

# Episode 259 - Nothing Comes From Nothing

Post by "Cassius" of November 18, 2024 at 2:09 PM

Welcome to Episode 259 of Lucretius Today. This is a podcast dedicated to the poet Lucretius, who wrote "On The Nature of Things," the most complete presentation of Epicurean philosophy left to us from the ancient world.

**Each week we walk you through the Epicurean texts, and we discuss how Epicurean philosophy can apply to you today. If you find the Epicurean worldview attractive, we invite you to join us in the study of Epicurus at EpicureanFriends.com, where we discuss this and all of our podcast episodes.**

This week we are continuing our review of the key doctrines of Epicurus that are featured here at Epicureansfriends on the front page of our website.

This week we will address what Epicurus and Lucretius use as the starting point for the discussion of Epicurean physics: nothing can come from nothing.

Full show notes here: [Lucretius Today Episode 259 - Nothing Comes From Nothing](https://www.epicureanfriends.com/thread/4149-episode-259-nothing-comes-from-nothing/)

<https://www.spreaker.com/episode/63428412>

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Post by "Cassius" of December 9, 2024 at 7:51 AM

Editing of Lucretius Today Episode 258 is just about complete, and it will be up later today.

In the meantime, the outline for Episode 259 is up in raw form here:

[Nothing Comes From Nothing](https://www.epicureanfriends.com/thread/4149-episode-259-nothing-comes-from-nothing/)

Our purpose in this series is to highlight:

1. The reasons why the issue is important;
2. The background and contentions of others to whom Epicurus was reacting;
3. The major aspects of Epicurus' reasoning in support of the doctrine; and
4. Takeaway implications of the doctrine.

There's a limit to what we have time to cover, so with these major goals in mind please feel free to make suggestions for additions here in this thread.

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## Post by “Cassius” of December 14, 2024 at 8:45 PM

Over the next two episodes we'll be addressing Epicurus' big picture views of the universe from a practical point of view... which means: don't expect the last word in the last physics research from us. However, Epicurus had some very intelligent things to say about the universe not coming from nothing (this week) and being infinite in time and space (next week).

There are many youtube videos that cover these issues. Here are a few that talk about how the view that the universe started at a single point in time is by no means universal today:

### Physics Videos Discussing Infinite Universe Possibilities:

- 1.1. Roger Penrose - Did The Universe Begin? <https://youtu.be/OFqjA5ekmoY>
- 1.2. Sean Carroll - Did the Universe Begin? <https://youtu.be/FgpvCxDL7q4>
- 1.3. Eternal Universe! The New Theory That Could Change the Way We Think about the Universe! [https://youtu.be/\\_TGTcv894j4](https://youtu.be/_TGTcv894j4)
- 1.4. PBS - What If The Universe DID NOT Start With The Big Bang? <https://youtu.be/HRqBGnSxyzl>
- 1.5. Celestium: Eternal Universe: The New Theory that Might Change the Way we Think About the Universe <https://www.youtube.com/watch?v=28AstfdTiOA>
- 1.6. Closer To Truth - What Would An Infinite Cosmos Mean? <https://live-closer-to-truth.pantheonsite.io/video/what-wou...te-cosmos-mean/>

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## Post by “Joshua” of December 15, 2024 at 11:27 AM

John Tyndall, *Belfast Address*

[Address Delivered Before the British Association Assembled at Belfast, With Additions \(1874\)](#)

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## Post by “Cassius” of December 21, 2024 at 11:35 AM

Lucretius Today Episode 259 is now available: "Nothing Comes From Nothing"

<https://www.spreaker.com/episode/63428412>

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### **Post by “TauPhi” of December 22, 2024 at 10:42 PM**

I have to ask, because I really don't understand how DeWitt's statement at the beginning of this episode is presented as relevant to the discussion. I'm talking about this:

#### Quote

The adoption of the Euclidean textbook as a model involved, of course, the procedure by deductive reasoning. The Twelve Elementary Principles were first stated and then demonstrated like theorems. Each theorem, in turn, once demonstrated, became available as a major premise for the deduction of subsidiary theorems. [...]

Where his 'of course' chain of statements come from? How do we know about the adoption of the Euclidean textbook and its consequences? What Twelve Elementary Principles? Where were they first stated? Where were they demonstrated like theorems? How each of this theorem that we know nothing about became a premise for anything?

Is there anything out there that would validate all these claims as DeWitt doesn't provide any sources for his statements? If they are nothing but his speculations, I don't see how they can be considered relevant to the discussion.

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### **Post by “Cassius” of December 23, 2024 at 6:01 AM**

I interpret the 'of course' to mean that a Euclidean approach clearly involves chains of deductions.

It is also clear from reading Lucretius and Herodotus that Epicurean physics involves a chain of deductive reasoning, starting with nothing come from nothing as the first deduction.

DeWitt is not the only commentator to take the position that there were twelve fundamentals and attempt to enumerate them - so does Diskin Clay, someone who is well recognized among mainstream commentators. His list is much the same, though not identical, to DeWitt's. See

Clay's "[Epicurus Last Will and Testament](#)."

Also, the reason for the relevance of this is that we singled out "Nothing comes from nothing" so that we could spend more time in the episode on the deductive reasoning process, to illustrate that deductive reasoning, and not "if I can't see it I won't believe it" empiricism, is a major basis of Epicurean physics and therefore the rest of the philosophy as well.

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## **Post by "Don" of December 23, 2024 at 8:30 AM**

### [Quote from Cassius](#)

DeWitt is not the only commentator to take the position that there were twelve fundamentals and attempt to enumerate them - so does Diskin Clay, someone who is well recognized among mainstream commentators. His list is much the same, though not identical, to DeWitt's. See Clay's "Epicurus Last Will and Testament."

I feel I would be slacking if I didn't play the gadfly here and point to this thread from June of this year when it comes to the "Twelve Fundamentals." I have nothing else to add to what I said in that thread, but it feels pertinent to this current conversation:

Thread

### [General Notes On Fundamentals of Nature](#)

This thread is for discussion of the list of twelve fundamentals such as suggested by DeWitt or Clay here:

<https://www.epicureanfriends.com/wcf/twelve-fundamentals-of-nature/>



Cassius

June 13, 2024 at 10:23 PM

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## **Post by "Cassius" of December 23, 2024 at 9:22 AM**

I see Diskin Clay also mentions the Euclid parallel:

<https://www.epicureanfriends.com/thread/4149-episode-259-nothing-comes-from-nothing/>

Each of the terms of Epicurus' philosophical testament requires careful interpretation, but taken massively the first paragraphs of the Letter to Herodotus show that Epicurus in ordering, condensing and refining his earlier thought, fashioned a stoicheiosis whose aim is elegantly, if not completely expressed by the requirements Proclus found perfectly fulfilled in Euclid's Elements. A passage from Proclus' introduction to the first book of Euclid does not set out all that Epicurus required of his own stoicheiosis, but it deserves study for bringing Epicurus closer to his contemporaries, especially the geometers of the IV century who were at work securing and refining the work of their predecessors. Such an alignment might well seem odd, if not bizarre. A Stoic claimed that the Epicureans never stirred up the "learned dust" (emditus pulver) of geometry", which goes too far. Such an alignment will not make Epicurus seem a physiologist among geometers. But in his concern for the methodic ordering and presentation of his thought, it does make him a geometer among physiologists.

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### **Post by "Don" of December 23, 2024 at 10:12 AM**

Have not read but skimmed: talks about Epicureans and Euclid regarding mathematics:

[Some Thoughts on the Epicurean Critique of Mathematics.pdf](#)

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### **Post by "Pacatus" of December 23, 2024 at 2:47 PM**

Having read, as best I could 🙄 , through the essay shared by [Don](#) in post #10 (which brought back vague but painful memories from my student days 😭 ), I offer the following only as an aside:

I always have a niggling unease at even the hint that anyone would reject, or even delimit, modern science (e.g. physics), either the empirical or the theoretical, based on adherence to any philosophical system – just as I do when people reject science based on religious beliefs. [Stressing that I don't think that's what anyone here is about.]

That is not to deny the relevance of "philosophy of science" – e.g. Popper's contribution of the principle of falsification. Nor is it to deny the validity of investigating what Epicurus and Epicureans thought – e.g. re physics, mathematics, logic\* – based on the knowledge base available.

With that said, I surely can't think it would be "un-Epicurean" to estimate the circumference of a circle using  $\pi$ . 😊 (Sedley, however, based on the quote in the essay, would seem to think so ... 😬 )

[However, I do tend to agree with those economists of the post-Keynesian schools – e.g. Steve Keen – who reject the traditional marginal analysis (based on differential calculus) in favor of more empirical discrete analysis.]

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\* I have stated my opinion before on what appears to be a lack of clear distinction between deductive logic and inductive logic on the part of the ancients. Thus, the Stoics seem to have thought that deductive logic can yield empirical "truth" rather than just propositional coherence (e.g. *modus ponens*). Epicurus was, it seems to me, better on that score: rejecting the notion that (deductive) logic could yield empirical truth, whilst also rejecting the skeptical notion (whether Academic or Pyrrhonian) that real knowledge is thereby impossible.

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### Post by "Cassius" of December 23, 2024 at 3:07 PM

Thanks for the input on Don's article Pacatus. Just now starting to scan it now and will probably have to come back to it. It is interesting to see that Plato's [Philebus](#) is cited early in the article:

*According to Karasmanis, the roots of the connection between the latter two concepts are found in Plato's [Philebus](#) in his notion of "apeiron" ("indeterminate"): "Plato's approach to apeiron is rather mathematical. He approaches magnitudes via incommensurability and not via infinite divisibility. Of course, all magnitudes are infinitely divisible in the Zenonian sense, and therefore continuous. But magnitudes are also dense, in the sense that they include incommensurable cuts. Is there any relation between infinite divisibility and incommensurability? Let me continue my reasoning beyond the text of [Philebus](#).*

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### Post by "Cassius" of December 23, 2024 at 3:28 PM

I am sure at some point that someone is going to make some insightful observations after reading that article.

That someone is unlikely to be me.

What I will say is that my gut tells me that people who go down the rabbit hole too far in mathematical theory are never going to accept that no matter how internally consistent their systems might be, Epicurus was going to reject any aspect of it that did not yield practical benefit, or that seemed to contradict the trustworthiness of the senses. I suspect that he was or would have been more than happy to accept any practical benefits that mathematical calculations produced, but to the extent those calculations couldn't be linked to practical benefit, he just wasn't interested in spending his time that way. Nor would he have recommended anyone else do so, unless they experienced pleasure in the chase of the calculations. I understand that's possible - mathematical puzzles can be fun. But i really get the sense that criticism of Epicurus' position is based more on wanting to make him look "anti-knowledge," or the result of the critic feeling hurt for having his or her pet interest disparaged. Just like the rest of the criticism that Epicurus was "anti-science" or "anti-knowledge," those criticisms to me seem vastly overblown.

EDIT - I do however think that it would be very helpful to pin down some of the comments in the article about exactly where Epicurus' first objection to the system started. The article points to one or more initial axioms that Epicurus rejected, and it would probably help to identify what those were. Identifying the initial dealbreaker would be good to keep in memory, while any additional objections would probably be superfluous because once the foundation was rejected the rest would go out the window too. Was it the "indivisibility" assertion or something else? I kind of suspect something else about the presumptions behind the initial setup leading to indivisibility.

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## Post by “Pacatus” of December 23, 2024 at 4:04 PM

### [Quote from Cassius](#)

What I will say is that my gut tells me that people who go down the rabbit hole too far in mathematical theory are never going to accept that no matter how internally consistent their systems might be



I remember years ago wading through a book - *The Mystery of the Aleph: Mathematics, the Kabbalah, and the Search for Infinity*, by Amir D. Aczel - in which it was suggested that single-minded pursuit down that very “rabbit hole” contributed to the mental collapse of mathematicians Georg Cantor and Kurt Gödel. (It was a difficult but engaging read, as I recall.)

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## Post by “Cassius” of December 23, 2024 at 4:08 PM

Quote from Page 191 of the article

### 3. The Epicurean Position

For the Epicureans, both issues (1) and (2) in Section 2 were objectionable. Issue (1) was perhaps the reason why mathematics was not part of the Epicurean curriculum, as it did not accord with Epicurean empiricism.

At risk of getting drawn in too far when I should be doing other things (which I suspect is the real objection), what are "issues 1 and 2 in Section 2".....?

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## Post by “Cassius” of December 23, 2024 at 4:10 PM

Perhaps this:

Quote

### **Definitions**

#### **Definition 1.**

A *point* is that which has no part.

#### **Definition 2.**

A *line* is breadthless length.

<http://aleph0.clarku.edu/~djoyce/elements/book1/book1.html>

So the objection is that his definitions (a point with no part; a line with no breadth) is "inconceivable" - because we judge what is conceivable by what the senses tell us?) or otherwise not something that we can observe in reality, and thus not relevant to us (?)

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## Post by “Pacatus” of December 23, 2024 at 4:19 PM

### [Quote from Cassius](#)

At risk of getting drawn in too far when I should be doing other things (which I suspect is the real objection), what are "issues 1 and 2 in Section 2".....?

On a quick look-back, I think it is here:

“For example, when someone proves that the number  $\sqrt{2}$  is irrational, i.e., that it is not a fraction, this particular piece of knowledge, as well as the methods that produced it, lead to two important conclusions, one general and one specific: **(1)** Mathematics does not in principle depend on sensory experience. **(2)** Incommensurability gives support to the idea of infinite divisibility of line segments.”

[My brain is becoming creamed corn at this point. 😬 Never great even at the maths that I had to know and apply in economics. 😭]

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Note: I used the example of  $\pi$  rather than the  $\sqrt{2}$ . Both are irrational numbers (as is  $e$ ). The reason I latched onto  $\pi$  is that I think it is useful to be able to estimate the circumference of a circle, even if there is no "perfect" circle.