

tem which bears his immortal name as an hypothesis convenient for making astronomical calculations, and one which might be devoid of foundation. "By no other arrangement," he exclaims with enthusiasm, "have I been able to find so admirable a symmetry of the universe, and so harmonious a connection of orbits, as by placing the lamp of the world (*lucernam mundi*), the Sun, in the midst of the beautiful temple of nature as on a kingly throne, ruling the whole family of circling stars that revolve around him (*circumagentem gubernans astrorum familiam*)."\* Even the idea of universal gravitation or attraction (*appetentia quædam naturalis partibus indita*) toward the sun as the center of the world (*centrum mundi*), and which is inferred from the force of gravity in spherical bodies, seems to have hovered before the mind of this great man, as is proved by a remarkable passage in the 9th chapter of the 1st book *De Revolutionibus*.†

\* Quis enim in hoc pulcherrimo templo lampadem hanc in alio vel meliori loco poneret, quam unde totum simul possit illuminare? Siquidem non inepte quidam lucernam mundi, alii mentem, alii rectorem vocant. Trismegistus visibilem Deum, Sophoclis Electra intuentem omnia. Ita profecto tanquam in solio regali Sol residens circumagentem gubernat Astrorum familiam: Tellus quoque miuime fraudatur lunari ministerio, sed ut Aristoteles de animalibus ait, maximam Luna cum terra cognationem habet. Concepit interea a Sole terra, et impregnatur annuo partu. Invenimus igitur sub hac ordinatione admirandam mundi symmetriam ac certum harmoniæ nexum motus et magnitudinis orbium; qualis alio modo reperiri non potest. (Nicol. Copern., *De Revol. Orbium Cælestium*, lib. i., cap. 10, p. 9, b.) In this passage, which is not devoid of poetic grace and elevation of expression, we recognize, as in all the works of the astronomers of the seventeenth century, traces of long acquaintance with the beauties of classical antiquity. Copernicus had in his mind Cic., *Somn. Scip.*, c. 4; Plin., ii., 4; and Mercur. Trismeg., lib. v. (ed. Cracov., 1586), p. 195 and 201. The allusion to the *Electra* of Sophocles is obscure, as the sun is never any where expressly termed "all-seeing," as in the *Iliad* and the *Odyssey*, and also in the *Choephoræ* of Æschylus (v. 980), which Copernicus would not probably have called *Electra*. According to Böckh's conjecture, the allusion is to be ascribed to an imperfect recollection of verse 869 of the *Œdipus Coloneus* of Sophocles. It very singularly happens that quite lately, in an otherwise instructive memoir (Czynski, *Kopernik et ses Travaux*, 1847, p. 102), the *Electra* of the tragedian is confounded with *electric currents*. The passage of Copernicus, quoted above, is thus rendered: "If we take the sun for the torch of the universe, for its spirit and its guide—if Trismegistes call it a god, and if Sophocles consider it to be an electrical power which animates and contemplates all that is contained in creation—"

† Pluribus ergo existentibus centris, de centro quoque mundi non temere quis dubitabit, an videlicet fuerit istud gravitatis terrenæ, an aliud. Equidem existimo, *gravitatem* non aliud esse, quam appetentiam quandam naturalem partibus inditam a divina providentia officis