

# Infinity and the Expanding Universe

Post by "Cassius" of July 25, 2020 at 12:39 AM

## [Quote from Don](#)

it can incorporate an idea like the multiverse or evolution or the possibility of alien life or other science with barely a shrug

As to the alien life, of course we know that Epicurus specifically predicted that to occur, which I think is an example of how he did take the position that we could use logic based on observation to produce rules in which we can have confidence ("nature never makes only a single thing of a kind") to extrapolate what we see here to other places which we have not seen. (Pretty much the same goes with a theory of evolution, at least of a kind, and also "other worlds" if you consider "worlds" to be analogous to a universe.)

I do think it is important to consider what seem to be the rules of extrapolating. Seems to me that epicurus is saying that those rules include preference (or at least, accepting it as more substantial evidence) that if we see a thing here, then we know it CAN exist. That gives the thing a head up over pure speculation of something that has never been observed, such as the kind of speculating that says that something MAY exist somewhere else just because we haven't been there to eliminate it.

That's probably not well stated on my part, but I think that's what's going on in our current example of where we are in Book 2. Where we are now, Lucretius has been saying that there must be a limit to size of an atom because to not have a limit would be inconceivable. (Presumably because or else we would see them? Or else if there were not a limit, then a single atom would take up the full universe?)

In other words, it seems to be a premise that Epicurus held that it is legitimate to hold that conditions that we observe here (never seeing an atom; no one thing of a single kind) are at least to some extent extrapolatable throughout the infinite universe. ("At least to some extent" meaning that if we observe them here there is a good reason to expect we will observe them elsewhere where conditions are similar.)

Now what I have just said may not be a good summary at all, but these are the issues I think they were getting at, and they deserve a lot of thought:

Are we not justified in having confidence in certain conclusions about the entire universe (that there is no supernatural god) based on extrapolation of what is observed here? And we have confidence of that even in face of the argument that "But you've never been there!" The answer to that question would have to be "yes i can be confident in some things (no

supernatural god there either)" or else we'd never have confidence in much of anything. If we admit any possibility just because we've never been there, no confidence would ever be possible, it would be possible for the supernatural god from the next universe over to pop in at any moment. It seems clear to me that Epicurus did (and was justified in) ruling out that sort of argument.

We're dealing in complex logical issues but the only way to get confident in our conclusion is to think about what we're saying and consider the alternatives, just as he said in suggesting we think about infinity. Because infinity can either be our worst enemy ("the anything is possible argument") or our best friend (Godfrey's it eliminates supernatural gods, for one thing) in getting confident about our decisions on how to live.

I'm going to drop this here without elaboration but we also need to keep in mind in thinking about infinity the related issue we've discussed elsewhere about PD3 and the "limit of pleasure" in how Plato, Seneca, and others argued that a thing cannot be "the best" unless it has a limit, and they alleged pleasure to be something that is unlimited and therefore rejected from competition for the role of "best life." I would expect there to be a clear connection between getting comfortable with discussing limit vs infinity in the field of pleasure (ethics) and limit vs infinity in the field of physics.

Is it possible that one of the issues Epicurus saw was that we need to get comfortable with the idea of the unlimited universe being the highest there is so that we can get comfortable with allegedly unlimited pleasure as the highest goal of life?

Stated another way, maybe one way to get comfortable that there is no single goal of life that is the same for everyone is to compare that question to the size of the universe, for which there is also no single set "end" that everyone would reach if they traveled infinitely in the same direction? No single "best life" might be comparable to no single "end" of the universe in any direction. In both cases we are tempted to think that a supernatural god is the answer for both, but in fact there is no supernatural god and the entire question is logically illegitimate (because we have never observed evidence for a supernatural god, but we have observed lots of evidence that things work naturally, and we reject the "it's possible because we haven't been there to eliminate it" argument).

Having confidence in our answer to one of these questions helps (I think) with our confidence in answering the other one.