

References on Motion in Lucretius and Diogenes Laertius

Post by “Cassius” of April 12, 2025 at 1:47 PM

As to examining the issue of "weight" more closely, Joshua has pointed out in Lucretius Today 275 that "gravitas" seems to be the word used by Lucretius for "weight," and [Don pointed out this as to the Greek](#):

[Quote from Don](#)

Joshua asked about the Greek word for "weight" in the characteristics of the atom: βάρος (baros). From which we get words like barometric, barometer "instrument for measuring the weight or pressure of the atmosphere," barophobia "an abnormal fear of gravity."

Here is [another section from Lucretius](#) where "gravitas" is not the word used. Given that there is never in any of these statements that there is "something else" pulling the atoms "down," I presume a good case can be made that regardless of the terminology, Epicurus was clear that this force of "weight" was something within the atoms themselves, not a force that is separate and apart from the atoms themselves. That is, other atoms and groups of atoms arguably could exert a pulling motion, but there is no extra-atomic force that operates on the atoms. This is very important for closing the door to the argument that some people like to make that this "force outside the atoms" is "god."

5-181

Whence again was first implanted in the gods a pattern for begetting things in general as well as the preconception of what men are, so that they knew and saw in mind what they wanted to make? And in what way was the power of first-beginnings ever ascertained, and what they could effect by a change in their mutual arrangements, unless nature herself gave the model for making things? For in such wise the first-beginnings of things many in number in many ways impelled by blows for infinite ages back and kept in motion by their own weights have been wont to be carried along and to unite in all manner of ways and thoroughly test every kind of production possible by their mutual combinations; that it is not strange if they have also fallen into arrangements and have come into courses like to those out of which this sum of things is now carried on by constant renewing.

5-181

Exemplum porro gignundis rebus et ipsa
notities hominum divis unde insita primum est,
quid vellent facere ut scirent animoque viderent,
quove modost umquam vis cognita principiorum
quidque inter sese permutato ordine possent.
si non ipsa dedit speciem natura creandi?
namque ita multa modis multis primordia rerum
ex infinito iam tempore percita plagis
ponderibusque suis consuerunt concita ferri
omnimodisque coire atque omnia pertemptare,
quae cumque inter se possint congressa creare,
ut non sit mirum, si in talis disposituras
deciderunt quoque et in talis venere meatus,
qualibus haec rerum geritur nunc summa novando.

Post by “Joshua” of April 12, 2025 at 4:16 PM

Quote

Given that there is never in any of these statements that there is "something else" pulling the atoms "down," I presume a good case can be made that regardless of the terminology, Epicurus was clear that this force of "weight" was something within the atoms themselves, not a force that is separate and apart from the atoms themselves.

Exactly, and to put it in Aristotelian terms the atoms are 'originative of motion'.

The word Lucretius uses in that passage is *ponderibus[que]*. *Ponderibus* is the dative and ablatative plural of [pondus](#).

Post by “Cassius” of April 12, 2025 at 4:25 PM

I hope Bryan won't mind but I think we need to add here a comment he just made on his wall:

[Quote from From Bryan's Wall](#)

What are now considered to be areas of empty space are really full of tiny, undetectable particles. We cannot see or measure them because they pass through us -- and through our instruments -- with almost no interference. "Gravity," in the sense of a force acting at a distance without contact, does not exist. What we call "gravity" is really the result of how larger objects interact with the wakes and currents they create in the medium of these smaller particles.

Objects move in the direction they are already moving, without any loss of speed, and deviating only slightly and rarely -- unless they make contact with something else. To believe (as those who follow Einstein do) in forces beyond the force of touch -- is to give in to magical thinking.

To which I posted this reply:

This is a topic I've been thinking a lot about as a result of going through Matthew Stewart's book. Apparently there were several major failures of follow-through in the years after the Epicurean period.

Simply talking about "pleasure" and rejecting some (but not all) aspects of supernatural religion doesn't go nearly far enough if you're going to turn around and talk like the Deists did, and you:

- (1) claim agnosticism about whether there is life after death, or even hopefulness that there is, and
- (2) accept the possibility that particle motion is imposed on them by some force outside the particles themselves.
- (3) talk about Nature or "everything" as a "God" (pantheism) without being clear that when you use the word god you are excluding supernatural action and design.

All if these three are really pretty simple to understand, but the "motion caused by unknown outside forces" that you're talking about in this wall post is probably the easiest of all to see how important it is.

And that surely helps explain why we have a section on magnetism in Lucretius (book six around line 1000) explaining that issue too in terms of flows of particles, not in terms of any mysterious outside force.