# Sunday Zoom - August 17, 2025 - 12:30 PM ET - Topic: "All Sensations Are True"

### Post by “Cassius” of August 15, 2025 at 5:42 PM

The topic for this week's zoom (after we finish new business) will be "All Sensations Are True"

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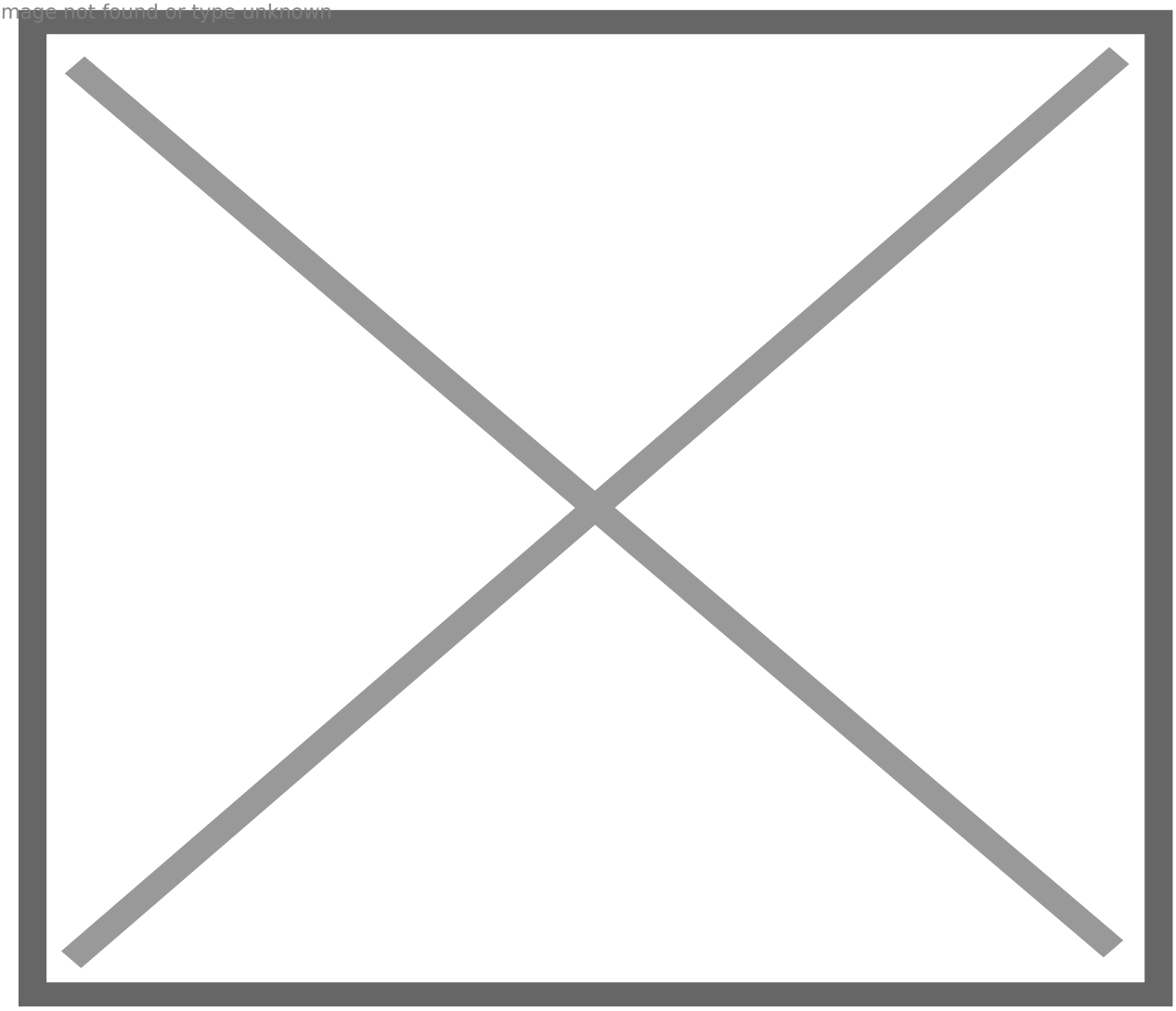

The Major Doctrines Of Classical Epicurean Philosophy - Epicureanfriends.com

This page presents a summary of Classical Epicurean Philosophy . For additional citations to Epicurean texts, click here. Nothing From Nothing Nothing Can Be...

www.epicureanfriends.com

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## Post by “Bryan” of August 17, 2025 at 11:24 AM

I shared a section of this in relation to the size of the sun, but it is all rather critical material, Sextus Empiricus ($_{fl.c.}$ 200 $^{CE}$), Against the Professions 7 (Against the Logicians/Dogmatists 1) 203 - 216:

Epicurus says that of the two things which are linked with one another – appearance and judgment– of these, the appearance, which he also calls "detectible reality," always exists as true. For just as the primary Experiences (that is, Pleasure and Suffering) are composed from certain productive things and in accordance with the very productive things themselves (such as Pleasure from what is pleasant – and Pain from what is painful) ¬ and is it not possible that what produces pleasure is not pleasant, nor what results in pain does not exist as painful.

But [*it is*] necessary that both what causes pleasure is pleasant and what causes pain is underlyingly painful by nature: so also in the case of the appearances – given that they exist around us as experiences. What produces each of the [*appearances*] is in every way and altogether capable of appearing – which cannot, being capable of appearing, not exist in truth such as it appears… …to establish what produces an appearance.

It is also necessary to reason analogously in regards to the [*sensations*] according to [*the details of*] each – for what is visible not only appears visible ¬ but is also such a thing as the kind of thing it appears [*to be*].

And what is audible does not only appear audible ¬ but actually in truth exists as such: and likewise for the other [*senses*]: all appearances, therefore, turn out to be true.

And according to reason: for, if an appearance is called true, say the Epicureans, whenever it is produced from something existing and in accordance with the very thing that exists – and [*given that*] every appearance is composed from something existing that is capable of appearing and in accordance with what is capable of appearing itself – [*then*] by natural necessity, every appearance is true.

But the difference regarding the appearances that seem to fall upon [*us*] from the same sensible thing (such as from a visible one) deceives some people – according to which the original source is apparent as either differently colored, or differently shaped, or otherwise completely changed.

[*Epicureans*] conjectured that, of appearances differing and conflicting in this way, it is necessary that a certain [*appearance*] is true ¬ but the other [*appearance*], from opposing things, happens to be false (which is naïve and [*a sign*] of men not fully perceiving the nature in the things that exist).

(let us make the reasoning based on visible things in this way) the hard object is not seen as a whole ¬ but [*only*] the color of the hard object.

Of the color, one [*part*] is on the hard object itself (just as in things seen from nearby and from a moderate separation) – the other [*part is*] outside the hard object and underlying in the adjacent locations (just as with things envisioned from a distant separation).

But this, being completely changed in the intervening [*space*] and taking on a particular shape, delivers such an appearance as the kind of thing which it also itself underlies in truth.

In just the same way, therefore, neither is the sound thoroughly heard in a bronze instrument that is being struck, nor the [*sound*] in the mouth of the man who shouted ¬ but rather the [*sound*] that is falling upon our sensation.

And just as no one says that a person hearing a sound from a small distance hears falsely – just because after he has come nearby he instead receives it as louder: in this way I would not say that vision gives a false report because from a far separation it sees the tower as small and round ¬ but from nearby as larger and tetragonal.

But rather [vision] truly reports – because even when the sensible object is apparent to [*vision*] as small and of a certain shape: it really is small and of a certain shape – due to the transmission through the air, as the edges of the films are being broken off.

And when [*it appears*] again large and differently shaped, [*it is*] again similarly large and differently shaped ¬ since by now both [*appearances*] are not established as the same thing.

For this is what remains of distorted judgment: to believe that the appearance envisioned from nearby and from far off was the same.

But it exists as the particularly of sensation instead to receive only what is present and moving it – such as color – and not to thoroughly separate that what is here is one thing ¬ but what is underlying there is another thing.

Therefore, the appearances, for these reasons, are all true ¬ the judgments, however, are not all true – but, they have some difference.

For, of these [*judgments*], some were true, but others false: since our distinctions [*between true and false*] are established upon appearances – and we distinguish some things correctly, others wretchedly (either by adding and attributing something to the appearances ¬ or by removing something from them – and generally give a false report against unreasoning sensation).

So then, of the judgments, according to Epicurus, some are true, and others are false: true are those attested and not contested by detectible reality ¬ false are those contested and not attested by detectible reality.

Attestation is the comprehension through detectible reality of what is judged [*actually*] being the kind of thing it was once judged [*to be*]: such as, when Plato is approaching from afar, I imagine and judge, due to the separation, that it is Plato ¬ but when he has approached, it was confirmed that it is Plato, with the separation between having been removed – and it was attested through detectible reality itself.

Non-contestation is conformity of what is unclear – but has been postulated and judged – with what appears: such as Epicurus saying that void exists, which is the very thing that is unclear ¬ this is confirmed through a detectible situation – movement.

For if the void does not exist, movement should not exist – with the moving body not having a location into which it will be transferred, because of everything being full and solid: so that what is apparent (that movement does exist) does not contest the unclear thing that has been judged.

But contestation is something opposed to non-contestation – for there was a joint-refutation of the visible thing with the unclear thing that was postulated. As for example the Stoic says that the void does not exist – asserting something unclear – and with this having been so postulated, what is apparent (movement, I mean) should be jointly refuted. For if the void does not exist, then, by natural necessity, movement is not produced – according to the way [*of thinking*] already previously made clear by us.

And so likewise, non-attestation is opposed to attestation: for it is as an underlying occurrence through the detectible reality of what is being judged not existing as such a thing as the exact kind of thing it was judged [*to be*].

Just as, when someone is approaching from far off, because of the separation we imagine it to be Plato ¬ but when the separation has been reduced: we know by detectible reality that it is not Plato. Thus something like this comes to be non-attestation: for what is judged was not attested by what is apparent.

Therefore, attestation and non-contestation are the criterion of something being true ¬ but non-attestation and contestation of being false: while the basis and foundation of all things is detectible reality.

| ATTESTED | | CONTESTED | | |
|---|---|---|---|---|
| (M)<br>**ἐπιμαρτυρούμενον**<br>attested<br><br>*being attested by sensation is sufficient to establish the truth of a judgment as long as there continues to be no contestation* | ∨<br>or | (¬W)<br>**μὴ ἀντιμαρτυρούμενον**<br>not contested<br><br>*not being contested by sensation is sufficient to establish the truth of a judgment as long as there continues to be no contestation* | ⇒ | (α)<br>TRUE |
| (¬M)<br>**μὴ ἐπιμαρτυρούμενον**<br>not attested<br><br>*not being attested by sensation is sufficient to establish the falsity of a judgment as long as there continues to be no attestation* | ∧<br>and | | ⇒ | (0)<br>**προσμένον**<br>pending<br>*(no evidence → unknown)* |
| | ∨<br>or | (W)<br>**ἀντιμαρτυρούμενον**<br>contested<br><br>*being contested by sensation is sufficient to establish the falsity of a judgment long as there continues to be no attestation* | ⇒ | (-α)<br>FALSE |
| (M)<br>**ἐπιμαρτυρούμενον**<br>attested | ∧<br>and | | ⇒ | (0)<br>**προσμένον**<br>pending<br>*(conflicting evidence → more observation needed)* |

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### Post by “Robert” of August 17, 2025 at 11:56 AM

Traveling today and won’t be able to make it—sorry to miss!

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### Post by “Cassius” of August 17, 2025 at 12:16 PM

Thanks for letting us know Robert. Drive safe.

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### Post by “Patrikios” of August 17, 2025 at 12:32 PM

On vacation in Portland, Oregon today. Sorry to miss the discussion.

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### Post by “Cassius” of August 17, 2025 at 1:49 PM

sorry to have missed you Patrikios -- we spent a lot of time on physics and you would have enjoyed it.

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### Post by “Martin” of August 17, 2025 at 2:02 PM

In most cases, the term to be used instead of "dimension" during today's discussion was "scale", i.e. instead of "in another dimension": "on another scale".

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## Post by “Bryan” of August 17, 2025 at 2:07 PM

To add a bit more:

The issue is not using mathematics or updating the physics. The issue is what you accept as your fundamental basis.

Newton used mathematics and "updated" physics in a way that is fully consistent with Epicurean philosophy, because he endeavored to explain what is observable -- his fundamental basis is what is observable.

All new inventions can be explained using a fully physical model. Taking credit for new technology is the prerogative those currently in charge.

Any "science" that uses math to try to *explain away* the observable is doing something fundamentally different -- and this path can lead to *any* conclusion. Even such things as the universe just popping into existence, or that matter is not fundamentally physical.

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## Post by “Cassius” of August 17, 2025 at 2:49 PM

> Quote from Bryan
>
> Any "science" that uses math to try to explain away the observable is doing something fundamentally different -- and this path can lead to any conclusion. Even such things as the universe just popping into existence, or that matter is not fundamentally physical.

That is a better way of getting at what I tried to approach in my last question before we ran out of time. There are now, have been for 2000+ years, and will always be people who advocate for a new kind of knowledge that is difficult of impossible for people who are not initiated in the specialty to understand. The rub comes when people use string theory or any other system of thought to argue against the basic ability of humans to have adequate confidence in the fundamental conclusions of their senses and the logical implications of what the senses have established. In our day, most of the advocates of quantum and other experimentation seem to be atheists, so they do not jump to arguing that their experiments prove that there is a "god," as the mathematics of the size of the sun issue was used in the past.

Today the advocates of these theories seem to be content to argue that their experiments prove that there is nothing that we should have confidence in. To my observation, they don't often state an explicit agenda of their own, and they seem satisfied to undermine the confidence of confidence of anyone else (anyone who does not participate in their theories) in anything else. They do this in the name of "science," without stating any more specific agenda for "science" other than that it is they (the scientists) who alone are objective.

Regardless of what quantum mechanics or what any other subatomic experimentation will eventually establish, there is every reason to be confident that what it will establish will be completely in line with a totally natural universe which has not prime mover, no master plan, and no intentional teleology for the way humanity should live other than that which we are given through pleasure and pain.

I am firmly convinced that most subatomic scientists are totally benevolent in their motivations, and if Epicurus were alive today he would be every bit as interested in their research as he was in atomism 2000 years ago. But I am also firmly convinced that there is and always will be a class of people who will attempt to manipulate the discussion, just as they did in Epicurus' time, to take advantage of the disparity in knowledge between "experts" and ordinary people. And I am convinced that the record shows that Epicurus was completely alert to this tendency and instilled deeply into his philosophy an antidote to it.

And that antidote is the understanding that all human sensations are to humans true, and there is no otherworldly or metaphysical standard of truth, no matter whether the person making the claim has a doctorate in theology from the Vatican or a doctorate in particle physics from M.I.T.

For those who understand the importance of the issue, the sun is, has always been, and will always be the size that it appears to be.

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## Post by “Kalosyni” of August 17, 2025 at 4:25 PM

This might be of interest to those who were at today's Zoom, given the topic of quantum mechanics (and also may be of interest to anyone who missed today)...there is both audio and a transcript:

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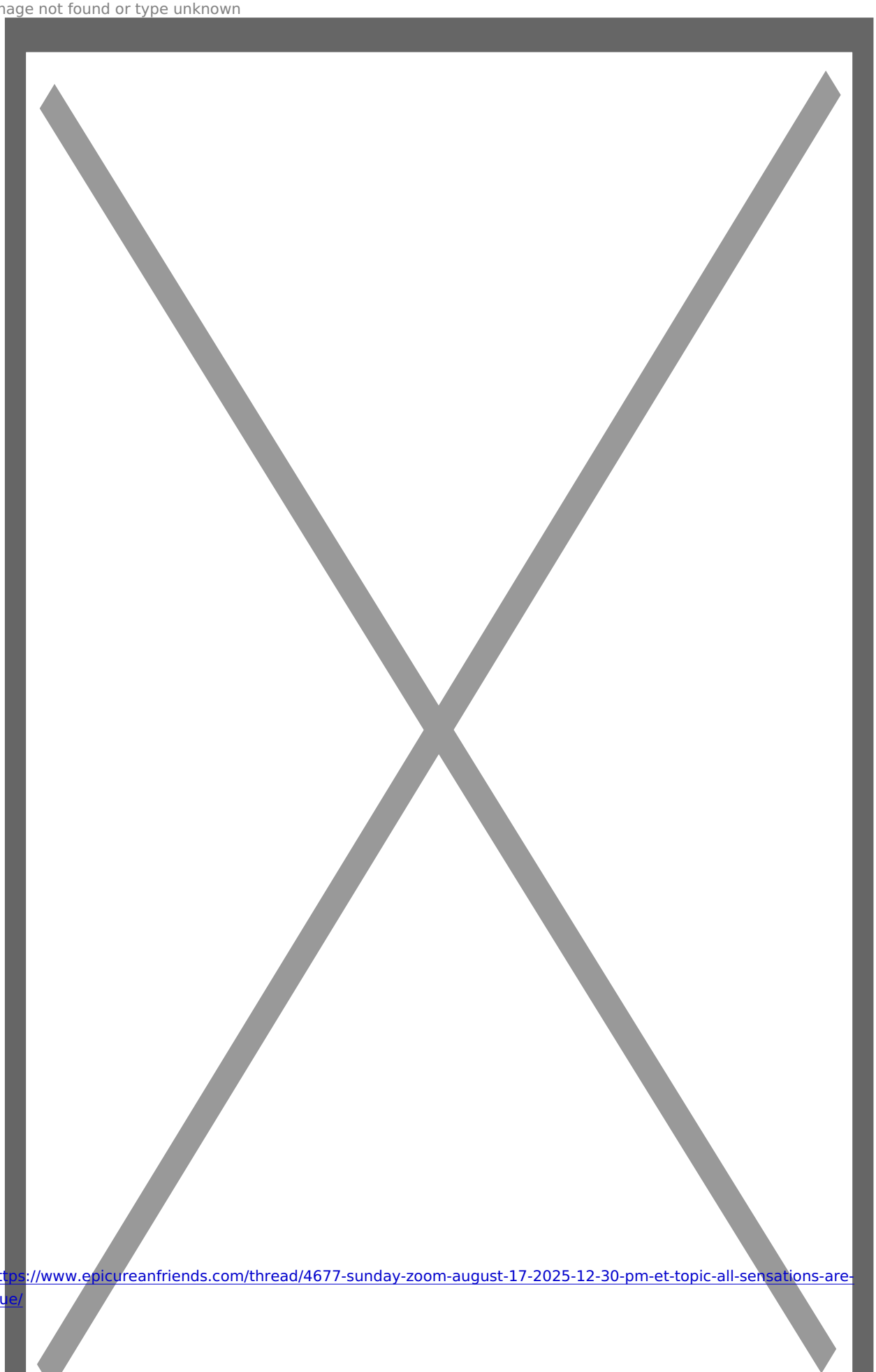

100 Years Later, Quantum Science Is Still Weird
This year marks the 100th anniversary of two papers that sparked the field of quantum mechanics.
www.sciencefriday.com

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## Post by “Rolf” of August 17, 2025 at 4:31 PM

> Quote from Cassius
>
> no intentional teleology for the way humanity should live other than that which we are given through pleasure and pain.

This is the key point for me.

> Quote from Cassius
>
> most of the advocates of quantum and other experimentation seem to be atheists

While this is likely true in a literal sense, I wouldn’t underestimate the trend of “quantum woo” or “quantum mysticism”. I’ve encountered many people online who use their interpretations of quantum theory to argue absurd claims, such as the idea that there is some kind of higher level of existence we must escape to.

Great write up Cassius! I really enjoyed listening in on the physics discussion today and I’d love to see a meeting dedicated to the topic. Special thanks to Bryan and Martin.

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## Post by “Cassius” of August 17, 2025 at 5:19 PM

> Quote from Rolf
>
> While this is likely true in a literal sense, I wouldn’t underestimate the trend of “quantum woo” or “quantum mysticism”. I’ve encountered many people online who use their interpretations of quantum theory to argue absurd claims, such as the idea that there is some kind of higher level of existence we must escape to.

Yes I agree with that. Every time I hear the "weirdness" words i suspect also that that is what is meant, but I also know that many of them also insist that they are *not* mysticists themselves, so to keep the discussion civil and constructive I'll take them at their word until something otherwise becomes clear. All these issues of determinism and skepticism and mysticism are right beneath the surface, even though it might not be stated explicitly by the advocates. So the best way at the moment I can think of to handle the issue is to go right along that no doubt they have some interesting experiments, but to require them to spell out *what implications do they take from those experiments*. So long as those implications aren't skepticism or determinism or mysticism, I'm all ears.

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### Post by “Rolf” of August 18, 2025 at 9:35 AM

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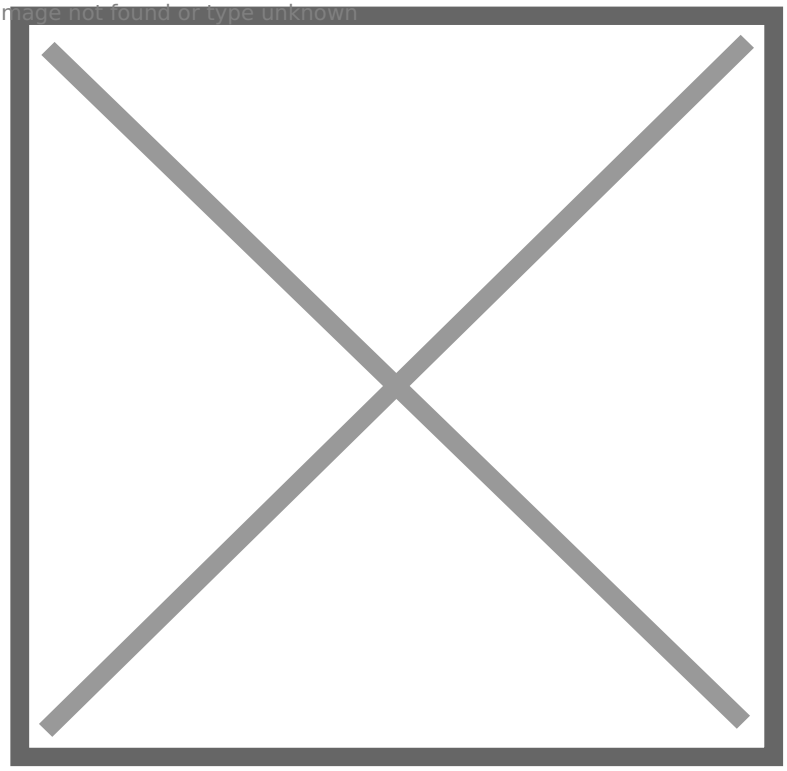

Quantum mysticism - Wikipedia
en.m.wikipedia.org

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### Post by “DaveT” of August 18, 2025 at 9:52 AM

I think Epicurus demands that we learn more about the natural world, does he not?

Here are the principal places where I get my science news: **The World Science Festival** by physicist Brian Greene <https://www.worldsciencefestival.com/>. **Big Think**, a broadly science based program <https://bigthink.com/>. **Sabine Hossenfelder** is a physicist who shows (with touches of humor) the scientific method of critical analysis as she shows the way science advances discovery. <https://www.youtube.com/@SabineHossenfelder/videos>

As a self-educated learner of physics and science, I know that my level of rudimentary understanding takes consistent attention. It takes time; it does not lead to a way to live a happy life (as Epicurus does) but I think the study is immanently of science is Epicurean.

I'm not very concerned about the impact of online pop pseudoscience, nor about any conceivable subversive motivations of scientists to undermine anyone else's philosophy or religion.

My understanding of this general topic is that our collective search for knowledge of the natural world is a process that invites, indeed demands, critical analysis. Science challenges itself this way, attacking methods or proposals of any kind in order to arrive at the newest, best understanding of our universe.

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## Post by "Cassius" of August 18, 2025 at 11:32 AM

Lots of interesting history in that wikipedia link. Just like I wouldn't take medical advise from a professed Christian Scientist, I might well entertain adopting the rule that before I admit any credibility in anyone claiming to be an expert in "quantum weirdness" I would first want to know the writer's personal position on mysticism, determinism, and skepticism. And if he or she wasn't willing to lay their cards on the table on these issues, that would be a major red flag.

> Quote
>
> Many early quantum physicists held some interest in traditionally Eastern metaphysics. Physicists Werner Heisenberg and Erwin Schrödinger, two of the main pioneers of quantum mechanics in the 1920s, were interested in Eastern mysticism, but are not known to have directly associated one with the other. In fact, both endorsed the Copenhagen interpretation of quantum mechanics.
>
> Olav Hammer said that "Schrödinger's studies of Hindu mysticism never compelled him to pursue the same course as quantum metaphysicists such as David Bohm or Fritjof

> Capra." Schrödinger biographer Walter J. Moore said that Schrödinger's two interests of quantum physics and Hindu mysticism were "strangely dissociated".[11]
>
> In his 1961 paper "Remarks on the mind–body question", Eugene Wigner suggested that a conscious observer played a fundamental role in quantum mechanics,[12][13]: 93 a concept which is part of the consciousness causes collapse interpretation. While his paper served as inspiration for later mystical works by others,[12] Wigner's ideas were primarily philosophical and were not considered overtly pseudoscientific like the mysticism that followed.[14] By the late 1970s, Wigner had shifted his position and rejected the role of consciousness in quantum mechanics.[15] Harvard historian Juan Miguel Marin suggests that "consciousness [was] introduced hypothetically at the birth of quantum physics, [and] the term 'mystical' was also used by its founders, to argue in favor of and against such an introduction."[16]
>
> Mysticism was argued against by Albert Einstein. Einstein's theories have often been falsely believed to support mystical interpretations of quantum theory. Einstein said, with regard to quantum mysticism, "No physicist believes that. Otherwise he wouldn't be a physicist."[16] He debates several arguments about the approval of mysticism, even suggesting Bohr and Pauli to be in support of and to hold a positive belief in mysticism which he believes to be false.

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### Post by “Bryan” of August 18, 2025 at 11:43 AM

> Quote from Cassius
>
> Mysticism was argued against by Albert Einstein

This is of course referring to *Eastern* mysticism, as Einstein did fully integrate Jewish mysticism -- from the spontaneous creation of matter to the formlessness of matter -- all of which fully accords with the fundamental "physical" teachings of the Talmud. This confirmation bias is still a powerful force.

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### Post by “DaveT” of August 18, 2025 at 4:58 PM

> Quote from Cassius

> I might well entertain adopting the rule that before I admit any credibility in anyone claiming to be an expert in "quantum weirdness" I would first want to know the writer's personal position on mysticism, determinism, and skepticism. And if he or she wasn't willing to lay their cards on the table on these issues, that would be a major red flag.

If you were to consider such a rule for yourself or any other inquirer, I'd suggest that none of us, (except perhaps Martin ) have any capacity to judge the credibility of those giants of modern physics you refer to above. Furthermore, asking that these giants who are recognized universally within modern science to be examined on, or that they voluntarily explain, their possible mysticism, and determinism or skepticism as defined and studied in the field of philosophical inquiry may be a much for any scientist to do or for the inquirer to comprehend.

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## Post by “Cassius” of August 18, 2025 at 5:16 PM

> Quote from DaveT
>
> suggest that none of us, (except perhaps Martin ) have any capacity to judge the credibility of those giants of modern physics you refer to above.

I think that Epicurus would reject that attitude even if he were here today. and *especially* if he were here today to see the effects of some scientists - by no means all - making similar claims.

It wouldn't matter to me if Martin or 100 people with more experience than Martin were to tell me that "modern physics establishes that there is a mystical realm, or modern physics establishes that knowledge is impossible, or modern physics establishes that human life is entirely mechanistic."

Despite my regard for Martin, I would nicely but firmly 100% reject each of those conclusions, and never lose a moments sleep concerned that any new discovery has already or would arise to prove the opposite. I think what we are discussing is very much the situation Epicurus found himself in 2000 years ago, and it will very likely remain the situation 2000 years from now.

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## Post by “Bryan” of August 18, 2025 at 5:56 PM

> Quote from DaveT
>
> none of us, (except perhaps Martin ) have any capacity to judge the credibility of those giants of modern physics you refer to above.

That position resembles accepting a priestly class -- yielding intellectual authority to those established by state, custom, and finance to declare that something contrary to our own experience is the *real* truth.

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## Post by “Cassius” of August 18, 2025 at 7:16 PM

I know that there are questions as to how Epicurean we should consider Lucian to have been, but here are two citations from two of his works that have seemed to me to be relevant to this question. To me, they ring of the Epicurean attitude, not one of radical skepticism, in refusing to defer to "weird" claims whether based on mathematics or other claims of advanced knowledge.

The point here is not that there won't always be new discoveries of new facts, but that on the largest issues that concern us we already have plenty of facts to reach firm conclusions. And these areas where we have more than enough evidence include that there is nothing supernatural over us, that we can have confidence in some conclusions, and that we are not so tightly controlled by determinism that we have no freedom of will whatsoever.

These following selections aren't from Epicurus, but I would argue that Lucian was reflecting Epicurus' attitude towards claims of authority that contradict what we can gain from the sensations, anticipations, and feelings:

> Quote
>
> Lucian's Hermotimus
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> Perhaps an illustration will make my meaning clearer: when one of those audacious poets affirms that there was once a three-headed and six-handed man, if you accept that quietly without questioning its possibility, he will proceed to fill in the picture consistently—six eyes and ears, three voices talking at once, three mouths eating, and thirty fingers instead of our poor ten all told; if he has to fight, three of his hands will have a buckler, wicker targe, or shield apiece, while of the other three one swings an axe, another hurls a spear, and the third wields a sword. It is too late to carp at these

details, when they come; they are consistent with the beginning; it was about that that the question ought to have been raised whether it was to be accepted and passed as true. Once grant that, and the rest comes flooding in, irresistible, hardly now susceptible of doubt, because it is consistent and accordant with your initial admissions. That is just your case; your love-yearning would not allow you to look into the facts at each entrance, and so you are dragged on by consistency; it never occurs to you that a thing may be self- consistent and yet false; if a man says twice five is seven, and you take his word for it without checking the sum, he will naturally deduce that four times five is fourteen, and so on ad libitum.

This is the way that weird geometry proceeds: it sets before beginners certain strange assumptions, and insists on their granting the existence of inconceivable things, such as points having no parts, lines without breadth, and so on, builds on these rotten foundations a superstructure equally rotten, and pretends to go on to a demonstration which is true, though it starts from premises which are false.

Just so you, when you have granted the principles of any school, believe in the deductions from them, and take their consistency, false as it is, for a guarantee of truth. Then with some of you, hope travels through, and you die before you have seen the truth and detected your deceivers, while the rest, disillusioned too late, will not turn back for shame: what, confess at their years that they have been abused with toys all this time? So they hold on desperately, putting the best face upon it and making all the converts they can, to have the consolation of good company in their deception; they are well aware that to speak out is to sacrifice the respect and superiority and honor they are accustomed to; so they will not do it if it may be helped, knowing the height from which they will fall to the common level. Just a few are found with the courage to say they were deluded, and warn other aspirants. Meeting such a one, call him a good man, a true and an honest; nay, call him philosopher, if you will; to my mind, the name is his or no one’s; the rest either have no knowledge of the truth, though they think they have, or else have knowledge and hide it, shamefaced cowards clinging to reputation.

Quote

Lucian’s Dialog “Icaromenippus, An Aerial Expedition:”

“Menippus. Ah, but keep your laughter till you have heard something of their pretentious mystifications. To begin with, their feet are on the ground; they are no taller than the rest of us ‘men that walk the earth’; they are no sharper-sighted than their neighbors, some of them purblind, indeed, with age or indolence. And yet they say

> they can distinguish the limits of the sky, they measure the sun’s circumference, take their walks in the supra-lunar regions, and specify the sizes and shapes of the stars as though they had fallen from them. Often one of them could not tell you correctly the number of miles from Megara to Athens, but has no hesitation about the distance in feet from the sun to the moon. How high the atmosphere is, how deep the sea, how far it is round the earth— they have the figures for all that. Moreover, they have only to draw some circles, arrange a few triangles and squares, add certain complicated spheres, and lo, they have the cubic contents of Heaven.
>
> Then, how reasonable and modest of them, dealing with subjects so debatable, to issue their views without a hint of uncertainty; thus it must be and it shall be; contra gentes they will have it so. They will tell you on oath the sun is a molten mass, the moon inhabited, and the stars water-drinkers, moisture being drawn up by the sun’s rope and bucket and equitably distributed among them.”

> Quote
>
> Lucian's Alexander the Oracle Monger
>
> And at this point, my dear Celsus, we may, if we will be candid, make some allowance for these Paphlagonians and Pontics; the poor uneducated ‘fat-heads’ might well be taken in when they handled the serpent—a privilege conceded to all who choose—and saw in that dim light its head with the mouth that opened and shut. It was an occasion for a Democritus, nay, for an Epicurus or a Metrodorus, perhaps, a man whose intelligence was steeled against such assaults by skepticism and insight, one who, if he could not detect the precise imposture, would at any rate have been perfectly certain that, though this escaped him, the whole thing was a lie and an impossibility.

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## Post by “Rolf” of August 19, 2025 at 4:30 AM

> Quote from Cassius
>
> Despite my regard for Martin, I would nicely but firmly 100% reject each of those conclusions, and never lose a moments sleep concerned that any new discovery has already or would arise to prove the opposite. I think what we are discussing is very much the situation Epicurus found himself in 2000 years ago, and it will very likely

> remain the situation 2000 years from now.

While I generally agree with your conclusions here Cassius, I have to ask: What makes you so certain? What is it that allows you to have faith in the physics of Epicurus but not the physics of certain modern scientists, even when they have a higher degree of expertise than you?

I’m playing devil’s advocate slightly here but I feel it’s vitally important that we have an answer to this.

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### Post by “Cassius” of August 19, 2025 at 7:43 AM

> Quote from Rolf
>
> even when they have a higher degree of expertise than you?

I think the key is in this part of the question. I certainly admit that there are many people with more expertise in many subjects than I have. Doctors know more medicine, computer scientists know more programming, and so on down the line.

But despite their expertise in specific subject areas, claims of mysticism, radical skepticism, and total determinism are already adequately proved to be false. And there is no good reason to hold open a possibility in one's mind that they will ever prove to be true.

Proof of mysticism would require not simply proof of a force stronger than ourselves. In fact it's part of the philosophy that there are many living beings in the universe other than ourselves on earth, and that we expect some of them to be more technologically advanced than we are. There may in fact be intelligent forces in operation in our world now or in the past which we do not currently recognize. We will likely soon visit Mars and then eventually leave our solar system and visit other parts of the universe, and it is possible that others from other parts of the universe have already visited ours. But there are thousands of years of human experience (observation plus deductive reasoning) to establish that the forces of nature operate on regular principles which are consistent with having a fixed nature. There is no evidence or logical reasoning based on that evidence to postulate an intelligent force behind the universe *as a whole.*

Proof of radical skepticism would require evidence that *nothing* in the universe has a regular consistency that can be predicted. There is no real reason to argue this one further other than to observe that many things are in fact known and deserve to be considered facts of reality.

Proof of total determinism would be on the same order as proof of radical skepticism. Epicurean philosophy firmly holds that many things are in fact determined by purely physical factors, but the issue is that not *all* things are so determined. In our (and my), own experience we have held the ability to affect how our future lives will be lived, and that is sufficient proof of the point.

All of these are issues on which Epicurus had every reason to be confident in his day, and we today have 2000 years more evidence that confirms that he was right to be confident then.

But there is one more thing I would add to this analysis, and that is that experience also shows that there are people who are strongly motivated to push this issue for reasons that also have to be acknowledged to exist. There are no supernatural forces, and knowledge is possible, but because humans have free will they are free to postulate the opposite, and there is a lot of power to be gained and money to be made in doing just that.

The arguments made by Lucretius at the beginning of his poem about the priests spinning tales, and the arguments by Lucian in Alexander the Oracle Monger and the other citations go in exactly that direction. It is for that reason that the Epicurean approach is so important. Certain people will always find it in their self-interest to throw around fear, uncertainty, and doubt as a means of manipulating people who are not steeled against this by the Epicurean approach. It is not true that there are mystical forces, it is not true that all things are predetermined, and it is not true that knowledge is impossible, but it certainly is true that there are people who will make such claims, and it is therefore necessary to have a proper understanding of why they are wrong.

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## Post by “DaveT” of August 19, 2025 at 9:12 AM

> Quote from Cassius
>
> It wouldn't matter to me if Martin or 100 people with more experience than Martin were to tell me that "modern physics establishes that there is a mystical realm, or modern physics establishes that knowledge is impossible, or modern physics establishes that human life is entirely mechanistic."

Cassius Respectfully, and I don't wish to belabor the points in this thread, but your quoted phrase is rather an overstatement. I don't think scientific endeavor used by mainstream scientists exploring and testing the boundaries of physics, have an agenda to prove there are mystical realms or that knowledge is impossible. Quite the opposite.

And even those scientists (thinkers and experimenters) who are exploring the degree to which human behavior is entirely mechanistic, I.e. biologically and environmentally determined,will admit that theirs is a minority opinion so far.

The real debate today over behavior and free will, as I understand it, is not a zero sum debate, but rather to what degree is our behavior determined by biology, and environment (culture, etc.) vs. to what degree it is not. Those exploring whether there is a middle ground are called Compatibilists.

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## Post by “Cassius” of August 19, 2025 at 9:39 AM

> Quote from DaveT
>
> I don't think scientific endeavor used by mainstream scientists exploring and testing the boundaries of physics, have an agenda to prove there are mystical realms or that knowledge is impossible.

I see that as raising the same issue Bryan raised. Who has the authority to say what is "mainstream" and what is not? And if "mainstream" is defined as the majority position, then we are to follow science by majority vote? I suspect it was in a context like this that Philodemus made the aside that democracy is or can be the worst form of government.

> Quote from DaveT
>
> And even those scientists (thinkers and experimenters) who are exploring the degree to which human behavior is entirely mechanistic, I.e. biologically and environmentally determined,will admit that theirs is a minority opinion so far.

And in regard to this, that's a very important "so far" there at the end, and I it is my observation that tolerance of opinions which dissent from that which is proclaimed to be "mainstream" by the majority is declining fast. And that's an inherent bug (or feature) of the deference to experts in matters of philosophy vs. science. You're quite right that many scientists are not willing to state their personal beliefs as to where their opinions lead, so there's an inherent bias toward more and more accumulation of power by those who proclaim that they alone have the expertise to even ask the questions, much less answer them.

i wish I were overstating this problem and I want to keep a bright line against discussing modern politics, but we can find ample illustrations of this problem throughout history, even if we exclude the events of the last 200 years. I don't expect the devoted skeptics or determinists

or mysticists to seriously entertain my opinions any more than I seriously entertain theirs, but history has shown that the Epicurean viewpoint is the minority, and the majority are always all-too-ready to enforce their opinions on "science" just as much as on religion or any other subject.

I'm glad there are (were) people like Daniel Dennet promoting compatibilist views, but it's a constant effort to keep the free flow of information and opinions going.

And that what takes us back to the central issue -- do we simply defer to "experts" and get out of their way when they proclaim that modern science makes Epicurean philosophy (except for the ice cream and friendship and tranquility part) totally obsolete? I'd say of course not.

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## Post by “Bryan” of August 19, 2025 at 3:48 PM

> Quote from Rolf
>
> What is it that allows you to have faith in the physics of Epicurus but not the physics of certain modern scientists?

I would say it is about the fundamental assumptions. There will always be thinkers looking for the real fundamental truth *in something other than the realm of the senses* -- be it in Platonic forms, or in omnipresence of Yahweh, or in mathematics.

If someone says they have *a particular knowledge that you cannot access* -- but from their knowledge they then teach you something that contradicts your experience, then they have all the intellectual power. They may as well have hypnotized you!

They can then say absurd things such as "*matter has no fundamental form*" or that "*matter can generate from no matter*" -- which comes from religious assumptions and is supported by self-referencing mathematics not scientific real-life observations.

In this way they cover your eyes and remove all your footing.

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## Post by “DaveT” of August 20, 2025 at 11:22 AM

Cassius Bryan Rolf I'm sorry to say this discussion makes me believe there are two points of argument that do not intersect. I'm not sure Cassius and Bryan are relying on the same language as I have been using about the scientific process. Let me restate my point of analysis and then ask you for further clarification.

Scientific inquiry in the modern sense demands that actual experiments prove theoretical (mathematical) evidence to the satisfaction of the entire community of that discipline. This is the consensus that the scientific process demands before something satisfies the experts as true.

The community does this process to the best of its ability to disprove the theoretical concept. Scientists who propose theories, and who present actual experiments to prove their theories, demand that their colleagues disprove their experimental results as they try to advance the field of knowledge. So, only after someone propounds a theory and other scientists either prove it repeatedly in experiments or disprove it, does a consensus get reached. The community cannot decide something as true to the best of its ability before that.

Now, for example, the priestly class, which I do not follow as experts, always tries to protect its own expertise against challenge, rather than invite efforts to challenge their beliefs (which often have no discernible proofs anyway). This is especially true of the priests of the peoples of the book: Jews, Christians, and Muslims. When people consider any book inspired and immutable, priests claim the sole right to interpret those books, solicit no challenges, and deny all challenges.

Isn't the distinction between the two clear? One protects ancient truths against all comers, and the other invites all comers to disprove past beliefs (or a proposed new discovery).

Now, I know this may cut deep as I explain my understanding of these topics, but I think a discussion of this topic can be illuminating if we understand our points better. So, for example, the assertions that there are "others" out there who use science to attack Epicurus' beliefs has confused me. In law and debate, referring to an unnamed party to make a point is called creating a straw man. Surely, to have a fair discussion if a theoretical straw man is used to support an argument, we can't get far in understanding each other.

For example:

Quote from Cassius "I think that Epicurus would reject that attitude even if he were here today. and especially if he were here today to see the effects of some scientists - by no means all - making similar claims." Who specifically are the scientists you refer to?

And Cassius "But despite their expertise in specific subject areas, claims of mysticism, radical skepticism, and total determinism are already adequately proved to be false." Who claim mysticism radical skepticism and total determinism?

And Cassius: “it is my observation that tolerance of opinions which dissent from that which is proclaimed to be “mainstream” by the majority is declining fast. And that’s an inherent bug (or feature) of the deference to experts in matters of philosophy vs. science." Declining fast? Where is this observed? Tolerance of proclaiming? (experimental proof is not a proclamation, nor an opinion) How is it a bug? and who is deferring to which experts?

And Bryan “If someone says they have a particular knowledge that you cannot access -- but from their knowledge they then teach you something that contradicts your experience, then they have all the intellectual power. They may as well have hypnotized you! How can anyone else have contradictory experience to challenge an expert if it is knowledge they cannot access?

They can then say absurd things such as “matter has no fundamental form” or that “matter can generate from no matter” -- which comes from religious assumptions and is supported by self-referencing mathematics not scientific real-life observations.In this way they cover your eyes and remove all your footing." Who are these people (the they)? Religious assumptions of whom? Do you perceive specific scientists to be trying to cover the eyes of anyone?

I'm hoping my clarifications are useful, and look forward to more clarity overall in this discussion.

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## Post by “Cassius” of August 20, 2025 at 12:01 PM

Dave:

The primary example I have cited in the past is Lawrence Krauss and his book "A Universe from Nothing" which we've discussed in the context of the Heraclitian Flux thread. We've also discussed Sabine Hossenfelder and her strongly determinist viewpoint.

But I know you're asking a much more general question, and it comes down to asking for specific cites to particular scientists to whom I object, in the absence of which it is your view that the concerns I have about these issues is unwarranted.

I would very much like to oblige you and go through specific citations, and in fact we could use AI questioning (as I believe I recall us doing in that other thread) to try to make the effort more manageable. Or as an alternative, we could look these issues up in Wikipedia and get a sense of the general drift of the majority viewpoints from their point of view. Over time I will do my best to satisfy you and those who ask these questions (as you are definitely not alone) with all the resources I can bring to bear on it. In fact this is one example why I have not agreed to ban all use of AI resources on the forum. Doing raw research on who takes what position is likely to

be an excellent use of AI as a starting point for answering these questions.

But at the most basic level, we'll simply have to disagree as to what we individually observe from our own experiences. My observation is that not only are my general concerns not overstated, but they are in fact understated. In fact I think these issues are much more of a concern than is generally appreciated precisely for the reason that the observation is correct. It is my view that much of "science" has become so dominated by political and corporate considerations that it is not even acceptable to discuss the possibility that there is any suppression of dissent.

At the moment I have to budget my time and pick my battles, and I think it is much more important for me to focus on the "absence of pain" and "nature of pleasure" ethical issues, along with the epistemology questions that come into play, than it is to catalog the scientists who I believe to be on the wrong side of these issues.

I'll get back to this as I can find the time, because I do agree that the issue is important. But it is my strong perception that the battle over deference to experts in physics is closely related to issues of dogmatism and determinism that some people consider to be outside physics. if our physics issues were limited to "X scientists are right about subatomic particles and Y scientists are wrong," then there would be seem to be no reason for urgency or concern over which set of scientists is correct.

But it is precisely because the positions taken on physics do impact the other issues and have such clear implications for them that Lawrence Krauss and Richard Dawkins found it appropriate to argue. Again I do not defer to Richard Dawkins as a modern-day Epicurus, but if there is anyone sensitive to Epicurus's viewpoint as they conflict with modern attitudes, I would put Dawkins near the top of the list. It is my perception that Krauss sees the importance of the same conflict as does Dawkins, but from the opposite viewpoint. And I do not see Dawkins and Krauss as outliers, but as the tip of the iceberg.

If your experience has been different, and you see no scientists arguing these positions I am concerned about, then I'll take that as an encouraging data point and consider it in my future attention on this issue. But my own personal experience in attempting to keep current on educated but non-specialist literature over my adult life has led me to a strongly opposite conclusion.

But by all means let's continue this discussion now and over time and as long as anyone reading this thread is willing to continue it, because it's certainly a goal of mine to have more material developed on this extremely important issue.

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## Post by “Rolf” of August 20, 2025 at 4:14 PM

I’m loving all the frank speech in here! It’s so important.

> Quote from Bryan
>
> They can then say absurd things such as "matter has no fundamental form" or that "matter can generate from no matter" -- which comes from religious assumptions and is supported by self-referencing mathematics not scientific real-life observations.

I’m the furthest from an expert, but isn’t there physical, observable proof for quantum physics? Do you deny the validity of all quantum theory? One example I’m vaguely familiar with is the double slit experiment, which shows that particles are not always solid particles but also waves.

What about things like nuclear fusion and fission where mass (particles) is transformed into energy? Doesn’t this contradict the Epicurean view that matter is eternal and indestructible?

How could quantum computers exist and function if the underlying quantum mechanics were false? Does the probabilistic and indeterminate nature of these computations not contradict the Epicurean view that reality is wholly knowable and predictable?

To be clear, I don’t disagree with the Epicurean conclusion that we ultimately have to verify and validate our abstract hypotheses using our senses. Regardless of someone dialectically proving to me that ice is hot, I’m still going to trust that it feels cold. At the same time, I am a strong believer in looking at things with a critical and uncompromising gaze. This isn’t radical skepticism, it’s getting to the bottom of things and finding truth, just as Epicurus himself did. If somebody presents physical, observable, repeatable evidence for something that contradicts my worldview, I’d be a fool to not at least consider it. Blind acceptance and rejection is the domain of supernatural religion. This isn’t me blindly rejecting epicurean physics in favour of whatever I read in science articles, but asking honest questions about things I’m genuinely unsure about.

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## Post by “Cassius” of August 20, 2025 at 4:38 PM

Rolf speaking for myself (and I suspect Bryan would agree but he will say it better), I am not denying the existence of subatomic particles in any way whatsoever. And what is currently held to be the lowest level may ultumately prove to be only another intermediate step.

But the point Epicurus is making is that the particles are not "infinitely" indivisible, as asserted by some, with the corollary being that Epicurus holds that regularity comes from the

consistency of the ultimate particles, not from (as others assert) a mystical overlay at any or every step along the way.

We're always dealing with the logical games of Parminides in that sense -- the assertion that there is NO bottom limit whatsoever, which leads to conclusions such as motion is impossible and other assertions that are contrary to what we sense to be the case.

It's the unstated implications of the assertions of INFINITE divisibility and FINITE size and age of the universe as a whole that creates the logical problems and inserts the possibility of supernatural forces that is objectionable.

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## Post by “Cassius” of August 20, 2025 at 4:44 PM

> Quote from Rolf
>
> If somebody presents physical, observable, repeatable evidence for something that contradicts my worldview, I’d be a fool to not at least consider it. Blind acceptance and rejection is the domain of supernatural religion. This isn’t me blindly rejecting epicurean physics in favour of whatever I read in science articles, but asking honest questions about things I’m genuinely unsure about.

And I completely agree that that is the right attitude. Going further, however, there is absolutely no reason to expect, and therefor every reason to reject, contentions that "one day" science will prove the existence of a supernatural force, or absolute determinism, or radical skepticism, because those are logical impossibilities given what we know already. If you admit that "maybe they'll prove those things tomorrow" then you've essentially lost the game already, because you will have given in and accepted an argument for a "possibility" that has no evidence to support its possibility whatsoever. You've lost the game of logic if you give in to logic that has no basis in hard evidence.

Our position of no supernatural forces, hard determinsm is false, and radical skepticism is false, is already proven beyond a reasonable doubt. Those are big philosophic issues, but I personally place "the universe as a whole is eternal" and the universe as a whole is infinite in size" in the same category as already proven beyond a reasonable doubt.

"Nothing can come from nothing or go to nothing" is very close to the same category, but that is one where everything turns on your definition of a "thing" (energy? waves? some other term?) and since quantum mechanics is what we're talking about, it's perfectly acceptable to me to talk in those terms rather than atoms, as long as the ultimate limit is remembered and the mysticism doesn't thereby creep in.

## Post by “Rolf” of August 20, 2025 at 4:55 PM

Thanks for the reply Cassius. I feel I may be a bit lost in the weeds... From the way you describe things, it doesn't seem like the observable and verifiable aspects of quantum physics and modern physics in general contradict Epicurean physics at all, beyond some changing terminology (eg. "atom" referring to the smallest indivisible substance). Quantum indeterminacy seems to align well with the idea that some things happen by chance rather than necessity or choice.

Bryan- could you clarify exactly which aspects of modern physics you disagree with? I'm totally with you on not taking abstract speculation as scientific fact, but of the things that are observable and experimentally verified, which do you feel contradict Epicurean physics?

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## Post by “Rolf” of August 20, 2025 at 5:05 PM

Plugged my thoughts into ChatGPT and it spat this out. Sounds fairly reasonable and, as far as I can tell, accurate. Sharing here as it may be helpful - don't hesitate to correct any inaccuracies.

***AI-GENERATED CONTENT BELOW***

### Epicurean Physics vs. Quantum Mechanics

1. **Atoms and chance**
    - Epicurus posited that atoms move mostly according to necessity (deterministic paths) but occasionally **swerve**, introducing chance.
    - Quantum mechanics shows that **subatomic particles behave probabilistically**, which is essentially a modern analog of the “swerve.”
2. **Predictable macroscopic world**
    - Epicurus also observed that the world we experience is **stable and predictable**—trees grow where they should, apples remain apples.
    - Quantum randomness **does not contradict this**, because macroscopic objects are composed of **immense numbers of particles**, and the tiny uncertainties cancel out statistically.
3. **Chance and necessity coexist**
    - Both Epicurus and quantum mechanics support the idea that **some events happen by necessity, some by chance**.

- Macroscopic determinism emerges from microscopic indeterminacy, meaning our everyday life remains **reliable and intelligible**.

4. **No need for mystical forces**
   - Quantum mechanics doesn't imply supernatural or arbitrary interventions—it's just **nature behaving probabilistically at small scales**.
   - This aligns with Epicurus' insistence that **all phenomena are natural and understandable** through observation and reason.

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## Post by "Bryan" of August 20, 2025 at 6:29 PM

> Quote from Rolf
>
> What about things like nuclear fusion and fission where mass (particles) is transformed into energy? Doesn't this contradict the Epicurean view that matter is eternal and indestructible?

When matter is broken down so small that it is past the ability of any machine to measure it as a physical unit – *machines can still measure the force* of that matter. (Just like we cannot see the particles in wind with our eyes, but we can feel their force.)

This does not prove matter is fundamentally destructible, but only proves that matter gets so small that its physical extension becomes undetectable to us. (It really is a similar error, which scientists no longer make, to actually thinking that air has no particles in it, beyond those we can see with our eyes).

> Quote from Rolf
>
> How could quantum computers exist and function if the underlying quantum mechanics were false? Does the probabilistic and indeterminate nature of these computations not contradict the Epicurean view that reality is wholly knowable and predictable?

Given most interpretations refuse to admit a level of physical existence too small to be measured, they prefer to rely on math. The function of the computers is of course real – as is the *observations* of superpositions and entanglement – but to the extent anyone gives non-physical explanations for these functions and observations is the extent that they are leaving reality for mathematical fictions.

It is between "the entanglements" that real atoms lie – and they provide the physical explanation. What is observed is easily explained by the interactions of these *true* atoms and

the wakes they produce.

> Quote from Rolf
>
> the double slit experiment, which shows that particles are not always solid particles but also waves.

The big mystery of the wave pattern can again be explained by accepting the existence a substrate that is not directly perceptible by machines.

What looks like a wave pattern coming ‘out of nowhere’ is really coming from the effect that the ‘oceans’ of these invisible atoms and their wakes have upon the matter we can detect. If someone takes an electron or something else that can be detected as the basis of matter, then the extra movement will always seem like it comes out of nowhere.

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## Post by “Cassius” of August 20, 2025 at 7:20 PM

> Quote from Rolf
>
> Thanks for the reply Cassius. I feel I may be a bit lost in the weeds... From the way you describe things, it doesn't seem like the observable and verifiable aspects of quantum physics and modern physics in general contradict Epicurean physics at all, beyond some changing terminology (eg. "atom" referring to the smallest indivisible substance). Quantum indeterminacy seems to align well with the idea that some things happen by chance rather than necessity or choice.

I think that's generally correct. As long as we are all devoted to finding the explanations for all phenomena in Nature, and we are not implying that there is something "non-natural" behind what we see, then all is well.

And I will be happy to agree that most scientists are approaching things in that way. But we're not able here to become specialists ourselves, and the real issue is not the legitimate debate between competing natural theories, it's the "uses" to which the scientific theories are put by non-specialists who do not admit the limitations of the existing science that causes most of the problems.

There are definitely differing interpretations of the Heisenberg "uncertainty" principles and the issues surrounding Schroediger's cat. But in the field we are in (practical philosophy for living life) those become slogans that can be used to intimidate nonspecialists into believing that "of

course" nothing is really knowable or predictable, or "of course" we make our own realities through our observation of it. Again, no one is doing that here, but part of our job in understanding (and promoting) Epicurean philosophy is to talk about how it responds to challenges.

Really the "swerve" in Epicurean philosophy is open to exactly this same kind of misuse. We've discussed before that if you took "the swerve" to its possible logical extreme, then the swerve would consume the rest of the physics and make all the rest of the system fall apart. This is discussed in AA Long's article "Chance and Natural Law in Epicureanism." But neither Cicero nor the other enemies of Epicurus recorded an attack like that, obvious as it would have been to make it, because it seems the Epicureans were careful to limit the operation of the swerve to prevent that kind of application.

It's definitely a constant challenge to keep things in line, but I think it begins to come into focus when - for example - you realize that to Epicurus "atom" just meant "indivisible" and that it makes no difference at all where that level is found -- whether it is found what we call today at the molecular, atomic, subatomic, quantum, or whatever other level. The argument to swat down is the essentially mystical argument that the divisibility "never" stops, because that would compel the conclusion that there is ultimately nothing (except a supernatural force) that can be counted on as a basis for the predictable reality that we do see to exist.

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## Post by “DaveT” of August 21, 2025 at 10:48 AM

Cassius **But it is precisely because the positions taken on physics do impact the other issues and have such clear implications for them that Lawrence Krauss and Richard Dawkins found it appropriate to argue.** *** **It is my perception that Krauss sees the importance of the same conflict as does Dawkins, but from the opposite viewpoint."**

I do want to honor your desire to focus more on the ethics, which I principally enjoy studying as well. However, it would have been clearer and helpful to show what particular physics topics you are referring to here as impacting other topics.

I followed your lead but only quickly reviewed Krauss’ and Dawkins’ professional relations. I see that they have a long history of collaboration rather than argument. Indeed, Dawkins wrote the *Afterward* to Krauss’ mentioned book mentioned by you, *A Universe From Nothing*. Looking further, apparently they did initially have different views on the degree to which science and faith could coexist. Krauss was early in favor in order to ease the conflict between the two, and Dawkins opposed. However, Krauss, while asserting that the universe can have occurred without the involvement of any divine hand, apparently has abandoned the view of coexistence

that for public acceptance of the science and he is more in line with Dawkins belief in the incompatibility of the two.

Cassius **“I do not defer to Richard Dawkins as a modern-day Epicurus, but if there is anyone sensitive to Epicurus’s viewpoint as they conflict with modern attitudes, I would put Dawkins near the top of the list.”** This seems somewhat accurate regarding his position on ongoing Divine Providence, but of course they differ in that Epicurus acknowledged disinterested gods and I expect Dawkins does not acknowledge them at all.

Cassius **“And I do not see Dawkins and Krauss as outliers, but as the tip of the iceberg.”**

And here, I’m not clear on the iceberg reference. What iceberg? If it refers to atheistic science, I see them both agreeing, but rather than sharing a tip, they are part of the entire iceberg threatening the Abrahamic religions of the Western world, indeed all other faiths proclaiming divine creation and involvement in the universe.

Last, I don’t see any actual conflict between Krauss’ cosmology and physics and Epicurus’ physics. As far as determinism versus indeterminism is concerned, the same goes. I’m quite content to follow the experimental proofs to see if the appropriate scientific community finds consensus on any theoretical proposition, as I’ve discussed earlier. This process continues, and consensus may take many years to reach, even beyond my lifetime. I’m fine with that.

Of course, I don’t need an immediate response, so please respond at your convenience.

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## Post by “Cassius” of August 21, 2025 at 11:09 AM

Dave:

I can offer this:

I don't perceive them as arguing about "the degree two which science and faith can coexist." ("Looking further, apparently they did initially have different views on the degree to which science and faith could coexist.) I think they both defer to "science" and disparage faith (belief without evidence) and on that I think we all agree.

The video to which I point is here: https://www.youtube.com/watch?v=gH9UvnrARf8&t=166s

The video description says this:

> Quote

> Krauss's latest book, A Universe from Nothing: Why There is Something Rather than Nothing, explains the scientific advances that provide insight into how the universe formed. Krauss tackles the age-old assumption that something cannot arise from nothing by arguing that not only can something arise from nothing, but something will always arise from nothing.

The underlined point I think illustrates what I am arguing against, and I listened to enough to hear them debating whether the start was "completely nothing" or not. From an ordinary philosophical understanding of words, it is ridiculous to troll people with the idea that something not only "can" but "will always" arise from nothing.

I don't have time to listen to the rest of the video (though I would like to) but that's already enough to establish that if things can come from or go to nothing, then the rest of Epicurean common sense physics, and indeed all predictability of science or rational logic leading to confidence in knowledge, would be eliminated.

Krauss is something of scientist and if I recall as you wade through the video that he backs off the accusation that he's talking about "absolutely nothing" -- but this is exactly the kind of sensationalism that "regular people" aren't going to be able to navigate through. And those are the ones I am most concerned about, not about those who find this all very amusing as apparently Krauss does. In this first part of the video that's playing in the background I think I hear in Dawkins' voice that he too takes this seriously and doesn't really appreciate Krauss' attitude (even though it may result in more book sales for them both),

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## Post by “Bryan” of September 19, 2025 at 1:38 PM

To support my last post above, I wanted to share this book that goes over the explanation of the model.

It is a fully physical theory of gravity that explains what we observe -- and the operations of our technology -- without needing support from the pure-math ideas of spacetime, vacuum fluctuations, virtual particles, etc.

This model was directly inspired by Epicurus *(Nicolas Fatio was a careful reader of Lucretius)* and also has a long list of supporting physicists *up to the present* that can see how it is more nearly correct than the explanations provided by general relativity and quantum field theory:

Pushing Gravity: New perspectives on Le Sage's theory of gravitation

Since Newton's time many have proposed that gravitation arises from the absorption by material bodies of minute particles or waves filling space. Such...
www.amazon.com

Le Sage's theory of gravitation - Wikipedia

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### Post by “Cassius” of September 19, 2025 at 4:44 PM

Thanks Bryan! I have never heard of Le Sage but that gives me some reading to do. It is intuitively the most likely explanation without hocus pocus and presumably relates to magnetism as well. And it fits well with the modern tendency such as Krauss to talk about space not really being empty. Of course it's not, there are "particles" flowing everywhere and in all directions.

> Quote
>
> **Le Sage's theory of gravitation** is a kinetic theory of gravity originally proposed by Nicolas Fatio de Duillier in 1690 and later by Georges-Louis Le Sage in 1748. The theory proposed a mechanical explanation for Newton's gravitational force in terms of streams of tiny unseen particles (which Le Sage called ultra-mundane corpuscles) impacting all material objects from all directions. According to this model, any two material bodies partially shield each other from the impinging corpuscles, resulting in a net imbalance in the pressure exerted by the impact of corpuscles on the bodies, tending to drive the bodies together. This mechanical explanation for gravity never gained widespread acceptance.

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### Post by “Martin” of September 20, 2025 at 2:01 PM

Le Sage's theory of gravitation is a nice example of a theory which can model some aspects but is refuted by experimental results.
By using simple senior high school physics, I found that the model can produce the observed 1/(distance * distance) dependence in gravity but results in a dependence on mass with with an exponent of 2/3 instead of 1. Attempts to fix this lead to a strong anisotropy, which contradicts observations. My own take fits statements by Paul du Bois-Reymond, Richard Feynman and others.
The history of the reception of the model shows that many physicists gave it friendly

consideration but found it to be refuted by observations.
The claim that Le Sage's theory of gravitation explains what we observe is false. The strong analogy between Epicurus' and that theory is an example of where Epicurus' physics is false or obsolete.
The claim that Le Sage's model can explain magnetism or observed relativistic effects has no base and appears to be rather cultish/esoteric.

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## Post by “Cassius” of September 20, 2025 at 3:39 PM

I don't think anyone is suggesting that LaSage claimed that he had all the answers. As far as i know, he didn't invent an anti-gravity machine or do anything else to prove his theories with finality beyond advancing the general theory that gravity is explained by particle flows. Particle flows are phenomena for which we do have analogs in real-world experience, whereas those who suggest theories that have no experimental or analogical argument at all do not have such a basis.

The real issue here is not who has the final answer and who doesn't, but that of retaining confidence that there will at some point be an explanation which comports with that which we do observe, and not - at any point while we wait - defer to theories that are self-consistent but which have no contact with the reality that we do observe. Especially when those theories are used to undermine the confidence of laymen that there is a natural order to things rather than a supernatural or chaotic basis.

I consider all information about people like LeSage and others who explore rational explanations for phenomena that is poorly understood to be helpful to everyone as examples of the right attitude, regardless if they don't complete the job that we'd like to see completed.

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## Post by “DaveT” of September 23, 2025 at 11:50 AM

> Quote from Cassius
>
> I consider all information about people like LeSage and others who explore rational explanations for phenomena that is poorly understood to be helpful to everyone as examples of the right attitude, regardless if they don't complete the job that we'd like to see completed.

I'm still on vacation, but catching up a little. I must not understand what you mean because I think this does not lead to an attitude of discovering truth about the natural world. Of course, the value of a statement like this depends on the audience. For those uneducated in science, it leads to ignorance. For those focused on discoveries of the natural world , they know that theory must be proven by observation and experimentation. Otherwise, debunked theories like this one of LeSage's lead the average reader nowhere closer to understanding the truth.

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### Post by “Bryan” of September 23, 2025 at 12:38 PM

Hello Dave, the book I listed, which I am currently reading with great joy, is composed of articles from 23 different physicists *(most still living, but some are being published posthumously)* all in support of La Sage's theory and pointing to the many issues with Einstein's model. Many physicists say La Sage's theory is debunked, but there are many other physicists who passionately argue he was more nearly correct than Einstein -- with a far superior model.

Pushing Gravity: New perspectives on Le Sage's theory of gravitation
Since Newton's time many have proposed that gravitation arises from the absorption by material bodies of minute particles or waves filling space. Such...
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