Neutrinos Do Not Exist

The only evidence that neutrinos exist is *"missing energy"* and the concept contradicts itself in several profound ways. An investigation.

Table of Contents (TOC)

Printed on November 22, 2025

https://cosmicphilosophy.org/neutrinos/

CHAPTER 1.

Neutrinos Do Not Exist

Missing Energy as Only Evidence for Neutrinos

Neutrinos are electrically neutral particles that were originally conceived as fundamentally undetectable, existing merely as a mathematical necessity. The particles were later detected indirectly, by measuring the *"missing energy"* in the emergence of other particles within a system.

Italian-American physicist Enrico Fermi described the neutrino as following:

> *A ghost particle that passes through light-years of lead without a trace.*

Neutrinos are often described as *"ghost particles"* because they can fly through matter undetected while oscillating (morphing) into three different mass variants (m_1, m_2, m_3) named *"flavor states"* (ν_e electron, ν_μ muon and ν_τ tau) that correlate with the mass of *emerging* particles in cosmic structure transformation.

The emerging leptons emerge spontaneously and instantaneous from a system perspective were it not for the neutrino to supposedly *"cause"* their emergence by either flying energy away into the void, or by flying energy in to be consumed. The emerging leptons are relative to either structure complexity increase or decrease from a cosmic system perspective, while the neutrino concept, by attempting to isolate the event for *energy conservation*, fundamentally and completely neglects structure formation and *"the bigger picture"* of the complexity, most commonly referenced as the cosmos being *"fine tuned for life"*. This instantly reveals that the neutrino concept must be invalid.

The ability of neutrinos to change their mass up to 700x in size[1] (by comparison, a human switching their mass into the size of ten full grown 🦣 mammoths), when considering that this mass is fundamental to cosmic structure formation at its root, implies that this *potential* for mass change must be contained within the neutrino, which is an inherent Qualitative context because the cosmic mass effects of neutrinos are evidently not random.

---

[1] *The 700x multiplier (empirical maximum: $m_3 \approx 70$ meV, $m_1 \approx 0.1$ meV) reflects current cosmological constraints. Crucially, neutrino physics requires only squared mass differences (Δm^2), making the formalism formally consistent with $m_1 = 0$ (actual zero). This implies the mass ratio m_3/m_1 could theoretically approach ∞ infinity, transforming the concept of "mass change" into one of ontological emergence — where substantial mass (e.g., m_3's cosmic-scale influence) arises from nothing.*

In the Standard Model, masses of all fundamental particles are supposed to be provided through Yukawa interactions with the Higgs field except for the neutrino. Neutrinos are also considered their own antiparticle, which is the basis for the idea that neutrinos can explain *Why* the Universe exists.

> *Neutrinos cannot acquire their mass from the Higgs field. Something else seems to be going on with neutrino mass...*
>
> (2024) **Do hidden influences give neutrinos their tiny mass?**
> Source: Symmetry Magazine

The implication is simple: an inherently Qualitative context cannot be '*contained*' in a particle. An inherently Qualitative context can only be *a priori* relevant to the visible world, which instantly reveals that this phenomenon belongs to philosophy and not science and that the neutrino will prove to be a 🔀 crossroad for science, and thus an opportunity for philosophy to regain a leading explorative position, or a return to *"Natural Philosophy"*, a position that it once left by subjecting itself to corruption for scientism as revealed in our investigation of the Einstein-Bergson debate of 1922 and the publication of the correlated book Duration and Simultaneity by philosopher Henri Bergson, which can be found in our books section.

CHAPTER 1.1.

Corrupting the Fabric of Nature

The neutrino concept, either the particle or modern quantum field theory interpretation, fundamentally depends on a causal context through W/Z^0 boson weak force interaction, which mathematically introduces a tiny time window at the root of structure formation. This time window in practice is considered '*too tiny to be observed*[(1)]' but nonetheless this has profound consequences. This tiny time window implies in theory that the fabric of nature can be corrupted *in* time, which is absurd since it would require nature to exist before it can corrupt itself.

[(1)] *The time window Δt is 10^-24 seconds. If one nanosecond (1 billionth of a second) would represent the 🏔 Mount Everest, this time window would be smaller than a grain of ⏳ sand. The time window is considered 15 orders of magnitude smaller than the most precise measurement technology (MicroBooNE collaboration, 2 nanoseconds precision).*

The finite time window Δt of neutrino's W/Z^0 boson weak force interaction creates a causal gap paradox:

- Weak interactions require Δt for any causal efficacy.
- For Δt to exist, spacetime must already be operational (Δt is a temporal interval). However, spacetime's metric structure is fundamentally dependent on matter/energy distributions governed by... *weak interactions*.

The absurdity:

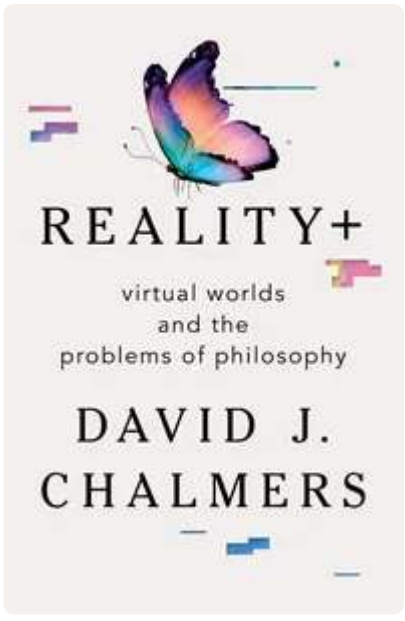
> Weak interactions require spacetime, while spacetime requires weak interactions. A circular dependency.

In practice, when the time window Δt is magically assumed, it implies that the universe's large-scale structure would depend on "🍀 *luck*" whether weak interactions behave during Δt.

- During Δt, energy conservation laws are suspended.
- It is magically assumed that neutrino Δt gaps behave — but during Δt, physical constraints are suspended.

The situation is analogous to the idea of a physical *God-being* existing before the Universe was created, and within the context of philosophy this provides the fundamental foundation and modern justification for Simulation Theory or the idea of a magical "✋ *Hand of God*" (alien or otherwise) being able to control and master existence itself.

For example, well-known philosopher David Chalmers, known for the Hard Problem of Consciousness (1995) and the invention of the Philosophical 🧟 Zombie problem (1996, in his book The Conscious Mind) recently made a '*180° shift*' in his new book Reality+ and became a fundamental propagator of Simulation Theory.



Within the academic world, his profound shift was characterized as following:

> *A philosopher comes full circle.*
>
> (2022) **David Chalmers: From Dualism to Deism**
> Source: Science.org

A citation from the book's introduction:

> ## Is God a billionaire hacker in the next universe up?
>
> If the simulation hypothesis is true and we're in a simulated world, then the creator of the simulation is our god. The simulator may well be all-knowing and all-powerful. What happens in our world depends on what the simulator wants. We may respect and fear the simulator. At the same time, our simulator may not resemble a traditional god. Perhaps our creator is … a billionaire hacker in the next universe up.
>
> The central thesis of this book is: Virtual reality is genuine reality. Or at least, virtual realities are genuine realities. Virtual worlds need not be second-class realities. They can be first-class realities.

Ultimately, the reasoning behind Simulation Theory is rooted in the tiny time window introduced by neutrino physics. While Simulation Theory doesn't use this time window specifically, it is likely the reason that prominent philosophers like David Chalmers fully and confidently embrace the theory in 2025. The potential for *"corruption"* of the fabric of nature introduced by the time window equally allows the idea of control or mastery of existence itself. Without the time window introduced by neutrino physics, Simulation Theory would be reduced to fantasy from a physics perspective.

The absurdity inherent to the temporal nature of weak force interaction reveals at first sight that the neutrino concept must be invalid.

CHAPTER 1.2.

The Attempt to Escape ∞ Infinite Divisibility

The neutrino particle was postulated in an attempt to escape '∞ *infinite divisibility*' in what its inventor, Austrian physicist Wolfgang Pauli, called *"a desparate remedy"* to preserve the law of energy conservation.

> *"I have done a terrible thing, I have postulated a particle that cannot be detected."*
>
> *"I have hit upon a desperate remedy to save the law of conservation of energy."*

The fundamental law of energy conservation is a cornerstone of physics, and if it were to be broken, it would render much of physics invalid. Without the conservation of energy, the fundamental laws of thermodynamics, classical mechanics, quantum mechanics, and other core areas of physics would be called into question.

Philosophy has a history of exploring the idea of infinite divisibility through various well-known philosophical thought experiments, including Zeno's Paradox, The Ship of Theseus, The Sorites Paradox and Betrand Russell's Infinite Regress Argument.

The phenomenon underlaying the neutrino concept may be captured by philosopher Gottfried Leibniz ∞ infinite Monad theory which is published in our book section.

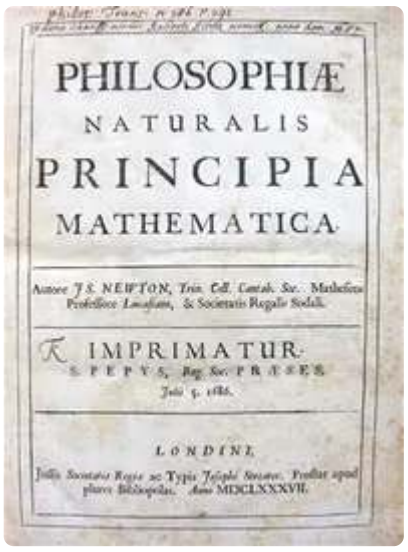
A critical investigation of the neutrino concept can provide profound philosophical insights.

The 🔭 CosmicPhilosophy.org project originally started with the publication of this *"Neutrinos Do Not Exist"* example investigation and the book Monadology about ∞ Infinite Monad Theory by Gottfried Wilhelm Leibniz, to reveal a link between the neutrino concept and Leibniz metaphysical concept. The book can be found in our books section.

CHAPTER 2.

Natural Philosophy

Prior to the 20th century, physics was called *"Natural Philosophy"*. Questions of ***why*** the Universe *appeared* to obey *"laws"* were considered as important as the mathematical descriptions of ***how*** it behaved.


PHILOSOPHIÆ
NATURALIS
PRINCIPIA
MATHEMATICA
Auctore J.S. NEWTON, Trin. Coll. Cantab. Soc. Mathefeos Professore Lucasiano, & Societatis Regalis Sodali.
IMPRIMATUR.
S. PEPYS, Reg. Soc. PRÆSES.
Julii 5. 1686.
LONDINI,
Jussu Societatis Regiæ ac Typis Josephi Streater. Prostat apud plures Bibliopolas. Anno MDCLXXXVII.

Newton's *"Mathematical Principles of Natural Philosophy"*

The shift from natural philosophy to physics started with Galileo and Newton's mathematical theories in the 1600s, however, energy and mass conservation were considered separate laws that lacked philosophical grounding.

The status of physics changed fundamentally with Albert Einstein's famous equation $E=mc^2$, which unified energy conservation with mass conservation. This unification created a kind of epistemological bootstrap that enabled physics to achieve self-justification, escaping the need for philosophical grounding altogether.

By demonstrating that mass and energy were not just conserved separately but were transformable aspects of the same fundamental quantity, Einstein provided physics with a closed, self-justifying system. The question *"Why is energy conserved?"* could be answered with *"Because it is equivalent to mass, and mass-energy is a fundamental invariant of nature."* This moved the discussion from philosophical grounds to internal, mathematical consistency. Physics could now validate its own *"laws"* without appealing to external philosophical first principles.

When the phenomenon behind *"beta decay"* implied ∞ infinite divisibility and threatened this new founded bedrock, the physics community faced a crisis. To abandon conservation was to abandon the very thing that had granted physics its epistemological independence. The neutrino was not merely postulated to save a scientific idea; it was postulated to save the newfound identity of physics itself. Pauli's *"desperate remedy"* was an act of faith in this new religion of self-consistent physical law.

CHAPTER 3.

History of the Neutrino

During the 1920s, physicists observed that the energy spectrum of the emerging electrons in the phenomenon that would later be called *"nuclear beta decay"* was *"continuous"*. This violated the principle of energy conservation, as it implied the energy could be divided infinitely from a mathematical perspective.

The '*continuity*' of the observed energy spectrum refers to the fact that the kinetic energies of the emerging electrons form a smooth, uninterrupted range of values that can take any value within a continuous range up to the maximum allowed by the total energy.

The term *"energy spectrum"* can be somewhat misleading, as the problem is more fundamentally rooted in the observed mass values.

The combined mass and kinetic energy of the emerging electrons was less than the mass difference between the initial neutron and the final proton. This *"missing mass"* (or equivalently, *"missing energy"*) was unaccounted for from an isolated event perspective.

This *"missing energy"* problem was resolved in 1930 by Austrian physicist Wolfgang Pauli with his proposal of the neutrino particle that would *"carry the energy away unseen"*.

Einstein and Pauli working together in 1926.

> *"I have done a terrible thing, I have postulated a particle that cannot be detected."*
>
> *"I have hit upon a desperate remedy to save the law of conservation of energy."*

Bohr-Einstein debate in 1927

At the time, Niels Bohr, one of the most revered figures in physics, suggested that the law of conservation of energy might only hold statistically on the quantum scale, not for individual events. For Bohr, this was a natural extension of his principle of complementarity and the Copenhagen interpretation, which embraced fundamental indeterminacy. If the core of reality is probabilistic, perhaps its most fundamental laws are too.

Albert Einstein famously declared, *"God does not play 🎲 dice"*. He believed in a deterministic, objective reality that existed independently of observation. For him, the laws of physics, especially conservation laws, were absolute descriptions of this reality. The Copenhagen interpretation's inherent indeterminacy was, to him, incomplete.

Until this day the neutrino concept is still based on *"missing energy"*. GPT-4 concluded:

> *Your statement [that the only evidence is "missing energy"] accurately reflects the current state of neutrino physics:*
>
> - *All neutrino detection methods ultimately rely on indirect measurements and mathematics.*
> - *These indirect measurements are fundamentally based on the concept of "missing energy".*
> - *While there are various phenomena observed in different experimental setups (solar, atmospheric, reactor, etc.), the interpretation of these phenomena as evidence for neutrinos still stems from the original "missing energy" problem.*

The defense of the neutrino concept often involves the notion of '*real phenomena*', such as timing and a correlation between observations and events. For example, the Cowan–Reines experiment, the first neutrino detection experiment, supposedly *"detected antineutrinos from a nuclear reactor"*. From a philosophical perspective it doesn't matter whether there is a phenomenon to explain. At question is whether it is valid to posit the neutrino particle.

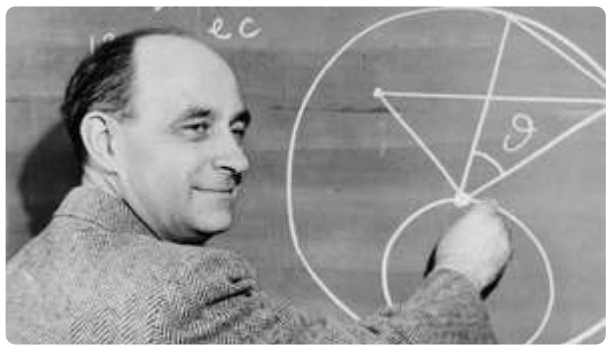
CHAPTER 4.

Nuclear Forces Invented for Neutrino Physics

Both nuclear forces, the weak nuclear force and the strong nuclear force, were '*invented*' to facilitate neutrino physics.

CHAPTER 4.1.

Weak Nuclear Force



In 1934, 4 years after the postulation of the neutrino, Italian-American physicist Enrico Fermi developed the theory of beta decay that incorporated the neutrino and that introduced the idea of a new fundamental force, which he called the *"weak interaction"* or *"weak force"*.

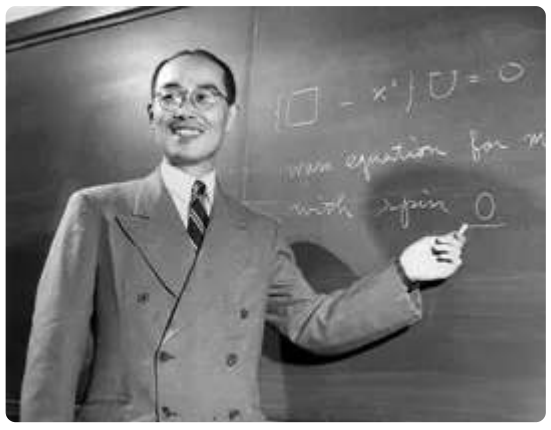
At the time, the neutrino was believed to be fundamentally non-interacting and undetectable, which caused a paradox.

The motive for the introduction of the weak force was to bridge the gap that arose from the fundamental inability of the neutrino to interact with matter. The weak force concept was a theoretical construct developed to reconcile the paradox.

CHAPTER 4.2.

Strong Nuclear Force

A year later in 1935, 5 years after the neutrino, Japanese physicist Hideki Yukawa postultated the strong nuclear force as a direct logical consequence of the attempt to escape infinite divisibility. The strong nuclear force in its essence represents *"mathematical fractionality itself"* and is said to bind three[(1)] sub-atomic Quarks (fractional electric charges) together to form a proton[+1].



[(1)] *While there are various Quark "flavors" (strange, charm, bottom, and top), from a fractionality perspective, there are just three Quarks. The Quark flavors introduce mathematical solutions for various other problems such as "exponential mass change" relative to system-level structure complexity change (philosophy's "strong emergence").*

As of this day, the strong force has never been physically measured and is considered *"to small to observe"*. In the same time, similar to neutrinos *"flying energy away unseen"*, the strong force is considered responsible for 99% of the mass of all matter in the Universe.

> *"The mass of matter is given by the energy of the strong force."*
>
> (2023) **What's so hard about measuring the strong force?**
> Source: Symmetry Magazine

CHAPTER 4.3.

Gluons: Cheating Out of ∞ Infinity

There is no reason why the fractional Quarks could not be divided further into infinity. The strong force did not actually resolve the deeper issue of ∞ infinite divisibility but rather represented an attempt to manage it within a mathematical framework: fractionality.

With the later introduction of gluons in 1979 - the supposed force carrying particles of the strong force - it is seen that science aspired to cheat out of what otherwise had remained an infinite divisible context, in an attempt to *"cement"* or solidify a *"mathematically chosen"* level of fractionality (Quarks) as the irreducible, stable structure.

As part of the gluon concept, the concept infinity is applied to the concept *"Quark Sea"* without further consideration or philosophical justification. Within this *"Infinite Quark Sea"* context, virtual quark-antiquark pairs are said to constantly emerge and disappear without being directly measurable, and the official notion is that an infinite number of these virtual quarks exist at any given time within a proton because the continuous process of creation and annihilation leads to a situation where, mathematically, there is no upper limit to the number of virtual quark-antiquark pairs that can exist simultaneously within a proton.

The infinite context in itself is left unaddressed, philosophically unjustified, while in the same time (mysteriously) functioning as the root of 99% of the mass of the proton and therewith all mass in the cosmos.

A student on Stackexchange asked the following in 2024:

> *"I am confused by different papers I have seen on the internet. Some say there are three valence quarks and **an infinite of sea quarks** in a proton. Others say there are 3 valence quarks and a large amount of sea quarks."*
>
> (2024) **How many quarks in a proton?**
> Source: Stack Exchange

The official answer on Stackexchange results in the following concrete statement:

> *There are an infinite number of sea quarks in any hadron.*

The most modern understanding from lattice Quantum Chromo Dynamics (QCD) confirms this picture and increases the paradox.

- Simulations show that if you could turn off the Higgs mechanism, making the quarks massless, the proton would still have roughly the same mass.
- This proves conclusively that the proton's mass is not a sum of the masses of its parts. It is an emergent property of the infinite gluon quark sea itself.
- The proton is, in this theory, a *"glueball"*—a bubble of self-interacting gluon quark sea energy —stabilized by the presence of the three valence quarks, which act like ⚓ anchors in an infinite sea.

CHAPTER 4.3.1.

Infinity Cannot Be Counted

Infinity cannot be counted. The philosophical fallacy at play in mathematical concepts such as the infinite quark sea is the fact that the mind of the mathematician is excluded from consideration, resulting in a '*potential infinity*' on paper (in mathematical theory) of which it cannot be said that it is justified to be used as a foundation for any theory of reality, because it is fundamentally dependend on the mind of the observer and its potential for '*actualization in time*'.

This explains that in practice, some scientists feel inclined to argue that the actual amount of virtual quarks is *"almost infinite"*, while when it comes down to it when asked about the amount specifically, the concrete answer is actual infinite.

The idea that 99% of the mass of the cosmos emerges from a context that is assigned *"infinite"* and of which it is said that the particles exist to short to be physically measured, while claiming they actually exist, is magical and doesn't differ from mystic notions of reality, despite science's claim of *"predictive power and success"*, which for pure philosophy is not an argument.

CHAPTER 5.

Logical Contradictions

The neutrino concept contradicts itself in several profound ways.

In the introduction of this article it was argued that the causal nature of the neutrino hypothesis would imply a tiny *"time window"* inherent to structure formation at its most fundamental level, which would imply, in theory, that the *existence* of nature itself can be fundamentally *"corrupted" in* time, which would be absurd because it would require nature to exist before it can corrupt itself.

When taking a closer look at the neutrino concept, there are many other logical fallacies, contradictions and absurdities. Theoretical physicist Carl W. Johnson from the University of Chicago argued the following in his 2019 paper titled *"Neutrinos Do Not Exist"*, that describes some of the contradictions from the perspective of physics:

> *As a Physicist, I know how to calculate the odds of a two-way head on collision happening. I also know how to calculate how ridiculously rare it would be for a three-way simultaneous head on collision to occur (essentially never).*
>
> (2019) **Neutrinos Do Not Exist**
> Source: Academia.edu

CHAPTER 5.1.

The Official Neutrino Narrative

The official neutrino physics narrative involves a particle context (the neutrino and W/Z^0 boson based *"weak nuclear force interaction"*) to explain a transformative process phenomenon within cosmic structure.

- A neutrino particle (a discrete, point-like object) flies in.
- It exchanges a Z^0 boson (another discrete, point-like object) with a single neutron inside the nucleus via the weak force.

That this narrative is still the status quo of science today is evidenced by a September 2025 Penn State University study published in the journal *Physical Review Letters (PRL)*, one of the most prestigious and influential scientific journals in physics.

The study made an extraordinary claim on the basis of the particle narrative: in extreme cosmic conditions neutrinos would self-collide to enable cosmic alchemy. The case is examined in detail in our news section:

(2025) Neutron Star Study Claims Neutrinos Self-Collide To Produce 🪙 Gold—Contradicting 90 Years of Definition and Hard Evidence

A Penn State University study published in Physical Review Letters (September 2025) claims cosmic alchemy requires neutrinos to 'interact with themselves'—a conceptual absurdity.

Source: 🔭 CosmicPhilosophy.org

The W/Z^0 bosons have never been physically observed and their *"time window"* for interaction is considered to be too tiny to be observed. In its essence, what the W/Z^0 boson based weak nuclear force interaction represents is a mass effect within structural systems, and all that is actually observed is a *mass related effect* in the context of structure transformation.

The cosmic system transformation is seen to have two possible directions: decrease and increase of system complexity (named *"beta decay"* and *"inverse beta decay"* respectively).

- **beta decay:**

  $$\text{neutron} \rightarrow \text{proton}^{+1} + \text{electron}^{-1}$$

  System complexity **decrease** transformation. The neutrino *"flies energy away unseen"*, carrying off mass-energy into the void, seemingly lost to the local system.

- **inverse beta decay:**

  $$\text{proton}^{+1} \rightarrow \text{neutron} + \text{positron}^{+1}$$

  System complexity **increase** transformation. The antineutrino is supposedly *"consumed"*, its mass-energy seemingly *"flown in unseen"* to become part of the new, more massive structure.

The *"complexity"* inherent in this transformation phenomenon is evidently not random and is directly relative to the reality of the cosmos, including the foundation of life (a context commonly refered as *"fine tuned for life"*). This implies that rather than a mere structure complexity *change*, the process involves *"structure formation"* with a fundamental situation of *"something out of nothing"* or *"order out of non-order"* (a context known in philosophy as *"strong emergence"*).

CHAPTER 5.2.

Neutrino Fog

Evidence That Neutrinos Cannot Exist

A recent news article about neutrinos, when critically examined using philosophy, reveals that science neglects to recognize what is to be considered plainly obvious.

> (2024) Dark matter experiments get a first peek at the '*neutrino fog*'
>
> *The neutrino fog marks a new way to observe neutrinos, but points to the beginning of the end of dark matter detection.*
> Source: Science News

Dark matter detection experiments are increasingly being hindered by what is now called "*neutrino fog*", which implies that with increasing sensitivity of the measurement detectors, neutrino's are supposed to increasingly '*fog*' the results.

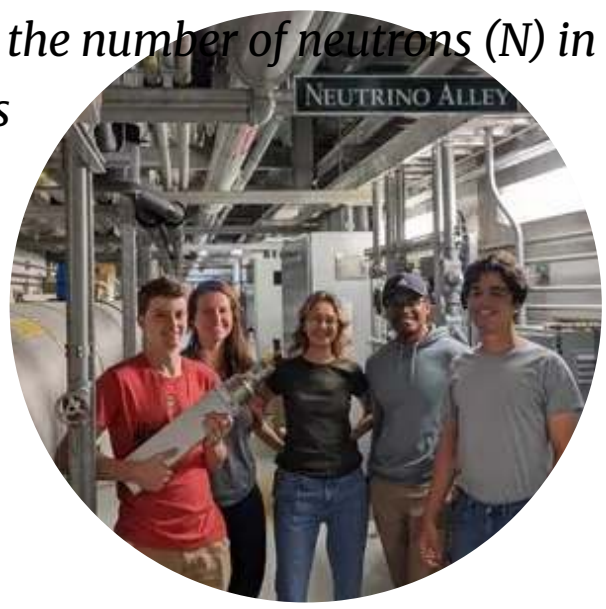
What is interesting in these experiments is that the neutrino is seen to interact with the entire nucleus or even entire system as a whole, rather than just individual nucleons such as protons or neutrons.

This "*coherent*" interaction requires the neutrino to interact with multiple nucleons (nucleus parts) simultaneously and most importantly **instantaneously**.

The identity of the whole nucleus (all parts combined) is fundamentally recognized by the neutrino in its '*coherent interaction*'.

The instantaneous, collective nature of the coherent neutrino-nucleus interaction fundamentally contradicts both the particle-like and wave-like descriptions of the neutrino and therefore renders the neutrino concept invalid.

The COHERENT experiment at Oak Ridge National Laboratory observed the following in 2017:

> *The probability of an event occurring does not scale linearly with the number of neutrons (N) in the target nucleus. It scales with N^2. This implies that the entire nucleus must be responding as a single, cohesive object. The phenomenon cannot be understood as a series of individual neutrino interactions. The parts are not behaving as parts; they are behaving as an integrated whole.*
>
> *The mechanism causing the recoil is not "bumping into" individual neutrons. It is coherently interacting with the entire nuclear system at once, and the strength of that interaction is determined by a global property of the system (the sum of its neutrons).*
>
> 
>
>
> (2025) **The COHERENT Collaboration**
> Source: coherent.ornl.gov

The standard narrative is therewith invalidated. A point-like particle interacting with a single point-like neutron cannot produce a probability that scales with the square of the total number of neutrons. That story predicts linear scaling (N), which is definitively not what is observed.

Why N^2 Annihilates *"Interaction"*:

- A point particle **cannot** simultaneously strike 77 neutrons (iodine) + 78 neutrons (cesium)
- **N^2 scaling proves:**
  - No *"billiard-ball collisions"* occur—even in simple matter
  - The effect is instantaneous (faster than light crosses nucleus)
  - N^2 scaling reveals a universal principle: The effect scales with the *square of system size* (number of neutrons), not linearly
  - For larger systems (molecules, 💎 crystals), coherence produces even more extreme scaling (N^3, N^4, etc.)
  - The effect remains **instantaneous** regardless of system size - violating locality constraints

Science has chosen to completely neglect the simple implication of the COHERENT experiment observations and instead is officially complaining about *"Neutrino Fog"* in 2025.

The standard model's solution is a mathematical contrivance: it forces the weak force to behave coherently by using the nucleus's form factor and performing a coherent sum of amplitudes. This is a computational fix that allows the model to predict the N^2 scaling, but it does not provide a mechanistic, particle-based explanation for it. It neglects that the particle narrative fails and replaces it with a mathematical abstraction that treats the nucleus as a whole.

CHAPTER 6.

Neutrino Experiment Overview

Neutrino physics is big business. There are tens of billions of USD invested in neutrino detection experiments all over the world.

Investments in neutrino detection experiments is surging to levels that rival small nations' GDPs. From pre-1990s experiments costing under $50M each (global total <$500M), investment surged to ~$1B by the 1990s with projects like Super-Kamiokande ($100M). The 2000s saw individual experiments reach $300M (e.g., 🧊 IceCube), pushing global investment to $3-4B. By the 2010s, projects like Hyper-Kamiokande ($600M) and DUNE's initial phase escalated costs to $7-8B globally. Today, DUNE alone represents a paradigm shift: its lifetime cost ($4B+) exceeds the entire global investment in neutrino physics prior to 2000, driving the total past $11-12B.

The following list provides AI cite links for fast and easy exploration of these experiments via an AI service of choice:

> - Jiangmen Underground Neutrino Observatory (JUNO) - Location: China
> - NEXT (Neutrino Experiment with Xenon TPC) - Location: Spain
> - 🧊 IceCube Neutrino Observatory - Location: South Pole

> [Show More Experiments]

Meanwhile, philosophy can do a whole lot better than this:

> *Cosmological data suggest unexpected masses for neutrinos, including the possibility of zero or negative mass.*
>
> (2024) **A neutrino mass mismatch could shake cosmology's foundations**
> Source: Science News

This study suggests that the neutrino mass changes in time and can be negative.

> *"If you take everything at face value, which is a huge caveat..., then clearly we need new physics," says cosmologist Sunny Vagnozzi of the University of Trento in Italy, an author of the paper.*

CHAPTER 7.

Conclusion

When the neutrino concept would be invalidated, it would logically require science to revert back to natural philosophy.

The *"missing energy"* in beta decay would involve a violation of the law of energy conservation.

Without the fundamental law of energy conservation science would again become obligated to address philosophical *"first principle"* related questions, which would revert it to philosophy.

The implications would be profound.

Philosophy's fundamental *Why* question introduces a moral dimension while most scientists today aspire to separate Truth from Good and to be morally neutral, often describing their ethical position as *"being humble in the face of observation"*.

> 
> *To most scientists, moral objections to their work are not valid: science, by definition, is morally neutral, so any moral judgement on it simply reflects scientific illiteracy.*
>
> (2018) **Immoral advances: Is science out of control?** ~ *New Scientist*

As philosopher William James once argued:

> *Truth is one species of good, and not, as is usually supposed, a category distinct from good, and co-ordinate with it. **The true** is the name of whatever proves itself to be **good in the way of belief**, and good, too, for definite, assignable reasons.*

The author of this article has suggested since 2021 that the phenomenon behind the neutrino concept would prove to be a 🔀 crossroad for science, and an opportunity for philosophy to regain a leading explorative position, or a return to *"Natural Philosophy"*.

While the fundamental openness of philosophy may be scary for science as the moral dimension that it introduces allows for metaphysics and mysticism, ultimately, philosophy is what birthed science and it represents the original pure explorative interest, which may be essential for progress when it concerns the phenomenon behind the ✨ neutrino.

CHAPTER 7.1.

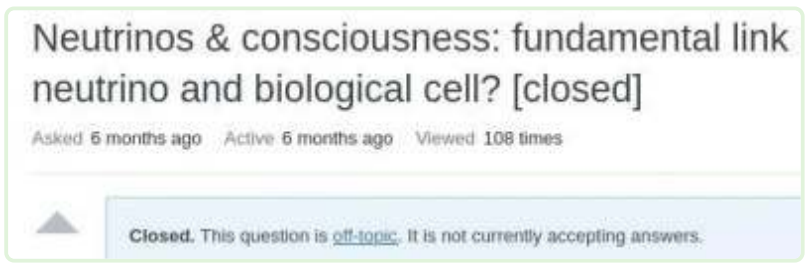
Neglected by Philosophy

A philosopher on 💬 Online Philosophy Club, user 🐉 Hereandnow who is the author of *"On The Absurd Hegemony of Science"* that involves a debate of scientism with well-known philosophy professor Daniel C. Dennett, which is published on 🦋 GMODebate.org, once argued the following in response to author's critical examination of the neutrino concept:

> *"Only a fool doesn't believe in science."*
>
> ...
>
> *"Like I said, the matter needs to be left up to those with the technical knowledge."*
>
> ...
>
> *"I don't think it is philosophy's job to investigate science's claims."*
>
> ...
>
> *"I think Foucault has a lot to say about this. And implicitly, Kuhn. But science itself is unimpugnable."*

Philosophy has been turning a blind eye when it comes to the neutrino concept and other fundamental aspects of science (for example, the dogma of virtual ✴️ photons).

In 2020 the author was '*banned*' on philosophy.stackexchange.com for asking a question about a potential link between neutrinos en consciousness.



Banned for asking a question about neutrinos

The author of this article argues that it IS philosophy's job to investigate science's claims.

It is philosophy that is responsible for examining the foundations of thinking in any context, which includes science. There is no *"closed for philosophy"* area.

Science has no justification to assume that the nature of it's facts differs from common truths despite its aspiration in the face of esteemed factual quality. Their aspiration itself is philosophically questionable just like any other truth claim.

What science claims to be '*the truth*' is at most an observation of *repeatability*. It is in that context that science intends to make a qualitative claim regarding the nature of facts, and it is plainly obvious that there is no theory for validity of the idea that only that what is repeatable, is *meaningfully relevant*.

At first sight therefore, science is fundamentally insufficient. The belief that scientific facts are '*the truth*' is dogmatic of nature with merely utilitarian value (e.g. *"predictive power and success"*) as ground for justification.

Allowing science to proceed without morality therefore is not responsible (not justified). In author's opinion, this implies a fundamental requirement to introduce philosophy and morality into the core practice of science, or a return to *"Natural Philosophy"*.

User 🐉 Hereandnow continued:

> *The ability of neutrinos to change their gravitational influence from within might be a crossing point for science that requires philosophy to create a new method for further progress.*
>
> If you are talking about the philosophy of science, which is a specific field of inquiry not really distinguishable from speculative science, then sure. But this wouldn't be about ethics. It would be about looking for new paradigms in science.

What if the ability of neutrinos to change their Gravitational influence in the world would need to be contained within the neutrino? What if that ability is necessarily qualitative of nature?

Albert Einstein once argued the following:

> *"Perhaps... we must also give up, by principle, the space-time continuum," he wrote. "It is not unimaginable that human ingenuity will some day find [new philosophical] methods which will make it possible to proceed along such a path. At the present time, however, such a program looks like an attempt to breathe in empty space."*

A new method beyond the scientific method to proceed. This would be a task for philosophy.

> *"If you take everything at face value, which is a huge caveat..., then clearly we need new physics," says cosmologist Sunny Vagnozzi of the University of Trento in Italy, an author of the paper.*
>
> (2024) **A neutrino mass mismatch could shake cosmology's foundations**
> Source: Science News

🔭 CosmicPhilosophy.org

https://cosmicphilosophy.org/

Printed on November 22, 2025

Our other projects:

- 🦋 GMODebate.org: A project that investigates the philosophical underpinnings of eugenics, scientism, the "emancipation-of-science from philosophy" movement, the "anti-science narrative" and modern forms of scientific inquisition.