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## COLOUR PERCEPTION IN PLATO'S *PHAEDO* AND DEMOCRITUS' TREATISE ABOUT COLOURS

Our conception of *Phaedo*'s artistic world will not be perfect if we do not take into consideration the understanding of colours in the work according to the colour perception in antiquity. Here we need to appeal to Democritus' treatise about colours, which is described in detail (and criticized at the same time) by Aristotle's disciple Theophrastus.

Democritus marked out four original, simple colours. They are white, black, red, and yellowish green. The rest of colors were considered as various combinations of the four elements.

As A. Losev explains, "According to Democritus' Treatise colour is a touchable subject having suitable features and at the same time it consists of physical atoms that can be palpated. The method of making the resemblance between subjects and colours creates the picture of coexistence and interaction of physically touchable atoms".<sup>1</sup>

As experts note, the consequent implementation of the atomism principle resulted in some striking peculiarities of approaching to colors. It was well revealed in Plato's *Timaeus*.<sup>2</sup> In our opinion, ancient, and namely Democritus' understanding of colors is clearly seen in *Phaedo* as well.

This work of Democritus is evaluated quite critically but the logical shortcomings of the doctrine and the wrong interpretation of colour phenomenon by Democritus is not so much relevant to us, as it is not the subject of our research. We shall simply bring Democritus' treatise as the evidence of the

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<sup>1</sup> Лосев А. Ф., Принципы античного цветоведения. История античной эстетики, М. 1963, 488.

<sup>2</sup> *op. cit.* 488.

subject perception of colours because, to our mind, there is its analogy in *Phaedo*.

When Socrates describes the true earth he notes the variety of colours existing here but mentions only three of them: λευκή αἰούρη, crusoeidh (*Phaedo*, 110 c 3-4).

"λευκή" is usually translated as "white". It is quite a conditional translation because as early as Homer times, with the word Greeks expressed everything that was clear, distinct, transparent, or simply something that is calm, healthy, pleasant.<sup>3</sup> Democritus associated the white colour with "radiance" and "transparency." Theophrastus criticized Democritus for confusing these two notions with the white colour. As to Losev, he thinks that this difference is not clearly perceived in antiquity either by Democritus or by Plato.

It is worth mentioning that "radiance," "splendor" was something divine for Democritus. The philosopher saw it in all colours – in golden, purple, and even in black.

As regards to the word αἰούρη, it can be translated as purple, rich red. In Democritus' treatise another word (πορφύρου-) is used to denote the given colour but it does not bear much importance.

According to Democritus purple most of all contains red, has less white and very little black... The radiance and the transparency of the given colour shows the presence of white in it.

Democritus thinks that crusoeidh or golden consists of red and white. The latter gives some radiance to the golden colour though the red colour is more essential for the given one.

Plato notes: ἡ καὶ τὰ ἐνθάδε λίθια εἶηαι ταῦτα τὰ ἀγαθὰ μὲν ἡ σαρδία τε καὶ ἰάσπιδας καὶ σμαράγδους καὶ πάντα τὰ τοιαῦτα... τὴν δὲ γῆν αὐτὴν κεκοσμησάτω τούτοις τε ἀπασὶ καὶ ἐπιτὶ crusw/ τε καὶ ἀργύρω/ καὶ τοῖς αἰοῖς αὐτοῖς τοῖς αὐτοῖς (it is from these [true earth] that the little stones we value, sardian stones, jaspers, emeralds, and all such, are pieces... But the true earth is adorned with all these things, and with gold and silver also, and with the other things of that kind as well) (*Phaedo*, 110 d 7-e 1; 110 e 6-111 a 1).<sup>4</sup>

It is worth mentioning that that sardian stone, jasper and emerald give rich range of colours. Sardian stone is red or orange, emerald is green, and jasper is a collective name of certain minerals that are characterized by their hardness and variety of colours. Describing various gems Plato shows us a highly coloured general picture but mentions only three colours. According to De-

<sup>3</sup> op. cit. 488-489.

<sup>4</sup> We use the English translation of *Phaedo* made by D. Gallop (see: Plato, *Phaedo*, Translated with notes by David Gallop, Clarendon Press, Oxford, 1975).

Democritus' Treatise these colours themselves are broken in white, red and partially black colours (The white colour especially dominates as it is a constituent element of both purple and golden).

Let us remember the description of the earth. Though Plato mentions that on the earth there are the colours similar to the true earth, he never names them directly. He does not give their straightforward picture but describes them in relation with the range of colours and stresses the preference and perfection of the true earth. He is true to his ideas even when choosing the palette of colours (range of expressions); he doesn't refuse his concept that the earth is the dim reflection or copy of the true earth.<sup>5</sup> The earth is described as *shragge- de; kai; aīmo- kai; phlo- ajmhcano- kai; borboroi* (eroded rocks and sand and unimaginable mud and mire) (*Phaedo*, 110 a 5-6). Although the concrete colours are not mentioned here, the reader sees the picture painted by black and white gradation and the gray colour gravitating towards black dominates here. If we imagine it visually, the earth is a black and white, hazy, dim copy, negative of the true earth.

As we have seen, in the description of the true earth the white colour dominates and in the picture of the earth the black one prevails. Let us remember how they are perceived in the antiquity. The white colour is associated with brightness, light, obtuseness, transparency, and the black one with duskiness, ruggedness and roughness.<sup>6</sup>

This kind of interpretation of black and white is distinctly reflected in the description of the true earth and the earth in *Phaedo*. The characteristics of white colour are ascribed to the Heaven and the features of the black one are ascribed to the Hell (To the Heaven are ascribed the characteristics of white colour and to the Hell – of black one).

While giving us the picture of the true earth, Plato notes:

...kai; au! ta; ofh wsautw- kai; tou- liqou- ecein aja; ton aujton logon thn te leiothta kai; thn diafaneian kai; ta; crwmata kalliw... ekeinoi oil liqoi eijsi; kaqaroi; kai; ouj katedhdesmenoi oupe; diefqarmenoi wšper oil eñqade upo; shpedono- kai; a!mh- upo; twñ deuro sunerruhkotwn... wšte ekeinou- ajnosou- eihai... kai; ton ge h!ion kai; selhnhn kai; aštra orašqai up jautwn... (...the mountains contain stones likewise, whose smoothness, transparency, and beauty of colour are in the same proportion... the stones there are pure, and not corroded or corrupted, like those here, by mildew and brine due to the elements that have flowed together... [men] are free from sickness... the sun

<sup>5</sup> We can see that kind of interrelation of the earth and the true earth in the mythological parts of *Phaedo*.

<sup>6</sup> Лосев А. Ф., op. cit. 489

and moon and stars are seen by them as they really are...<sup>7</sup>) (*Phaedo*, 110 d 5-e 5; 111 b 2).

While describing the earth Plato says: ἀπα- οἱ τοπο- οἱ ἐῆγατε δειφάρμενα εἰσὶν καὶ κatabeβρῶμενα... οὐτε τελεῖον ἡ- ἐπο- εἶπειν οὐδὲν εἰσὶν, σθραγγε- δε; καὶ; ἀῆμο- καὶ; φλο- ἀῆμῆcano- καὶ; βορβοροῖν εἰσὶν... For this earth of ours, and its stones and all the region here, are corrupted and eaten away, as are things in the sea by the brine... and practically nothing is perfect, but there are eroded rocks and sand and unimaginable mud and mire...) (*Phaedo*, 110 a 2-6).

Besides golden and purple, one more colour, *kuanor*, is named in *Phaedo*. It is mentioned in the description of Hades. Namely, it is said that the Styx, the river coloured bluish-grey all over flows in a very terrible and wild region (ἐκπίπτει εἰς- τὸν πρῶτον δεινὸν τε καὶ; ἀβρίον, ἡ- λεγεται, κρῶμα δὲ ἔχοντα οἷον οἶον οἱ *kuanor*...) (*Phaedo*, 113 b 8-c 2).

"*kuanor*" is usually translated as bluish-grey (blackish blue), something transforming from black to blue. According to A. Losev, it is difficult to imagine this colour with its all antiquity peculiarities.<sup>8</sup> We meet the word at different authors with different shades of its meaning.<sup>9</sup> It is assumed that the bugs, distinguished by the different shades of black colour with some dark blue and blue tints, give us the best idea of the colour.<sup>10</sup>

According to Democritus, "*kuanor*" consists of azure and flame-coloured and their combination gives the lilac shade of the bluish-grey colour. For its part, azure consists of mainly strong black and only partially of yellowish green colours.

The bluish-grey colour together with its consisting black, yellowish green and flame-coloured is logically put in the description of Hades. Here, the Hell is shown in the above-mentioned colours as hot waters, big fire, and rivers of flame and silt are described in Hades.

In the artistic world of *Phaedo*, as one can guess, the understanding of colours is connected to their subject perception. That is, each colour is mentioned in the environment the features of which exactly (or almost exactly) coincide with the features, existing in the antiquity and mentioned by Democritus, of the given colour.

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<sup>7</sup> This is where the real light is.

<sup>8</sup> Лосев А. Ф., op. cit. 490.

<sup>9</sup> See op. cit. 490-491.

<sup>10</sup> op. cit. 491.