

# Empedocles on the Inheritance of Parental Traits by Offspring\*

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The paper deals with the embryological teaching of Empedocles, the ancient Greek philosopher from Acragas, who lived in the 5<sup>th</sup> century BC. The article is focused on the mechanisms by which children inherit their parents' features in the doctrine of Empedocles. The available fragments and evidence on the teachings of early Greek philosophers often provide distorted and sometimes contradictory information. This paper attempts to carefully analyze all the evidence regarding inheritance mechanisms and bring it into an agreement with each other without resorting to abandoning some of the fragments. The most extensive information is provided to us by Censorinus, the 3<sup>rd</sup> century Roman writer, who in 238 AD wrote the treatise *De die natali* to congratulate his patron Caerelius on his 49<sup>th</sup> birthday. The article comments in detail on the testimony of Censorinus (*De die natali*, 6. 6 = 31 A 81 DK) concerning Empedocles' views on the inheritance of parental traits by children, as well as the contradictory messages by Aetius (Aët. 5. 11. 1 = A 81) and Aristotle (*De gen. an.* I, 18, 723a23; IV, 1, 764a1f.; 765a 8 = 31 A 81 DK). The analysis conducted by Erna Lesky in her famous monograph of 1950 was expanded and supplemented in this article. In addition, the study takes into account the evidence of cases where children do not resemble their parents. Empedocles justifies these cases by popular superstitions, which were widespread in Europe up to the 20<sup>th</sup> century.

*Keywords:* Presocratic philosophy, Empedocles, embryology, inheritance theory.

When trying to restore Empedocles' understanding of the mechanism of inheritance of parental traits by children, we face a number of difficulties. The most extensive information is provided to us by Censorinus, the 3<sup>rd</sup> century Roman writer, who in 238 AD wrote the treatise *De die natali* to congratulate his patron Caerelius on his 49<sup>th</sup> birthday. In this work, he describes various ancient views on human life from conception to death, including chapters on spermatology, embryology, and gynecology. His main source (*fons uberrimus*), as documented by H. Diels, was the lost treatise by Varro, probably "*Tubero de Origine humana*".<sup>1</sup> Varro presumably might have used the so-called *Vetusta placita* (1<sup>st</sup> century BC), the doxographic compilation, which is traced back to the work of Theophrastus, Aristotle's pupil and successor. *Vetusta placita* was a richer version of the *Placita*, which was used, as H. Diels thought, by Aetius (whose testimony on views of Empedocles we will discuss later).<sup>2</sup> Mansfeld and Runia note that such simplification and reduction to a single source for Censorinus and Aetius is "*simplistic*", motivated by "19<sup>th</sup>-century fond-

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<sup>1</sup> Diels 1879, 186–189.

<sup>2</sup> *Ibid.*, 186–198.

ness for *Einquellentheorie*”.<sup>3</sup> Consequently, it is crucial to consider the amount of “mediators” between the treatise of Empedocles and the retelling of his views by Censorinus. Censorinus writes about views of Empedocles on the inheritance by children of the parental features the following:

ex dextris partibus profuso semine mares gigni, at e laevis feminas Anaxagoras Empedoclesque consentiunt. Quorum opiniones, ut de hac specie congruae, ita de similitudine liberorum dispariles; super qua re Empedocles, disputata ratione, talia profert (Sallmann; Empedoclis... talis profertur mss). Si par calor in parentum seminibus fuit, patri similem marem procreari; si frigus, feminam matri similem. Quodsi patris calidius erit et frigidius matris, puerum fore qui matris vultus repraesentet: at si calidius matris, patris autem fuerit frigidius, puellam futuram quae patris reddat similitudinem (*De die natali*, 6. 6 = 31 A 81 DK).

“Anaxagoras and Empedocles agree that if the seed is poured out on the right side, then men are born, and [if the seed is poured out on the left side], then women are born. As their opinions are similar on this point, they differ on the similarity of the children [with the parents]. Empedocles, after discussing the reasons for [the similarity], states the following: if the heat in the seeds of the parents is equal, then a boy is born, similar to the father; if [is equal to the amount of] cold, then [is born] a girl similar to the mother. If the father’s seed is warmer and the mother’s is colder, then a boy will be born with the mother’s features. And if the mother’s seed is warmer and the father’s is colder, a girl like the father will be born.” (Transl. mine — A. P.)

Censorinus’ testimony creates several difficulties at once. First, he attributes to Empedocles the teaching of Anaxagoras, according to which the sex of the embryo is determined before conception, namely, whether the male seed comes from the right or left side of the body.<sup>4</sup> This contradicts the fragments of Empedocles (B 65; 67) and the references by Aristotle (*Gen. an.* I, 18, 723a23; IV, 1, 764a1f.; 765a 8 = 31 A 81 DK, cf. Aët. V, 7, 1 = 31 A 81), according to which Empedocles explains the differentiation of sex by the temperature of the womb at the time of conception.<sup>5</sup> Temperature of the womb depends on

<sup>3</sup> Mansfeld, Runia 2020, 1748.

<sup>4</sup> Aristotle refers to Anaxagoras as one of the thinkers who believe that the seed is secreted only by the male body, while the female provides a place for the development of the fetus, and that the sex of the embryo is determined already in the seed, that is, before conception, namely, whether it comes from the right or left part (*Gen. an.* IV, 1, 763 b 30–36 = 59 A 107 DK). This may mean that the sex of the child depends on which part of the male genitals, right or left, the seed comes from. However, this view is further attributed by Aristotle specifically to the little-known Leophanes (*Gen. an.* IV, 1, 765 a 23–31), so it can be supposed that Anaxagoras held a more general view that the sex of the child is determined by the separation of the seed from the right or left part of the male body. Aristotle, in any case, argues against the proponents of this theory (except for Leophanes) as if at issue is the origin of the seed from the right or left part of the entire male body (*Gen. an.* IV, 1, 765 a 35 — b 4). But Censorinus relates Anaxagoras to those who believe that the seed is secreted by both parents (5, 3 = 24 A 13; 6, 8 = 59 A 111), see Lesky 1950, 55, Anm. 1 (E. Lesky rightly gave preference to the testimony of Aristotle, objecting to M. Wellmann). Therefore, it is likely that Censorinus puts the same meaning in the teaching that he attributes together to Anaxagoras and Empedocles, according to which the sex of the child is determined by whether the seed comes from the right or left side of the body of *both* parents.

<sup>5</sup> Aristotle opposes the teaching of Empedocles that the sex of the embryo is determined by the temperature of the womb at the time of conception (and this temperature is determined in turn by the fact that the monthly periods are more or less hot and more or less recent at the time of conception [*Gen. an.* IV, 1, 764 a 1–7]), to the position of Anaxagoras and some other “physiologists” about determining the sex of the embryo before conception (the seed is originated from the right or left part of the male body).

menstruation, right after which the womb becomes hotter (Arist., *Gen. an.* 764a1–6).<sup>6</sup> Probably, Censorinus confused the teachings on the dependence of sex on the origin from the right or left part of the parent organism with the teachings on the dependence of sex on the formation of the embryo in the right or left part of the womb, and the latter with the formation of it in the right or cold part.

Both errors have parallels. As for the first one, in the text of Aristotle, immediately after the presentation of the views of those, who think that sex is determined before conception by the origin of the seed from the right or left part of the male organism, there is an addition that contradicts such view: “male organisms are located in the right side of the womb, and female organisms are in the left” (*Gen. an.* IV, 1, 763 b 36–37). A. Peck, in his edition of *De generatione animalium*, excludes this part of the text as an interpolation.<sup>7</sup> However, further Aristotle uses his own observation based on animal autopsies as an argument against the view that sex is determined before conception: the female embryo is found in the right part of the womb, and the male, on the contrary, in the left (*Gen. an.* IV, 1, 765 a 17–21). A. Peck also excludes this passage since it seems to him that it cannot serve as a refutation of the belief of the determination of sex before conception.<sup>8</sup> But it is unlikely that the interpolator in two places consistently attributed to the proponents of such view the idea of the dependence of sex on the part of the womb in which the fetus develops. It is more likely that at least some of the supporters of this view (whom Aristotle has in mind) argued that the consequence of whether the seed comes from the right or left side of the body will be whether the seed ends up in the right or left side of the womb.<sup>9</sup> It is possible, therefore, that this is how Censorinus understood the theory of Anaxagoras and, as a result, brought it closer to the teaching of Empedocles about the dependence of sex on the state of the womb.

The second error of Censorinus was that he assumed that the dependence of sex on the descent of the seed from the right or left part of the body means the same as the dependence on conception in the right or left part of the womb. He also attributed a similar view to Empedocles. This mistake is explainable. Censorinus attributes to Empedocles the widespread understanding of the right side of the womb as hotter than the left one. So, at any rate, does Galen (*In Hippocr. Epid.* VI, 48), quoting Empedocles (B 67).<sup>10</sup> He reports that the male embryo arises in a hotter womb, and the female in a colder one. Galen’s interpretation is that there are the hotter and colder parts of the womb, and these, in turn are understood by him as the right and left parts, respectively.<sup>11</sup>

Thus, this first part of the testimony of Censorinus has no value for the teaching of Empedocles,<sup>12</sup> but it cannot be considered mere speculation. It is more likely that mis-

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<sup>6</sup> The hotter womb after menstruation results in male fetus, the colder one — in female fetus, see Wright 1981, 219.

<sup>7</sup> Peck 1942, 373, n. c.

<sup>8</sup> *Ibid.*, 382, n. b.

<sup>9</sup> Aetius attributes a similar theory to Parmenides and Anaxagoras (Aët. 7, 4 = 28 A 53 DK).

<sup>10</sup> On the textual problems of this fragments, see Deichgräber 1930; Longrigg 1964; Wenkebach, Pfaff 1965; Wright 1981, 220.

<sup>11</sup> Aristotle himself considers it certain that the right side of the body is warmer than the left (*Gen. an.* IV, 1, 765 b 2–3). M. Thiessen (2018, 309) mistakenly attributes to Empedocles Galen’s view and notes that sex of the embryo depends on whether the seed comes from the right or left side of the body.

<sup>12</sup> This is agreed by Lesky and G. Lloyd (1991, 39, n. 19), who rejects this evidence, as it contradicts the doctrine of the dependence of sex on the temperature of the womb, and by W. K. C. Guthrie (1965, 78, n. 1).

understandings have arisen due to the reduction and simplification of the original statements of theories, which were quite complex.

More difficult is the second part of the evidence, which explains the child's resemblance to the father or mother. Lesky notes that, on the one hand, this reasoning corresponds to the general approach of Empedocles: like his theory of the formation of sex, it operates with the concepts of heat and cold. But, on the other hand, it contradicts this theory: according to Censorinus, the temperature of the womb does not play any role in determining sex; the sex is determined solely by the temperature of the seed of both parents.<sup>13</sup>

Lesky makes this contradiction clear by using the following diagram. If we denote the male with the letter M, the female with F, the heat of the seed through "+", the cold of the seed through "-", the similarity with the father — m, and with the mother — f, then according to the theory of Censorinus we get the following four combinations:<sup>14</sup>

1. M <sup>+</sup> F <sup>+</sup>	2. M <sup>-</sup> F <sup>-</sup>	3. M <sup>+</sup> F <sup>-</sup>	4. M <sup>-</sup> F <sup>+</sup>
Mm	Ff	Mf	Fm

From the diagram it can be seen that according to Censorinus, the definition of sex depends on the temperature of the male seed, and the similarity of children and parents depends on the temperature of the female seed. This, in turn, contradicts the theory of Empedocles about the definition of sex as presented by Aristotle.<sup>15</sup> Sex is determined by the temperature of the womb at the time of conception. If the seed enters a cold womb, it turns out to be a girl; if it enters a warm womb, it turns out to be a boy. The theory reported by Aristotle is supported by the words of Empedocles himself.<sup>16</sup> The seed in this theory does not matter in determining the sex.

Thus, the first condition in the Censorinus' testimony (sex depends on the temperature of the father's seed) does not work for Empedocles' theory. If we correlate the conditions that the Censorinus specifies with the factors for determining sex, we find the following: the first and third combinations will be possible only if the seed gets into a warm womb, and the second and fourth are possible if it gets into a cold one. If the cold seed of the father and mother (combination #2) or the cold seed of the father and the warm of the mother (combination #4) fall into the warm womb, then, according to the testimony of Aristotle, a boy should be born, while according to Censorinus in both cases there will be a girl. And vice versa: if we apply combinations #1 and #3 to a cold womb, then according to Aristotle a girl should be born, but according to Censorinus it will be a boy.

For these reasons, Lesky rejects the evidence of Censorinus, believing that it reflects someone's later teaching, in which the Empedocles' theory of inheritance of the sex was supplemented by the cross-inheritance of the parents' features.<sup>17</sup> She compares it to Parmenides' testimony on the cross-inheritance of parental features (Aët. V, 11, 2 = 28 A 54 DK), in which she also sees an anachronism.<sup>18</sup>

<sup>13</sup> Lesky 1950, 36–37.

<sup>14</sup> Ibid., 37.

<sup>15</sup> *Gen. an.* IV 1. 764a1f. = 31 A81 DK.

<sup>16</sup> *Arist. Gen. an.* I. 18. 723a 23 — b3 = 31 B 65.

<sup>17</sup> Lesky 1950, 38.

<sup>18</sup> Ibid., 44–45.

Lesky is certainly right that the evidence of Censorinus looks as if the sex (as well as the similarity) is determined solely by the temperature of the seeds, but not the womb. However, it should be noted that this part of Censorinus' testimony, in his own words, is not devoted to the determination of the sex but to the appearance of the similarity of the infant with one of the parents. Although Empedocles' teaching on the determination of sex in the first part of the testimony is greatly distorted, it must be assumed that sex, according to Censorinus, is already determined by factors that have nothing to do with the temperature of the seed. In addition, the testimony of Aetius, despite its brevity and ambiguity, confirms that according to Empedocles, the sex of the embryo was determined by the ratio of the temperature of the seeds of both parents.<sup>19</sup>

In fact, the four cases that Censorinus discusses in the second part of the testimony are quite consistent with Empedocles' teaching on the definition of sex as presented by Aristotle. Suppose the sex of the child is already determined by the hot temperature of the womb as male. In that case, options (1) and (3) are possible: if the seeds of both parents are hot, then a boy similar to the father will arise, and if they are opposite in temperature (the father's seed is hot, and the mother's is cold), then a boy similar to the mother will be born. Suppose the sex is determined by the temperature of the womb as female. In that case, options (2) and (4) are possible: in the case of cold seeds of both parents, a girl similar to the mother will be born, and if the father's seed is cold and the seed of the mother is hot, there will be a girl similar to the father.

These options do not contradict what Aetius reports (Aët. 5. 11. 1 = A 81):

πόθεν γίνονται τῶν γονέων αἱ ὁμοιώσεις καὶ τῶν προγόνων; Ἐ. ὁμοιότητος γίνεσθαι κατ' ἐπικράτειαν τῶν σπερματικῶν γόνων, ἀνομοιότητος δὲ τῆς ἐν τῷ σπέρματι θερμοσίας ἐξαιτισθείσης.

“Where does the resemblance to parents and more distant ancestors come from? Empedocles teaches that similarities arise from the predominance of the seed [of the related parent], and dissimilarities [arise] when the heat contained in the seed evaporates.” (Transl. A. Pimenova.)

We must assume that “similarity” refers to the similarity of a child with a parent of the same sex. The similarity of the boy to the father and the girl to the mother is explained by the victory of the seeds of the related parent (options 1 and 2). When equally hot and equally cold seeds of both parents are combined (in the hot and cold womb, respectively), a boy similar to the father is born in the first case and a girl similar to the mother in the second. The seed of each parent wins in both cases thanks to the “help” from the temperature of the womb.<sup>20</sup>

<sup>19</sup> According to Lesky, the statement of Aristotle (*Gen. an.* IV, 3, 769 a 17–19) confirms that attempts to explain the similarity of the boy with the mother, and the girl with the father, go back not to Empedocles and Democritus, but to their unknown followers. However, Aristotle says this: unlike those who explain sex by the quantitative predominance of the male or female seed (these theorists cannot explain the cross-inheritance of the properties of the parents, since they also determine the sex of the child by the predominance of the corresponding seed, and apparently do not try to do this), those who define sex, like Empedocles and Democritus, explain cross-inheritance, however, in an impossible way. Aristotle definitely says “like Empedocles and Democritus” here, not because he means the followers of Empedocles and Democritus, but simply because he wants to combine the theories of both. This passage rather confirms that Empedocles and Democritus themselves explained cross-inheritance, and their explanations were known to Aristotle.

<sup>20</sup> H. Diels suggested that the “predominance” in Aetius' testimony does not mean the quantitative predominance of the seed, as in Alcmaeon, but its predominance over the other in terms of the amount

The dissimilarity of a boy with his father and a girl with her mother is explained by the loss of warmth by the seed of the related parent. In the first case, in the hot womb, the hot seed of the father partially loses heat under the influence of the cold seed of the mother, and thus a boy similar to the mother is obtained (option 3). In the second case, on the contrary, in a cold womb with a cold seed of the father and a hot seed of the mother, the mother's seed partially loses heat, and a girl similar to the father is obtained (option 4).<sup>21</sup> The mention of "heat loss" by Aetius suggests that the "strong" factor determining the similarity in the conflict of temperatures of both seeds in Empedocles' theory was the hot temperature of the seed, i.e., its high activity, which for a female seed is rather an anomaly.

One possible objection to such a reconstruction is that Empedocles' theory does not consider all possible variants: the same combinations of seeds can occur at the opposite temperature of the womb. If this temperature defines the sex as male, then options (2) and (4) are not taken into account, and if the sex is determined as female, then options (1) and (3) are omitted. However, Empedocles could simply ignore the cases when two equally hot seeds or two equally cold ones fall into the opposite womb in terms of temperature. In this case, most likely, conception either does not occur at all since the environment is not favorable for both seeds, or the seeds acquire the temperature of the womb (heated or cooled) and are in equilibrium, that is, options (1) or (2) arise. The situation is more complicated when the hot seed of the father and the cold seed of the mother are in the cold womb (5), or the cold seed of the father and the hot of the mother are in the hot womb (6). Perhaps Empedocles considered that case (5) is equivalent to case (4) — a girl will be born who looks like the father, and (6) is equivalent to (3) — a boy who looks like the mother — on the principle that Aetius suggests: "the hotter seed dominates in determining the similarity with the related parent." And so, Empedocles might as well have omitted to mention these options. However, it cannot be firmly excluded that Empedocles' theory was more complex and took into account not only the similarity of children with their parents in general but also various aspects of this similarity. It should be remembered that each of the parents provides only "half" of their features in each of the seeds (the theory of "symbols," see Arist. *Gen. an.* A 18. 722b10 [= B 63]), and therefore the combinations of these features can be different: the child can resemble one of the parents, but also both (some features are similar to one, others to the other). In addition, Empedocles' theory took into account the similarity with more distant ancestors (Aët. V 11, 1).

Apart from the evidence of the inheritance of children from their parents, Aetius writes about how Empedocles explained the cases when children are born unlike their parents (Aët. V 12, 2 = A 81):

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of heat (Diels 1879, 193). M. Wellmann, following Diels, corrected the text to κατ' ἐπικράτειαν <τῆς θερμασίας> τῶν σπερματικῶν ῥοιῶν (Wellmann 1929, 316). In itself, such an understanding is possible, but it contradicts the second half of the testimony: if the child is similar to the parent whose seed is warmer, then why further explain his dissimilarity with the other parent? And what does the loss of heat by one of the seeds mean in this case?

<sup>21</sup> Lesky (1950, 38) believes that in case (3) Aetius' testimony contradicts Censorinus: according to Aetius, a colder female seed should lead to dissimilarity with the mother, and according to Censorinus, a boy appears, but similar to the mother. However, Aetius does not speak of a colder seed, but of a seed that has lost some of its heat, that is, that has cooled in a cold womb. An issue is, of course, the "initially" hot seed: it is "dominant" according to Aetius and will determine the similarity with the corresponding parent at the opposite temperature of both seeds.



πῶς ἄλλοις γίνονται ὅμοιοι γεννώμενοι καὶ οὐ τοῖς γονεῦσιν; Ἐ. τῆι κατὰ τὴν σύλληψιν φαντασίαι τῆς γυναικὸς μορφοῦσθαι τὰ βρέφη· πολλάκις γὰρ ἀνδριάντων καὶ εἰκόνων ἠράσθησαν γυναῖκες καὶ ὅμοια τούτοις ἀπέτεκον.

“Why are [children] born like other people and not like their parents? Empedocles teaches that fetuses are shaped according to the mother’s imagination at the time of conception. So, women often fell in love with statues and pictures and gave birth to children similar to them.” (Transl. A. Pimenova.)

The belief that the mother’s impressions during pregnancy can affect the appearance of the unborn child was widespread not only in Greece and Rome<sup>22</sup>, but also around the world. J. Ballantyne, referring to the study of G. Ploss, writes that this belief was found in India, China, South America, West Asia, and East Africa.<sup>23</sup> The doctrine of the influence of the mother’s imagination (*imaginatio gravidarum / vis imaginativa / imagination maternelle / Einbildungskraft / Versehen*) was widespread even in the 18<sup>th</sup> century. As M. Stol notes, “doubts first raised” only in 1727 by James Blondell, but in the 20<sup>th</sup> century this theory still had its followers.<sup>24</sup>

Thus, according to Empedocles, the similarity of the embryo to the parent is determined by the predominance of the temperature of the seed of this parent. In this case, the colder seed can “cool” the seed of the other parent. Four combinations of inheritance of traits are possible, which take into account the determination of sex, depending on the temperature of the womb at the time of conception:

1. If the equally warm seeds of the mother and father fall into the hot womb, a boy who looks like his father is developed.
2. If the equally cold seeds of the parents fall into the cold womb, then a girl will be born, similar to the mother.
3. If the father’s seed is hotter than the mother’s seed and they find themselves in a warm womb, then a boy will turn out to be similar to the mother (under the influence of the “cooling” effect of the temperature of the mother’s seed).
4. If the mother’s seed is hotter than the father’s seed and they end up in a cold womb, then a girl similar to the father will be born (under the influence of the “cooling” effect of the temperature of the father’s seed).

If combination #3 is in the cold womb, then you will get combination #4 (a girl who looks like her father). If the mother’s seed (#4) is hot and they end up in a warm womb, then a boy similar to the mother (#3) will turn out.

Cases, where the parents’ seeds were equally hot in a cold womb or equally cold in a warm womb, may not have been taken into account by Empedocles. Or we can assume that conception does not occur at all in this case. For clarity, I present the following di-

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<sup>22</sup> Augustine (*Contra Iulian*. V. 14. 51), with reference to Soranus, reports that Dionysius of Syracuse (possibly, the Younger) hung an image of a handsome man in front of his pregnant wife. Soranus himself (*Gynaec*. I, 39) believed that women who look at monkeys during pregnancy give birth to children similar to them. Galen was of the same opinion (*De theriaca ad Pisonem liber*, 11). Porphyry of Tyre (*Ad Gaurum*, 5.4; 5.5.1) describes this process, where “it is the mother’s soul acting as demiurge, that is responsible, after the moment of conception, for forming the fetus” (Marx-Wolf 2018, 9).

<sup>23</sup> Ballantyne 1897, 24.

<sup>24</sup> Stol 2000, 152.

agram, where the sign next to the combination number indicates the temperature of the womb at the time of conception (“+” hot, “-” cold):

1 <sup>+</sup>	2 <sup>-</sup>	(1) <sup>-</sup>	(2) <sup>+</sup>	3 <sup>+</sup>	4 <sup>-</sup>	5(=4) <sup>-</sup>	6(=3) <sup>+</sup>
M <sup>+</sup> F <sup>+</sup>	M <sup>-</sup> F <sup>-</sup>	M <sup>+</sup> F <sup>+</sup>	M <sup>-</sup> F <sup>-</sup>	M <sup>+</sup> F <sup>-</sup>	M <sup>-</sup> F <sup>+</sup>	M <sup>+</sup> F <sup>-</sup>	M <sup>-</sup> F <sup>+</sup>
Mm	Ff			Mf	Fm	Fm	Mf

## References

- Aristotle. *Generation of Animals* / Translated by A. L. Peck. Loeb Classical Library 366. Cambridge, Harvard University Press, 1942.
- Ballantyne J. W. *Teratogenesis: An inquiry into the causes of monstrosities*. Edinburgh, Oliver and Boyd, Tweeddale Court, 1897.
- Deichgräber K. [Rez.] Ernst Wenkebach. Beiträge zur Textgeschichte der Epidemieinkommentare Galens. *Gnomon* 1930, Bd. 6, H. 7, 368–376.
- Diels H. *Doxographi Graeci*. Berolini, G. Reimer, 1879.
- Guthrie W. K. C. *A History of Greek Philosophy*. Cambridge, Cambridge University Press, 1965, vol. II.
- Lesky E. Die Zeugungs- und Vererbungslehren der Antike und ihr Nachwirken. *Abhandlungen der Akademie der Wissenschaften und der Literatur in Mainz, Geistes- und Sozialwissenschaftliche Klasse*, Jg. 1950, Nr. 19, Weisbaden, Steiner, 1950.
- Longrigg J. Galen on Empedocles (fragment 67). *Philologus* 1964, 108, 297–300.
- Lloyd G. E. R. *Methods and Problems in Greek Science: Selected Papers*. Cambridge, Cambridge University Press, 1991.
- Mansfeld J., Runia D. *Aëtiana V: An Edition of the reconstructed text of the Placita with a commentary and a collection of related texts. (4 vols)*. Philosophia antiqua, vol. 153/1. Leiden — Boston, Brill, 2020.
- Marx-Wolf H. Living Plants, Dead Animals, and Other Matters: Embryos and Demons in Porphyry of Tyre. *Preternature: Critical and Historical Studies on the Preternatural* 2018, 7 (1), 1–26.
- Stol M. *Birth in Babylonia and the Bible: its Mediterranean setting*. Groningen, STYX Publications, 2000.
- Thiessen M. The Legislation of Leviticus 12 in Light of Ancient Embryology. *Vetus Testamentum*. 2018, 68 (2), 297–319.
- Wellmann M. Spuren Demokrits von Abdera in Corpus Hippocraticum. *Archeion* 1929, 11 (4), 297–330.
- Wenkebach E., Pfaff F., Galeni in Hippocratis Epidemiarum librum VI commentaria I–VIII. Berlin, 1956 (CMG V 10, 2, 2).
- Wright M. R. *Empedocles: The Extant Fragments*. New Haven, Yale University Press, 1981.

## Эмпедокл о наследовании детьми черт родителей

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В статье рассматривается эмбриологическое учение Эмпедокла, древнегреческого философа из Акраганта, жившего в V в. до н.э. Доступные фрагменты и свидетельства об учениях ранних греческих философов часто содержат искаженную, а иногда и противоречивую информацию. В этой статье предпринята попытка тщательно проанализировать все свидетельства, касающиеся механизмов наследования детьми черт родителей в учении Эмпедокла, и привести их в соответствие друг с другом, не прибегая к отказу от некоторых фрагментов. Наиболее полная информация дошла до нас



через Цензорина, римского автора III в. н.э., в его трактате «О дне рождения» (*De die natali*), созданном в подарок его патрону на 49-й день рождения в 238 г. н.э. В этой работе Цензорин описывает древние теории, касающиеся различных аспектов человеческой жизни от зачатия до смерти, включая главы о сперматологии, эмбриологии и гинекологии. В статье подробно комментируется свидетельство Цензорина (*De die natali*, б. 6 = 31 А 81 DK), касающееся взглядов Эмпедокла на наследование детьми черт родителей, а также противоречащие этому сообщения Аэция (Aët. 5. 11. 1 = А 81) и Аристотеля (*De gen. an.* I, 18, 723a23; IV, 1, 764a1f; 765a 8 = 31 А 81 DK). В работе был расширен и дополнен анализ свидетельств Цензорина, Аэция и Аристотеля, проведенный Э.Лески в ее знаменитой монографии 1950 г. Исследование также учитывает случаи, когда дети рождаются непохожими на своих родителей. Эмпедокл объясняет такие случаи народными суевериями, в которых решающую роль играло воображение матери во время беременности. Такое верование получило название *vis imaginativa* или *imaginatio gravidarum* и было распространено в Европе до XX в.

*Ключевые слова:* досократическая философия, Эмпедокл, эмбриология, теории наследования признаков.

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