

Episode Twenty-One - The Universe Has No Center

Post by "Cassius" of May 29, 2020 at 1:50 PM

Welcome to Episode Twenty-One of Lucretius Today.

I am your host Cassius, and together with my panelists from the EpicureanFriends.com forum, we'll walk you through the six books of Lucretius' poem, and discuss how Epicurean philosophy can apply to you today. Be aware that none of us are professional philosophers, and everyone here is a self-taught Epicurean. We encourage you to study Epicurus for yourself, and we suggest the best place to start is the book, "Epicurus and His Philosophy" by Canadian professor Norman DeWitt.

Before we start with today's episode let me remind you of our three ground rules.

First: Our aim is to go back to the original text to bring you an accurate presentation of [classical Epicurean philosophy](#) as the ancient Epicureans understood it, not simply repeat for you what passes for conventional wisdom about Epicurus today.

Second: We won't be talking about Lucretius with the goal of promoting modern political perspectives. Epicurus must be understood on his own, and not in terms of competitive schools which may seem similar to Epicurus, but are fundamentally different and incompatible, such as Stoicism, Humanism, Buddhism, Taoism, Atheism, and Marxism.

Third: We will be approaching Lucretius with the goal of understanding the fundamental nature of the universe as the essential base of Epicurean philosophy. From this perspective you will see that Epicurus taught neither the pursuit of luxury nor the pursuit of simple living, as ends in themselves, but the pursuit of pleasure, using feeling as the guide to life, and not supernatural gods, idealism, or virtue ethics. As important as anything else, Epicurus taught that there is no life after death, and that any happiness we will ever have must come in THIS life, which is why it is so important not to waste time in confusion.

Now for today in this Episode 21, we close Book One with a discussion of how the Earth does not reside at the center of the Universe.

Now let's join our discussion with Elayne reading today's text from Book One.

Note: In previous episodes we have discussed:

- (1) **Venus / Pleasure As Guide of Life:** That Pleasure, using the allegory of Venus, is the driving force of all life; That the way to rid ourselves of pain is to replace pain with pleasure, using the allegory of Venus entertaining Mars, the god of war;
- (2) **The Achievement of Epicurus:** That Epicurus was the great philosophic leader who stood up to supernatural religion, opened the gates to a proper understanding of nature, and thereby showed us how we too can emulate the life of gods;
- (3-4) **So Great Is The Power of Religion To Inspire Evil Deeds!** That it is not Epicurean philosophy, but supernatural religion, which is truly unholy and prompts men to commit evil deeds;
- (5) **On Resisting The Threats of Priests And Poets:** That false priests and philosophers will try to scare you away from Epicurean philosophy with threats of punishment after death, which is why you must understand that those threats cannot be true; That the key to freeing yourself from false religion and false philosophy is found in the study of nature;
- (6-7) **Step One: Nothing Comes From Nothing.** The first major observation which underlies all the rest of Epicurean philosophy is that we observe that **nothing is ever generated from nothing.**
- (8) **Step Two: Nothing Goes To Nothing.** The second major observation is that **nothing is ever destroyed completely to nothing.**
- (9) **The Evidence That Atoms Exist, Even Though They Are Unseen.** The next observation is that we know elemental particles exist, even though we cannot see them just like we know that wind and other things exist by observing their effects.
- (10-11) **The Void And Its Nature.** We also know that the void exists, because things must have space in which to move, as we see they do move.
- (12) **Everything We Experience Is Composed Of A Combination of Matter And Void.** Everything around us that we experience is a natural combination of atoms and void.
- (13) **The Things We Experience Are Properties and Qualities Of Atoms And Void And Cease To Exist When Their Atoms Disperse.** All things we experience around us are either (1) the **properties** (essential conjuncts; essential and unchanging) or **qualities** (events; inessential and changing depending on context) of bodies. All these arise from the nature, movement, and combinations of the atoms, and cease to exist when the atoms which compose the bodies disperse. Therefore it is incorrect to think that ideas or stories such as that of the Trojan war have any permanent existence.
- (14-15) **Atoms Are Solid And Indestructible, And Therefore Eternal.** The argument that atoms are solid and indestructible and therefore eternal.
- (16) **The Atoms Are Never Destroyed,** they Provide Continuity To All Nature, and there is a strict limit on Divisibility of All Things.
- (17) **All things are not made of a single element, such as fire, as some philosophers assert** - such as Heraclitus, who asserted all things are made of fire.

- (18) **All things are not simply formed from the four classical elements (earth, air, fire, and water)** - here there reference is to Empedocles who was a great man, but greatly fallen.
- (19) All things are not made of tiny pieces of the same thing, or of tiny pieces of all things, as Anaxagoras suggested.
- (20) The universe is infinite in size and has no limits to its size.
- (21) The earth is not the center of the universe.

Here is the text that will be covered in Episode Twenty-One. The Latin version of Book One has this as beginning at approximately line 829 of the [Daniel Brown Edition](#) and of the [Munro Latin Edition here](#).

[Daniel Brown 1743 Edition:](#)

[1037] For as the animal creation, deprived of food, must perish, and their bodies be quite destroyed, so things must be dissolved as soon as matter, turning from its course, fails to afford supply, and save the whole.

[1041] Nor, as some may object, can outward blows on all sides given, preserve this All of things we see compounded, from falling into pieces: They may indeed beat thick, and stay some part, till other atoms come, and so supply the universe. But often they are compelled to bound, and leap back, and so afford the seeds both time and place to fly away, and thus to get their former liberty again. Therefore, 'tis fit that many seeds should still arise, from time to time, for a supply; and that these blows might never cease to beat, the force of matter must be on all sides infinite.

[1051] In these inquiries see that you avoid, my Memmius, to believe with some that say, all bodies strive to reach the middle place of this great All, and so the nature of the world stands fixed, not struck at all by outward blows; nor can the upper or lower parts be scattered any way abroad, since all things by nature to the center tend (as if you could believe that any thing could stay and rest upon itself, that heavy bodies tend upwards, and fix their rest upon the surface of the earth opposite to us, just as we see the images of bodies show themselves in water.) By the same reason they contend that creatures walk underneath, as we above; nor can they fall into the regions of the air below, than can our bodies naturally fly upwards to Heaven; and when they see the sun, we view the stars of night, and so by turns they share with us the seasons of the heavens, and with us still divide night and days.

[1067] But vain mistake hath formed this scheme for fools, who judge perversely of the seeds of things. For there can be no Middle, where there is a void or space that's infinite; or if there was, can bodies, for this reason, rather stop their course in this medium, than take up their

abode in any part of space that's further off. For place, or empty space, which we call void, must equally give way to heavy movements through a medium, or through none, which way soever their motions tend; nor is there any place where bodies, when they come, throw off their weight, and stand fixed in a void, and take their rest. Nor can a void support the weight of bodies, but must by its own nature still give way. It follows then that things are not preserved or held together by this means, as if they fondly strove to reach a middle space.

[1082] Besides, all bodies, they pretend, do not incline towards the center, but those of earth and water, the sea, the rivers rolling from the hills, and those that are composed of earthy parts. But the thin air, they say, and the hot fire are carried upwards from the middle; and hence it is the sky spangled every way with stars, and the sun's flame in his celestial course is fed, because the fire flying from the center there binds up all its heat; (so from the earth all mortal things are fed, nor can the trees adorn their lofty heads with leaves unless the earth to every kind affords its due support.) They say a sort of heavenly canopy above covers the whole, and holds it in; lest the world's walls, their parts being all dissolved, should instantly be scattered through the void, like swiftest flames, and all things be overwhelmed in this great ruin; lest the thundering vaults of heaven should tumble from above, and earth should fail our trembling feet, and the whole race of men, their bodies broken and dissolved, should wander through the boundless void, amidst these mingled ruins of the earth and heavens; and in a moment nothing would be left but desert empty space, and senseless seeds. For in whatever part you will suppose the seeds to separate, here will be the gate of death to bodies; for matter through the breach will rush abroad, and press with mighty force.

[1107] If this you thoroughly know, and little pains will serve (for one thing by another you'll explain) no more shall darkness interrupt your way, but you shall view the utmost depths of nature, for things will show themselves by mutual light.

Munro:

[1037] For as the nature of living things when robbed of food loses its substance and wastes away, thus all things must be broken up, as soon as matter has ceased to be supplied, diverted in any way from its proper course.

[1041] Nor can blows from without hold together all the sum which has been brought into union. They can it is true frequently strike upon and stay a part, until others come and the sum can be completed. At times however they are compelled to rebound and in so doing grant to the first beginnings of things room and time for flight, to enable them to get clear away from the mass in union. Wherefore again and again I repeat many bodies must rise up; nay for the blows themselves not to fail, there is need of an infinite supply of matter on all sides.

[1051] And herein, Memmius, be far from believing this, that all things as they say press to the center of the sum, and that for this reason the nature of the world stands fast without any

strokes from the outside and the uppermost and lowest parts cannot part asunder in any direction, because all things have been always pressing towards the center (if you can believe that anything can rest upon itself); or that the heavy bodies which are beneath the earth all press upwards and are at rest on the earth, turned topsy-turvy, just like the images of things we see before us in the waters. In the same way they maintain that living things walk head downwards and cannot tumble out of earth into the parts of heaven lying below them any more than our bodies can spontaneously fly into the quarters of heaven; that when those see the sun, we behold the stars of night; and that they share with us time about the seasons of heaven and pass nights equal in length to our days.

[1067] But groundless [error has devised such dreams] for fools, because they have embraced [false principles of reason.] For there can be no center [where the universe is] infinite; no nor, even if there were a center, could anything take up a position there [any more on that account] than for some quite different reason [be driven away.] For all room and space, which we term void, must through center, through no-center alike give place to heavy bodies, in whatever directions their motions tend. Nor is there any spot of such a sort that when bodies have reached it, they can lose their force of gravity and stand upon void; and that again which is void must not serve to support anything, but must, as its nature craves, continually give place. Things cannot therefore in such a way be held in union, o'er-mastered by love of a center.

[1082] Again since they do not suppose that all bodies press to the center, but only those of earth, and those, of water, [both such as descend to the earth in rain] and those which are held in by the earth's body, so to say, the fluid of the sea and great waters from the mountains; while on the other hand they teach that the subtle element of air and hot fires at the same time are carried away from the center and that for this reason the whole ether round bickers with signs and the sun's flame is fed throughout the blue of heaven, because heat flying from the center all gathers together there, and that the topmost boughs of trees could not put forth leaves at all, unless from time to time [nature supplied] food from the earth to each [throughout both stem and boughs, their reasons are not only false, but they contradict each other. Space I have already proved to be infinite; and space being infinite matter as I have said must also be infinite] lest after the winged fashion of flames the walls of the world should suddenly break up and fly abroad along the mighty void, and all other things follow for like reasons and the innermost quarters of heaven tumble in from above and the earth in an instant withdraw from beneath our feet and amid the commingled ruins of things in it and of heaven, ruins unloosing the first bodies, should wholly pass away along the unfathomable void, so that in a moment of time not a wrack should be left behind, nothing save untenanted space and viewless first-beginnings. For on whatever side you shall first determine first bodies to be wanting, this side will be the gate of death for things, through this the whole crowd of matter will fling itself abroad.

[1107] If you will thoroughly con these things, then carried to the end with slight trouble [you will be able by yourself to understand all the rest.]

For one thing after another will grow clear and dark night will not rob you of the road and keep you from surveying the utmost ends of nature: in such wise things will light the torch for other things.

Bailey:

[1037] For even as the nature of living things, robbed of food, loses its flesh and pines away, so all things must needs be dissolved, when once matter has ceased to come for their supply, turned aside in any way from its due course.

[1041] Nor can blows from without on all sides keep together the whole of each world which has come together in union. For they can smite on it once and again, and keep a part in place, until others come, and the sum may be supplied. Yet sometimes they are constrained to rebound and at once afford space and time for flight to the first-beginnings of things, so that they can pass away freed from union. Therefore, again and again, it must be that many things rise up, yea, and in order that even the blows too may not fail, there must needs be limitless mass of matter on all sides.

[1051] Herein shrink far from believing, Memmius, what some say: that all things press towards the centre of a sum, and that 'tis for this cause that the nature of the world stands fast without any blows from outside, and that top and bottom cannot part asunder in any direction, because all things are pressing upon the centre (if indeed you can believe that anything can stand upon itself): and that all heavy things which are beneath the earth press upwards, and rest placed upside down upon the earth, like the images of things which we see, as it is, through water. And in the same way they maintain that living things walk head downwards, and cannot fall off the earth into the spaces of heaven beneath them any more than our bodies can of their free will fly up into the quarters of heaven: that when they see the sun, we are descrying the stars of night, and that they share with us turn by turn the seasons of the sky, and pass nights equal to our days.

[1067] But empty error has commended these false ideas to fools, because they embrace and hold a theory with twisted reasoning. For there can be no centre, since the universe is created infinite. Nor, if indeed there were a centre, could anything at all rest there any more for that, rather than be driven away for some far different reason: for all room and space, which we call void, must through centre or not-centre give place alike to heavy bodies, wherever their motions tend. Nor is there any place, to which when bodies have come, they can lose the force of their weight and stand still in the void; nor must aught that is void support anything, but rather hasten to give place, as its own nature desires. It cannot be then that things can be held together in union in such a way, constrained by a yearning for the centre.

[1082] Moreover, since they do not pretend that all bodies press towards the centre, but only those of earth and liquid, the moisture of the sea and mighty waters from the mountains, and those things which are, as it were, enclosed in an earthy frame; but on the other hand, they teach that the thin breezes of air and hot fires at the same time are carried away from the

centre, and that for this cause all the sky around is twinkling with stars, and the flame of the sun is fed through the blue tracts of heaven, because all the heat fleeing from the centre gathers itself together there; nor again can the topmost branches grow leafy upon trees, unless from the earth little by little each has food [supplied by nature, their thoughts are not at harmony with themselves. There must then be an infinite store of matter], lest after the winged way of flames the walls of the world suddenly fly apart, dissolved through the great void, and lest all else follow them in like manner, or the thundering quarters of the sky fall down from above, and the earth in hot haste withdraw itself from beneath our feet, and amid all the mingled ruin of things on earth and of the sky, whereby the frames of bodies are loosed, it pass away through the deep void, so that in an instant of time not a wrack be left behind, except emptied space and unseen first-beginnings. For on whatever side you maintain that the bodies fail first, this side will be the gate of death for things, by this path will all the throng of matter cast itself abroad.

[1107] These things you will learn thus, led on with little trouble; for one thing after another shall grow clear, nor will blind night snatch away your path from you, but that you shall see all the utmost truths of nature: so shall things kindle a light for others.

Post by “Cassius” of May 31, 2020 at 10:42 AM

Here is a link to the "geocentric model" (which Epicurus rejected) that we discuss during this episode:

https://en.wikipedia.org/wiki/Geocentric_model

In [astronomy](#), the **geocentric model** (also known as **geocentrism**, often exemplified specifically by the **Ptolemaic system**) is a [superseded](#) description of the [Universe](#) with [Earth](#) at the center. Under the geocentric model, the [Sun](#), [Moon](#), [stars](#), and [planets](#) all [orbited](#) Earth. [\[1\]](#) The geocentric model was the predominant description of the cosmos in many ancient civilizations, such as those of [Aristotle](#) in Classical Greece and [Ptolemy](#) in Roman Egypt.

Post by “Cassius” of June 6, 2020 at 5:00 PM

Episode 21 of the Lucretius Today Podcast is now available.

<https://www.spreaker.com/episode/29739765>

Post by “Paquin” of July 28, 2021 at 4:44 AM

I enjoyed today's discussion of the meaning of the seeds arising and the geocentric model of the universe. I have enjoyed reading along with this podcast and my understanding of the poem has been greatly enriched by following the discussion. I don't believe that I would ul

Post by “Paquin” of July 28, 2021 at 4:47 AM

...would have got this far without the guidance and support of the podcast. Thank you to everyone who has taken part. You have created something brilliant together!! am now looking forward to book 2.

Post by “Cassius” of July 28, 2021 at 7:41 AM

Thank you for your comments. We're now in the process of recording the final book, and it is definitely motivational to hear that we've been of assistance to people!