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SAADYAH'S SECOND THEORY OF CREATION
IN ITS RELATION TO PYTHAGOREANISM
AND PLATONISM*

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The second of the thirteen cosmogonic theories, discussed by Saadyah in *Amānāt*, ch. 1, namely that all things were created from eternal spiritual substances, is generally presented as a composite of atomism and Timaeon Platonism, and hence corresponding, in its atomic aspect, to the second cosmogonic theory in Saadyah's *Tafsīr* on *Sefer Yeširah*.¹ But here, as Malter notes, a difficulty arises. For in the *Tafsīr*, the views are listed in the order of increasing acceptability, whereas here the order is that of decreasing acceptability;² so that the view which is here next to the most reasonable ranks there as next to the most repugnant. Malter offers a solution, but there are other difficulties. First, atomism constitutes the ninth view in the *Amānāt*. Second, here a creator is assumed, whereas in the ninth view atomism dispenses with a deity. Third, it cannot be a presentation of Greek atomism which maintains that atoms have forms and sizes, nor of the Arabian type according to which atoms are indeed spaceless but continuously created. Fourth, Saadyah was too sharply discerning and too fond of piling up arguments and views, for the sake of the mere weight of numbers, to group together two such discrepant views as atomism and Platonism, a combination which is somewhat

* Technical considerations necessitated the transliteration of Arabic quotations into Hebrew characters.

¹ See J. Guttmann, *Die Religionsphilosophie des Saadia*, 45, n. 2; M. Lambert, *Commentaire sur le Sefer Yesira par le Gaon Saadya de Fayyoun*, 17, n. 3; H. Malter, *Life and Works of Saadya Gaon*, 203; M. Ventura, *La Philosophie de Saadia Gaon*, 114, 117, n. 100.

² Malter, l. c. Comp. D. Neumark, *Toledot ha-Filosofiyah be-Israel*, II, 181-191.

ironic since Plato was so opposed to Democritus that he refrained from mentioning him and is even said to have wished to burn up the latter's writings.¹

Neumark,⁴ without going into the details of the text, states that the view follows the *Timaeus*, where, he says, Plato describes the genesis of the world as moving from the point to the line, from the line to the plane, and then to the various polyhedrons from which God created all spheres. This theory, Saadyah, or his sources, fitted into Plato's theory of Ideas, which resulted in a combination of atomism and Platonism, the Ideas being the spiritual atoms, the mathematical points, from which corporeal existence developed. But where did Neumark find in the *Timaeus* that the world came from points? Quite the contrary is true, as we shall soon see. His reference to "mathematical points" is correct; but evidently he uses it as a general phrase for atoms, or perhaps, together with Guttman with whom he agrees as to source,⁵ for the $\psi\lambda\eta$. Had he felt the technical implication of that phrase he might have been led to a different source for the second view.

We shall try to show that this second cosmogonic view is basically Pythagorean with some Platonic modifications, to offer in this light some exegetical comments on the text, and hence to identify this view with the eighth in the *Tafsir*.

1. In *Metaph.* 986a1, Aristotle states that, according to the Pythagoreans, the elements of numbers are the elements of all things; and in *Metaph.* 987a19, that number is the substance of all things (see also 1080b18). The basis for this arithmetical conception of the world is the correspondence of the geometrical point to number *one*, as is shown by the Pythagorean definition of a point $\muονὰς \thetaέσιν \epsilon\chiουσα$, a unit having position.⁶ The

¹ Thomas L. Heath, *The Thirteen Books of Euclid's Elements*, I, 38.

⁴ *Op. cit.* 120, 154.

⁵ *Ibid.* 503.

⁶ See Arist., *Metaph.*, 1080b 20, 32. See also John Burnet, *Early Greek Philosophy*, 290; A. E. Taylor, *Plato* (N. Y., 1936), 505. Similarly Shahrastani, *Kitab al-Milal wal-Nihal*, ed. Cureton, 270: מקבלה פי מקבלה ואוקע אלנקטה פי מקבלה. אלוטאר ואלכץ פי מקבלה מלאחזין ואלסטח פי מקבלה מלאחלה ואלנסח פי מקבלה. In *Fons Vitae*, II 22, the equation is: point = 1, plane = 4, solid = 8,

implication that the point has minimum volume was combated by Parmenides and Zeno, so that Plato came to regard the geometrical point as a "geometrical fiction," and to speak of "indivisible lines" which, according to A. E. Taylor,⁸ means infinitely divisible lines; for a line is a continuum and will always break up into lines, never into points. He defined the point merely as the "beginning of a line," i. e. zero, and assigned the role of indivisible magnitude and the primary real of all things to the plane.⁹ Aristotle like Plato, and like Euclid in his second definition of a line, takes the point as "the boundary of a line,"¹⁰ and regards the line as essentially linear and hence does not consist of points but always of lines.¹¹ The Arabian neo-Pythagoreans, the *Ikhwan al-Safa*, blended these two distinct views, defining the point together with Plato as the beginning of a line, i. e. as non-magnitudinal, and at the same time, together with Pythagoras, as equivalent to the arithmetical *one*.¹² Among Jewish thinkers, we find the Platonic-Aristotelian view dominant, but Gabirol, Abraham ibn Ezra, and Albo follow Pythagoras.¹³

thus following the *Ikhwan al-Safa*. See Dieterici, "Zahl und Maass nach den Arabischen Philosophen," *ZDMG* 18 (1864), 694.

⁷ Arist., *Metaph.*, 992a 20.

⁸ *Op. cit.* 506.

⁹ Arist., *De Gen. et Corr.* 316a 30; *De Coelo* 298b 35. See also Heath, *op. cit.* 156.

¹⁰ *Topics*, 141b 20, 21.

¹¹ *Physics*, 231a 24-26, 231b 15-16; *Metaph.*, 1016b 26.

¹² Dieterici, *Ikhwan Es-Safa*, 292: מלנקטה אלחי הי ראס אלכץ ואנה פי צנאעה. מלהורסה טחל מלוטאר אלחי קבל מלאחזין פי צנאעה אלעדד מנאט on p. 591: פראס אלכץ יכסי נקטה וליס הו בנוי מן אלכץ.

¹³ The following references show the Platonic-Aristotelian view הנקודה היא אלנקטה אלחי הי ראס אלכץ ואנה פי צנאעה. מלהורסה טחל מלוטאר אלחי קבל מלאחזין פי צנאעה אלעדד מנאט on p. 591: פראס אלכץ יכסי נקטה וליס הו בנוי מן אלכץ. קצת הקו (ספר היסודות לר' יצחק הישראלי 45). ותהיה הנקודה בגדר הזה תכלית הקו או המציאה אשר בין שני קוים נדבקים זה אל זה (המשיחה והתעבורה לר' אברהם בר' חייא, א. נ.) והמחברק הוא אשר אפשר שיונה בו חלק יחלקהו ויהיה שותף לשני המחלקים (אמנה רסה לר' אברהם אבן ראוד 5). הפילוסופים לא יאמינו שהקו מורכב מנקודות (עץ חיים לאחר בן אליהו, פרק ד). דע כי הנקודה . . . היא תכלית הקו וקצהו ואינה חלק ממנו כמו שחשבו הטפשים באסרם שהקו הוא מחובר מנקודות (יכוד עולם לר' יצחק ישראלי 4, 3) שאל הנקודה שחשאר הקו ושיחידוש ממנה על צד ההתחברות חלק אחר חלק . . . הנקודה כל מה שתכפול לא תצא מנדר הנקודה כי לא יחדש כמנה כ"א דבר בלתי מחלק (פלאטון השם הוצ' לייפציג, 345. והשוה ספר היסודות 45, 47, 48). והקו לו שני תכליות נודרות מהם וכל אחת מהם היא נקודה

spirituales of Gabirol in *Fons Vitae*, II, 24, *quae sunt natura et tres animae et intelligentia*. Such an interpretation would not differ essentially, for Pythagoras, according to Shahrastani, accepted mind, soul, nature, and *hyle*, corresponding, though not number but only numbered (ערד > מעדור), to the first four elemental numbers.²¹ Still, numbers and letters are more analogous to points; and we shall see that, like Shahrastani, Saadyah himself in the *Tafsîr* and also Gabirol in *Fons Vitae* group together these three elements. The *Ikhwân al-Şafâ* speak of points, as well as of line and plane, as נקל and נחמ, which terms are epistemological equivalents of the metaphysical "spiritual."

"The adherents of this view," Saadyah continues, "imagine that the Creator assembled from amongst them (i. e. from amongst the spirituals) tiny points which are the indivisible parts." These are not atoms for reasons given above, but geometrical points which Euclid and Aristotle defined as indivisible.²² Gabirol, in *Fons Vitae*, II, 16, cautions against confusing the point with the atom, the former being a part of the body only *accidentaliter, nec naturaliter, nec essentialiter*, whereas the latter is part of the body's essence. Isaac Israeli too, in *Sefer Yesodot*, 43, differentiates between them; although, at first blush, the opposite seems to be true. He states that an opponent of his Empedoclean theory of elements might cite "the sage Democritus" who said that "body is composed of planes, planes

הכלליה הנלולית וחחתייה החומר הראשון ואלו אינם נופים. Shahrastani, *op. cit.*, 268-269, in his presentation of Pythagoreanism speaks of mind, soul and nature as elements embodying numbers 2, 3, 4 respectively, and also of the *hyle* as אלמנטארי. The *Ikhwân* however (see Dieterici in *ZDMG*, XVIII, 693, cited *supra* n. 6) make the *hyle* correspond to 4, and are followed by Palquera, *op. cit.*, 105.

²¹ See *supra*, n. 22.

²² Dieterici, *Ikhwân*, 293-294. הנדסה עקליה ומסיה . . . ולטא נקול אן הרה אלוקסה. See also *Kilâb Ikhwân al-Şafâ*, redacted by Ahmad ibn 'Abd Allah (Bombay, 1887), I 53-54, where mention is made of נקסח עקליה, נקסח עקליה, נחמ, כסח. הנדסה עקליה. נחמ, כסח. For the meaning of נחמ see Goichon, *Lexique de la langue philosophique d'Ibn Sînâ*, 442. See also Dieterici in *ZDMG* cited *supra*, n. 6.

²³ Arist., *Metaph.*, 1016b 26.

are composed of lines, and lines of points," and he might also mention the Mutazilite view that "body is composed of atoms, i. e. points." It would seem then that Israeli identifies points with atoms; in fact he ascribes the point-theory to the atomist Democritus. But this ascription is erroneous, for Democritus maintained that bodies cannot be composed of points which are only extremities of lines.²⁴ That it is the Pythagorean points that Israeli has in mind, and that, far from identifying them with atoms, he really separates them, is shown by the fact that he combats first the point-theory, and only on p. 49 he turns to the Mutazilite doctrine and there he raises the question whether the atoms are spatial, a question that does not occur in his argument against "Democritus." The expression "atoms i. e. points" is therefore his opponents' contention, not his own. Thus a distinction was made between points and atoms, and we should not confuse them in the interpretation of our text.

"And He made out of them," Saadyah continues, "a straight line and then He cut that line into two halves." Here, where scholars note a change of source and the beginning of the parallel to Plato's *Timaeus*, we really discern the unity of design and a coherence with the first part. In *Timaeus* 36b 5, there is no mention of a line but of a fabric woven out of the soul-stuff of the Same and the Other. Why does Saadyah speak of a line? Because the nature of this creative act is different from that of the *Timaeus*. The Timaeian band of soul-stuff is regarded as cosmic matter; whereas Saadyah, unlike Plato, begins with the point which can only yield a line, i. e. length. The same reason accounts for the next divergence: the Timaeian band is split lengthwise; Saadyah does not say "lengthwise", for such a division is impossible in a mathematical line.

Then the two halves were fastened, one across the other like the Ar. Lam-Alif or the letter K.²⁵ This is also found in the *Timaeus* as well as in the second part of Parmenides' poem, the

²⁴ See Ingeborg Hammer Jensen, "Demokrit und Platon," *Archiv f. Gesch. der Philosophie*, XXIII (Berlin, 1910), 105.

²⁵ See Guttman, *op. cit.*, 46, n. 2.

part which is Pythagorean.²⁸ But here it has for its additional purpose to generate a plane by the intersection of the lines.

"Then He cut (Ar. קטעהם Tibbon נור) them from their point of fastening and He made out of one of them the all-surrounding sphere, and out of the other — the smaller spheres." In the *Timaeus*, the Demiurgus bent each band around into a circle. The word 'cut', in Saadyah's text, seems pointless. Tibbon mistook the meaning of the Ar. קטעהם which means here 'he made them cross' (r. perhaps: אקטעהם). The same expression in a similar context is used in the *Tafsīr*,²⁹ where it undoubtedly has this meaning.

The *Timaeus* now proceeds to discuss the genesis of diverse subjects until 47E where the discovery of "necessity" in the paradise of reason compels the author to begin his account anew. The notion of space is introduced, and then we are told how God formed the four elements "by giving them a distinct configuration, by means of shapes and numbers" (53B). Here the number-theory makes its appearance. From half-square triangles there was formed the cube which is the appropriate form of the earth-corpuscle, and from "half-triangles" there came into being the tetrahedron (fire), the octahedron (air), and the icosahedron (water). The dodecahedron was reserved "for the whole, adorning it with constellations." This is Pythagorean,³⁰ but it does not begin back enough, not, of course with the point which Plato regards as a "geometrical fiction," not even with the line which he does posit in *Laws* 894a as an ἀρχή, but with the plane which is his cosmic unit, thus ignoring the first three cosmogonic steps in the Pythagorean account, summarized, as stated, by Alexander Polyhistor. Saadyah's statement about the geometrical construction of the four elements does not constitute a revision or a second account, but flows entirely along Pythagorean lines from his previous statements.

²⁸ See Burnet, *op. cit.*, 187.

²⁹ Lambert, *op. cit.*, 83: ודלך אדא כס' פי אלהא-כטוטא מסתקמה פי דואיר ומחללהא: אקלידס ווי אלסטה אלסטוח אלסחלהא ואלעכל אלארצ' דו אלסטה אלסטוח אלסחלהא ואלעכל אלסח' דו אלסחאניה אלסטוח אלסחלהא ואלעכל אלסח' דו אלעשרין קאערה מחללהא ואלעכל אלפלכ' דו אחני עשר קאערה מסח' This does not agree, as Dieterici notes, with Euclid's *Elements*. XIII, XIV, XV. See Dieterici, *Die Lehre vom Weltseele*, 3; *Propädeutik*, 30, 129. Palquera, *Reshit Hokmah*, 43, speaks of Euclid as a Pythagorean.

³⁰ Taylor, *op. cit.*, 458 n. 1; Burnet, *op. cit.*, 292 ff.

According to him, God formed "out of those spiritual parts" (i. e. the points) a conic form, an octahedron, a dodecahedron, an icosahedron and created from these forms fire, earth, air, and water respectively. The geometrical forms of these elements do not agree entirely with those of *Timaeus*, but the *Ikhwān al-Ṣafā* also had a different arrangement.³¹

3. Thus the second view is not a composite of atomism and Timaeism, but Pythagoreanism as it was understood about the time of Saadyah. Now what relation does this view bear to any of the views in the *Tafsīr*? Hitherto scholars thought that the doctrine of the *Sefer Yeşirah* or the eighth view of the *Tafsīr* was disregarded in the *Amānāt*-enumeration of the cosmogonic theories, either because Saadyah did not take the *Sefer Yeşirah*-view seriously (Guttmann), or because he deals here with views which are either positively true or positively wrong but not with those which are just tolerable (Malter), or because he did not reject this view as he did the others (Neumark).³² But if our interpretation of the second *Amānāt*-view is correct, it becomes identical with the eighth view of the *Tafsīr*, i. e. the stand-point of the *Sefer Yeşirah*. They are both Pythagorean. True, in the *Amānāt* the spiritual substances are viewed as eternal, whereas in the *Tafsīr* they are created, but, as Saadyah himself states in the seventh view of the *Tafsīr*, the anteriority of numbers and geometrical figures is acceptable if regarded only in a potential sense, objectionable if taken in an actual sense. Hence, in the *Amānāt*, in the list of objectionable cosmogonies, he gives the view with its objectionable Platonic feature which includes actual anteriority and eternity, whereas in the *Tafsīr*, presenting it as the Abrahamic view, he

³¹ Dieterici, *Ichwan*, 439: ואלכססא אלעכאל אלפאצלה אלמכורה פי כחאב אקלידס ווי אלעכל אלנאר' דו אלארבע אלסטוח אלסחלהא ואלעכל אלארצ' דו אלסטה אלסטוח אלסחלהא ואלעכל אלסח' דו אלסחאניה אלסטוח אלסחלהא ואלעכל אלסח' דו אלעשרין קאערה מחללהא ואלעכל אלפלכ' דו אחני עשר קאערה מסח' This does not agree, as Dieterici notes, with Euclid's *Elements*. XIII, XIV, XV. See Dieterici, *Die Lehre vom Weltseele*, 3; *Propädeutik*, 30, 129. Palquera, *Reshit Hokmah*, 43, speaks of Euclid as a Pythagorean.

³² Guttmann, *op. cit.*, 26; Malter, *op. cit.*, 204; Neumark, *op. cit.*, 191.

carefully specifies that numbers and letters are not to be taken as abstract and separable, but, that is, in the originally Pythagorean conception. The various cosmogonic steps of the *Amānāt* are reproduced in the *Tafsīr* as follows: "He (the adherent of this view) does not posit them (the 10 numbers and the 22 letters) as pure and separated. He maintains that He created the air and deposited there these 32 things. According to him, the air consists of distinct particles which number traverses (so Lambert. Barzillai however: *יחכרו למספר*). And when it moved forward according to straight and oblique lines, it generated figures." In this account, the "air" is a monotheistic adaptation of the Pythagorean-Platonic receptacle or *χώρα*. The distinct particles are the points. Number traverses (or cuts) them, because each point is a numerical *one*. The straight and oblique lines, like the Lam-Alif of the *Amānāt*, make the planes. In another passage in the *Tafsīr*, Saadyah says: "Thus when He drew in the air straight lines in circles, triangles, and squares, and also traced oblique lines in circles, triangles, and squares, there came into being, out of the bending and crossing of one line over the other, plane and solid figures." The bending and crossing is reminiscent of the bending and crossing of lines to form spheres which we have noted in the *Amānāt*.

Gabirol also identified the point-theory, or the second view of the *Amānāt*, with the eighth of the *Tafsīr*, which is the theory of the *Sefer Yeṣirah*; for in *Fons Vitae*, II, 21, after stating the gist of his teaching that quantity subsisting in substance is a conjunction of unities, which he explains in the sequel as being points, he remarks with unmistakable reference to the eighth view of the *Tafsīr*: *ac per hoc dictum est illud, quod compositio mundi non evenit nisi ex lineamento numeri et litterarum in aere*.

¹¹ Lambert, *op. cit.*, 10: והו פליס ידעיה מחצ'ה מפרדה ואנסא יקול אנה זלק אלהוא: ואודעה הרה אלל'ב שי ואנדה אן אלהוא-אמא-מנא'ה יקטעהא אלעדד ואדא סאר פיהא עלי זמוט מסחקיס'ה ומנערה'ה אחרלח אשכאלא. See *supra* n. 29. The Heb. version in Barzillai's commentary on the *Sefer Yeṣirah*, 272: *כי האויר יחלקהו לחלקים: ויחכרו למספר*.