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THE TRANSCENDENCE OF THE PYTHAGOREAN
ARITHMETICAL ONTOLOGY
IN THE AREOPAGITIC WRITINGS

By transcendence we mean neither the abolition, nor even a *mere extension* of Pythagorean ontology. What we really mean is its transfer and its natural assimilation within the Areopagitic works¹, which however, indicates a serious and substantial difference from it. The Pythagorean ontological notions are correctly assimilated by the Areopagite according to their nature and order within the context of ontology and are kept together in a functional relation in the frame of a universal ontology, while remaining remote in the sense of an essential morphological distinction. Although the Areopagitic ontology may inevitably echo Pythagoreanism, Platonism and above all Neoplatonism, the sequence of terms can only be considered as a matter of form, not of essence. Therefore, by referring to the transcendence of the Pythagorean arithmetical ontology in the Areopagitic writings, all we mean is not only that the former ontology is logically incorporated into them, as a union, but also that it is substantially differentiated as a distinction, and finally superceded by the latter.

The Pythagorean arithmetical ontology², which clearly leads to an arithmetical consideration of the universe, uses as its fundamental ontological principle the first Pythagorean opposition, i.e. finite - infinite (πέρας - ἄπειρον)³, whose existence is presumed everlasting⁴ - it has always been, existing in its own right. According to the Pythagoreans, the primordial being was invariable, unified and finite, i.e. indistinct, hence uncountable. This primordial being is identified with the number One, the initial unity or Monad. This One, then, which appears at the very beginning, the first to be applied (τὸ πρῶτον ἀποσθέν), attracts to itself the infinite and confers it a limit. The Pythagoreans categorically state, as is confirmed by Aristotle⁵, that when the One (which was formed either out of *planes*, *surface*, *seed* or other untraceable substance) came into existence, immediately all

1. Cf. J.-P. MIGNE, *Patrologia Graeca cursus completus* (PG), vol. 3, pp. 1119-1122, especially *De Divinis Nominibus*, pp. 585-596.

2. For the Pythagorean ontology, cf. C.J. DE VOGEL, *Pythagoras and Early Pythagoreanism*, Assen, Van Gorcum, 1966; J. A. PHILIP, *Pythagoras and Early Pythagoreanism*, Toronto, 1966, and W. BURKERT, *Love and Science in Ancient Pythagoreanism*, Cambridge, Mass., 1972.

3. *Metaphysics*, A 5, 986 a 15.

4. The term *everlasting* or *sempiternal* is used in the sense of ARISTOTLE, *ibid.*, Θ 9, 1051 a 20; M 8, 1073 b 6; N 3, 1091 a 12 and A 6, 1063 a 14; 33; 35.

5. *Ibid.*, N 3, 1091 a 14.

those parts of the infinite which were very close to the One became attracted to and bounded (ἐλλέετο καὶ ἐπεγαίνετο) by the *finite*. What then was the factor that set the bound to the primordial finite being? This, of course, was the *non-being*, which not only for the Pythagoreans, but also for the entire ancient Greek thought, was strongly connected with the void. Thus, the finite and invariable being (the primordial being) is restricted by the void (the non-being) that has infinite extent. This unlimited void, that sets the bound, intervenes in the beginning of the Pythagorean ontology and breaks up the finite being – the One – thus interposing itself between its two parts. This invasion or interpolation is marked in ancient Greek tradition anthropomorphically and metaphorically, as the respiration from the boundless void or the inhaling of the boundless (ἐλάνων ἄπειρου). Aristotle also maintains⁶ that the universe performs some kind of respiration by breathing in the boundless void that surrounds it. More specifically, he states that the Pythagoreans had claimed that the void exists and introduces itself into the world from the infinite air. The world inhales the *void* which distinguishes the nature of things, as if it were what separates and distinguishes the terms of a series. This remains true primarily in what concerns the numbers; for the void distinguishes their nature. Through the inhaling of the boundless a continual breaking is caused and the numbers are formed as separate entities. Thus, from the monad, the dyad is formed and then the rest of the numbers follow in such a way that the Pythagorean universe constitutes a copy of natural numbers. That Pythagoreans attributed a great ontological importance to numbers is an indisputable fact. Numbers constituted the essential elements of the existing world. Each number was considered as a separate entity with its own ontological content and properties that remain to be discovered through research. Thus the Pythagorean ontology is an arithmetical one, according to which the properties as well as the relations among the beings cannot be expressed by any other means than *ratios* of natural numbers, just as in music. The numbers 1, 2, 3 and 4 which once they are summed, give 10 – the tetractys or the decade – became the basis of Pythagorean ontology, the pure ontological terms of which are: *identity*, *otherness*, *rest* and *motion*, as Hero of Alexandria⁷ asserts after Plato⁸. They also are incorporated and transcended in the Areopagitic writings⁹, this being considered not as a *logical consequence*, but as different modes of a free *communication*, *relationship* and *reference* to the super-substantial One. The One represents *Being*. It is the *progenitor* and *founder* of the universe. From this very One, through a natural split, resulted number two, which represented the straight line. From number two number three, which represented the triangle, the simplest plane figure. From number three comes number four, identified with the tetrahedron, the simplest solid body. Pythagoreans believed in the *discreteness* of the universe, out of which counting emerged. Number is

closely related to the *form* (idea), according to a major strand of Greek thought. To count things together means that they belong to the same form. Co-counting presupposes close relation, and this is the etymological meaning of the number. The word is related to the root *art*: close relation; and *rais*: a raft, intertwined pieces of wood. Thus the original meaning leads us to the concept of a morphologically formed entity and this is the reason why the number (ἀριθμός) can be subsumed under the Greek terms *logos* and *idea*. Everything that is not a number has for the Pythagoreans a subordinate meaning. However, as every number is finite, the *bound* constitutes a characteristic of numbers and hence of all things. Whatever lacks bound and appears as infinite constitutes the defective element of reality, out of which, according to Philolaus¹⁰, *falsity*, *disharmony*, *absurdity* and *envy* derive. Thus the Pythagoreans compared infinity with matter, which cannot undergo either counting or specification, and has no limit. In this way the concept of matter as a senseless and unspecified element was introduced: an element that refutes every specification or reason and is considered as the source of every ontological and ethical defect.

Diogenes Laertius, in his valuable compendium¹¹, maintains that Pythagoras and the Pythagoreans considered the monad as the beginning of all things. From the monad resulted, or rather was created, the indefinite dyad. All other numbers were considered to have derived from the monad and the infinite dyad. From numbers resulted the points and from them, the lines. From the lines came the plane figures, from them the solid bodies and finally the perceptible bodies, which consisted of four elements: *Fire*, *Water*, *Earth* and *Air*, that is the tetractys in nature, which was considered sacred and the source of eternal nature. These elements change. Through this process of changing the World becomes animated, intelligible and spheroidal, which in its kernel holds the spheroid and inhabited earth. Although Pythagoreans identified God with the Monad – the One – they have not left any indication of ever reaching a clear concept thereof. By the same analogy according to which the soul maintains, within the human being, its moving cause, God was considered as the moving cause of the universe, being symbolically presented as the Monad. Thus, next to the monad, i.e. in the burning kernel (τὸ ἐν τῷ κέντρῳ πύρ), the Pythagoreans placed the metaphysical Monad – God. Since all numbers are referred to the monad, from which they come, by the same token the incorporeal and sempiternal ontological elements, which are registered with numbers, are referred to a primordial ontological principle, which was symbolically represented by the monad, deprived of generation (ἥς οὐκ ἔστι γένεσις). This monad, then, is identified with the Pythagorean God and its existence is considered as the cause (the moving force) of order, symmetry and harmony of the universe.

6. *Physics*, IV 6, 213 b 23-26.

7. Cf. *About Geometricals*, vol. 4, Definitions (Heiberg).

8. *Sophist*, 254 d - 256 b.

9. *De divinis nominibus*, PG 3, IX, 909 b - 918 a.

10. Cf. fr. 11 H. DIELS - W. KRANZ, *Die Fragmente der Vorsokratiker*, Weidmansche Verlagsgesellschaft, 1952, p. 412. The notion of *infinite*, negative since the Pythagoreans, became positive only with Plotinus.

11. Cf. DIOGENES LAERTIUS, VIII 25, in H. S. LONG (ed.), *The Lives of the Philosophers*, Oxford Classical Texts, Oxford, 1964 (also in Loeb Classical Library).

Neoplatonism is the last philosophical system of antiquity which immediately precedes the Areopagitic writings. Besides rationality Neoplatonism has also used some irrational means and practices in order to seek the ultimate truth, such as enlightenment, faith, introspection, love, trance and increased awareness¹². Due to this it has often been believed that Neoplatonism is devoid of scientific accuracy; thus a distinction between rational and irrational philosophy became necessary. This consideration leads to a serious misunderstanding. The term irrational philosophy is not attributed to the infrastructure of Neoplatonism as a systematic and explicit form of knowledge, but to its objectives. The fact that Neoplatonic philosophy tends to use images, symbols and analogies as a more effective means of expression in its effort to acquire wider perspective and provoke emotional reactions does, by no means, imply that it uses irrational methods of thinking. In the Areopagitic writings one also finds analogical and similar irrational experiences, like love, ecstasy, zeal, faith, salvation and deliverance¹³, but the basic method of thinking remains strictly rational, taking into account the reason of truth¹⁴ in comparing things of different qualities and in using it as a finest rule of truth¹⁵ or in dealing with the analogy which comes out of the clearest picture¹⁶. Finally, and very significantly, it stresses that one must know all natural things according to right reason¹⁷. A prominent feature of these writings, the use of symbols, pictures and analogies, more in the qualitative Platonic and Neoplatonic sense, than in the quantitative Aristotelian one, is obvious. However, there exists a noticeable transcendence of human reason by right reason, but also in the very close relation, which leads to their *union* within the context of Areopagitic ontology.

Dionysius strongly maintains¹⁸ that the primordial ontological principle is not divisible and dual, self-contradictory and differentiated, but simple, single and unified. It is impossible that two contradictory origins of beings co-exist. It makes no sense to say that two diametrically opposed things come into existence out of one single source. Hence, we can not accept any dyad but only the monad¹⁹, as a principle. He therefore introduces the first ontological pair union - distinction (ἔνωσις - διάκρισις) for the Absolute and the pair unions - distinctions (in plural) in the relative, built or created «world» and uses three main illustrations²⁰ in order to explain these concepts. From this first pair numbers are naturally formed through distinction and discreteness. Although Dionysius's ontology remains very close to Neoplatonism, he does not accept the theory of emanation, but constantly speaks of *creation*. His consideration of the *summum bonum* does not seem to be partially ethical, but entirely ontological.

12. PLOTINUS, *Enn.*, VI, 9, 10.

13. *De divinis nominibus*, PG 3, IV, pp. 693 b - 736 b; also VII, pp. 865 b - 873 a and VIII, pp. 889 c - 897 c.

14. *Ibid.*, PG 3, I, 1, p. 588 b: κατὰ τὸν αὐτὸν τῆς ἀληθείας λόγον.

15. *Ibid.*, PG 3, II, 11, p. 640 a: ὡς περὶ τινὰ κανόνα κάλλιστον ἀληθείας.

16. *Ibid.*, PG 3, IV, IV, p. 700: κατὰ τὸν αὐτὸν τῆς ἐμφανθοῦς εἰκότος λόγον.

17. *Ibid.*, PG 3, IV, XI, p. 708 b: θεὸν εἶδέναι κατὰ τὸν ὁρθὸν λόγον.

The transcendence of the Pythagorean arithmetical ontology of the finite and the infinite by the circular and bilateral Areopagitic ontology of union and distinction can be summarized in the following four main points: (a) *The dualism of the ontological principle of the Pythagoreans*, which derives from the contradiction existing within the first Pythagorean ontological pair of finite - infinite and is transcended by the unity and simplicity of the unitary, undivided, non - contradictory, bilateral and circular Areopagitic ontological pair: union - distinction. (b) *The appearance of the material element*, which the Pythagoreans identified with the indefinite dyad by presenting the One too as matter. In turn it expresses the irrational as well as the evil, even in Plato and Aristotle, and is transcended by the Areopagitic acceptance of the *ex nihilo*²¹ creation of matter and its property of goodness²² in a *saltus fidei* manner. Hence a different essential consideration of the void as a complementary form of the Being and not as non-Being. (c) *The arithmocentric reductionism of the Pythagoreans*, which has already collapsed together with their unrevised ontology, according to which there is a reduction of Geometry (hence Cosmology) to Arithmetic, is neither transcended by the inversion of Pythagorean reductionism, as carried out by Plato²³, towards a geometry, nor by the presentation of a new arithmetical ontology²⁴ in an effort towards the unification of number and form (ἰδέα) within the concept of formal or ideal number, as in the Platonic *Parmenides*, that was transmitted to the Neoplatonists²⁵. All the above are transcended, taking into account the arithmetical as much as the geometrical ontology²⁶. Both depict equally well reality within the frame of the circular, bilateral and universal ontology of union and distinction of Dionysius²⁷. (it unifies them and distinguishes between them without making the one necessarily reducible to the other). And (d) *The nonexistence of a God, master and creator of the universe* (God's Ruling - Creation) according to the Pythagoreans. However, the identification of God, through a simple logical process and natural reduction, with the indefinite, non-specific One, i.e. the metaphysical monad next to the burning kernel, which all numbers refer to, and which is not transcended even through the identification of the One with the abstract concept of

18. *Ibid.*, PG 3, IV, XXI, p. 921 c, 921 d.2.

19. *Ibid.*: Πᾶσα γὰρ δυὰς οὐκ ἀρχή, μονάς δ' ἔσται πάσης δυάδος ἀρχή.

20. *Ibid.*, PG 3, II, IV, p. 641 b; also in II, V, p. 644 a and II, VI, p. 644 b.

21. V. LOSSKY, *Essai sur la theologie mystique de l'Eglise d'Orient*, Paris, Aubier, 1944; cf. mainly Chap. V; also in English translation 1957 and in reprint 1970.

22. *Op. cit.*, PG 3, IV, XXVIII, p. 729 a: ἀλλ' οὐδὲ τὸ πολυθρόνητον... Ἐν ὅλῃ τὸ κακόν, ὡς φασιν, καθ' ὃ ὅλη... Ἀλλως τε, πῶς ἢ ὅλη κακόν;

23. K. POPPER, *The Open Society and Its Enemies*, London, Routledge and Kegan Paul, 1945; cf. Chap. 6 Note 9(2) and *Addendum* 1957; also *Conjectures and Refutations*, London and New York, Routledge, 19895, pp. 75-93.

24. *Parmenides*, 127 b - 135 c; 137 c - 160 b and 165 b - 166 c; also *Philebus*, 14 c - 19 b.

25. PLOTINUS, *Enn.*, VI, 6, 15 and VI, 9 (*About Numbers*).

26. *De divinis nominibus*, PG 3, V, VI, pp. 820 d - 821 a.

27. *Ibid.*, PG 3, V, VII, p. 821 a, 821 b: Ἀλλὰ καὶ ἐν τῇ ὅλῃ τῶν ὁλῶν φύσει πάντες οἱ τῆς καθ' ἑκα- στον φύσεως λόγοι συνελλημένοι εἰσὶ κατὰ μίαν ἀσύγχυτον ἔνωσιν.

the *summum bonum*,²⁸ and its relation to the theory of emanation²⁹ propounded by Plato and the Neoplatonics. However the above process is transcended through the acceptance, by the status fidei, of the entire thearchy - God's ruling (τῆς ὁλῆς θεοαρχίας)³⁰: (i) as Monad or Oneness, (ii) as Triad or Trinity, (iii) as the Cause of beings, (iv) as Wise and Benevolent and (v) as loving mankind – as asserted in the ontology and the theology of Dionysius.

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28. *Symposium*, 211 a and *Republic*, VI, 508 c 1 - 509 b 10; cf. PROCLUS, *The Elements of Theology*, I, 3.

29. *Timaeus*, 41 d; cf. PLOTINUS, *Enn.*, V, 1, 8 and V, 2, 1.

30. *Op. cit.*, PG 3, I, IV, pp. 589 d - 592 a.