

## EUDOXEAN AESTHETICS

### 1. DID EUDOXUS INTRODUCE THE CONCEPTS THAT BECAME FUNDAMENTAL IN HELLENISTIC AESTHETICS?

It is a prevalent opinion that, being «the greatest mathematician and astronomer of his time»<sup>1</sup>, Eudoxus dedicated the best of himself to science and its philosophical implications and thus he was not willing to concern himself with questions specific to the field of aesthetics. Far from subscribing to this opinion, F. di Bello<sup>2</sup> suggested that Eudoxus was probably the first to introduce the concepts that became fundamental in Hellenistic aesthetics by permitting the extension of theorems on proportions to the cases of incommensurable magnitudes, i.e. by implying that the artists had a right to champion freedom of form and subject against classicism. Taking into account that Eudoxus was a «φυσιολόγος with a bent towards positivism»<sup>3</sup>, we have reason to believe that he never developed any sophisticated theory of aesthetics. In this connexion we may note that Eudoxus made mention of a Coan rivulet which caused ὀχετοὺς to change into stone, but he did not underline the fact that ἐκ τοῦδε τοῦ ὕδατος οἱ Κῶροι λίθους λατομήσαντες ὠκοδόμησαν τὸ θέατρον<sup>4</sup>.

1. Cf. G. SARTON, *Introduction to the History of Science*, vol. 1, Baltimore, The Williams and Wilkins Company, 1953<sup>4</sup>, p. 117.

2. Cf. F. DI BELLO, (La monetazione). Il dibattito, in G. PUGLIESE CARRATELLI, *Locri Epizefirii*, vol. 1, Napoli, Arte Tipografica, 1977, p. 307.

3. Cf. C.N. POLYCARPOU, The Eudoxean conception of φιλοσοφία, *Parnassos*, 44, 2002, p. 367. Keeping in mind that, according to Eudoxus, the number seven symbolized the Pythagorean way of life (cf. IDEM, The Eudoxean Conception of Καῖρός, *Diotima*, 32, 2004, p. 188), we hold that it was natural for him to take an interest in some works of art made by the famous vase-painter Execias, who had been fascinated by the properties of the number seven (cf. J.M. PAILLER, Le sept, pilier de la sagesse, *Pallas*, 44, 1996, pp. 210- 211).

4. Cf. EUDOX., F 363 Lasserre. As a matter of fact, Eudoxus' aforementioned reference to a Coan rivulet seems to be particularly relevant to a geological phenomenon related to petrified substances (cf. F. GISINGER, *Die Erdbeschreibung des Eudoxos von Knidos*, Amsterdam, Hakkert, 1967<sup>2</sup>, p. 115) but is of no value to us as regards history of architecture. On the other hand, it deserves to be noted that, being not only a Dorian (cf. H. GRENEMANN, *Knidische Medizin*, part 1, Berlin, de Gruyter, 1975, p. 48) but also a historian of Greek medicine (cf. *infra* and n. 62) who did not only concern himself with the ἀγαθή ἔρις between the physicians of the School of Cnidus and those of the School of Cos (cf. H. GRENEMANN, *op. cit.*, pp. 2-3) but also took an interest in the history of the city of Cos, Eudoxus must have been kept informed of developments related to the foundation of the Coan theater. Indeed, it is worth mentioning that any reference to the foundation of a Greek theater had a great deal to do with the Pythagorean conception of the so-called *golden section* (cf. E. STAMATES, Pythagoras (in Greek), *The Helios Encyclopedia*, vol. 16, Athens, Helios, p. 501), which was of great importance to Eudoxus (cf. *infra* and n. 42).



This being so, we doubt the truth of F. Egbert's<sup>5</sup> statement that in all probability the architect Pytheos drew up the plans for the New Priene because he was in contact with Eudoxus, who did not refuse to draw up a code of laws for the inhabitants. In other words, in view of the body of information we have about Eudoxus' legislative assignments<sup>6</sup>, we must admit that evidence in confirmation of F. Egbert's aforementioned statement is lacking. To our way of thinking, it is hardly conceivable that Eudoxus, who had put stress on natural philosophy and cosmology, failed to notice that for the Greek artists man was an epitome of the Universe<sup>7</sup> because of the kairic aspect of his way of life<sup>8</sup>. As far as a scanty evidence of Eudoxus' writings allows, we may reach the conclusion that Eudoxus, who would furnish Plato with ample information about Egyptian matters<sup>9</sup>, disagreed with Plato about the approach on the solution of the problem of artistic techniques and styles. Such being the case, we are inclined to think that Eudoxus disapproved of Plato's evaluation of the steadiness of Egyptian art<sup>10</sup> because he was in a position to know that Plato had not been credibly informed of the so-called Egyptian antiquities<sup>11</sup>.

With a view to shedding light on the core of Eudoxean aesthetics, F. Egbert<sup>12</sup> laid special emphasis on Eudoxus' visit to Mausolus and asserted that Eudoxus was primarily a mathematician personally known to and on at least nodding terms with the sculptors Scopas and Bryaxis. Now, in view of our account of

5. Cf. F. EGBERT, Eudoxos- Pytheos, *Architectura*, 23, 1993, p. 12. In this connexion we must admit that in a way F. Egbert's assertion, that the architect Pytheos had a nodding acquaintance with Eudoxus, harmonizes well with the fact that the teachings of Pythagoras affected the design of the Athena temple at Priene, which was indissolubly linked to Pytheos' aesthetics (cf. G. GRUBEN, *Griechische Tempel und Heiligtümer*, München, Hirmer, 2001<sup>5</sup>, pp. 421- 422).

6. Cf. C.N. POLYCARPOU, Eudoxus' legislative assignments (in Greek), *Philosophia*, 33, 2003, p. 174.

7. Cf. E. MOUTSOPOULOS, *Poiésis et Technè*, vol. 3, Montréal, Éditions Montmorency, 1994, p. 98. It is perhaps worth recalling that Eudoxus, who was exceedingly well versed in Democritus' philosophy (cf. H. USENER, *Vorträge und Aufsätze*, Leipzig, Teubner, 1907, p. 90), could not disregard the fact that Democritus had been the first to put forward an ordered set of aesthetic ideas (cf. J. SALEM, *Démocrite*, Paris, Vrin, 1996, pp. 286- 287).

8. Cf. E. MOUTSOPOULOS, *op. cit.*, p. 98. In our opinion, it should be borne in mind that Eudoxus had a clear conception of *καίρος* (cf. C.N. POLYCARPOU, The Eudoxean Conception of *Καίρος*, *Diotima*, 32, 2004, p. 187).

9. Cf. C. FROIDEFOND, *Le mirage égyptien dans la littérature grecque d'Homère à Aristote*, Aix-en-Provence, Ophrys, 1971, p. 316.

10. Cf. *ibid.*, p. 330. As a matter of fact, Plato's enthusiastic reference to the quasi- standardization of the works of Egyptian art, which reflects his firm belief that artistic rules should not undergo any change (cf. E. MOUTSOPOULOS, *op. cit.*, pp. 88- 89), seems to be relevant to the characteristics of the so-called *ἀκούσιος τέχνη* (cf. *ibid.*, p. 44). Now, in view of the Pythagorean condemnation of *ἀκούσιος τέχνη* (cf. ARISTOX., F 36 Wehrli), we are inclined to think that Eudoxus would find it difficult to sympathize with Plato's approach to Egyptian art.

11. Cf. C. FROIDEFOND, *op. cit.*, p. 273.

12. Cf. F. EGBERT, *op. cit.*, p. 11.



Eudoxus' visit to Mausolus<sup>13</sup>, F. Egbert's aforementioned assertion seems rather questionable. On the other hand, there is nothing wrong with F. Egbert's<sup>14</sup> suggestion that Pytheos' statement that specially trained architects excel in every branch of knowledge, including not only the exact sciences but also the fine arts, is remarkably reminiscent of Eudoxus' vast learning. Indeed, taking into account that Eudoxus did not only have a good reputation as a historian but was also an eminent geographer who made a name for himself as an expert in climatology<sup>15</sup>, we are inclined to think that Eudoxus tried to evaluate the conditions under which Greek art flourished in order to point out that art in each society is nothing but the result of the interaction of geographical, climatic and historical factors<sup>16</sup>.

To our way of thinking, there is no denying the fact that for Eudoxus, who leaned towards Pythagoreanism<sup>17</sup>, the Pythagorean correlation between *κάλλος* and *πέρας*<sup>18</sup> was a good criterion for evaluating individual works of art. In this connexion we may note that Eudoxus never saw in any religious work of Greek art a manifestation of the absolute<sup>19</sup>, because, far from being in favour of the so-called sensible forms of religious myths, he was known as a quasi-

13. Cf. C.N. POLYCARPOU, Eudoxus' legislative assignments (in Greek), *Philosophia*, 33, 2003, p. 171.

14. Cf. F. EGBERT, *op. cit.*, p. 12. Far from dismissing the idea that Pythagoras was the first to stress the point «that the arithmetical ratios determining musical harmony must also govern architecture, for they recur throughout the Universe and are thus divine in origin» (cf. H.W. JANSON, *History of Art*, New York, Abrams, 1977<sup>2</sup>, p. 390, who is quite in agreement with W. KOCH'S, *Baustilkunde*, Gütersloh, Bertelsmann, 1998<sup>21</sup>, p. 447, approach to the matter in question), we take into account that in a way the teachings of Pythagoras affected the design of the Athena temple at Paestum (cf. N. NABERS-S. FORD WILTSHIRE, *The Athena Temple at Paestum and Pythagorean Theory*, *Greek, Roman and Byzantine Studies*, 21, 1980, p. 214).

15. Cf. Á. SZABÓ- E. MAULA, *Enklíma. Untersuchungen zur Frühgeschichte der griechischen Astronomie, Geographie und der Sehnentafeln*, Athen, Forschungsinstitut für griechische Philosophie, 1982, p. 186.

16. Cf. E. ZELLER- R. MONDOLFO, *La filosofia dei Greci*, part 1, vol. 1, Firenze, La Nuova Italia, 1951<sup>3</sup>, p. 335.

17. Cf. C.N. POLYCARPOU, Eudoxus in the Ancient Biographical Tradition (in Greek), *Platon*, 53, 2003, pp. 315- 316.

18. Cf. E. MOUTSOPOULOS, *op. cit.*, p. 101. One should particularly mention that the Pythagorean correlation between *κάλλος* and *πέρας* influenced Pletho's philosophy of art (cf. C.D. GEORGOULES, *Greek Mathematics* (in Greek), *The Helios Encyclopedia*, vol. 7, Athens, Helios, pp. 802- 803). On the other hand, it must not be forgotten that unity in variety was an aesthetic principle for which the Pythagoreans took credit, because they had attached great importance to «the essentially mathematical nature of musical harmony» (cf. J.G. WARRY, *Greek Aesthetic Theory*, London, Methuen, 1962, p. 13). Now, keeping in mind that for Archytas and his Pythagorean predecessors music was linked to astronomy (cf. E. MOUTSOPOULOS, *op. cit.*, p. 61), we may fairly assume that Eudoxus' approach to unity in variety harmonized well with Archytas' view concerning the birth of the cosmos (cf. C.N. POLYCARPOU, Archytas' Approach to the One, *Diotima*, 28, 2000, pp. 20- 21).

19. Cf. E. ZELLER-R. MONDOLFO, *op. cit.*, p. 336.



rationalist thinker περί θεῶν τινα θαυμαστὰ ἀπιστῶν<sup>20</sup>. In our opinion, it stands to reason that for Eudoxus, who had emphasized the importance of Pythagoras' ἥττον γνώριμα ἐπιτηδεύματα, the vehicle of mystical knowledge was indissolubly linked to Pythagorean music<sup>21</sup>, which could manifest, to a certain extent, the truth of τὸ πόρρητον τῆς φιλοσοφίας<sup>22</sup>. Now, keeping in mind that the younger contemporaries of Eudoxus who were believing in realism in Greek art had a dislike for παράδοξα<sup>23</sup>, we may reach the conclusion that Eudoxus, who had concerned himself with the scientific aspects of a wide variety of παράδοξα<sup>24</sup>, never spoke favourably of artistic realism. In addition, it should be remembered that «Eudoxus...instituted techniques...of proportions in a manner exemplary for its formal precision» because he was motivated «by the ambition to advance the technical achievements of earlier geometers»<sup>25</sup>, i.e. by the ambition to advance achievements which do not witness a shift in perspective on the nature of aesthetics. Granting this to be true, it seems reasonable to infer that Eudoxus never broke away from «the Pythagorean idea that everything consists of numbers, and that, consequently, the beautiful is the result of certain numerical combinations which are manifested under the aspect

20. Cf. EUDOX., F 298 Lasserre. In point of fact, Eudoxus' quasi-rationalistic approach to τὰ περί θεῶν (cf. F. LASSERRE, *Die Fragmente des Eudoxos von Knidos*, Berlin, de Gruyter, 1966, p. 252) contrasts sharply with the so-called catechism of the Acousmatics, which captures the flavor of extreme fideism (cf. C.N. POLYCARPOU, *The Eudoxean Biography of Pythagoras*, *Diotima*, 32, 2004, p. 61) and reminds us of the credulity of the historian Eudoxus of Rhodes (cf. G.F. UNGER, *Eudoxos von Knidos und Eudoxos von Rhodos*, *Philologus*, 50, 1891, p. 229). In our opinion, Eudoxus of Cnidus, who was a mathematical genius, could point out that Pythagoras had never come to Delos with a view to τὸν ἀναίμακτον βωμὸν προσκυνεῖν not only by producing historical evidence (cf. F. CHAPOUTHIER, *La prétendue initiation de Pythagore à Delos*, *Revue des Études Grecques*, 48, 1935, pp. 422-423) but also by demonstrating that «the peripteral temple of Apollo on Delos... fails to achieve a Pythagorean triangle» (cf. N. NABERS-S. FORD WILTSHIRE, *op. cit.*, pp. 213-214).

21. Cf. E. MOUTSOPOULOS, *Philosophical Questions* (in Greek), vol. 1, Athens, Tzounacos, 1971, p. 294.

22. Cf. C.N. POLYCARPOU, *op. cit.*, p. 64.

23. Cf. E. MOUTSOPOULOS, *Aesthetic Categories* (in Greek), Athens, Arsenides, 1996<sup>2</sup>, pp. 109-110.

24. Cf. C.N. POLYCARPOU, *Did Eudoxus form a theory of spontaneous generation? [forthcoming]*.

25. Cf. W.R. KNORR, *The Ancient Tradition of Geometric Problems*, New York, Dover Publications Inc., 1993<sup>2</sup>, pp. 86-87. Being of the opinion that Eudoxean mathematics had a great deal to do with Eudoxean aesthetics, H. BAKER, *Eudoxus of Cnidus*, *The Sewanee Review*, 1973, p. 278, contended that in all probability «the stylobate blocks which formed the perimeter of the (Aphrodite) temple (at Cnidus)... were cut so that a circular edge was countered by a straight edge opposite it» because the architect was fascinated by «the combination of shapes which Eudoxus used in his examination of the properties of the circular». Far from falling in with H. Baker's view, we maintain that the basic principles of Hellenistic aesthetics were not acceptable to Eudoxus, because those principles led the way to sentimentalism (cf. E. ZELLER-R. MONDOLFO, *op. cit.*, p. 336), whereas Eudoxus, who had appraised Myson's method of drawing arguments from facts (cf.



of proportions»<sup>26</sup>.

## 2. THE EUDOXEAN CONCEPTION OF ΦΙΛΟΚΑΛΙΑ

With a view to making possible a fresh approach to the core of Eudoxean aesthetics, we underline the fact that Eudoxus, who had an intimate knowledge of Protagorean philosophy<sup>27</sup>, paid great attention to the aesthetic implications of Protagoras' method of making "the weaker argument the stronger"<sup>28</sup>. To our mind, it deserves to be noted that Eudoxus, who was exceedingly well versed in Democritus' philosophy<sup>29</sup>, must have known that Democritus supplied much inspiration for the Protagorean conception of δημιουργική τέχνη<sup>30</sup>. Moreover, it should be borne in mind that, in view of a valuable piece of information given by Galen<sup>31</sup>, there is no denying the fact that for Democritus man is driven by

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C.N. POLYCARPOU, The Eudoxean conception of φιλοσοφία, *Parnassos*, 44, 2002, p. 368), was very much opposed to sentimentalism. On the other hand, we think that Eudoxus might have exerted influence upon the sculptor Silanion, who was famous for emphasizing the importance of the so-called *praecepta symmetriarum* (cf. R. NEUDECKER, Silanion, *Der kleine Pauly*, vol. 11, Stuttgart, Metzler, 2001, p. 546). In other words, it may be a coincidence, but the term *praecepta* reminds us of the Eudoxean term παραγγέλματα (cf. EUDOX., F 339 Lasserre) and the term *symmetriae* reminds us of the Pythagorean term συμμετρίαι (cf. PYTHAGOR., B 15 Diels), which probably came into use in the time of Plato (cf. PLAT., *Tim.* 87 c- d).

26. Cf. E. MOUTSOPOULOS, *The Reality of Creation*, New York, Paragon House, 1991, p. 122.

27. Cf. C.N. POLYCARPOU, On Eudoxus' Value as a Historian of Philosophy (in Greek), in *Φιλοσοφίας ἀγώνισμα: Studies in honour of C. Boudouris*, Athens, Ionia, 2004.

28. Cf. M. UNTERSTEINER, *I sofisti*, vol. 1, Milano, Lampugnani Nigri, 1967<sup>2</sup>, p. 113. It is perhaps worth recalling that Eudoxus, who must have known not only that Protagoras was the first to make use of *πάρισα*, i.e. of sentences consisting of exactly balanced and almost equal members (cf. H. DIELS- W. KRANZ, *Die Fragmente der Vorsokratiker*, vol. 2, Berlin, Weidmann, 1972<sup>16</sup>, p. 262) but also that the Pythagoreans were not entirely negative towards Protagoras' rhetorical language (cf. DIOG. LAERT., *Vit. Phil.*, 8. 37), might have been under the impression that the Protagorean καλλιεξία (cf. H. DIELS- W. KRANZ, *op. cit.*, p. 262) was nothing but a way of achieving beauty of language. In point of fact, it can hardly be a coincidence that Eudoxus became famous for emphasizing the importance of κάλλος τῶν ὀνομάτων (cf. SYN., *Dio* 1.5-6).

29. Cf. *supra* and n. 7.

30. Cf. H. DIELS- W. KRANZ, *op. cit.*, p. 267. With a view to shedding light on Eudoxus' approach to δημιουργική τέχνη, we pay attention to his statement «that the best whetstones come from Armenia», i.e. to a statement which "has direct and important application to a craft» (cf. J.A.C. GREPPIN, Early Greek Historical Fragments Pertinent to Armenian Matters, *Journal of the Society for Armenian Studies*, 1, 1984, p. 40) and is not based on supposition (cf. *ibid.*, p. 40). Now, in view of Eudoxus' assertion that the Gyzants τέχνην ἐπιτηδεύουσιν to make honey by using dates (cf. F. GISINGER, *op. cit.*, pp. 109-110), we hold that Eudoxus did not find it difficult to make use of the term τέχνη without confining himself to the fine arts. Moreover, keeping in mind that, according to Plutarchus, Plato admonished Eudoxus for being in favour of *ἐκτανυστοργία* (cf. EUDOX., D 27 Lasserre), we have reason to believe that Eudoxus made use of the term τέχνη without forming too low an estimate of the so-called *ἐκτανυτοί τέχνηαι*.

31. Cf. J. SALEM, *op. cit.*, p. 270.



necessity to concern himself with τέχνη<sup>32</sup>, whereas for Eudoxus, who disapproves of Democritus' approach to necessity<sup>33</sup>, man interests himself in τέχνη because he intervenes in nature not only for his own sake and survival, but also in order to exert his authority upon it. In this connexion we may note that the Epicureans, who criticized Eudoxus for being very much opposed to the purely materialistic mode of explanation adopted by Archelaus<sup>34</sup>, were probably keeping in mind that Eudoxus had found fault with the quasi-Democritean background of Archelaus' theory of the origin of τέχνη<sup>35</sup>.

In addition, we may stress the point that there is much reliance to be placed<sup>36</sup> on Diogenes Laertius' statement that «Archelaus himself...treated of ethics, for he has discussed laws and goodness (περί...καλῶν) and justice»<sup>37</sup>. In other words, taking into account that Archelaus knew that Anaxagoras had been the first to maintain that Homer's poems were dealing systematically with virtue and justice<sup>38</sup>, we think that Eudoxus might have implied that Archelaus made use of the term καλόν in its Homeric sense<sup>39</sup> in order to indicate that καλόν had something to do with aesthetic standards. On the other hand, we consider that Eudoxus, who quoted extensively from Hippias' own writings<sup>40</sup>, must have known that Hippias contrasted nature (φύσει) and custom (νόμῳ) because he had been influenced by Archelaus' ethics<sup>41</sup>. Now it is worth recalling that Eudoxus, who was firmly convinced that Philolaus had rightly given reasons in support of the view that justice manifests itself φύσει καὶ οὐ νόμῳ<sup>42</sup>, might have

32. Cf. *ibid.*, p. 274.

33. Cf. C.N. POLYCARPOU, *Chance and Necessity in Eudoxean Thought* [forthcoming].

34. Cf. IDEM, *Did Eudoxus form a theory of spontaneous generation?* [forthcoming].

35. As a matter of fact, V. TILMAN, *Archélaos d'Athènes*, *Revue de Philosophie Ancienne*, 18, 2000, pp. 65-107, highlighted the importance of the quasi-Democritean background of Archelaus' theory of the origin of τέχνη.

36. Cf. G. DONNAY, *De la raison à la foi: le pari de Socrate*, *Diotima*, 32, 2004, p. 84.

37. Cf. DIOG. LAERT., *Vit. Phil.*, 2. 16. The translation is by R.D. HICKS, *Diogenes Laertius*, vol. 1, Cambridge Massachusetts, Harvard Univ. Press, 1972<sup>7</sup>, p. 147.

38. Cf. O. DITTRICH, *Geschichte der Ethik*, vol. 1, Leipzig, Meiner, 1926, p. 153.

39. Cf. H.G. LIDDELL-R. SCOTT, *A Greek-English Lexicon*, London, Oxford Univ. Press, 1940<sup>9</sup>, p. 870.

40. Cf. C.N. POLYCARPOU, *On Eudoxus' Value as a Historian of Philosophy* (in Greek), in *Φιλοσοφίας ἀγώνισμα: Studies in honour of C. Boudouris*, Athens, Ionia, 2004.

41. Cf. M. UNTERSTEINER, *I sofisti*, vol. 2, Milano, Lampugnani Nigri, 1967<sup>2</sup>, p. 127.

42. Cf. C.N. POLYCARPOU, *Eudoxus' legislative assignments* (in Greek), *Philosophia*, 33, 2003, p. 181. With a view to having a clear conception of Eudoxus' firm belief that τὸ κάλλος manifests itself φύσει, we take into account that Galen did not hesitate to cite τὸ κάλλος as the goal of Polycleitus' system of human proportion (cf. J. POLLITT, *The Critical Terminology of the Visual Arts in Ancient Greece*, Diss., Univ. of Columbia, 1963, p. 223), i.e. of a system which had derived from its quasi-Pythagorean love of mathematical relationships (cf. F. HARTT, *Art. A History of Painting, Sculpture, Architecture*, New York, Abrams, 1989<sup>3</sup>, p. 160) and was in keeping with some moral standards (cf. E. MOUTSOPOULOS, *Poiésis et Technè*, vol. 3, Montréal, Éditions Montmorency, 1994, pp. 99-100). To our way of thinking, it seems probable that Eudoxus, who contributed new information on the Pythagorean conception of the so-called *golden section* (cf. E. SACHS, *Die fünf platonischen Körper*, Berlin, Weidmann, 1917, p. 99), did not fail to notice that Polycleitus had examined the properties of the so-called *Fibonacci sequence*, i.e. of a sequence which had a great



argued that τὸ καλὸν (or τὸ κάλλος) also manifests itself φύσει.

Taking into account that Eudoxus wrote a biography of Pythagoras in order to explicate the original teachings of the philosopher of Samos<sup>43</sup>, we are under the impression that Aristoxenus' well-known reference to Pythagoras' attitude towards φιλοκαλία<sup>44</sup> can be traced back to the Eudoxean biography of Pythagoras. In point of fact, F. Wehrli<sup>45</sup>, who doubted the truth of Aristoxenus' statement that the distinction between καλὰ ἔθνη...καὶ ἐπιτηδεύματα (i.e. ἡ

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deal to do with the aforementioned *section* (cf. J.F. MATTÉI, *op. cit.*, pp. 112- 113). Now, «in view of the interrelation between the construction of πεντάγραμμον and the Pythagorean conception of the so- called *golden section*,... which was of great importance to Eudoxus» (cf. C.N. POLYCARPOU, Ameinias' Conception of Ἡσυχία, *Philosophia*, 34, 2004, p. 263), we maintain that Eudoxus was firmly convinced that any reference to aesthetic implications of the aforementioned *section* contradicts the Pythagorean ἀπόρρητον τῆς φιλοσοφίας.

43. Cf. IDEM, The Eudoxean Biography of Pythagoras, *Diotima*, 32, 2004, p. 63. Being of the opinion that the Eudoxean biography of Pythagoras enabled some ancient historians of Greek thought to revalue the teachings of the philosopher of Samos, we consider that in all probability Aristoxenus' assertion that Pythagoras venerated both medicine and music (cf. J. MEWALDT, *De Aristoxeni Pythagorici sententiis et Vita Pythagorica*, Weimar, Wagner, 1904, pp. 29- 30) goes back to Eudoxus, i.e. to an outstanding Pythagorean physician (cf. C.N. POLYCARPOU, The Eudoxean conception of φιλοσοφία, *Parnassos*, 44, 2002, p. 366) who happened to be interested in music. In other words, we do not disregard the fact that the Pythagoreans (cf. E. MOUTSOPOULOS, *Kairos. La mise et l'enjeu*, Paris, Vrin, 1991, p. 251), including Eudoxus (cf. *infra* and n. 62), had the reputation of being specialists in the use of music therapy. Indeed, it can hardly be a coincidence that the Pythagorean approach to the use of music therapy was in conformity with Melampous' medical reasoning (cf. E. MOUTSOPOULOS, *op. cit.*, p. 250), which received elaborated treatment in Eudoxus' geographical work (cf. EUDOX., F 313 Lasserre).

44. Cf. F. WEHRLI, *Aristoxenos*, Basel, Schwabe, 1967<sup>2</sup>, p. 58. Far from holding that the Pythagorean conception of φιλοκαλία had nothing to do with the Pythagorean preservation of past experience for future use (cf. J. MEWALDT, *op. cit.*, pp. 33-34), we concur with I. GOBRY, *Pythagore*, Paris, Éditions Universitaires, 1992, p. 42, in observing that for the Pythagoreans ἡ φιλοκαλία was indissolubly linked to the foundations of the philosophical study of morality. In our opinion, Aristoxenus' statement that Pythagoras gave prominence to τὴν ἀληθῆ φιλοκαλίαν (cf. ARISTOX., F 40 Wehrli) can be justified by taking into account that for the Pythagoreans (cf. M. UNTERSTEINER, *op. cit.*, p. 172), including Eudoxus (cf. EUDOX., D 3 Lasserre), truth was the proper aim and natural result of philosophical inquiry. In this connexion we may note that in all probability Pericles made use of the phrase φιλοκαλεῖν μετ' εὐτελείας in order to portray a quasi-philosophical way of life (cf. S. HORNBLOWER, *A Commentary on Thucydides*, vol. 1, London, Oxford Univ. Press, 1991, pp. 304-305 ) because he had benefited much from his association with the Pythagorean musician Pythocleides (cf. E. MOUTSOPOULOS, *La musique dans l'œuvre de Platon*, Paris, P. U. F., 1959, pp. 48- 49).

45. Cf. F. WEHRLI, *op. cit.*, p. 62. As a matter of fact, it is noteworthy that, according to Aristoxenus, Pythagoras stressed the point that ἡ ἀληθὴς φιλοκαλία was connected with ἐπιτηδεύματα καὶ ἐπιστήμαι (cf. ARISTOX., F 40 Wehrli) and not with τέχναι, in spite of the fact that those who were practising one of the fine arts were known in Greece as οἱ τὰς τέχνας ἔχοντες (cf. XENOPH., *Mem.*, III. x.1). Now, keeping in mind that Archytas' Pythagorean predecessors had no hesitation in stating that for them music was primarily a μάθημα related to the rules of science (cf. ARCHYT., B 1 Diels), we may reach the conclusion that Pythagoras and his followers were the first to mathematize the fine arts.



ἀληθὴς φιλοκαλία) and ἀναγκαῖα καὶ χρήσιμα (i.e. ἡ λεγομένη ὑπὸ τῶν πολλῶν φιλοκαλία) goes back to Pythagoras, failed to notice that Pythagoras' reference to καλὰ ἔθνη harmonizes well with Eudoxus' reference to καλαὶ πράξεις<sup>46</sup>, whereas Pythagoras' reference to χρήσιμα is, in some way, connected with Eudoxus' reference to *utilissima*<sup>47</sup>. It is perhaps worth adding that Pythagoras and his followers, who were the first to raise issues specific to the field of aesthetics<sup>48</sup>, never proceeded from the level of aesthetics to that of philosophy of art<sup>49</sup>.

In our opinion, Pythagoras and his followers, including Eudoxus, might have argued that warlike people, who are φιλόκαλοι περὶ ὅπλα<sup>50</sup>, speak publicly in support of τὴν λεγομένην ὑπὸ τῶν πολλῶν φιλοκαλίαν, whereas peaceful men, who have something in common with Ὅσιριν...ἐλάχιστα...ὅπλων δεηθέντα<sup>51</sup>, insist that ἡ ἀληθὴς φιλοκαλία is free from fighting or uproar. As a matter of fact, one should be aware that Plato's emphasis on the connexion between loving peace and making progress in civilization is not only in line with Eudoxeanism<sup>52</sup> but also resembles Gorgias' evaluation of φιλόκαλος εἰρήνη<sup>53</sup>.

46. Cf. EUDOX., F 342 Lasserre.

47. Cf. EUDOX., F 272 Lasserre.

48. Cf. T. VOREAS, *An Introduction to Philosophy* (in Greek), Athens, Organismos Ecdoseos Didacticon Biblion, 1972<sup>2</sup>, pp. 348- 349. Taking into account that the doctrine of the harmony of the spheres may go back to Pythagoras (cf. E. MOUTSOPOULOS, *Philosophical Questions* (in Greek), vol. 1, Athens, Tzounacos, 1971, pp. 339- 340), we subscribe to the view that Pythagoras was the first to make significant conceptual progress in providing a framework for aesthetic ideas (cf. I. GOBRY, *op. cit.*, p. 28). Moreover, being of the opinion that Eudoxus concerned himself with the early Pythagorean origin of the term φιλόσοφος (cf. C.N. POLYCARPOU, *op. cit.*, p. 368), which appears to have been used in a way that reminds us of the term φιλόκαλος (cf. C.J. DE VOGEL, *Pythagoras and Early Pythagoreanism*, Assen, van Gorcum, 1966, p. 100), we contend that it was natural for Eudoxus to take an interest in the Pythagorean conception of φιλοκαλία.

49. Cf. E. MOUTSOPOULOS, *The Itinerary of Mind* (in Greek), vol. 3, Athens, Hermes, 1977, p. 143. One should particularly mention that the Pythagoreans were quite ignorant of the foundations of philosophy of art, because it was not necessary for them to state precisely the meaning of aesthetic terms (cf. Sir W.D. ROSS, *Aristotle's Metaphysics*, vol. 2, London, Oxford Univ. Press, 1970<sup>6</sup>, p. 422). As a matter of fact, in view of Aristotle's assertion that the Pythagoreans made it clear that τὸ περιττόν, τὸ εὐθύ, τὸ ἴσον belong to the series of the Beautiful (cf. H. DIELS-W. KRANZ, *Die Fragmente der Vorsokratiker*, vol. 1, Berlin, Weidmann, 1974<sup>17</sup>, p. 459), we are inclined to think that for the Pythagoreans Petron's equilateral triangle (cf. P. KROH, *Lexikon der antiken Autoren*, Stuttgart, Kröner, 1972, p. 457) was the symbol of the Beautiful.

50. Cf. F. WEHRLI, *op. cit.*, p. 62.

51. Cf. EUDOX., F 290 Lasserre. It is remarkable that the Pythagoreans focussed their attention on the so- called purification of the emotions, which can be achieved through pleasing combinations in rhythm and harmony (cf. H. UND H. HUCHZERMEYER, *Die Bedeutung des Rhythmus in der Musiktherapie der Griechen von der Frühzeit bis zum Beginn des Hellenismus*, *Sudhoffs Archiv*, 58, 1974, p. 126), and insisted that music brings εὐσχημοσύνη to perfection (cf. *ibid.*, p. 130). Such being the case, we consider that Pythagoras rightly underlined the fact that φιλοκαλία rests upon εὐσχημοναὶ ἐπιστῆμαι (cf. ARISTOX., F 40 Wehrli).

52. Cf. EUDOX., D 26 Lasserre. It should be borne in mind that, far from holding that the term τὸ καλόν «did not refer to a thing's autonomous aesthetic value, but rather to its excellence, which is connected with its...usefulness» (cf. R. AUDI, *The Cambridge Dictionary of Philosophy*, London,



Indeed, Gorgias' type of aesthetic hedonism<sup>54</sup> was not a matter of indifference to Eudoxus, who had the reputation of being an ardent supporter of ethical hedonism<sup>55</sup>. Now it may be a coincidence, but – *mutatis mutandis* – Gorgias' attempt to build an aesthetics of appearance in order to «save the appearances»<sup>56</sup> reminds us of Eudoxus' attempt to introduce an astronomical system in order to «save the appearances»<sup>57</sup>. On the other hand, we do not disregard the fact that the subtle refinements in the construction of the Parthenon, which were in line with Gorgias' aesthetic theory<sup>58</sup>, had nothing to do with the core of Pythagorean aesthetics<sup>59</sup>.

Being exceedingly well versed in Anaxagoras' philosophy<sup>60</sup>, Eudoxus, who knew that Anaxagoras had been the first philosopher to contribute new information on the laws of perspective<sup>61</sup>, attached great importance to the medical implications of the Anaxagorean doctrine that «phaenomena are

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Cambridge Univ. Press, 1995, p. 66), the Pythagoreans distinguished τὸ καλὸν τε καὶ εὐσχημον from τὸ συμφέρον τε καὶ ὠφέλιμον (cf. J. MEWALDT, *op. cit.*, pp. 13-14). Now, keeping in mind that Eudoxus leaned towards Pythagoreanism (cf. *supra* and n. 26), we may rest assured that he disapproved of Gorgias' attempt to build an aesthetics of appearance by presupposing that the distinction between τὸ καλὸν τε καὶ εὐσχημον and τὸ συμφέρον τε καὶ ὠφέλιμον may be negligible (cf. E. MOUTSOPOULOS, *op. cit.*, pp. 143-144).

53. Cf. GORG., B 6 Diels. In view of some points of similarity (cf. F. LASSERRE, *op. cit.*, p. 261) between Gorgias' encomiastic reference to the Athenaeans who had been best in fighting and Eudoxus' encomiastic reference to the Greeks who had fallen in the battle of Plataeae (cf. EUDOX., F 311 Lasserre), we think that Eudoxus might have been favourable to Gorgias' evaluation of φιλόκαλος εἰρήνη.

54. Cf. M. UNTERSTEINER, *I sofisti*, vol. 1, Milano, Lampugnani Nigri, 1967<sup>2</sup>, p. 296.

55. Cf. E. MOUTSOPOULOS, *Poiésis et Technè*, vol. 3, Montréal, Éditions Montmorency, 1994, pp. 159-160.

56. Cf. IDEM, *Philosophie de la culture grecque*, Athènes, Académie d'Athènes, 1998, p. 126.

57. Cf. H. FLASHAR, *Die Philosophie der Antike*, vol. 3, Basel, Schwabe, 1983, pp. 78-79.

58. Cf. E. MOUTSOPOULOS, *op. cit.*, p. 126.

59. Cf. E. STAMATES, *op. cit.*, p. 500. With a view to shedding light on the core of Eudoxean aesthetics, we stress the point that Eudoxus took a profound interest in the earliest known proof of the so-called Pythagorean theorem (cf. D.M. BURTON, *History of Mathematics: An Introduction*, Dubuque, Brown, 1995<sup>3</sup>, pp. 152-153), which can be ascribed to the mathematician Hippocrates of Chius (cf. W.R. KNORR, *op. cit.*, p. 102). In point of fact, it is not merely implied but distinctly stated that in ancient times the so-called Pythagorean triangles, which could appear in the forms of the equations  $3^2+4^2=5^2$ ,  $5^2+12^2=13^2$ ,  $8^2+15^2=17^2$ ,  $7^2+24^2=25^2$ ,  $12^2+35^2=37^2$  (cf. H. JUNECKE, *Die wohl bemessene Ordnung. Pythagoreische Proportionen in der historischen Literatur*, Berlin, Verlag der Beeken, 1982, p. 14) and  $20^2+21^2=29^2$  (cf. *ibid.*, pp. 15-16), had a profound impact on architects. This being so, we think that Eudoxus might have given special prominence to the aesthetic properties of the so-called Pythagorean triangles. Now, in view of the fact that the magnificent structure of Solomon's temple accords with almost every aspect of the so-called Pythagorean triangles (cf. *ibid.*, pp. 33-34), it seems probable that the aforementioned structure is in some way connected with Eudoxean aesthetics.

60. Cf. J. NAAS- H.L. SCHMID, *Mathematisches Wörterbuch*, vol. 1, Berlin, Akademie Verlag, 1962<sup>2</sup>, p. 471.

61. Cf. A.A. PAPAIOANNOU, Σχήμα κύκλω περὶ ἑμαυτὸν σκιαγραφίαν ἀρετῆς περιγραφτέον (in Greek), *Platon*, 51, 1999-2000, pp. 86-87.



glimpses of the unseen»<sup>62</sup>. This being so, we must admit a radical difference between the Eudoxean view that the term *φαινόμενα* can be used with reference to things that appear to or are perceived by the senses and the Platonic view that the term *φαινόμενα* can be used with reference to sensible forms which are regarded as mentally apparent without being *ὄντα τῇ ἀληθείᾳ*<sup>63</sup>. To our way of thinking, it is remarkable that Plato's metaphysical approach to *φαινόμενα* harmonizes well with the doctrine that «the human mind is enabled to detach itself from the sensible incarnations of beauty and to reach the intelligible beautiful which is the most real»<sup>64</sup>, whereas Eudoxus' empirical approach to *φαινόμενα*, which contrasts sharply with the foundations of Plato's theory of Forms<sup>65</sup>, makes it clear that for Eudoxus the beautiful is not a transcendent entity.

Granting this to be true, we consider that Eudoxus might have exerted influence upon Aristotle, who had no hesitation in stating that the beautiful resides «in greatness and order»<sup>66</sup>. Furthermore, we put forward the opinion that Eudoxus concurred with Aristotle in observing that «they are in error who assert that the mathematical sciences tell us nothing about beauty...The main species of beauty are orderly arrangement, proportion and definiteness; and these are especially manifested by the mathematical sciences»<sup>67</sup>. In other

62. Cf. H. BAKER, *op. cit.*, p. 271. To our mind, Eudoxus, who approved of the controlled use of music in the treatment of those with physical or mental disabilities (cf. C.N. POLYCARPOU, Are there Passages from Jamblichus' Work *On the Pythagorean Way of Life* which can be traced back to the Eudoxean Biography of Pythagoras ? (in Greek), *Platon*, 54, 2004- 2005), was probably the first to assert that Pythagoras «sought to restore or to maintain in the psyche and the body the rhythms that characterize the functioning of the healthy psyche and body» (cf. C. CAVARNOS, *Pythagoras on the Fine Arts as Therapy*, Belmont, Institute for Byzantine and Modern Greek Studies, 1994, p. 37). Granting this to be true, we put forward the opinion that Jamblichus did not only remark that the so-called *noble kinds of dances* were used by Pythagoras «as therapy in the sense of a health-preserving agency» (cf. *ibid.*, pp. 41-42) but also affirmed that for Pythagoras *beautiful shapes and forms*, which were presented to the sense of sight by the art of painting, could lend themselves to «therapeutic uses» (cf. *ibid.*, p. 44) because he had access to the Eudoxean biography of Pythagoras.

63. Cf. H.G. LIDDELL- R. SCOTT, *op. cit.*, p. 1913.

64. Cf. E. MOUTSOPOULOS, *The Reality of Creation*, New York, Paragon House, 1991, p. 125.

65. Cf. C.N. POLYCARPOU, Menaechmus' Philosophical Investigations, *Philosophia*, 29, 1999, p. 68.

66. Cf. E. MOUTSOPOULOS, *op. cit.*, p. 125. It must be noted that the way in which Aristotle conceives the Eudoxean proportion theory to operate in zoology (cf. J. VUILLEMIN, *De la logique à la théologie*, Paris, Flammarion, 1967, pp. 17-18) makes it clear that Aristotle is not entirely negative towards Eudoxean aesthetics. In other words, taking into account that for Aristotle the Eudoxean proportion theory was of much help to those who intended to explicate the way in which the parts of the various animals function, we are inclined to think that Aristotle related beauty to function (cf. N. CHRONIS, Beauty as a Cause. Condemnation or Justification of Art?, *Diotima*, 9, 1981, p. 89), by asserting «that in not one of them (of the various animals) is Nature or Beauty lacking» (cf. ARIST., *H. A.*, A5, 645 a 22-23; the translation is by A.L. PECK, *Aristotle. Parts of Animals*, Cambridge Massachusetts, Harvard Univ. Press, 1983<sup>6</sup>, p. 101), because he had familiarized himself with Eudoxean aesthetics.

67. Cf. ARIST., *Metaph.*, M3, 1078 a 33-1078 b 2. (The translation is by H. TREDENNICK, *Ari-*



words, from Sir W.D. Ross's statement that «the thinkers here criticized are those referred to in B. 996 a 32 as τῶν σοφιστῶν τινες οἷον Ἀρίστιππος»<sup>68</sup>, we gather that the aforementioned passage from Aristotle's *Metaphysics* appears initially concerned to defend an Eudoxean position against the Aristippeans<sup>69</sup>.

With a view to facilitating research, we may stress the point that it is highly improbable that Eudoxus was unable to appreciate the full significance of the Pythagorean conceptions of order and symmetry (ἡ μὲν τάξις καὶ συμμετρία καλὰ..., ἡ δ' ἀταξία καὶ ἀσυμμετρία αἰσχροί...) <sup>70</sup>. Being admittedly a man of moral integrity<sup>71</sup>, Eudoxus might have focussed his attention on the moral

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stotle. *Metaphysics. Books X-XIV*, Cambridge Massachusetts, Harvard Univ. Press, 1935, p. 193). It deserves to be noted that, according to P. BRAILAS-ARMENIS, *Philosophical Works* (in Greek), vol. 4, part 1, Athens, 1973, pp. 425-426, Aristotle wrote the aforementioned passage in order to produce evidence in support of the view that unity in variety has priority over any other aesthetic principle. To our way of thinking, Eudoxus must have realized that unity in variety, which harmonized well with the teachings of the Pythagoreans (cf. *supra* and n. 18), had a great deal to do with hedonism, because it was in line with the view that beauty is a set of properties of an object that makes the object capable of producing a certain sort of pleasurable experience in any suitable perceiver (cf. P. BRAILAS-ARMENIS, *op. cit.*, pp. 420-421).

68. Cf. Sir W.D. ROSS, *op. cit.*, p. 418.

69. In view of some points of similarity between the Aristippean refutation of the mathematicians and the Protagorean one (cf. F. LASSERRE, *The Birth of Mathematics in the Age of Plato*, London, Hutchinson, 1964, p. 19), which was familiar to Eudoxus (cf. *supra* and n. 27), we may fairly assume that the aforementioned passage from Aristotle's *Metaphysics* goes back to Eudoxus. With a view to conducting a polemic against Aristippus, Eudoxus might have stated that the keynote of Pythagorean aesthetics, which contributed greatly to the mathematization of the fine arts (cf. M. LOI, Les mathématiques et l'art: de Pythagore à Bourbaki, *Diotima*, 10, 1982, p. 54), was the need for mathematic expression of those forms and structures (cf. *ibid.*, p. 58) which had the quality of being more agreeable to the senses (cf. *supra* and n. 67).

70. Cf. ARISTOX., F 35 Wehrli. As a matter of fact, G.L. MAHNE, *Diatribes de Aristoxeno philosopho peripatetico*, Amsterdam, den Hengst, 1793, pp. 102-103, rightly highlighted the importance of this fragment. In our opinion, it is worth adding that Aristoxenus' phrase τὴν τροφήν τεταγμένως προσφέρεσθαι (cf. ARISTOX., F 35 Wehrli) has something in common with the so-called Eudoxean phrase ἕκαστον... τὸ αὐτῷ ἀγαθὸν εὕρισκιν, ὥσπερ καὶ τροφήν (cf. EUDOX., D 3 Lasserre).

71. Cf. EUDOX., D 3 Lasserre. Taking into account that the musician Damon of Oa, who was the first to explain and analyse in detail the moral implications of aesthetic ideas (cf. E. MOUTSOPOULOS, *Poiésis et Technè*, vol. 1, Montréal, Éditions Montmorency, 1994, p. 126), exerted influence upon Archytas (cf. IDEM, *Presocratic Thought* (in Greek), Athens, Gregores, 1978<sup>2</sup>, p. 64), we are of the opinion that Eudoxus took a great interest in the Pythagorean background of Damon's aesthetics (cf. IDEM, *La philosophie de la musique dans la dramaturgie antique*, Athènes, Hermès, 1975, p. 132). On the other hand, we do not disregard the fact that, far from developing a sophisticated theory of aesthetics based on the general notion of κάθαρσις (cf. F. HOESSLY, *Katharsis: Reinigung als Heilverfahren*, Göttingen, Vandenhoeck und Ruprecht, 2001, p. 188), Eudoxus insisted on the necessity of having a clear conception of the medical implications of κάθαρσις (cf. *ibid.*, pp. 154-155). With a view to shedding light on the medical implications of κάθαρσις, we suggest that in all probability Plutarch made a comparison between the habit of drinking wine and that of expressing grief by paying attention to flute-music (cf. E. HOWALD, Eine vorplatonische Kunsttheorie, *Hermes*, 54, 1919, p. 204) because he had drawn upon Eudoxus. In



implications of the Pythagorean conception of ἀληθὴς φιλοκαλία, which does not seem to be in contradiction with Aristotle's reference to ἥθος...ἀληθῶς φιλόκαλον...κατοκώγιμον ἐκ τῆς ἀρετῆς<sup>72</sup>. In point of fact, being a famous

other words, it may be a coincidence, but Plutarch's aforementioned reference to the habit of expressing grief by paying attention to flute- music reminds us of the medical implications (cf. H. FLASHAR, *Die medizinischen Grundlagen der Lehre von der Wirkung der Dichtung in der griechischen Poetik*, *Hermes*, 84, 1956, p. 29) of Archytas' reference to flute-music (cf. M. TIMPANARO CARDINI, *Pitagorici*, vol. 2, Firenze, La Nuova Italia, 1962, p. 380), which was familiar to Eudoxus, whereas Plutarch's aforementioned reference to the habit of drinking wine reminds us of Eudoxus' reference to the effects of drunkenness (cf. EUDOX., F 300 Lasserre).

72. Cf. ARIST., *E.N.*, K9, 1179 b 8-9. Keeping in mind that the avoidance of the implications of the term ἀρετὴ is characteristic of Eudoxeanism (cf. C.N. POLYCARPOU, *Ameinias' Conception of 'Ἡσυχία*, *Philosophia*, 34, 2004, p. 263) and taking into account that Eudoxus attached great importance to the Anaxagorean distinction between φαινόμενα and ἄδηλα (cf. *supra* and n. 62), we put forward the opinion that Eudoxus' approach to φιλόκαλον ἥθος had a great deal to do with the Pythagorean distinction between φαινόμενον κάλλος and ἄδηλον κάλλος. In other words, we consider that for Eudoxus the so-called Pythagorean equilateral triangle was the very perfection of φαινόμενον κάλλος (cf. *supra* and n. 49), because the sum of the first four numbers (τετρακτὺς) produced the number ten, i. e. a number capable of being represented by dots in an equilateral triangle (cf. A. DELATTE, *Études sur la littérature pythagoricienne*, Paris, Champion, 1915, p. 256), which symbolized the secrets of the Universe (cf. N. TAYLOR, *The Pythagorean Conception of Ἀρμονία* (in Greek), Athens, Nefeli, 2000, p. 43). Now, in spite of the fact that Theon of Smyrna contended that the τετρακτὺς produced a πυραμῖς, i.e. a tetrahedron whose surfaces were equilateral triangles (cf. H.S. SCHIBLI, *Pythagoreanism*, in E. CRAIG, *Routledge Encyclopedia of Philosophy*, vol. 7, London, Routledge, 1998, p. 858), we may rest assured that Theon's view was not only mathematically wrong (cf. K. VON FRITZ, *Philolaos*, *Paulys Realencyclopädie der classischen Altertumswissenschaft*, suppl. vol. 13, München, Druckenmüller, 1973, p. 465) but also out of line with the Eudoxean definition of πυραμῖς (cf. F. LASSERRE, *Die Fragmente des Eudoxos von Knidos*, Berlin, de Gruyter, 1966, p. 175). To our way of thinking, in view of Eudoxus' reference to the construction of πεντάγραμμον (cf. *supra* and n. 42), it seems reasonable to infer that Eudoxus laid special emphasis on the primacy of the τετρακτὺς, which was indissolubly linked to πεντάγραμμον (cf. J.-F. MATTÉI, *op. cit.*, p. 121) and represented the original insight of Pythagoras (cf. K. VON FRITZ, *Pythagoreer*, *Paulys Realencyclopädie der classischen Altertumswissenschaft*, vol. 24, part 1, Stuttgart, Druckenmüller, 1963, p. 259). In this connexion we may note that in all probability the sacred figure of the τετρακτὺς (cf. I. GOBRY, *op. cit.*, p. 113) had something to do with Polycleitean aesthetics (cf. A.H. BORBEIN, *Polykleitos*, *Yale Classical Studies*, 30, 1996, p. 88), notwithstanding the fact that Polycleitus' sources were quite heterogeneous (cf. C. HUFFMAN, *Polyclète et les Présocratiques*, in A. LAKS-C. LOUGUET, *Qu'est-ce que la Philosophie Présocratique?*, Lille, P.U.S., 2002, p. 325). Taking into account that Eudoxus was a Pythagorean who had given a course of lectures on περὶ κόσμου (cf. C.N. POLYCARPOU, *On Eudoxus' Περὶ κόσμου*, *Diotima*, 33, 2005, p. 136), we have reason to believe that Eudoxean aesthetics harmonized well with the Pythagorean doctrine that there were some points of similarity between the ἄδηλον κάλλος of the structure of the Universe and that of the so-called magnificent works of art (cf. K. JOËL, *Geschichte der antiken Philosophie*, Tübingen, Mohr, 1921, pp. 379- 380). This being so, we may reach the conclusion that Eudoxus was an ardent supporter of the Pythagorean doctrine that «human beings should... imitate the patterned rhythms of the cosmos and should achieve thereby a kind of satisfaction which is at least aesthetic» (cf. R.C. LODGE, *Plato's Theory of Art*, London, Routledge and Kegan Paul, 1953, p. 248).



advocate of genuine Pythagoreanism<sup>73</sup>, Eudoxus must have known right well that the Pythagoreans had no hesitation in subordinating the general study of beauty to the general study of goodness<sup>74</sup>.

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## Η ΕΥΔΟΞΕΙΟΣ ΑΙΣΘΗΤΙΚΗ

### Π ε ρ ί λ η ψ η

Διαφωνοῦντες πρὸς τὴν ἐκδοχὴν κατὰ τὴν ὁποίαν ὁ Εὐδοξὸς διὰ τῆς περὶ ἀναλογιῶν θεωρίας του ὑπετύπωσε τὴν αἰσθητικὴν τῶν ἐλληνιστικῶν χρόνων, ὑποστηρίζομεν ὅτι ὁ Εὐδοξὸς οὐδέποτε ἀπέστη τῆς πυθαγορείου διδασκαλίας κατὰ τὴν ὁποίαν τὸ κάλλος τῶν ἔργων τέχνης ἀποκαλύπτεται μέσω μαθηματικῶν δομῶν. Κατὰ τὴν ἀποψίν μας, ἐπίκεντρον τῆς εὐδοξείου αἰσθητικῆς ἀπετέλεσεν ἡ καλουμένη *χρυσή τομή*, βάσει τῆς ὁποίας ἡ ἀληθὴς φιλοκαλία ταυτίζεται πρὸς τὸ ἄδηλον κάλλος τῆς δομῆς τοῦ σύμπαντος.

Χριστόφορος Ν. ΠΟΛΥΚΑΡΠΟΥ

73. Cf. *supra* and n. 72.

74. Cf. J. WALTER, *Die Geschichte der Ästhetik im Altertum*, Hildesheim, Olms, 1967<sup>2</sup>, pp. 102-103.