

Episode Nine - The Evidence That Atoms Exist, Even Though They Are Unseen

Post by "Cassius" of March 6, 2020 at 3:48 AM

Welcome to Episode Nine of Lucretius Today. This is a podcast dedicated to the poet Lucretius, who lived in the age of Julius Caesar and wrote "On The Nature of Things," the only complete presentation of Epicurean philosophy left to us from the ancient world.

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 bring you an accurate presentation of [classical Epicurean philosophy](#) as the ancient Epicureans understood it, which is not necessarily the same as modern commentators interpret it.

Second: We won't be talking about modern political issues in this podcast. We call this approach "Not Neo-Epicurean, But Epicurean." Epicurean philosophy is a philosophy of its own, it's not Stoicism, Humanism, Buddhism, Taoism, Atheism, or Marxism - it is unique and must be understood on its own, not in terms of any conventional modern morality.

Third: We will be talking about many details of Epicurean physics, but we'll always relate them to how they translate into the Epicurean conclusions about how best to live. Lucretius will show that Epicurus was not focused on luxury, like some people say, but neither did he teach minimalism, as other people say. Epicurus taught that feeling - pleasure and pain - are the guides that Nature gave us to live by, not gods, idealism, or virtue ethics. More than anything else, Epicurus taught that the universe is not supernatural in any way, and that means there's no life after death, and any happiness we'll ever have comes in THIS life, which is why it is so important not to waste time in confusion.

Remember that our home page is LucretiusToday.com, and there you can find a free copy of the version of the poem from which we are reading, and links to where you can discuss the poem between episodes at Epicureanfriends.com.

In the episodes so far here are the major topics we have covered:

- That Pleasure is the driving force of all life;
- That the way to rid ourselves of pain is to replace pain with pleasure;
- 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;
- That it is not Epicurean philosophy, but supernatural religion, which is truly unholy and prompts men to commit evil deeds;
- That false priests and philosophers will try to scare you 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 ideas is found in the study of nature;
- That the first major observation which underlies all a correct understanding of the universe is that **nothing ever comes from nothing.**
- That the second major observation is that **nothing is ever destroyed completely to nothing.**
- That what all things come from, and what all things pass back to, are the elemental particles, which we call atoms.

Now that we are up to date let's start today's discussion,

This is the text that will be covered in Episode Nine. The Latin version of Book One has this as beginning at approximately line 137 which can be found in the [Munro Latin Edition here.](#)

[1743 Daniel Browne Edition \(click link for English and Latin\):](#)

And now, since I have taught that nothing can proceed from nothing, nor can things, once formed, to nothing be reduced, lest you by chance should doubt my reasons, since the seeds of things cannot be seen with naked eyes; hear further, that there are seeds of bodies (and you must confess there are) impervious to the sight.

And first, the raging force of winds does lash the sea, o'erthrow vast ships, and chase the clouds; sometimes they scour the plains with furious storms, and spread them o'er with tallest trees, and vex the lofty hills with blasts that rend the woods. And so they bluster with a dreadful sound, and roar with threatening noise through the air. These winds are therefore bodies to the eyes unseen, which scour the sea, the lands, the clouds, and toss them, thus tormented, with their blasts. They act the same, and spread destruction round as a still stream, increased by sudden rain, and swelled by torrents pouring from the hills, the effect of driving showers, is born along, rending the limbs of trees, and then whole woods: Nor can the strongest bridges bear the force, so sudden, of the rushing flood; the stream, made mad by hasty rains, beats on the dams with force impetuous, swells through the breach with horrid noise, and rolls the massy stones under its waves, and breaks what stops its tide. Just so, the hurricanes of wind drive on which way they point their blasts, like mighty floods, force all before them, beat with frequent strokes; sometimes they snatch with rapid turns, and while things as they roll in

eddies through the air. These winds, 'tis plain, are bodies still unseen, since by their furious blasts they rival in their force the largest streams, which bodies are we own.

Besides, we feel the various smells of things, but can't discern how they affect the nose; nor can we see the raging heat, nor with our eyes perceive the cold, nor can we see a voice; all which by nature are of bodies formed, because they make an impression on the sense, for nothing but body can be touched, or touch.

Again, a garment hung up nigh the shore, that breaks the waves, grows wet, and, to the Sun expanded, dries; yet no one ever saw how the moist vapor fixed, or how again it fled before the heat; the watery drops must be dissolved into small parts too subtle to be at all discovered by the eye.

But further, after circling many years, a ring upon the finger wears away, the fall of dropping water hollows stones, the crooked plough-share, though of iron, wastes in the fields insensibly by use; we see the streets, paved with hard stones, worn out by frequent tread of passengers; the brazen statues nigh the gates shew their right hands made less by many a kiss of those who worship, or who pass along. These things we see shew less and less, and wear; but what a share of matter every time is brushed off, nature in envy to us has not indulged the faculty to see.

Lastly, what every day and nature do bestow on beings, to make them grow by just degrees, not the most piercing eye could ever find, nor yet the particles that fly and waste by age or by decay; nor can you see by what degrees the rocks are eaten through by the corroding salt of dashing waves: thus Nature works by bodies not discerned.

Munro:

267] Now mark me: since I have taught that things cannot be born from nothing, cannot when begotten be brought back to nothing, that you may not haply yet begin in any shape to mistrust my words, because the first-beginnings of things cannot be seen by the eyes, take moreover this list of bodies which you must yourself admit are in the number of things and cannot be seen.

[272] First of all the force of the wind when aroused beats on the harbors and whelms huge ships and scatters clouds; sometimes in swift whirling eddy it scours the plains and straws them with large trees and scourges the mountain summits with forest-rending blasts: so fiercely does the wind rave with a shrill howling and rage with threatening roar. Winds therefore sure enough are unseen bodies which sweep the seas, the lands, ay and the clouds of heaven, tormenting them and catching them up in sudden whirls. On they stream and spread destruction abroad in just the same way as the soft liquid nature of water, when all at once it is borne along in an overflowing stream, and a great downfall of water from the high hills augments it with copious rains, flinging together fragments of forests and entire trees; nor can the strong bridges sustain the sudden force of coming water: in such wise turbid with much rain the river dashes

upon the piers with mighty force: makes havoc with loud noise and rolls under its eddies huge stones: wherever aught opposes its waves, down it dashes it. In this way then must the blasts of wind as well move on, and when they like a mighty stream have borne down in any direction, they push things before them and throw them down with repeated assaults, sometimes catch them up in curling eddy and carry them away in swift-circling whirl. Wherefore once and again I say winds are unseen bodies, since in their works and ways they are found to rival great rivers which are of a visible body.

[298] Then again we perceive the different smells of things, \yet never see them coming to our nostrils; nor do we behold heats nor can we observe cold with the eyes nor are we used to see voices. Yet all these things must consist of a bodily nature, since they are able to move the senses; for nothing but body can touch and be touched.

[306] Again clothes hung up on a shore which waves break upon become moist, and then get dry if spread out in the sun. Yet it has not been seen in what way the moisture of water has sunk into them nor again in what way this has been dispelled by heat. The moisture therefore is dispersed into small particles which the eyes are quite unable to see.

[312] Again after the revolution of many of the sun's years a ring on the finger is thinned on the under side by wearing, the dripping from the eaves hollows a stone, the bent plowshare of iron imperceptibly decreases in the fields, and we behold the stone-paved streets worn down by the feet of the multitude; the brass statues too at the gates show their right hands to be wasted by the touch of the numerous passers by who greet them. These things then we see are lessened, since they have been thus worn down; but what bodies depart at any given time the nature of vision has jealously shut out our seeing.

[323] Lastly the bodies which time and nature add to things by little and little, constraining them to grow in due measure, no exertion of the eyesight can behold; and so too wherever things grow old by age and decay, and when rocks hanging over the sea are eaten away by the gnawing salt spray, you cannot see what they lose at any given moment Nature therefore works by unseen bodies.

[33

Bailey:

267] Come now, since I have taught you that things cannot be created of nought nor likewise when begotten be called back to nothing, lest by any chance you should begin nevertheless to distrust my words, because the first-beginnings of things cannot be descried with the eyes, let me tell you besides of other bodies, which you must needs confess yourself are among things and yet cannot be seen. First of all the might of the awakened wind lashes the ocean and o'erwhelms vast ships and scatters the clouds, and anon scouring the plains with tearing

hurricane it strews them with great trees, and harries the mountain-tops with blasts that rend the woods: with such fierce whistling the wind rages and ravens with angry roar.

[272] There are therefore, we may be sure, unseen bodies of wind, which sweep sea and land, yea, and the clouds of heaven, and tear and harry them with sudden hurricane; they stream on and spread havoc in no other way than when the soft nature of water is borne on in a flood o'erflowing in a moment, swollen by a great rush of water dashing down from the high mountains after bounteous rains and hurling together broken branches from the woods, and whole trees too; nor can the strong bridges bear up against the sudden force of the advancing flood. In such wise, turbid with much rain, the river rushes with might and main against the piles: roaring aloud it spreads ruin, and rolls and dashes beneath its waves huge rocks and all that bars its flood. Thus then the blasts of wind too must needs be borne on; and when like some strong stream they have swooped towards any side, they push things and dash them on with constant assault; sometimes in eddying whirl they seize them up and bear them away in swiftly swirling hurricane. Wherefore again and again there are unseen bodies of wind, inasmuch as in their deeds and ways they are found to rival mighty streams, whose body all may see.

[298] Then again we smell the manifold scents of things, and yet we do not ever descry them coming to the nostrils, nor do we behold warm heat, nor can we grasp cold with the eyes, nor is it ours to descry voices; yet all these things must needs consist of bodily nature, inasmuch as they can make impact on our senses. For, if it be not body, nothing can touch and be touched.

[306] Once more, garments hung up upon the shore, where the waves break, grow damp, and again spread in the sun they dry. Yet never has it been seen in what way the moisture of the water has sunk into them, nor again in what way it has fled before the heat. Therefore the moisture is dispersed into tiny particles, which the eyes can in no way see.

[312] Nay more, as the sun's year rolls round again and again, the ring on the finger becomes thin beneath by wearing, the fall of dripping water hollows the stone, the bent iron ploughshare secretly grows smaller in the fields, and we see the paved stone streets worn away by the feet of the multitude; again, by the city-gates the brazen statues reveal that their right hands are wearing thin through the touch of those who greet them ever and again as they pass upon their way. All these things then we see grow less, as they are rubbed away: yet what particles leave them at each moment, the envious nature of our sight has shut us out from seeing.

[323] Lastly, whatever time and nature adds little by little to things, impelling them to grow in due proportion, the straining sight of the eye can never behold, nor again wherever things grow old through time and decay. Nor where rocks overhang the sea, devoured by the thin salt spray, could you see what they lose at each moment. 'Tis then by bodies unseen that nature works her will.

Post by “Cassius” of March 11, 2020 at 8:05 PM

Episode Nine is now released!

<https://www.spreaker.com/episode/23769888>

Post by “Don” of March 12, 2020 at 3:20 PM

I was listening to Episode 9 in my car on my way to work this morning and found myself desperately wanting to chime in as you all were discussing the jealous/envious aspect of vision.

My take on that line was that it is our faculty of vision itself that is greedy, envious, that is wanting, etc. There's no outside agency that's jealous.

In another sense, it is we, through our sight, who feel we are entitled to see everything! Nothing should be hidden from us. Who is nature to hide something from our vision?!

I also got this corroborated somewhat in [a book I found via Google Books](#) which gives a translation as "**The grudging nature of our vision** had shut is off from proof as to which atoms have left at a given time."

Great episode!

Post by “Cassius” of March 12, 2020 at 4:47 PM

Thank you Eugenios -- "grudging" is surely in line with most of those other terms (except for Martin Ferguson Smith who apparently didn't like the idea 😊)

I am not sure I am with you though on what you think it means. You included "wanting" in your list, and to me that means "insufficient" or "inadequate" but the other terms (greedy, envious) imply something different - at least to me.

Envious, greedy, grudging, all carry (to me) the implication that there is some force/entity that is deliberately holding back something.

<https://www.epicureanfriends.com/thread/1468-episode-nine-the-evidence-that-atoms-exist-even-though-they-are-unseen/>

So I think the same issue that we discussed is still in play -- what is behind Lucretius in "personalizing" the faculty of vision as if it had some intent to hold us from seeing more?

And do you think this is related to the opening part which referred to "the fast bars of nature's portals" (Munro) / "the close-set bolts upon the doors of nature" (Bailey)?

And even if the answer to that last question is yes, that just make the questions more important to answer: "*Who is standing between us and nature? How? Why?*"

Post by "Don" of March 12, 2020 at 8:26 PM

Fair points, [Cassius](#) 😊 Allow me to rephrase my thoughts.

By using "wanting" I wanted to convey that if you're envious, you want something. You're lacking something you want, something you feel that you deserve. From my perspective, Lucretius is saying our vision is jealous in the sense that it "wants" to see all of Nature's secrets, greedy to see everything hidden from view... but it can't. But our vision just isn't capable of seeing atoms, so Lucretius is telling us how we can perceive them by analogy and by using our other senses (including our mental sense).

As to the barred doors of Nature, I have thoughts. (Hard to believe, I know 😊) From my perspective, this is nothing more than Lucretius exercising his poetic muscles. This language is simply describing, in a poetic manner, the idea that Epicurus was the first to reveal the secrets of nature that no one else could figure out. Before Epicurus, nature's processes were accepted as being under the control of the gods or other supernatural forces. The processes behind "the nature of things" were hidden behind "the close-set bolts upon the doors of nature" to simply use poetic language. That's so much better than just saying "Epicurus figured things out that no one else figured out before him because he was really smart." There is no one or no thing standing guard at actual or figurative doors. It's simply poetry: the honey on the rim of the cup of wormwood.

Post by "Cassius" of March 13, 2020 at 3:24 AM

I agree that's probably the best interpretation (You're lacking something you want, something you feel that you deserve), but I think this is one of those areas that we can sense a perspective that is different from ours, so we need to be on guard that we don't just

unthinkingly presume an answer that might not be exactly what Lucretius/Epicurus was saying.

Post by “Don” of March 13, 2020 at 5:44 AM

I can see your perspective (Oops, no pun intended there). These kinds of ambiguous or hard-to-interpret lines reinforce facts like we're dealing with:

- a language in which no one alive today can really be 100% fluent (Latin as it was spoken and understood by actual Romans)
- a manuscript transmission for which it is impossible to know if it was 100% accurately transcribed.
- a philosophy for which we've lost so much primary source material and have to rely on fragments and so much secondhand and often hostile commentators.

It's not impossible to take all these into account and interpret texts and try to follow Epicurus' path, but it is often all seen through a glass darkly to bring that whole vision analogy back in...

OMG! That *just* stuck me as I write that! I *think* I Corinthians 13:12 could be saying something parallel (but supernatural) to that line in Lucretius in a similar poetic manner. The Amplified Bible has:

[12 For now \[in this time of imperfection\] we see in a mirror dimly \[a blurred reflection, a riddle, an enigma\], but then \[when the time of perfection comes we will see reality\] face to face. Now I know in part \[just in fragments\], but then I will know fully, just as I have been fully known \[by God\].](#)

Please don't misinterpret! This Pauline poetic metaphorical language about vision just struck me. I'm not implying or ascribing ANY supernatural or Christian content in or connection to Lucretius, just that using poetic metaphor in DRN like this conveys something - for us - like our vision isn't capable of seeing the reality of atoms with our eyes through our limited vision but Epicurus was the first to be able to "see" reality face-to-face through those "barred doors" and to share that with us so we could "see" it, too.

Okay, I realize I'm descending down the rabbit hole on this one. 😊 Time to climb my way back to the sunlit world and move along in the poem.

Post by “Cassius” of October 19, 2021 at 2:35 PM

<https://www.epicureanfriends.com/thread/1468-episode-nine-the-evidence-that-atoms-exist-even-though-they-are-unseen/>

Received a comment today on this episode from a listener in Europe (via google translate):

Cassius, I listened to Lucretius podcast 9. There is a debate about how to convince people who don't want to trust their senses. The Flemish philosopher Maarten Boudry has an interesting view on this. He says that there are people who do not want to know something. There are lovers who promise each other loyalty and also say, if you were unfaithful, I don't want to know. There are people who carry cancer genetically, but say to their doctor, I don't want research, I don't want to know. When developing new tests for detecting cancer, they ask people in advance: if we develop that test, would you use it? 70% say yes, but if the test is really there, and people are invited, there are only 35% who actually do it. So a lot of people don't even know they don't want to know something. I find that an enlightening insight.