Is Motion One Of The Three Eternal Properties of Atoms? I.E. Are The Three Properties Shape, Size, and MOTION?

Post by “Cassius” of April 12, 2026 at 2:17 PM

Ok I asked Claude to summarize David Sedley's position. Apparently the main article is not publicly available but I will include the cite below:

The key Sedley text regarding the Epicurean relationship between weight and motion turns out to be his own entry in the Routledge Encyclopedia of Philosophy (1998), where he lays this out with unusual precision. Here is what he says:

Weight as the first of three causes of motion

There are three causes of an atom's motion. The first is its own weight, interpreted as an inherent tendency to move downwards. The second is collisions with other atoms, which can deflect an originally downward motion along any number of new rectilinear trajectories, thus generating the patterns of motion of which compounds are born. The third cause of atomic motion is the swerve, whereby an atom may shift from its rectilinear trajectory onto an adjacent one — a displacement sideways by a distance of one minimum. Routledge

So Sedley's answer is precise and structural: weight is not merely a property atoms happen to have — it is the *first cause of motion itself*. It is the explanatory ground of atomic movement before anything else enters the picture.

Weight does not control speed

Then comes the crucial complication Sedley also states directly: atoms all move at equal speed, since in a vacuum, unlike air, there is no resistance from the medium to slow down the lighter ones more than the heavier ones. Routledge This is Sedley citing Letter to Herodotus 61. So weight is the cause of motion but plays no role whatsoever in determining how fast atoms move — all atoms move equally fast regardless of their weight or size.

The implication

Taken together, Sedley's position gives you the clearest possible statement of why "weight" in Epicurean physics is so philosophically strange. Weight is the *source* of motion — the intrinsic directional tendency that makes atoms move at all — but it does not differentiate fall-rate, does

not produce attraction between atoms, and does not operate the way ordinary physical weight does. The atom's property of weight was designed to account for motion as a whole in Epicurus' physics St-andrews — it is the answer to Aristotle's objection that Democritus had no explanation for why atoms move in the first place.

This is exactly why "motion" seems like it could substitute for "weight" — because in Sedley's reading, Epicurean weight just *is* the cause of natural motion, and the two concepts are inseparable. But Sedley himself maintains "weight" as the right term because the Greek is clearly βάρος, and because weight is the *cause* of motion, not motion itself. Substituting "motion" would collapse the distinction between the property and what the property produces — which matters for understanding how the swerve then modifies things.