

The Divided Meadows of Aphrodite

Empedocles' Fragments 63-67

The discussion which constitutes this article on the question of sex-determination in the embryology of Empedocles involves the following fragments of the philosopher as numbered and read by Diels;¹ the translations are my own.

Fr. 63 *alla diespastai meleōn phusis· hē men in andros . . .*

'but torn asunder is the origin of the limbs; partly in the man's . . .'

Fr. 64 *tōi d' epi kai pothos eisi di opsios amminēiskōn(?)*

'upon him comes also desire, reminding him through sight' . . .

Fr. 65 *en d' echuthē katharōisi· ta men telethousi gunaikēs psucheos antiāsanta (ta d' empalin arrena thermou).*

'and they were poured into the purified. Some, encountering the cold become women, (others again encountering the hot, men).'

Fr. 66 *schistous leimōnas . . . Aphroditēs.*

'the divided meadows of Aphrodite.'

Fr. 67 *en gar thermoterōi tokos arrenos epleto gaster (i)· kai melanes dia touto kai hadromelesteroi andres kai lachnēentes mallon.*

'for in the warmer (part) the stomach is productive of the male. And it is on this account that men are dark, more powerfully built and more hairy.'

Freeman,² collating the evidence of these fragments and the doxography, makes the following observations on the matter of sex-determination in Empedocles' embryology, supporting them with footnote references to Diels, which I give immediately after the passage.

"In human beings, Love still working in the world brings the sexes together, desire being aroused in them through sight.^k The child, before conception, is partly in the man, partly in the woman.^a Its sex is decided according to the part of the womb into which the seed falls: if into the warmer part, the result is a male, if into the colder,

1. Diels-Kranz, *Die Fragmente der Vorsokratiker*, 6th ed., Berlin, 1951-52, pp. 336-337.

2. K. Freeman, *The Pre-Socratic Philosophers*, Oxford, 1953, pp. 193-194.

a female,^b and the this accounts for the distinctive characteristics of males, such as colouring, growth of hair and superior strength.^c (Aristotle criticises this as 'too easy-going' as it fails to account for the organic difference between males and females.)^d Some commentators thought that the womb had a hot side (the right) and a cold side (the left), but Aristotle says that the temperature depends on the menstrual flow, according to whether it is hot or cold, older or more recent.^e Others says that as Empedocles thought sex-differentiation depended on temperature, the first males were born in the east and south, the first females in the north.^f

^kB64: ^aB63: ^bB65,cp.B66: ^cB67: ^dA81: ^eA81: ^fA81.

The conflict of evidence is left unresolved, Freeman being content to present it as opinions held by different commentators for the reader to make whatever he or she wishes of it. On the other hand, the more evaluative analysis made by Raven³ seems to have led him to the notion of a divided womb as Empedocles' — male children are conceived in the warmer part of it (citing fr. 67) and contain a greater proportion of the hot than do the female. At the same time, however, he accepts without hesitation the evidence of fr. 63 as well, that the substance in which is the origin of the child's limbs is divided between the parents.

Longrigg⁴ argued strongly against the notion of a divided womb as Empedoclean, pointing the finger at Galen, who is our source for fr. 67, for having "grossly misused the evidence" and consequently misled certain writers in English to the conclusion that Empedocles had explained sex-differentiation in the case of the child as dependent on the side of the womb into which the seed fell. In an accompanying footnote⁵ he faults Freeman for having adverted to fr. 66 ('the divided meadows of Aphrodite') as evidence of this when, he says, "it is clear from the context that the reference is to the female genitals and not to any difference within the womb."

Fr. 67, the most important piece of evidence on the matter of sex-determination in Empedocles' embryology, has been subjected to a fairly thorough discussion — and so has fr. 66, though the interdependence of their interpretations has not always been underscored, perhaps because it was obvious enough. Either they both referred to a divided womb which is hot and cold in parts or the former refers to a womb which is *in toto* hot or cold at different times, leaving us no choice but to interpret the divided organ alluded to in the latter as the female genitals.

3. J. S. Kirk and J. E. Raven, *The Presocratic Philosophers*, Cambridge, 1957, p. 340.

4. J. Longrigg, "Galen on Empedocles (Fragment 67)," *PhiloLogus*, 108, pp. 297–300.

5. *Ibid.* p. 297, n. 6

If the MS reading of *gaiēs* ('of the earth') or Deichgräber's emendation of it to *gaja* ('the earth') is accepted instead of Diels' *gaster(i)*, fr.67 would be put outside reference to any part of the female anatomy. It would not, however, be beyond influencing Empedoclean embryology through the likelihood of a macrocosm-microcosm analogy and in favour of a divided womb. Consequently also fr.66.

Finally, there is fr.63 with its implications of a third possibility of how the child at conception acquires its sex. Aristotle⁶ observed that the idea of the parents contributing the bodily parts of the child was in open conflict with the notion that heat and cold in the womb decided its sex, since sex involved bodily parts such as the male genitals and the female uterus.

The sexual desire of male and female for each other, which is what leads to reproduction, is the subject of the single verse which constitutes fr.64. The memory which is linked with this is, in my opinion, not (as Plutarch⁷ thought) simply of the pleasures of sex but looks beyond to a state of being, the *holophuē* ('whole-natured') of Empedocles, of which humanity are the sundered halves and which, for him, provided the basis of his psychology of sex.

These fragments must of necessity be treated as a set if we are to discover Empedocles' teaching on the matter of sex-determination in the case of the child. The attempt made here goes over the old question of a division of the womb, but it may be that in a few instances the approach to a detail may be new. I shall be as brief as possible, therefore, and avoid all except the most necessary references in working towards my own opinion on the question.

Fr.65. The absence of the substantive of the adjective *katharōisi* leaves the identity of the receptacles thus described as 'purified' uncertain.

Empedocles is speaking about the womb; of this there is no doubt. But the question is whether he is referring to the womb as a whole, using the plural generically (as *gunaiikes*, 'women', which follows) or to parts of the womb.

There is no disagreement on two other points, i. e. that this purification is effected by menstruation (Diels:⁸ 'nämlich durch die Menstruation') and that what is 'poured' in thereafter is the semen of the male (Bollack:⁹ 'les semence du pere').

6. *De gen. anim.* D 1.764a 1 ff.

7. *Quaest. nat.* 21, 917c

8. *op.cit.* p. 337 n.ad loc.

9. J. Bollack, *Empedocle*, Paris, 1965, 3.2 p. 556 comment on *echuthē*

For the latter Empedocles seems to have used (in a verse or verses preceding) a neuter noun in the plural, perhaps *spermata* ('seeds') so that it could be spoken in terms of *ta men* and *ta de*.

It is in these particles that we have a clue, slim though it be, as to whether the purified receptacles were wombs or parts of the womb. If the *ta men* (which, Diels easily conjectured, looked to a *ta de* in continuation) referred to seed that was poured into a divided womb, the distribution suggests a quantitative one – part of the seed meeting the cold (in the cold part of the womb) and becoming females, part of it meeting the hot (in the hot part of the womb) and becoming males. Such an eventuality would only belong to the birth of twins, but this is vitiated by the use of the plural *gunaikeis* which we have in evidence.

Ta men and *ta de* are better read, then, not as 'some' and 'others' i.e. purely quantitatively, but temporally as 'sometimes' and 'at other times,' a sense in which the latter is also better reinforced by Diels' conjectural *empalin*.

Bollack¹⁰ writes, "Le substantif alors designerait la matrice et l'on aurait comme sens: *dans un ventre purifié (par le sang frais).*" The katharsis is not a purification of the womb by fresh blood, as he thinks; rather, it is the evacuation of the menstrual blood itself (Aristotle:¹¹ *ta katamenia*). It is, according to Aristotle,¹² the flow of this menstrual blood (*tōn katameniōn .. rhusis*) which leaves the womb hot or cold so that, upon the entry of the semen, male children or female children are born.

It must be a paraphrase of Empedocles at this point that Aristotle¹³ gives when he writes that he says that, (of the seed) "some (*ta men*) entering a hot womb become males, some (*ta de*) entering a cold, females, and the cause of the heat and the cold is the flow of the menses, whether it is colder or hotter, older or more recent..."

That which, when the semen meets it cold, yields female children, and when it meets it hot, male children, is the womb; not alternate parts of it but the womb as a whole. Its temperature is determined by the flow of the menses that has occurred and left it 'purified' at the same time. If the flow was cold, it would leave the womb cold, if hot, hot. How the proximity or distance of the date of menstruation affected the temperature of the womb as against the temperature of the menstrual flow that had

10. *loc.cit.* comment on *katharosis*

11. *loc.cit.*

12. *loc.cit.* Philoponus (*De gen. anim. p. 30, 1 ff.*), misreading the fragment and Aristotle, thought male children were created out of purer and hotter blood, females out of the colder; he surely means the menstrual blood.

13. *loc.cit.* He contrasts Empedocles (D 1-763b 30) with those who establish the opposition in the semen itself. See also 765a 8.

preceded is a bit more difficult to sort out but need not bother us here.¹⁴ What is relevant is that the fragment inclines to the notion of the womb as a whole being hot and cold in different circumstances rather than being hot and cold on different sides.

In his criticism of this theory of Empedocles, however, Aristotle¹⁵ points to the fact that male and female twins are often found in the same part of the womb. This might be cited as evidence that Aristotle did know of Empedocles as holding some notion of the womb being divided into hot and cold parts, (as Galen is thought to have believed) which was significant in the matter of the sex-determination of the child at conception. But Aristotle did realize, says Longrigg,¹⁶ that the criticism was also valid against those who held this view and his wording was probably influenced by this consideration. Subsequently, however, Aristotle is found actually contrasting Empedocles with those who held that males were developed in the right side of the womb and females on the left.

Fr.67. The general opinion is that Galen,¹⁷ judging from the words with which he introduces fr.67, thought that Empedocles contributed to the notion of a divided womb. Galen, defending a reading in the *Epidemics* of Hippocrates,¹⁸ writes:

“Male embryos are found produced more often in the parts on the right of the womb, female in the other hollow of it, the left. For it is natural that the hotter be produced in the hotter part of the womb. The male is hotter, as appears from the thickness of his veins and his skin. Men are in general darker than women... However, that the male is conceived in the right-hand part of the womb even other ancients have stated. For Parmenides said thus: On the right boys, on the left, girls. But Empedocles thus’ — and he goes on to cite fr.67.

There is little controversy on verses 2 and 3 of the fragment, which give the distinctive qualities of males arising from their having been conceived in hot surroundings; they are dark, more powerfully built (or, on a variant reading, *andrōdesteroi*, “more manly”) and more hairy. In the case of verse 1 the interpretation pivots largely on the reading of its last word. A fundamental difference is introduced into the relevance of the verse according to whether the word is taken as *gaiēs*, as it appears in the MS (Deichgräber, *gaia*) or *gaster(i)*, following Diels.

14. i. e. in what sense the menstrual flow was ‘older’ or ‘more recent;’ whether he really meant the condition of the blood and not the date of the flow itself, and whether it was hotter if recent, and colder if older or the opposite.

15. *op. cit.*, D 1. 764a 33.

16. *op. cit.*, p. 300.

17. *Ad Hippocr. Epid.* vi. 48.

18. vi. 2.25

It is clear that Galen's reference to the ancients was in support of the detail of "males on the right." His citation of Parmenides is in proof of this. But the fragment from Empedocles cited by him has, from what he gives of it, nothing on the question of the *side* of the womb but on its temperature. There is also the *men... de* contrast which he establishes between Parmenides and Empedocles which cannot be passed off lightly and implies that Empedocles is not evidence for the same thing that Parmenides is. Still, Empedocles, too, is one of the ancients and his evidence must be of relevance to what Galen was saying.

What then is the testimony of Empedocles if it is not of the association of the right of the womb with the male? Is it not of heat with the male?

Both right side and heat were associated with the male by Hippocrates in the passage on which Galen is commenting.¹⁹ There were also those specific male qualities dependent on the heat of the womb rather than on any other peculiarity belonging to its right side. Galen cites Parmenides in support of the association of the male with the right, while he cites Empedocles in support of the association of the male with heat and those male characteristics arising from heat. But while he contrasts the two accordingly, he fails to sort out what each of them is separately testimony for of what Hippocrates had asserted, lumping them both as if they were ancients saying more or less the same thing, i.e. males on the right.

The evidence of Galen's comment leading up to the fragment is then inadequate to justify reading *gaster* in conjunction with *thermoteroi* so as to translate "in the hotter part" of the womb, as against *gasteri*, so as to translate "in the hotter womb." The latter reading and the interpretation flowing from it is in accord with our discussion of fr. 65 above and the testimonia of Aristotle.

But before this there is the reading *gaies* of the MS and Deichgräber's *gaia*, both of which make more or less the same sense out of the verse, to be considered. Aetius²⁰ says that male and female are born according to heat and cold, according to Empedocles. He is not any more specific. But he goes on to add "whence it is said (*historeitai*) that the first males had their origin more (*mallon*) in the east and the south and women in the north."

19. Some Hippocratic treatises make use of Parmenides' theory (cf. *Epid.* ii. 6. 15; *Aph.* 5.48; see *Prorrh.* ii.24) or make some correlations between the male embryo and the right-hand side of the mother's body (see *Aph.* 5.38), but *On Super. fetation* 31 says the right testicle is responsible for male, the left for female children. For some discussion of the views of the ancients see G.E.R. Lloyd 'Right and Left in Greek philosophy,' *J.H.S.*, 82 (1962) p.60 f. and n.19.

20. v.7.1-2

Obviously he has read the verses of fr.67 with *gaiēs* or *gaia* or some such word and gone on to identify the regions of the world which were hotter (and had darker people) and colder respectively. The addition of east is a concession to observation which disturbs the neat twofold division of the world into hotter and colder halves and, consequently, to a clear right and left.

Longrigg,²¹ despite his rejection of the notion of a divided womb in favour of one that is alternately hot and cold in Empedoclean embryology, goes along with this cosmological interpretation of a world divided accordingly. He prefers Deichgräber's reading of *gaia* for the MS's *gaiēs*. On the other hand, Bollack²² writes, *Revenant au texte des manuscrits, je maintiens gaiēs... Le Nord est à gauche et le Sud à droite. Les vers précédents (cf. gar) pouvaient décrire la différenciation utérine des sexes ou la montée au jour des mâles modèles.*" Bollack, it will be seen, accepts an uterine division as well as a geographical division corresponding to it.

Longrigg²³ writes: "The belief that the first men and animals sprang from the earth is a common one throughout the Presocratic period and later, and it is extremely difficult to believe that the corruption of *gaster* to *gaiēs* could possibly have occurred in this particular context. Accordingly, it appears that this was all the evidence Galen could find in Empedocles to support his standpoint."

This is the view of Guthrie²⁴ as well, who, like Longrigg, is conditioned to accept a cosmological interpretation for fr.65 in order to escape an embryological one. Both of them, Guthrie certainly, fall back on Aetius' evidence in their rejection of Galen's apparent representation of the fragment as evidence of a divided womb and in favour of a divided world in Empedocles.

To me the evidence of Aetius looks dubious. I do not like his *historeitai*, "it is marrated" nor the palliative *mallon*, "more" (in the east and the south) nor the inclusion of the east itself with the south as the regions in which the male originated. The origin of the cosmological account must be this selfsame fr.65 with the *gaiēs* reading, about which Aetius himself does not appear to be too comfortable. The notion of a divided earth as Empedoclean can have owed as much to Parmenides, who could have held such a view without inconsistency as much as the notion of a divided womb itself. Parmenides thought males were conceived on the right side of the womb, but with him they were cold, not hot, and consequently, in his cosmological context, received their origin in the

21. *op.cit.*, p.298-299.

22. *op.cit.*, p. 543.

23. *op.cit.*, p.299.

24. W. K. C. Guthrie, *A History of Greek Philosophy* 1. Cambridge, 1962, p.218 and n.5. See also his *In the Beginning*, London, 1957, ch.1 with n.8.

north.²⁵ A misreading of fr.65 could therefore have easily set up Empedocles in opposition to him with the late commentators as much as with recent scholars, if not in the embryological context, in the cosmological.

It is my contention that if Empedocles held the one notion he would easily have held the other also on the basis of the equally well established line of Presocratic thought, as of the earth as mother, of microcosm reproducing the order of the macrocosm. This is what we found in Parmenides. Unfortunately fr. 65 cannot be used twice over in two different readings, even by the most ardent division-advocates.

Those who are for taking fr. 65 cosmologically think it should be assigned to the zoogonical phase descriptive of the rise of living things on the earth. Longrigg²⁶ is for giving it a different number from that of Diels and taking it temporally fairly close after fr. 62 where Simplicius tells us that "whole-natured forms" which rose from the earth were not sexually differentiated.

Bollack²⁷ writes, "Les mâles et les femelles n'étaient pas nés au même endroit. Les premiers hommes sortirent de terre dans les parties chaudes de la terre, les femmes au nord... la sexologie d'Empédocle repose sur le principe de la réparation. Les mâles, plus chauds, marchent vers l'artique et les femmes descendent vers le milieu qui leur est contraire."

With this I find it difficult to agree, for my own view of Empedocles' *holophue* ("whole-natured beings") is not of the nature of Zeller's "unförmliche Klumpen" made of earth and water or embryonic globules of flesh pushed up from the earth to become men in the south and women in the north,²⁸ but, as I have discussed elsewhere,²⁹ complex beings who were sexless because they were bisexed; they even had a sex organ, though not such as is proper to men, and limbs though not of a sexually attractive

25. Arist. *De part. anim.* B 2 648a 25. "Parmenides says that women are hotter than men, and so do certain others, and that it is on account of the heat that women have an excess of blood. But Empedocles says the opposite." The geographical opposition owes itself to the evidence of Aetius (*loc.cit.*) A belief that the first males rose in one part of the earth and the first females in another does not run counter to any known teaching of Parmenides, whereas it does in the case of Empedocles.

26. *op.cit.*, p.300.

27. *op.cit.*, I-Introduction, Paris, 1965, p.212.

28. Zeller-Nestle, *Die Philosophie der Griechen*, 1st ed., pt.2, Darmstadt, 1963, p.987. See Bollack, *loc.cit.* He writes, "Comme la différenciation de l'embryon, entier dès la conception... les embryons géants que sont les typos s'articulent déjà lentement sous terre. Ils bourgeonnent à la surface, munis de leurs membres futurs encore inachevés. 'But see D. O'Brien, *Empedocles' Cosmic Cycle*, Cambridge, 1959, p.203 ff. He will not, however, speculate on their shape.

29. 'Wholenatured Forms and the Erotic Embrace,' *Sri Lanka Journal of the Humanities* Vol. iii nos. 1 and 2, 1977, p.33-62.

form of them. These bisexed double-fold beings, if they gave origin to human beings, did so by sundering in two, one half becoming male, the other female.³⁰ Thus male and female would of necessity have originated together, wherever the phenomenon of human origination occurred.

This is the process in the zoogony of Hate's reign in Empedocles' cosmological cycle. Similarly, in the zoogony of Love's reign, there is no evidence to show that, in this reverse system, the assembly of random parts, foreheads without necks, arms without shoulders and eyes without brows,³¹ occurred in such a way that males and females rose in different regions of the world and not indiscriminately. In fact, in the only reference to sex in this stage, fr. 61 speaks of creations which were "mixed in part from men, in part of female sex, equipped with sterile genital organs."³²

Consequently Diels' emendation of *gaster* for *gaiēs* of the MS, (or Deichgräber's *gaia*, for that matter) is meaningful. But in the light of the discussion above, it must be in the alternative form, in the dative, as *gasteri*, thus agreeing with *thermoterōi* to make the verse translate "for in the warmer stomach there rose that which produced the male."

Empedocles, in his zoogony, seems to have been greatly influenced by the observed fact of sexual attraction and the mysterious feeling of individual inadequacy which brought the sexes to union with each other. This desire of the one for the other, personified by the goddess of sexual love, Aphrodite herself, is universalized by Empedocles in his cosmology as one of the two great powers of Nature which cyclically dominate the universe. His zoogony involves an attempt to give this a biological basis, which also involves his embryology.

The paramount image in this context is, for Empedocles, the tally (*sumbolon*). The notion of a physical division underlies the details expressed not only in fr. 63 but also fr. 64 and beneath them both lies the image of the *sumbolon*.

Fr. 64. When man sees woman the sight evokes in him a memory and a desire. (The same must have been the case with women). The grammar in which Empedocles links the three events consequetively suggests also a close concomitance. The psychological sequence must however be sight, memory, desire, the sight of a member of the opposite sex factitively induc-

30. Aristophanes, in the *Symposium* myth (189d-193d) surely misrepresented the *holophueis* of Empedocles, making them outward-facing dualities; he also took the liberty of introducing other forms than the androgyne. The Orphic Phanes appears to have been inward-facing like Viraj of the *Bṛihadāraṇyaka Upaniṣad*, who took the form of a man and woman in embrace before splitting down the middle to create the sexes.

31. Fr. 57 read with fr. 58-61

32. *Skierois* (Kranz) 'hairy' *steirois* (Diels) 'sterile'. The sterility sees to it that even if the sex organs were present, they were not able to reproduce.

ing a recollection of some experience of the past that was highly pleasurable or, conversely, the deprivation of which is the cause of some present grave distress. I go by the strength of the word *pothos*, which signifies a strong yearning. But what could the nature of that memory be, that (a) is evoked by the sight of the opposite sex and (b) that looks back to an experienced happiness involving the opposite sex which a member of that opposite sex is capable of recreating?

Plutarch³³ took it to be a recollection which had not a shred of metaphysical implications about it. It was, for him, a memory of earlier sexual pleasures evoked by the sight of each other as they fed and herded together, a straightforward *anamnesis . . . tōn aphrodisiōn*.

Quite apart from the infinite regress that this would involve if it were to serve as the inspiration for sexual congress, it pays little heed to the notion of anamnesis with metaphysical, even transcendental, implications used by Empedocles elsewhere and his search for ultimates.

Everything comes into perspective, however, if the memory which is evoked by the sight of someone of the opposite sex and leads to a desire for sexual congress is recognized as a memory of a state in which male and female constituted the two halves of a single being. The anamnesis need not be a clear visualization of that erstwhile condition and private; it could have been a strong subconscious feeling of an universal nature, residual, not from any external experience, but from that state of being itself. Within early Pythagoreanism itself the notion of anamnesis had undergone a degree of sophistication; with Empedocles it was on its way to the Platonic use.

Fr. 63. It is in respect of the composition of the child at conception that Aristotle³⁴ brings in the simile of the tally (*sumbolon*). That which becomes the child's limbs is shared between the two parents; the whole of it comes from neither.

What is remarkable, however, is the verb used by Empedocles in this fragment to describe this original state of division, i.e. *diespastai* ("torn asunder"); there is no mention that it even adverts to the limbs of the child and not any other person. It is Aristotle who assures us that it is the child's.

33. *loc. cit.*

34. *De gen. anim.* A 18 722 b 10. 'For he (Empedocles) says that it is in the male and the female like a tally. The entirety comes from neither one.' This, adds Aristotle, is why women cannot breed by themselves and men and women need cohabitation with each other. Philoponus (*De gen. anim.* p. 166, 24 ff.) expresses the same notion as Empedocles'. This biological necessity does not, however, account for the psychological element implied in fr. 64.

As it stands, then, the fragment seems to describe, not a body that is being put together but rather one that has already suffered the opposite fate - been rent in two, a portion being in the male, a portion in the female.

Because of this I was inclined to the view that the description of the verse applied to man and woman rather than the child - to the origin of man and woman from the bisection of a more primitive being rather than the constitution of a child by a contribution from both parties. The *phusis meleōn* that is torn apart would be of that original being and not of any future child.³⁵

Conceding the evidence of Aristotle, however, we may take it to apply to the child. Even so, Empedocles' use of the verb *diespastai* must be explained. Bollack³⁶ is certainly embarrassed by it. He writes, "N'indique pas nécessairement la division en deux mais suggere plutot la dispersion." Not necessary, but in Empedocles, quite probable, if we are prepared to accept, as Bollack is not, the notion of a devolutionary zoogony in which each successive stage is the result of a fragmentation of the beings of the preceding one. Human children are in the two parents, half and half. The parents are themselves half and half of a more complete being. That being was sexless because he was bisexed. Sex is an emergent factor, emergent with the bisection. The child, similarly, is in a half and half state in the two parents, torn asunder from the point of view of Empedoclean evolution, like the parents. When the parents come together in sex to reconstitute temporarily (as described in fr. 64) their erstwhile unified state, they also reconstitute, with the two halves of the child, an unit like themselves, a human being. What lies "torn asunder" in the parents is this human unit.

The sunbolon simile suggests that what is put together is a single entity which has suffered fragmentation into two parts and not simply that two discrete entities, unrelated to each other as parts, are coming into a new union. The imagery is straightforward with regard to the union of the parents as halves of a whole-natured primitive being; as regards the child, however, the use is anticipatory. It is upon the event of this that the humour of Aristophanes' detail, in the *Symposium* myth,³⁷ of a second subdivision threatened by Zeus if men persisted in their wickedness rests.

35. See Plato, *Symposium*, 191d 4-6. Each of us is a mere broken tally, the result of a bisection, and each of us is in search of his corresponding tally. Other similes of this divided state are eggs cut with a hair, fruit cut for drying and preserving (190d-e) and flat-fish (191d), two of which, when slapped together gave the appearance of a single fish. The *Upaniṣad* compares the halves to the halves of a split pea.

36. *op.cit.* 3.2 p.552; see 1 Intr. p.217. He thinks Plato is misleading us to look for a break in the individual in Empedocles, whereas the separate beings are complete in the same way as the isolated limbs in the zoogony.

37. 190d; see also 193a. They are likened then to the profiles in *basso-relievo* on grave-stelai.

Whether Empedocles himself described a stage in which human beings and other animals would actually exist as half-creatures (in terms of our present physical natures), a stage not only reflected in Zeus' threat but logical in Empedocles' zoogony, I cannot venture to say – though it would be by no means absurd with a man who visualized a stage of life in which foreheads went about without necks, arms without shoulders and eyes without brows. The sunbolon image and the startling use of the verb *diespastai* must look forward to such an eventuality.

Admittedly, the limbs, as contributed by the parents, are not in any actualized form but potential in the seed of the two; whence, not *melea* but *phusis meleōn*.

More relevant to the present study than the features of Empedocles' zoogony is the matter of sex-determination in his embryology raised by fr. 65 and 67. With this fragment, fr. 63, it becomes more complicated. For, asks Aristotle,⁸ how are the two accounts of Empedoclean embryology reconcilable, viz. that the sex of the child at conception is determined by the temperature of the womb at the time and this, that the limbs, in whatever form or state, are contributed by the parents. For genitals and uterus (involved in the sexual make-up of male and female babies respectively) would already be in that parental contribution!

In his *De Generatione Animalium*³⁹ Philoponus gives as of Empedocles the teaching that each of the two parents contributes in infinitesimally minute form a half part of each and every organ. If the womb in which they join to form wholes is hot, the male halves overpower and change the nature of the female halves into their own and a male is born. If the womb is cold, the opposite happens. But Philoponus seems to imply that, in the case of the sex organs, the male contributes the genitals and the female the uterus and not, both of them, half of each; so that, if the male contribution overpowers the female, genitals will prevail over uterus, and vice-versa.

Aristotle seems not to have known of a struggle of this nature. He accuses Empedocles of thinking that the difference between the sexes was one of heat and cold, when he could well observe the great difference all the parts had and of the genitals and uterus. What would happen Aristotle⁴⁰ asks, if two beings, made up of male and female parts respectively, were put into a womb as into an oven, the one with the uterus (female) into a hot, the one without an uterus (male) into a cold? Would it be that the one without an uterus would become female and the one with an uterus male? This, says Aristotle, is impossible.

38. *De gen. anim.* D 1 763b 30 ff.

39. *loc. cit.*

40. *loc. cit.*

It is unfair on the part of Aristotle to have thought of the child here as if it were a baby replete with genitals or uterus being deposited in the mother's womb, like a loaf of bread in an oven, as it would be for us to visualize the two parts of the child in the two parents, as referred to in fr. 63, as two halves of a developed child torn down the middle. The child, in either case, is still in seminal state. What the two parents contribute at intercourse is not *melea*, but, as we remarked before, a *phusis meleōn*.

Philoponus contradicts himself. In the passage cited above, he says both parents contribute one half of each and every organ and that at conception a struggle ensues in which the male or the female contribution prevails (*kratei*) according to whether the womb was hot or cold at the time. In an earlier passage,⁴¹ however, he had said that, according to Empedocles, the father contributes the more vital parts (*ta kuriotera*), such as the heart and the liver, and the mother those that are less vital (*ta akurotera*), bringing in the image of the sunbolon to illustrate their assembly. The element of struggle is absent in this account.

Philoponus' confusion shows that he was not clear about the nature of the contribution of the *phusis meleōn* by either parent. It is not likely that Empedocles himself went into detail on the matter, being satisfied with the general observation that both parents had a share of the child's body. All we may safely assume is that at conception the child had in its *phusis meleōn* the potentiality of developing genitals or an uterus and which of these bourgeoned ultimately depended on the temperature of the womb at the time. I would venture the suggestion with regard to the body as a whole and with deference to the sunbolon imagery, that Empedocles held that the right half of it came from the male and retained a maleness about it, and so with the left half and the female. This may account for some of the evidence and much of the confusion about right and left in Empedoclean embryology.⁴²

Fr. 66. In the light of the foregoing discussion of the other fragments, which showed our inability to accept a division of the womb as a feature of Empedoclean embryology, the female organ referred to as *schistous* (divided) in fr. 66 cannot be the womb but the female genitals.

The fragment is quoted by the scholiast on Euripides' *Phoenissae* vs. 18. Commenting on the dramatist's use of the phrase *mē speire tekṇōn aloka* ('do not seed the furrow of children'), he writes, "Empedocles, the physicist,

41. *op. cit.* p. 27, 4 ff. and 8 ff.

42. Censorinus (*De die nat.* vi. 6) interprets Empedocles as having said that males were born of semen that came from the father's right side (*ex dextris partibus profuso semine*). Philoponus (*op. cit.* p. 166, 24 ff.) says that Empedocles claimed that he was half woman in his heart and head and all else; that everything was half female and half male. This is general and not peculiar to him alone. Just as his *holophueis* reflected the androgynism of Virāj (Puruṣa) of the Indian cosmic mythology, Empedocles seems to have had an *ardhanārīśvara* concept of human beings themselves that was Siya-like.

speaking allegorically, talks of "the divided meadows of Aphrodite" in which the birth of children is. But Euripides, saying the same thing, avoided the shameful thought and used homely words and a metaphor from labour, speaking of "seeding and furrow."

The reading *leimōnas* ('meadows') appears in two MSS. (A and T) as against *limōnas* and *limenas* ('harbours') in two others (M and B. Schwartz respectively), the latter reading being preferred by those who see in this fragment reference to, and hence, evidence of, a divided womb.⁴³

Obvious reasons argue for a preference of the reading *schistous leimonas* ('divided meadows') i.e. the female genitals, in this context as against *schitous limenas* ('divided harbours') i.e. a partitioned womb. These reasons are quite apart from the greater eligibility of the former for association with Aphrodite. Firstly, the reference in Euripides, the *teknon aloka* ('furrow of children'), to which the scholiast saw a parallel in Empedocles' phrase, is, without doubt, the female genitals. Nobody contests that. Secondly, it better explains the scholiast's embarrassment, his reluctance to call a spade a spade, and his commendation of Euripides for having avoided 'the shameful thought' (*ennoian tēn aischron*) by the considerate use of metaphorical language. Finally, the cleft nature of the female genitals is a physical fact as against the hypothetical division of the womb, which requires the support of other evidence from the embryology of Empedocles to win preference over the former in the face of the other considerations as well.⁴⁴ The foregoing review of the relevant fragments and other evidence has failed to reveal any such support.

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43. E. Bignone (*Empedocle*, Torino, 1916, pp. 452-3), while accepting a divided womb and a divided earth on the principle of microcosm reproducing macrocosmic features with respect to fr. 67, takes fr. 66 (*bifidi prati . . . di Afrodite*) "in senso erotico," as we find Silenus using *Itinōn* in Euripides' *Cyolops*, 170 ff. But see, for example, Bollack, *op. cit.*, p. 540, comment on *schistous leimōnas*: "De toute façon, la fission et le doublement répondent à la dualité des contraires."

44. *Leimōn*, any moist, grassy place and used, even without *schistos*, as metaphor for the female Pudenda, as by Silenus. *Limēn* has similarly been used for the womb, see Sophocles *Oed. Tyr.* 1208.