

by the human ear if it was rendered insensible by extreme familiarity, as it is perpetual, and men are accustomed to it from childhood."* The harmonic part of the Pythagorean doctrine of numbers thus became connected with the figurative representation of the Cosmos precisely in the Platonic *Timæus*; for "cosmogony is to Plato the work of the union of opposite first causes, brought about by harmony."† He attempted, moreover, to illustrate the tones of the universe in an agreeable picture, by attributing to each of the planetary spheres a syren, who, supported by the stern daughters of Necessity, the three Fates, maintain the eternal revolution of the world's axis."‡ Such a representation of the Syrens, in whose place the Muses are sometimes substituted as the choir of heaven, has been, in many cases, handed down to us in antique monuments, especially in carved stones. Mention is constantly made of the harmony of the spheres, although generally reproachfully, throughout the writings of Christian antiquity, and all those of the Middle Ages, from Basil the Great to Thomas Aquinas and Petrus Alliacus.§

* The Pythagoreans affirm, in order to justify the reality of the tones produced by the revolution of the spheres, that hearing takes place only where there is an alternation of sound and silence.—Aristot., *De Cælo*, ii., 9, p. 290, No. 24–30, Bekker. The inaudibility of the spherical music is also accounted for by its overpowering the senses.—Cicero, *De Rep.*, vi., 18. Aristotle himself calls the Pythagorean tone-myth pleasing and ingenious (*κομψῶς καὶ περιττῶς*), but *untrue* (l. c., No. 12–15).

† Böckh, in *Philolaus*, p. 90.

‡ Plato, *De Republica*, x., p. 617 (*Davis's translation, Bohn's Class. Lib.*, p. 307). He estimates the planetary distances according to two entirely different progressions, one by doubling, the other by tripling, from which results the series 1. 2. 3. 4. 9. 8. 27. It is the same series which is found in the *Timæus*, where the subject of the arithmetical division of the world—spirit (p. 35, Steph., *Davis's trans., Bohn's Class. Lib.*), which Demiurgus propounds, is treated of. Plato had, indeed, considered the two geometrical progressions 1. 2. 4. 8 and 1. 3. 9. 27 together, and thus alternately taken each successive number from one of the two series, whence resulted the above-mentioned succession 1. 2. 3. 4. 9 Compare Böckh in the *Studien von Daub und Creuzer*, bd. iii., p. 34–43; Martin, *Etudes sur le Timée*, tom. i., p. 384, and tom. ii., p. 64. (Compare also Prevost, *Sur l'Ame d'après Platon*, in the *Mém. de l'Acad. de Berlin* for 1802, p. 90 and 97; the same in the *Bibliothèque Britannique, Sciences et Arts*, tom. xxxvii., 1108, p. 153.)

§ See the acute work of Professor Ferdinand Piper, *Von der Harmonie der Sphären*, 1850, p. 12–18. The supposed relation of the seven vowels of the old Egyptian language to the seven planets, and Gustav Seyffarth's conception, already disproved by Zoega's and Tölken's investigations, of the astrological hymns, rich in vowels, of the Egyptian priests, according to passages of Pseudo-Demetrius Phalæreus (perhaps Demetrius of Alexandria), an epigram of Eusebius, and a Gnostic man-