metal does not solidify until it is in place, he argues, the vessel containing lead will not be heavier than that containing gold, though it will be heavier than that containing silver, as would also be the case if one just considered solid bars of the material. Al-Birūrī is right about the facts, whether or not Theophrastus' view is to be explained in the way he suggests; lead has a relative density or specific gravity of 11.35, but gold one of 19.32; that of silver is 10.5 (Daintith [1996] 228, 292, 444). In view of the part played in Theophrastus' physical theory by the notion of pores (see above on 169-183) it is noteworthy that the explanation in terms of trapped air is not one that al-Birūrī claims Theophrastus himself advanced, but on the contrary one he is presented as overlooking.

For the Arabic translation of the Problemata of Theophrastus see 137 no. 26b.

THE ETERNITY OF THE UNIVERSE

184-185 Sources and Doctrine: Overview

Theophrastus maintained the Aristotelian doctrine of the eternity of the universe (argued for by Aristotle especially in On Heaven 1.10-12). Even if Theophrastus did reject the fifth, imperishable element, he could still hold that the eternity of the world depends on the mutual replacement of the four elements as they change into one another (so Steinmetz [1964] 164, 167; see below on 184.159-71).

185 relates to the eternity of the human race, but that, as the text itself indicates (lines 13-14) implies the eternity of the universe a fortiori. Admittedly, reports such as 185 and 254B that simply couple Theophrastus with Aristotle, especially when they do so in the course of a sequence of other names, may not have that much

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362 Cf. also Aristotle frs.18-21 Rose = Philo, On the Eternity of the Universe 10-11, 20-4, 28-34, 39-43 (t.6 p.76.3-11, 79.6-81.2, 82.1-84.5, 85.5-86.10 Cohn).—With hindsight it would have been better to render κόσμος by "world", both because that is the natural sense of the term ("universe" being rather τὸ πᾶν) and also because it is the permanence of the world-order that is at issue; no ancient Greek theorist believed that there was an absolute beginning to the universe before which nothing existed at all, but many believed in the perishability of worlds, in the sense of ordered systems. In what follows "universe" and "world" should both be understood in the sense of the particular present ordering of the world.
value as evidence; but there seems no reason for doubt in this particular case.\footnote{254A seems to preserve more circumstantial information.} What calls for particular comment in 185 is rather the attribution of a belief in the eternity of the human race not just to Aristotle but also to Plato; see further below. Scholarly discussion has centred on 184, from Philo, a series of four arguments against the eternity of the universe and four replies; the principal questions concern the origin of the arguments against the unity of the universe, and how much of the whole sequence of arguments and responses actually derives from Theophrastus.

184 Philo the Jew (Philo of Alexandria), *On the Eternity of the Universe* 23.117-27.149 (vol.6 p.108.12-119.2 Cohn)


\footnote{aš-Sahrastānī in 241C is reporting that Theophrastus said that *Plato* believed that the universe had a beginning; see below on 185. Buneman, cited at Migne, *PL* 6 124D (on Lactantius, *Institutiones Divinæ* 1; cf. Sorabji [1983] 315 n.47) reported that Theophrastus said the world was created from nothing. This could be a misremembering of 184, where Theophrastus is given as the source for arguments against the eternity of the universe, even though it is made clear that he was reporting arguments with which he himself did not agree. Alternatively, confusion might perhaps have arisen from the fact that shortly after 65 Jerome, who there uses “Theophrastus” as a term of abuse for his opponent Rufinus, mentions a number of theories concerning human souls, including their creation in advance, as it were, at the time when God created everything from nothing (2.9.17-18, *CCSL* vol. 79 p.41). In a dialogue entitled “Theophrastus”, by Aeneas of Gaza (fifth century A.D.) the thesis that the universe had a beginning is resisted by the character, initially pagan, who gives the dialogue its name. That the name “Theophrastus” was here chosen not for the sake of an allusion to the Eresian, but for the significance of the name in itself—“he who speaks of God”—is argued by A. Milazzo, ‘I personaggi del “Dialogo” di Enea di Gaza: storicità e tradizione letteraria’, in *Syndesmos: studi in onore di Rosario Anastasi*, Catania: Istituto di studi Bizantini e neoellenici, Università di Catania, 1990, 1-20. Aeneas’ work was a reply to the *Ammonius* of Zacharias, in which Philo’s *On the Eternity of the Universe* was used as a source; Cumont (1891) xii-xiv; D.T. Runia, *Philo in Early Christian Literature*, Assen: Van Gorcum, 1993, 209-10.}