names, for which see below, p. 229, n. 3.

36. Plutarch (*Adv. Col.* 1112 a) says that φύσις here means "birth," as is shown by its opposition to death, and all interpreters (including myself) have hitherto followed him. On the other hand, the fragment clearly deals with θνητά, and Empedokles cannot have said that there was no death of mortal things. The θνητά are just perishable combinations of the four elements (cf. fr. 35, 11), and the point is that they are constantly coming into being and passing away. It is, therefore, impossible, as pointed out by Prof. Lovejoy (*Philosophical Review*, xviii. 371 sqq.), to take θανάτοιο τελευτή as equivalent to θάνατος here, and it may equally well mean "end of death." Now Aristotle, in a passage where he is carefully distinguishing the various senses of φύσις (*Met.* Δ, 4. 1015 a 1), quotes this very verse as an illustration of the meaning ἢ τῶν ὄντων οὐσία (see further in the Appendix). I understand the words ἐπὶ τοῖσδ' as equivalent to ἐπὶ τοῖς θνητοῖς, and I take the meaning of the fragment to be that temporary compounds or combinations like flesh, bone, etc., have no φύσις of their own. Only the four "immortal" elements have a φύσις which does not pass away. This interpretation is confirmed by the way Diogenes of Apollonia speaks in denying the ultimate reality of the "elements." He says (fr. 2) εἰ τούτων τι ἦν ἕτερον τοῦ ἑτέρου, ἕτερον ὄν τῆ ἰδίᾳ φύσει, *i.e.* he says the elements are θνητά.

37. I understand this fragment to deal with the "elements," of which φῶς and αἰθήρ (Fire and Air) are taken as examples. These are not subject to birth and death, like the θνητά of fr. 8, and the application of the terms to them is as much a matter of convention as the application of the term φύσις to the perishable combinations which are subject to birth and death. The text is corrupt in Plutarch, and has two or three lacunae, but the usual reconstructions depart too far from the tradition. I suggest the following, which has at least the merit of not requiring the alteration of a single letter:

οἱ δ' ὅτε μὲν κατὰ φῶτα μὴ γέν φῶς αἰθέρι [κύρση],

ἢ κατὰ θηρῶν ἀγροτέρων γένος ἢ κατὰ θάμων

ἢ κατ' οἰωνῶν, τότε μὲν τὸ ν[έμουσι] γενέσθαι·

εὔτε δ' ἀποκρινθῶσι, τάδ' αὖ δυσδαίμονα πότμον

ἢ θέμις [οὐ] καλέουσι, νόμῳ δ' ἐπίφημι καὶ αὐτός.

I understand τάδε in the fourth verse as referring to the "elements" (e.g. Fire and Air), which cannot properly be said to be born or to die as their combinations do. I take it that Fire and Air are specially mentioned because the life of animate creatures depends on them. The earth and water would never of themselves produce a living being.

38. Reading μετὰ τοῖσιν. I still think, however, that Knatz's palaeographically admirable conjuncture μετὰ θεοῖσιν (*i.e.* among the elements) deserves consideration.

39. Keeping ἄλλοτε with Diels.

40. Reading ἄμβροτα δ' ὅσ' ἴδει with Diels. For the word ἴδος, cf. frs. 62, 5; 73, 2. The reference is to the moon, etc., which are made of solidified Air, and receive their light from the fiery hemisphere. See below, §113.
41. Reading with Blass (*Jahrb. f. kl. Phil.*, 1883, p. 19) and Diels:
- οὔτω μὴ σ' ἀπάτη φρένα καινύτω κτλ.
- Cf. Hesychios: καινύτω· νικάτω. This is practically what the MSS. of Simplicius give, and Hesychios has many Empedoklean glosses.
42. The "goddess" is, of course, the Muse. Cf. fr. 5.
43. The word μονίη, if it is right, cannot mean "rest," but only solitude. There is no reason for altering περιηγεί, though Simplicius has περιγηθεί.
44. The masculine κολλήσας shows that the subject cannot have been Φιλότης; and Karsten was doubtless right in believing that Empedokles introduced the simile of a baker here. It is in his manner to take illustrations from human arts.
45. We see clearly from this fragment how the ἀθάνατα (the elements) are identified with the "unmixed," and the θνητά (the perishable combinations) with the "mixed."
46. The MSS. of Clement have ἥλιον ἀρχήν, and the reading ἥλιου ἀρχήν is a mere makeshift. Diels reads ἥλικά τ' ἀρχήν, "the first (elements) equal in age."
47. The lines are referred to Xenophanes by Aristotle, who quotes them *De caelo*, B, 13. 294 a 21. See above, Chap. II. p. 125, n. 3.
48. I translate Diels's conjecture ἀπεστέγασεν ... ἔστ' ἂν ἴη.
49. See p. 177, n. 1.
50. Reading στείροις with Diels.
51. Retaining εἶδεος (i.e. ἴδεος), which is read in the MSS. of Simplicius. Cf. above, p. 209, n. 1.
52. That Empedokles regarded milk as putrefied blood is stated by Aristotle (*De gen. an.* Δ, 8. 777 a 7). The word πύον means *pus*. There may be a pun on πύός "beestings," but that has its vowel long.
53. Said of women in reference to births in the seventh and ninth months.
54. Of the membrane round the foetus.
55. Reading ἴδεα ποιπνύουσα with Diels.
56. This seems clearly to be the meaning of ἡήρ here. Cf. fr. 100, v. 13, and p. 228, n. 2.
57. See Beare, p. 16, n. 1, where Plato, *Tim.* 45 b 4 (τοῦ πυρός ὅσον τὸ μὲν κάειν οὐκ ἔσχεν, τὸ δὲ παρέχειν φῶς ἡμέρον) is aptly quoted.
58. On this fragment see Clara E. Millerd, *On the Interpretation of Empedocles*, p. 38, n. 3.
59. On fr. 99, see Beare, p. 96, n. 1.
60. This passage is quoted by Aristotle (*De respir.* 473 b 9), who makes the curious mistake of taking ῥινῶν for the genitive of ῥίς instead of ῥινός. The *locus classicus* on the klepsydra is *Probl.* 914 b 9 *sqq.* (where read ἀλοῦ for ἄλλου b 12). It was a metal vessel with a narrow neck ἀλόξ at the top and with a sort of strainer ἡθμός pierced with holes (τρήματα, τρυπήματα) at the bottom. The passage in the *Problems* just referred to attributes this theory of the phenomenon to Anaxagoras, and we shall see that he also made use of the experiment (§ 131).

61. The MSS. of Aristotle have ἀέρος here, though the air is called αἰθήρ in four other verses of the fragment (vv. 5, 7, 18, 24.). It is easier to suppose that Aristotle made a slip in this one verse than that Empedokles should use ἀήρ in a sense he elsewhere avoids (p. 228, n. 2), and this suspicion is confirmed by the form ἀέρος instead of ἠέρος. I think, therefore, that Stein was right in reading αἰθέρος.

62. This seems to be the experiment described in *Probl.* 914 b 26, ἐὰν γὰρ τις αὐτῆς (τῆς κλεψύδρας) αὐτὴν τὴν κωδίαν ἐμπλήσας ὕδατος, ἐπιλαβὼν τὸν αὐλόν, καταστρέψῃ ἐπὶ τὸν αὐλόν, οὐ φέρεται τὸ ὕδωρ διὰ τοῦ αὐλοῦ ἐπὶ στόμα. ἀνοιχθέντος δὲ τοῦ στόματος, οὐκ εὐθὺς ἐκρεῖ κατὰ τὸν αὐλόν, ἀλλὰ μικροτέρω ὕστερον, ὡς οὐκ ὄν ἐπὶ τῷ στόματι τοῦ αὐλοῦ, ἀλλ' ὕστερον διὰ τούτου φερόμενον ἀνοιχθέντος. The epithet δυσηχέος is best explained as a reference to the ἐρυγμός or "belching" referred to at 915 a 7. Any one can produce this effect with a water-bottle. If it were not for this epithet, it would be tempting to read ἠθμοῖο for ἰσθμοῖο, and that is actually the reading of a few MSS.

63. On fr. 101, see Beare, p. 135, n. 2.

64. That this refers to dreams, we learn from *Simpl. De an.* p. 202, 30.

65. Necessity is an Orphic personage, and Gorgias, the disciple of Empedokles, says θεῶν βουλευμασιν καὶ ἀνάγκης ψηφίσμασιν (*Hel.* 6).

66. I retain φόνω v. 3 (so too Diels). The first word of v. 4 has been lost. Diels suggests Νεΐκει, which may well be right and takes ἀμαρτήσας as equivalent to ὁμαρτήσας. I have translated accordingly.

67. According to Porphyry (*De antro Nymph.* 8), these words were spoken by the "powers" who conduct the soul into the world (ψυχοπομποὶ δυνάμεις). The "cave" is not originally Platonic but Orphic.

68. This passage is closely modelled on the Catalogue of Nymphs in *Iliad* xviii. 39 *sqq.* Chthonie is found already in Pherekydes (*Diog.* i. 119).

69. I have retained ἀλλόγνωτι though it is a little hard to interpret. On the history of the Orphic *chiton* in gnostic imagery see Bernays, *Theophr. Schr.* n. 9. It was identified with the coat of skins made by God for Adam. Cf. also Shakespeare's "muddy vesture of decay."

70. This is the best μετοίκησις (*Ael. Nat. an.* xii. 7).

71. The dwellers in the Golden Age.

72. The MSS. of Porphyry have γραπτοῖς τε ζώοισι The emendation of Bernays (adopted in R. P.) does not convince me. I venture to suggest μακτοῖς on the strength of the story related by Favorinus (*ap. Diog.* viii. 53) as to the bloodless sacrifice offered by Empedokles at Olympia.

73. These lines were already referred to Pythagoras by Timaios (*Diog.* viii. 54). As we are told (*Diog. ib.*) that some referred the verses to Parmenides, it is clear that no name was given.

74. On frs. 138 and 143 see Vahlen on *Arist. Poet.* 21. 1457 b 13, and Diels in *Hermes*, xv. p. 173.

75. Cf. *Emp.* frs. 27, 28, with *Parm.* fr. 8.

76. For the history of the term στοιχειῶν see Diels, *Elementium*. Eudemos said (*ap. Simpl. Phys.* p. 7, 13) that Plato was the first to use it, but he probably got it from the Pythagoreans. The original term was μορφῆ or ἰδέα.

77. In fr. 17, Diels reads ἠέρος ἄπλετον ὕψος with Sextus and Simplicius. Plutarch, however, has αἰθέρος, and it is obvious that this was more likely to be corrupted into ἠέρος than *vice versa* in an enumeration of the elements. In fr. 38. v. 3, which is not an enumeration of elements, ὑγρὸς ἀήρ (*i.e.* the misty lower air) is distinguished from Τῖτάν αἰθήρ (*i.e.* the bright blue sky) in the traditional way. In fr. 78 the reference is clearly to moisture. On fr. 100, 13, see p. 219, n. 3. These are the only passages in which Empedocles seems to speak of ἀήρ in the sense of atmospheric air.

78. Cf. *Chap. I.* § 27.

79. Arist. *Phys.* Δ.6, 213 a 22 (R. P. 159). Aristotle only mentions Anaxagoras by name in this passage; but he speaks in the plural, and we know from fr. 100 that the klepsydva experiment was used by Empedokles.

80. In antiquity the Homeric Allegorists made Hera Earth and Aidoneus Air, a view which has found its way into Aetios from Poseidonios. It arose as follows. The Homeric Allegorists were not interested in the science of Empedokles, and did not see that his αἰθήρ was quite a different thing from Homer's αἴηρ. Now this is the dark element, and night is a form of it, so it would naturally be identified with Aidoneus. Again, Empedokles calls Hera φερέσβιος, and that is an epithet of Earth in Hesiod and the Homeric Hymns. Another view identified Hera with Air, which is the theory of Plato's *Cralylus*, and Aidoneus with Earth. The Homeric Allegorists further identified Zeus with Fire, a view to which they were doubtless led by the use of the word αἰθήρ. Now αἰθήρ certainly means Fire in Anaxagoras, as we shall see, but there is no doubt that in Empedokles it meant Air. It seems likely, then, that Knatz is right ("Empedoclea" in *Schedae Philologicae Hermanno Usenero oblatae*, 1891, pp. 1 *sqq.*) in holding that the bright Air of Empedokles was Zeus. This leaves Aidoneus to stand for Fire; and nothing could have been more natural for a Sicilian poet, with the volcanoes and hot springs of his native island in mind, than this identification. He refers to the fires that burn beneath the Earth himself (fr. 52). If that is so, we shall have to agree with the Homeric Allegorists that Hera is Earth; and surely φερέσβιος Ἥρα can be none other than "Mother Earth." The epithet seems only to be used of earth and corn.

81. Arist. *De gen. corr.* B, 1. 329 b 1.

82. *Ibid.* B, 6. 333 a 16.

83. *Ibid.* A, 8. 325 b 19 (R. P. 164 e). This was so completely misunderstood by later writers that they attribute to Empedokles the doctrine of στοιχεῖα πρὸ τῶν στοιχείων (Aet. i. 13, 1; 17, 3). The criticism of the Pythagoreans and Plato had made the hypothesis of elements almost unintelligible to Aristotle, and *a fortiori* to his successors. As Plato put it (*Tim.* 48 b 8), they were "not even syllables," let alone "letters" (στοιχεῖα). That is why Aristotle calls them καλούμενα στοιχεῖα (Diels, *Elementum*, p. 25).

84. Philistion put the matter in this way. See p. 201, n. 5.

85. Arist. *Met.* A, q. 985 a 31; *De gen. corr.* B, 3. 330 b 19 (R. P. 164 e).

86. Cf. *Intro.* § VIII.

87. Arist. *Met.* A, 10. 1075 b 3.

88. Theophr. *Phys. Op.* fr. 3 (*Dox.* p. 477; R. P. 166 b).

89. *Met.* A, 4. 985 a 21; Γ, 4. 1000 a 24; b 9 (R. P. 166 i).

90. Plato, *Laws*, x. 889 b. The reference is not to Empedokles exclusively, but the language shows that Plato is thinking mainly of him.

91. Arist. *De gen. corr.* B, 6. 334 a 1; *Phys.* Θ, 1. 252 a 5 (R. P. 166 k).

92. Arist. *De gen. corr.* A, 8. 324 b 34 (R. P. 166 h).

93. Arist. *De gen. corr.* A, 8. 326 b 6.

94. This is the view of Zeller (pp. 785 *sqq.*), but he admits that the external testimony, especially that of Aristotle, is wholly in favour of the other. His difficulty is with the fragments, and if it can be shown that these can be interpreted in accordance with Aristotle's statements, the question is settled.

95. Arist. *De gen. Corr.* B, 6. 334 a 6, τὸν κόσμον ὁμοίως ἔχειν φησὶν ἐπὶ τε τοῦ νείκους νῦν καὶ πρότερον ἐπὶ τῆς φιλίας. Miss Millerd (*Interpretation of Empedocles*, p. 45) adds Theophrastos, *De sensu* §20, συμβαίνει δὲ καὶ ἐπὶ τῆς Φιλίας ὅπως μὴ εἶναι αἰσθησὶν ἢ ἦττον διὰ τὸ συγκρίνεσθαι τότε καὶ μὴ ἀπορρεῖν Here ἐπὶ τῆς Φιλίας and τότε imply the antithesis ἐπὶ τοῦ Νείκους and νῦν.

96. Arist. *De caelo*, Γ, 2. 301 a 14, ἐκ διεστώτων δὲ καὶ κινουμένων οὐκ εὐλόγον ποιεῖν τὴν γένεσιν. διὸ καὶ Ἐμπεδοκλῆς παραλείπει τὴν ἐπὶ τῆς φιλότητος· οὐ γὰρ ἂν ἠδύνατο συστήσῃ τὸν οὐρανὸν ἐκ κεχωρισμένων μὲν κατασκευάζων, σύγκρισιν δὲ ποιῶν διὰ τὴν φιλότητα· ἐκ διακεκριμένων γὰρ συνέστηκεν ὁ κόσμος τῶν στοιχείων ("our world consists of the elements in a state of separation"), ὥστ' ἀναγκαῖον γενέσθαι ἐξ ἐνὸς καὶ συγκεκριμένου.

97. It need not mean that Empedokles said nothing about the world of Love at all; for he obviously says something of both worlds in fr. 17. It is enough to suppose that, having described both in general terms, he went on to treat the world of Strife in detail.
98. Arist. *De gen. Corr.* B, 6. 333 b 21 (R. P. 168 e); *Met.* B, 4. 1000 a 28 (R. P. 166 i). Cf. *Simpl. Phys.* p. 1124, 1 (R. P. 167 b). In other places Aristotle speaks of it as "the One." Cf. *De gen. Corr.* A, 1. 315 a 7 (R. P. 168 e); *Met.* B, 4. 1000 a 29 (R. P. 166 i); A, 4. 985 a 28 (R. P. *ib.*). This involves a slight Aristotelian "development." It is not the same thing to say, as Empedokles does, that all things come together "into one," and to say that they come together "into the One." The latter expression suggests that they lose their identity in the Sphere, and thus become something like Aristotle's "matter." As has been pointed out (p. 230, *n.* 3), it is hard for Aristotle to grasp the conception of irreducible elements; but there can be no doubt that in the Sphere, as in their separation, the elements remain "what they are" for Empedokles. As Aristotle also knows quite well, the Sphere is a mixture. Compare the difficulties about the "One" of Anaximander discussed in Chap. 1. § 15.
99. This accounts for Aristotle's statement, which he makes once positively (*Met.* B, 1. 996 a 7) and once very doubtfully (*Met.* B, 4. 1001 a 12), that Love was the substratum of the One in just the same sense as the Fire of Herakleitos, the Air of Anaximenes, or the Water of Thales. He thinks that all the elements become merged in Love, and so lose their identity. In this case, it is in Love he recognises his own "matter."
100. For the phrase τοῦ περὶ τὸν ἀέρα πάγον cf. Περί διαίτης, I. 10. 1, πρὸς τὸν περιέχοντα πάγον *Et. M. s.v.* βηλός . . . τὸν ἀνωτάτω πάγον καὶ περιέχοντα τὸν πάντα ἀέρα.
101. Aet. ii. 31, 4 (*Dox.* p. 363).
102. Aet. ii. 11, 2 (R. P. 170 c).
103. Arist. *De caelo*, B, 1. 284 a 24; 13. 295 a 16 (R. P. 170 b). Plato, *Phaed.* 99 b 6, διὸ ὁ μὲν τις δίνην περιτιθεὶς τῇ γῆ ὑπὸ τοῦ οὐρανοῦ μένειν δὴ ποιεῖ τὴν γῆν. The experiment with τὸ ἐν τοῖς κυάθοις ὕδωρ which κύκλω τοῦ κυάθου φερομένου πολλακίς κάτω τοῦ χαλκοῦ γινόμενον ὅμως οὐ φέρεται κάτω, reminds us of that with the *klepsydra* in fr. 100. The point is that the δίνη overcomes the οικεία ῥοπή by its velocity.
104. [Plut.] *Strom.* fr. 10 (*Dox.* p. 582, 11; R. P. 170 c).
105. Plut. *De Pyth. or.* 400 b (R. P. 170c). I keep the MS. reading περὶ γῆν with Diels.
106. Aet. ii. 20, 13 (*Dox.* p. 350), Ἐμπεδοκλῆς δύο ἡλίους· τὸν μὲν ἀρχέτυπον, πῦρ ὃν ἐν τῷ ἐτέρῳ ἡμισφαιρίῳ τοῦ κόσμου, πεπληρωκὸς τὸ ἡμισφαίριον, αἰεὶ κατ' ἀντικρὺ τῇ ἀνταυγείᾳ ἑαυτοῦ τεταγμένον· τὸν δὲ φαινόμενον, ἀνταύγειαν ἐν τῷ ἐτέρῳ ἡμισφαιρίῳ τῷ τοῦ ἀέρος τοῦ θερμομογοῦς πεπληρωμένῳ, ἀπὸ κυκλοτεροῦς τῆς γῆς κατ' ἀνάκλασιν γιγνομένην εἰς τὸν ἥλιον τὸν κρυσταλλοειδῆ, συμπεριελκομένην δὲ τῇ κινήσει τοῦ πυρίνου. ὡς δὲ βραχέως εἰρησθαι συντεμόντα, ἀνταύγειαν εἶναι τοῦ περὶ τὴν γῆν πυρὸς τὸν ἥλιον.
107. I strongly suspect that the confusion is due to a somewhat captious criticism by Theophrastos (see below, p. 298, *n.* 1). It would be like him to point out that the theory implied "two suns."
108. Arist. *De sensu*, 6. 446 a 28; *De an.* B, 7. 418 b 20.
109. [Plut.] *Strom.* fr. 10 (*Dox.* p. 582, 12; R. P. 170 c); *Diog.* viii. 77; Aet. ii. 31, 1 (cf. *Dox.* p. 63).
110. Aet. ii. 13, 2 and 11 (*Dox.* pp. 341 *sqq.*).
111. Aet. iii. 3, 7; Arist. *Meteor.* B, 9. 369 b 12, with Alexander's commentary.
112. Arist. *Meteor.* B, 3. 357 a 24; Aet. iii. 16, 3 (R. P. 170 b). Cf. the clear reference in Arist. *Meteor.* B, 1. 353 b 11.
113. Seneca, *Q. Nat.* iii. 24, "facere solemus dracones et miliaria et complures formas in quibus aere tenui fistulas struimus per declive circumdatas, ut saepe eundem ignem ambiens aqua per tantum fluat spatii quantum efficiendo calori sat est. frigida itaque intrat, effluit calida. idem sub terra Empedocles existimat fieri."
114. Arist. *De an.* B, 4. 415 b 28.
115. Theophr. *De causis plantarum*, i. 12, 5.
116. [Arist.] *De plantis*, A, 1. 815 a 15.

117. Alfred the Englishman translated the Arabic version into Latin in the reign of Henry III. It was retranslated from this version into Greek at the Renaissance by a Greek resident in Italy.
118. A, 2. 817 b 35, "mundo . . . diminuto et non perfecto in complemento suo" (Alfred).
119. Aet. v. 19, 5 (R. P. 173).
120. Arist. *De caelo*, Γ, 2. 300 b 29 (R. P. 173 a). Cf. *De gen. an.* A, 18. 722 b 19, where fr. 57 is introduced by the words καθάπερ Ἐμπεδοκλῆς γεννᾷ ἐπὶ τῆς Φιλότητος. S. Simplicius, *De Caelo*, p. 587, 18, says μουνομελῆ ἔτι τὰ γυῖα ἀπὸ τῆς τοῦ Νείκου διακρίσεως ὄντα ἐπλανᾶτο.
121. Arist. *De an.* Γ, 6. 430 a 30 (R. P. 173 a).
122. This is well put by Simplicius, *De caelo*, p. 587, 20. It is ὅτε τοῦ Νείκου ἐπεκράτει λοιπὸν ἡ Φιλότης . . . ἐπὶ τῆς Φιλότητος οὖν ὁ Ἐμπεδοκλῆς ἐκεῖνα εἶπεν, οὐχ ὡς ἐπικρατούσης ἤδη τῆς Φιλότητος, ἀλλ' ὡς μελλούσης ἐπικρατεῖν In *Phys.* p. 371, 33, he says the oxen with human heads were κατὰ τὴν τῆς Φιλίας ἀρχήν.
123. Cf. Plato, *Symp.* 189 e.
124. Arist. *Phys.* B, 8. 198 b 29 (R. P. 173 a).
125. Arist. *De part. an.* A, 1. 640 a 19.
126. Aet. v. 10, 1; 11, 1; 12, 2; 14, 2. Cf. Fredrich, *Hippokratische Untersuchungen*, pp. 126 *sqq.*
127. Aet. v. 15, 3; 21, 1 (*Dox.* p. 190).
128. Aet. v. 25, 4 (*Dox.* p. 437).
129. Aet. v. 19, 5 (*Dox.* p. 431). Cf. *Eth. Eud.* H, 1. 1235 a 11.
130. Arist. *De respir.* 14. 477 a 32; Theophr. *De causis plant.* i. 21.
131. Nutrition, Aet. v. 27, 1; pleasure and pain, Aet. iv. 9, 15; v. 28, 1; tears and sweat, v. 22, 1.
132. That is watery vapour, not the elemental air or αἰθήρ (§ 107). It is identical with the "water" mentioned below. It is unnecessary, therefore, to insert καὶ ὕδωρ after πῦρ with Karsten and Diels.
133. Beare, p. 96 *n.* 1.
134. *Ibid.* p. 133.
135. Aet. iv. 17, 2 (*Dox.* p. 407). Beare, p. 133.
136. Beare, pp. 161-3, 180-81.
137. *Ibid.* pp. 95 *sqq.*
138. *Ibid.* pp. 14 *sqq.*
139. Theophr. *De sens.* 26.
140. The definition is quoted from Gorgias in Plato, *Men.* 76 d 4. All our MSS. have ἀπορροαὶ σχημάτων, but Ven. T has in the margin γρ. χρημάτων, which may well be an old tradition. The Ionic for "things" is χρήματα. See Diels, *Empedokles und Gorgias*, p. 439.
141. See Beare, *Elementary Cognition*, p. 18.
142. Arist. *De an.* Γ, 3. 427 a 21.

143. R. P. 178 a. This was the characteristic doctrine of the Sicilian school, from whom it passed to Aristotle and the Stoics. Plato and Hippocrates, on the other hand, adopted the view of Alkmaion (§ 97) that the brain was the seat of consciousness. At a later date, Philistion of Syracuse, Plato's friend, substituted the ψυχικὸν πνεῦμα ("animal spirits") which circulated along with the blood.

144. Beare, p. 253.