

# Article - David Sedley - 1988 - "Epicurean Anti-Reductionism"

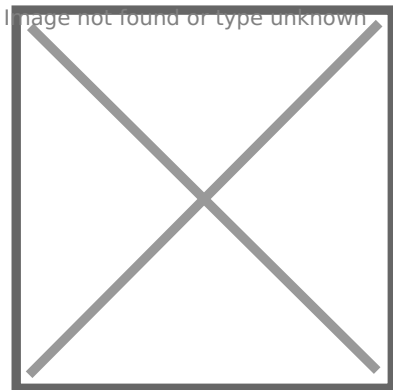
Post by "Cassius" of March 26, 2026 at 9:13 AM

We've referenced many times on the forum the comments about this topic made by David Sedley in his "Epicurus' Refutation of Determinism."

I don't think we previously cited - or that I knew of - an article Dr. Sedley had written directly on point:

Epicurean Anti-Reductionism - 1988 - J. Barnes, M. Mignucci (eds.), Matter and Metaphysics (Naples 1988), 295-327

Full article available here:



[Epicurean anti-reductionism](#)

Epicurean anti-reductionism

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## Summary of Main Arguments and Highlights

### 1. Core Thesis: Epicureanism is Not Fully Reductionist

Sedley's central claim is that Epicurean philosophy, although grounded in atomism, **cannot be understood as a purely reductionist system.**

- While everything is composed of atoms and void, Epicurus does **not reduce all explanations** to atomic properties alone.
- Instead, Epicureanism allows for **higher-level explanations** that are not eliminable into micro-level physics.

**Key implication:**

Epicurus is a **qualified materialist**, not a strict reductionist.

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## 2. Distinction Between Atoms and Compounds

Sedley emphasizes a crucial distinction:

- **Atoms:** possess only a few **immutable properties** (shape, size, weight).
- **Compound bodies:** exhibit **qualities that do not belong to atoms themselves**.

This aligns with Lucretius' distinction between:

- **Coniuncta (necessary qualities)**
- **Eventa (accidental qualities)**

These qualities:

- Depend on atomic arrangements
  - But are **not reducible to atomic descriptions**
- 

## 3. Emergent Qualities Are Real (Not Illusions)

A central anti-reductionist point:

- Qualities like **color, heat, solidity, life, and agency** are:
  - Not properties of individual atoms
  - Yet **genuinely real features of compound bodies**

Sedley stresses that Epicurus:

- Does **not treat these as mere appearances or illusions**
- Instead treats them as **objective, though derivative, realities**

**Conclusion:**

Epicureanism supports a form of **emergence**—higher-level properties arise from but are not identical to lower-level constituents.

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## 4. Explanatory Pluralism

Sedley argues that Epicurus uses **multiple levels of explanation simultaneously**:

- Micro-level: atoms and their motions
- Macro-level: observable phenomena and qualities

These levels are:

- **Compatible**, but
- Not interchangeable

Thus:

- Some explanations are best given **at the level of bodies**, not atoms.
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## 5. Rejection of Eliminative Reductionism

Epicurus rejects the idea that:

Quote

Only atomic-level facts are “really real”

Instead:

- Observable properties retain **explanatory legitimacy**
- Everyday descriptions (e.g., “fire is hot”) are **philosophically valid**

This is a direct rejection of:

- The view that higher-level properties must be eliminated in favor of physics
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## 6. Stability and Identity of Objects

Sedley highlights that:

- Compound bodies have **stable identities**
- These identities depend on:
  - Structural organization

- Functional roles

Not merely:

- A list of atomic constituents

Thus:

- A thing's identity is tied to **its emergent organization**, not just its atoms
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## 7. Ethical and Psychological Implications

This anti-reductionism is not merely physical—it extends into ethics:

- Human experiences (pleasure, pain, fear) are:
  - Grounded in atomic processes
  - But must be understood at the **level of lived experience**

Epicurus therefore:

- Treats psychological states as **real and explanatorily significant**
  - Not reducible away into physics
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## 8. Lucretius as Key Evidence

Sedley relies heavily on *On the Nature of Things* to support this interpretation:

- Lucretius explicitly distinguishes:
    - Atomic properties
    - Emergent qualities of bodies
  - He shows that:
    - Qualities arise from **arrangements and interactions**, not intrinsic atomic features
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## Overall Interpretation

Sedley's interpretation can be summarized as follows:

- Epicurus is a **materialist** → everything is made of atoms and void
- But also an **anti-reductionist** → not everything can be explained purely at the atomic level

This results in a philosophical position that combines:

- **Ontological reduction** (everything is atoms)
- With **explanatory pluralism** (not everything is explained in atomic terms)

## Concise Takeaway

### Quote

Epicurean philosophy holds that while atoms are the fundamental constituents of reality, the world we experience—including qualities, objects, and human life—must be understood at their own level and cannot be reduced away into atomic descriptions.

## Post by “Cassius” of March 26, 2026 at 9:32 AM

There's a LOT of interest in that article. Here's a section that both interesting and "funny" as to what should probably be our love-hate relationship with Cyril Bailey:

One of the most influential voices in Epicurean studies, Cyril Bailey, writing in 1928, came at one point tantalizingly close to what I take to be the correct interpretation:

« The compound is more than a mere aggregate of independent atoms: it is their union in a complex, which has a new individuality of its own in which it may acquire qualities and even powers which are not possessed by the individual component atoms. The soul or mind is a compound body of such peculiar constitution in the nature of its component atoms and their motions among themselves, that it acquires the power of sensation or consciousness »<sup>31</sup>.

Frustratingly, Bailey went on almost immediately to torpedo this insight:

« The more material thinkers of our own time are content to say that consciousness "supervenes" as an "epiphenomenon" on the movements of matter. Epicurus went the step farther and was prepared to say that consciousness, sensation, thought, and will are the movements of the soul-atoms. Such an idea is to most modern minds, as it was to the majority of philosophers in Epicurus' day, unthinkable: between the one set of facts and the other there is a great gulf fixed »<sup>32</sup>.

Bailey can hardly be blamed here for failing to foresee how far from "unthinkable" the identity theory of mind would prove to be in future decades. Much more immediately wor-

ying is his account of this "step farther" taken by Epicurus. Nowhere in his entire book does Bailey supply evidence or arguments for this assertion that Epicurus identified states of consciousness with the movements of soul atoms. Nevertheless, earlier<sup>24</sup> he has made it clear enough why he assumes Epicurus to hold such a view: it is because it is the only view which a materialist can consistently hold! To decide in advance that Epicurus merits the label "materialist", and to circumscribe so narrowly the range of theories available to someone who, like Epicurus, starts out from inanimate particles of matter, is to miss a good deal of the interest that this topic holds. Did Bailey not know, for example, that C. D. Broad, in his prestigious 1923 lectures published in 1925 under the title *The mind and its place in nature*, had defended a theory of "emergent vitalism" as superior both to mechanistic materialism and to epiphenomenalism? « I know no reason whatever » Broad had written<sup>25</sup> « why new and theoretically unpredictable modes of behaviour should not appear at certain levels of complexity, or why they must be explicable in terms of elementary properties and laws of composition which have manifested themselves in less complex wholes ».

## Post by "Cassius" of March 26, 2026 at 10:39 AM

In this article Sedley refers several times to aetiology and ontology and discusses which aspect is primary to Epicurus on a particular point. It might help to have this explanation before reading the article (pasted from our good friends at ChatGPT):

The phrase "**aetiologically rather than ontologically primary**" distinguishes two different senses in which something can be considered "primary" or fundamental.

### 1. Aetiologically primary (causally primary)

- *Aetiology* means **cause or explanation of origin**.
- If something is **aetiologically primary**, it is:
  - The **cause** or **source** of something else
  - What explains **how or why** something comes to be

☐ In simple terms:

**It comes first in the order of explanation or causation.**

### 2. Ontologically primary (being primary)

- *Ontology* concerns **what exists** and **what is fundamentally real**.
- If something is **ontologically primary**, it is:
  - More **fundamental in reality**

- What other things **depend on for their existence**

☐ In simple terms:

**It comes first in the order of being or reality.**

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### **Post by “DaveT” of March 26, 2026 at 11:13 AM**

Sorry I missed the discussion on this topic since my observation may already have been raised and answered.

Why should interpretations of Epicurus' thinking on atoms, that is, whether he was either or both a reductionist and/or an anti reductionist, be relevant to modern practice of Epicurean lifestyle? Compared to modern discoveries, albeit they stand on Epicurus' intuitions about atoms, his explanations of atoms and void are rather simplistic.

I don't question that this topic is a worthy one among historians of Epicurus' teachings. However, the study of reality arising from perceived nature, and logically intuited unseen nature, as Epicurus demanded, seems to point us beyond the history if we want to live a happy life grounded in reality and not mythology.

For me, the advances in physics over the last 100 years have led to modern scientific discoveries that further advance what Epicurus encouraged.

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### **Post by “Cassius” of March 26, 2026 at 1:52 PM**

Thanks for your question, Dave. It comes up frequently so I have updated the FAQ. Here's the short version:

Epicurus would be the *last* person to insist we cling to 2,000-year-old technical details in physics just because he said them. He was emphatically committed to observation and experience over authority — including his own. So when you say modern physics has advanced what Epicurus encouraged, I agree completely. The question is really: *what specifically did Epicurus encourage in the area of physics, and why does it still matter to how we live?*

Here's the crux: Epicurean physics was never really *about* the technical details of atoms for their own sake. It was constructed to do a specific job — to address three towering sources of human misery:

**1. The fear that supernatural gods are watching us, judging us, and will punish us after death.**

**2. The fear that the universe is governed by Fate or Necessity, that nothing we do matters, and that we have no real agency in our own lives.**

**3. The view that what we see around us is not real, and that our lives and everything we value is essentially 'unreal.'**

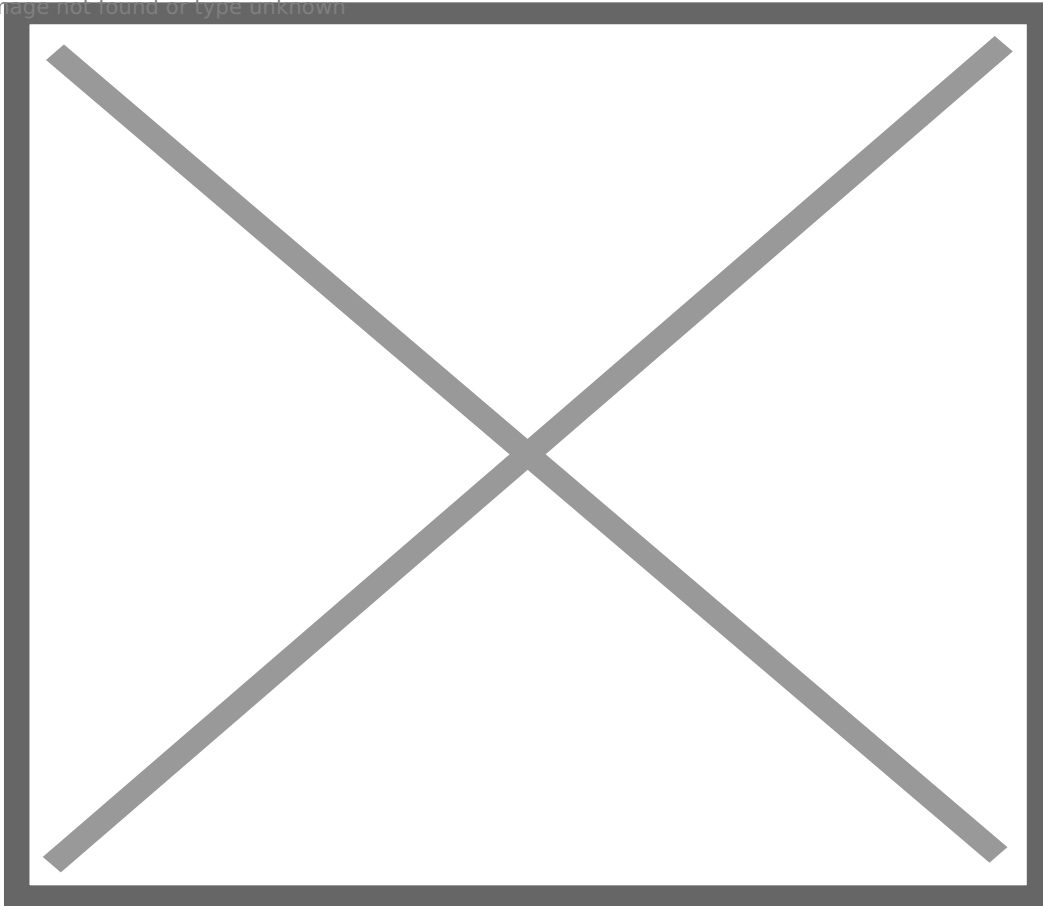
Epicurus built his physics — the atoms, the void, the swerve, the emergent properties of compound things — specifically to establish that the natural world we experience is self-sufficient and self-explanatory. Nothing comes from nothing; nothing goes to nothing; the universe operates by natural processes, not divine whim or iron destiny. That framework is what allows the ethics to work. Pull out the physics, and you immediately create space for the supernatural to rush back in — which is exactly what Epicurus' rivals (Plato, the Stoics, and later the Christians) did with great success.

Now, as to the Sedley article specifically — and the question of whether Epicurus was a "reductionist" — this turns out to be very relevant to modern Epicurean life, more than it might first appear. Sedley's argument is that Epicurus was not a strict reductionist: he did not say that your feelings of pleasure and pain, your lived experience, your psychological states are "mere illusions" that dissolve into atomic physics if you look closely enough. The qualities of compound things — including the pleasure and pain we feel — are real, not eliminable, and must be understood at their own level. That is philosophically powerful ammunition against the modern dismissal of Epicurean ethics as "merely subjective" or "just brain chemistry."

So the short answer to your question "why should I care about the atoms debate if so much science has changed?" is: care not because the technical atomic details are sacred, but because the *method and framework* Epicurus established — natural causation, no supernatural intervention, emergent reality at the level of lived experience — is exactly what you need to build and defend a life philosophy grounded in nature. And you need confidence in a framework that establishes that your life and the things you value are truly real. The details update as science advances; the framework remains as essential as it ever was.

The full updated FAQ answer is here:

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[Why Should I Care About Epicurean Physics When So Much Science Has Changed in the Last 2,000 Years? - Epicureanfriends.com](http://www.epicureanfriends.com)

[www.epicureanfriends.com](http://www.epicureanfriends.com)

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**Post by “DaveT” of March 26, 2026 at 3:17 PM**

[Quote from Cassius](#)

Sedley's argument is that Epicurus was not a strict reductionist: he did not say that your feelings of pleasure and pain, your lived experience, your psychological states are "mere illusions" that dissolve into atomic physics if you look closely enough. The qualities of compound things — including the pleasure and pain we feel — are real, not eliminable, and must be understood at their own level. That is philosophically powerful ammunition against the modern dismissal of Epicurean ethics as "merely subjective" or "just brain chemistry."

Please explain how: "That is philosophically powerful ammunition against the modern dismissal ...as 'merely subjective'". Doesn't each person experience those things based on their own subjective physical and mental state?

Also, please explain how "just brain chemistry" varies from the Epicurus' methods and conclusions exploring those human experiences. I have trouble seeing it as a dismissal of Epicurus. The question of chemistry affecting free will to some degree is being examined and tested. Therefore, the possibilities of chemistry partly explaining free will seems consistent with Epicurus' methodology of reductionistic and antireductionistic logic.

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### **Post by "Cassius" of March 26, 2026 at 5:04 PM**

Dave, the answer to both of your questions seems to me to be pretty much the same. These things are not "totally subjective" nor are they "just brain chemistry." As the article is discussing, emergent properties like the mind's actions are not mechanically determined by atoms and void, nor are they totally subjectively under the power of the mind. Most people cannot through mental will power find burying their hands in a fire to be pleasurable - on the other hand did not the feeling of pleasure and pain work regularly across people, there would never be any regularity at all in what people find to be pleasurable or painful.

That's why this discussion is important. Epicurus is discussing the limits and boundaries of properties of atoms and the qualities that emerge from combinations of atoms. All of this directly refutes the idea that human life is either chaotic or determined supernaturally.

And in the end what we are doing is PHILOSOPHY - we are exploring a 'systematic study of nature' that allows us to have confidence that all of this is occurring naturally and without input from or direction from gods (if you're the religious type) or chaotically (if you're the nihilist type). I suspect that you are neither and that's why you think it's ok to go right to ethics, but Epicurus thought (and I do too) that the world in general is not that way, and that everyone from childhood needs to be taught a systematic approach to the way the world works that allows us to live successfully.

These are the issues we are really talking about and that Epicurus is addressing. Epicurus could care less whether we call fundamental particles atoms or protons or neurons or quarks or anything else, and I think if he were here today those who focus on that perspective are in fact lost and will never see the bigger picture until they back up and decide philosophically what "reality" really means.

## Post by “DaveT” of March 27, 2026 at 12:09 PM

### [Quote from Cassius](#)

I suspect that you are neither and that's why you think it's ok to go right to ethics

Cassius, your suspicion is quite incorrect as well as your conclusion. I do think my posts relating to Sedley's interpretations, indeed Lucretius' interpretations and arguments of Epicurus' beliefs need to be balanced and kept in context much better.

For instance, to say: "That's why this discussion is important. Epicurus is discussing the limits and boundaries of properties of atoms and the qualities that emerge from combinations of atoms. All of this directly refutes the idea that human life is either chaotic or determined supernaturally." (Underlining added)

I don't agree that it directly refutes either the chaotic nature or the supernaturally determined nature of human life. It is an argument against supernaturalism and chaos, but it is just that, a *reasonable argument*, rather than a refutation.

Please see my further comment below.

### [Quote from Cassius](#)

These are the issues we are really talking about and that Epicurus is addressing. Epicurus could care less whether we call fundamental particles atoms or protons or neurons or quarks or anything else, and I think if he were here today those who focus on that perspective are in fact lost and will never see the bigger picture until they back up and decide philosophically what "reality" really means.

Cassius, in the spirit of Epicurean frankness, I hope you are not suggesting that perhaps I am lost on account of my opinion. Indeed, I think I see the bigger picture, even if it differs from someone else's field of study and opinion. Perhaps there is a failure to communicate here. And I am willing to consider that part of the problem is my failure to write more clearly.

But to your quote: It is quite clear to me, as you have responded more than once, that Epicurus' physics is a foundation for leading people away from mythology and divine Providence and using our human nature to achieve happiness. Anyone who thinks physics or ancient metaphysics are separate and apart from philosophy would be mistaken. I think we agree there.

I think it would be a better course to maximize Epicurus' reasons for his physics and minimize the study of the details for the average student, like me.

To repeat my earlier comment in this thread, I find the deep study of his physics more historically valuable than practically useful to a philosophically based lifestyle. And here is the crux of my comments; at the same time, our exposure to and study of modern science are essential to the individual practice of Epicurus' overall philosophy.

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### **Post by "Cassius" of March 27, 2026 at 12:43 PM**

#### [Quote from DaveT](#)

I think it would be a better course to maximize Epicurus' reasons for his physics and minimize the study of the details for the average student, like me.

Probably that's the crux of the issue. There's a wide variety of people here with different backgrounds and interests, but this is primarily a forum for the promotion of Epicurean philosophy, not for philosophy generalists (not placing you in that latter category).

I am working on how to better deal with people on the newer side but as I see it the primary need in Epicurean philosophy is not that of building bridges to people of different opinions but working to develop a core team of people who like me share the conviction that Epicurus is uniquely worth rebuilding a "team" or "camp" of those who want to approach modern problems from the perspective of actual ancient Epicureans.

In most respects other than pure technology I see mostly regression from 2000 years ago, and in order to deal with that regression we need to focus on where things went wrong and how applying core Epicurean attitudes could redress those problems.

There are plenty of places on the Internet where people can discuss raw hedonic calculus from generic point of view, but almost no one bringing to bear the insights that people like Dewitt and Sedley have written about over the last 50 years.

So I will work on both but that's the explanation for where we are.

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### **Post by "DaveT" of March 27, 2026 at 3:35 PM**

#### [Quote from Cassius](#)

I see mostly regression from 2000 years ago, and in order to deal with that regression we need to focus on where things went wrong and how applying core Epicurean attitudes could redress those problems.

I understand your point of view. On the other hand I see progress away from the monarchical God and church appointed governments of the last 250 years. No longer do we accept conquest in the name of god's command to subjugate the earth.

I think there is something to be said about a focus on the secular adaptation of Epicurean principles that have made their way into common society, into academia and medicine as well as government policies even though those principles are not often recognized as Epicurean.

One might call this raw hedonic calculus, if I follow you, but it is still moving away from mythology in practice accross Europe and North America. Most PEW polling shows the decline of popular participation in religious organizations. It seems to me this is to the good, even if people haven't fully broken with their all-to-human fear of displeasing an unprovable divinity, believing in Astrology, having their palms read and fearing ghosts.

On your point of searching for a way to deal with newer people, I'm guessing you mean newer to the Forum. I've heard that the way to engage with others is to ask those people, who they are in real life, why they joined, what their goals are at the Forum, and perhaps when they might have the time to participate. I think those questions can be asked tactfully, not just to new people, but perhaps they might become a part of an annual discussion among the membership.

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## **Post by “Cassius” of March 27, 2026 at 4:58 PM**

These are very relevant points Dave and I think about them all the time. Here's my current view.

### [Quote from DaveT](#)

On the other hand I see progress away from the monarchical God and church appointed governments of the last 250 years. No longer do we accept conquest in the name of god's command to subjugate the earth.

I don't think I am violating the no-politics rule by observing that the world is on the brink of WW3 and I would say that a major reason is that most of the world is still in the grip of religious

and philosophical absolutism of the very kind that Epicurus was fighting against.

#### [Quote from DaveT](#)

I think there is something to be said about a focus on the secular adaptation of Epicurean principles that have made their way into common society, into academia and medicine as well as government policies even though those principles are not often recognized as Epicurean.

Unfortunately here too I am convinced that the darker side of this overwhelms the brighter. The "secular adaptation of Epicurean principles" is largely a bastardization of what Epicurus actually taught, and is in fact being used to suppress any reemergence of his actual teachings. I'll paraphrase someone I don't particularly admire and say that the most "common secular adaptations of Epicurean principles" - by which I mean the elevation the pursuit of immediate pleasure as a tranquilizer against deeper understanding of philosophical issues which undermine the word today as they did in 300 BC - are as much the opiate of the people as any religion.

#### [Quote from DaveT](#)

Most PEW polling shows the decline of popular participation in religious organizations.

I think you're talking about our "first world" situation primarily in the USA. Disturbingly even here I understand the evidence shows a resurgence in religious interest, particularly Catholicism, and of course I am not seeing that as a positive development. It's interesting to consider that in Catholicism we see preserved many of the same Platonic/Stoic positions that were incorporated directly into it. The early Catholic "church fathers" understood Epicurus to be strong opposition. I do think that a lot of the turmoil in organized religion presents an opportunity for the re-emergence of a true Epicureanism, but that re-emergence isn't going to be accomplish by a superficial understanding of Epicurus as a neo-Stoic / neo-Buddhist / Humanist who is running from philosophical and social engagement to live a minimalist / ascetic life.

#### [Quote from DaveT](#)

On your point of searching for a way to deal with newer people, I'm guessing you mean newer to the Forum. I've heard that the way to engage with others is to ask those people, who they are in real life, why they joined, what their goals are at the Forum, and perhaps when they might have the time to participate. I think those questions can be asked tactfully, not just to new people, but perhaps they might become a part of an annual discussion among the membership.

I largely agree with you here but there is a danger that I also constantly consider:

Until people understand what Epicurus was really all about, they are tempted to focus only on the surface ethical questions such as how to experience more pleasure than pain under a conventional outlook of focusing only on stimulative pleasure. There are also those who come here fully convinced that the goal of life is "tranquility" and the last thing they want to do is to face uncomfortable deeper questions. Posts from such people give us an excellent opportunity to educate them about the full meaning of the texts, but too much emphasis on "momentary pleasures" and "relief from anxiety" without understand that "relief from anxiety" does not mean a "zero state," but pleasure in the full and true meaning of the word, is difficult to deal with given existing resources.

We need more people actively writing about Epicurus from a more educated and deeper perspective, so I think the priority has to be "educating the educators" so we can better address exactly what you are talking about with people who are just beginning to read Epicurus.

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## Post by “Cassius” of June 21, 2026 at 4:44 PM

Significant discussion recently here on the forum about emergence and Epicurus' opposition to Democritus' atomic reductionism, so just bumping this thread to remind people of the existence of this article by David Sedley directly on point.

### Quote

The topic with which this paper' will concern itself is the relation in which, according to Epicurean metaphysics, a complex entity such as a man stands to its constituent parts and qualities. Although Epicureanism and Stoicism both give centre stage to bodily particulars, and in consequence have certain features of their respective epistemologies in common, their metaphysical systems are nevertheless in fact extraordinarily different. Stoicism is a top-down theory, which takes life and intelligence as irreducibly basic features of the world and of at least some of its occupants. The reason why all but a very few of the items in the world, including mental qualities such as virtue, are bodies, is not that body is more metaphysically fundamental than mind or intelligence, but simply that the ability of such things to cause anything is held to depend on their capacity for bodily interaction. In Epicureanism, on the other hand, bodies are indeed metaphysically fundamental, since they are, apart from the space which they occupy and move through, the only conceivable per se entities. Yet a Stoic-like concern with causality is hardly in evidence here, since in Epicureanism causal interaction goes on all the time between bodies and certain non-corporeal items,

namely their properties.