Why the Universe Exists

CERN Claims Discovery of '*CP Violation in Baryons*'. A critical investigation.

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CHAPTER 1.

Why the Universe Exists

CERN Claims Discovery of '*CP Violation in Baryons*'

In March 2025, the global scientific press — from Physics World to Science Daily — announced a resolution to one of the universe's deepest mysteries. *"First observation of CP violation in baryons,"* the headlines declared. The narrative suggested that the LHCb experiment at CERN had finally found a fundamental asymmetry in the building blocks of matter that potentially explains why the universe exists.

This article reveals that CERN committed a double category error. Their claim conflates a continuous, dynamic process that is fundamental to cosmic structure formation with an illusory '*particle*', and it unjustly insinuates that CP Violation has been observed in a particle category that includes protons and neutrons.

By framing the discovery as a property of *"baryons"*, CERN is making a false claim: what has been observed is a statistical difference in how fast disrupted protons and anti-protons decay in a process of self-healing.

The statistical difference is the result of a third error: by treating matter and antimatter as two separate isolated entities while neglecting their unique higher-order structure context, the result is a mathematical artifact that is mistaken for CP violation.

CHAPTER 1.1.

CP Violation 101: The Missing Antimatter

To understand the magnitude of the error, one must understand how CP Violation relates to the *"Why"*-question of the cosmos.

In physics, **C** stands for *Charge Conjugation* and in practice concerns the inverting of empirical properties of matter for antimatter: electric charge, color charge, lepton number, baryon number, etc.) and **P** stands for *Parity* which in practice concerns the viewing of the universe in a mirror from a purely spatial perspective in space.

If CP symmetry held, and if the Big Bang theory were true, the cosmic origin should have produced equal amounts of matter and antimatter that would result in a total annihilation. Therefor, for the Universe to exist, the apparent symmetry must be broken. This breaking is called **CP Violation** — the *"bias"* that allowed matter to survive annihilation.

The recent LHCb experiments claimed to have found this bias inside baryons, a class of particles that includes protons and neutrons.

CHAPTER 1.2.

Double Category Error

Conflating a Continuous Process with an Illusory Particle

The LHCb results observed a difference in the neutrino based weak-force decay rates of the $\Lambda_b{}^0$ baryon (bottom-flavored baryon) compared to its antimatter counterpart. However, the global media narrative has framed this as finding CP violation of the baryon class itself.

Examples of how it was presented to the public:

> **CERN press release (official LHCb statement):** *"The LHCb experiment at CERN has revealed a fundamental asymmetry in the behaviour of particles called baryons"* and states that baryons as a category *"are subject to a mirror-like asymmetry in nature's fundamental laws."*
>
> ---
>
> *In this official press release, baryons as a class are presented as objects that "are subject to" an asymmetry. CP violation is treated as a feature of a whole category of particles.*
>
> **Physics World (IOP):** *"The first experimental evidence of the breaking of charge–parity (CP) symmetry in baryons has been obtained by CERN's LHCb Collaboration."*
>
> ---
>
> *CP violation is said to be "in baryons" as a category, not just in a specific transition.*
>
> **Science News (US outlet):** *"Now, researchers at the Large Hadron Collider near Geneva have spotted CP violation in a class of particles called baryons, where it's never been confirmed before."*
>
> ---
>
> *An example of the generalized "object" framing: CP violation is spotted "in" a class of particles.*

In each case, the asymmetry is treated as a feature of the particle class. Yet, the only place where CP violation has supposedly been observed is in the transformation (the *decay amplitude*) from the exotic, disrupted proton state back to a basic proton, which is an inherently dynamic and continuous process that is fundamental to cosmic structure formation.

The difference in how fast the disrupted protons and anti-protons decay (renormalize) is what LHCb measures as the CP asymmetry. By treating this statistical bias as a property of a particle, physics commits a category error.

To critically examine why this *"decay"* cannot be treated as a property of a particle, one must look at the history of the weak force.

CHAPTER 1.3.

The "*Desperate Remedy*" Neutrino

Why Decay Is Not A Property of a Particle

If CP violation is a property of a particle, then the mechanism of "*decay*" must be a mechanical event intrinsic to that object. However, a critical look at the history of the neutrino and weak force reveals that the framework of decay is built on a mathematical invention designed to hide a continuous and infinite divisible context.

Our article "*Neutrinos Do Not Exist*" reveals that the observation of radioactive decay (beta decay) originally posed a massive problem that threatened to overthrow physics. The energy of the emerging electrons showed a continuous and infinite divisible spectrum of values — a direct violation of the '*fundamental law*' of energy conservation.

To save the deterministic paradigm, Wolfgang Pauli proposed a "*desperate remedy*" in 1930: the existence of an invisible particle — the neutrino — to carry away the "*missing energy*" unseen. Pauli himself admitted the absurdity of this invention in his original proposal:

> "*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.*"

Despite being framed explicitly as a "*desperate remedy*" — and despite the fact that the **only** evidence for neutrinos today remains the same "*missing energy*" that was used to invent it — the neutrino became the foundation of the Standard Model.

From a critical outsider's perspective, the core observational data remains unchanged: the energy spectrum is continuous and infinitely divisible. The "*neutrino*" is a mathematical construct invented to preserve deterministic conservation laws and seeks to isolate the decay event while the actual phenomenon according to observational data alone is fundamentally continuous of nature.

A closer look at decay and inverse decay reveals that these processes are fundamental to cosmic structure formation, and represent a change in system complexity rather than a simple particle exchange.

The cosmic system transformation has two possible directions:

- **beta decay:**

  ```
  neutron → proton⁺¹ + 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:**

  ```
  proton⁺¹ → neutron + 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 weak-force decay narrative attempts to isolate these events to save the '*fundamental law*' of energy conservation, but in doing so, it fundamentally neglects *"the bigger picture"* of the complexity — commonly referenced as the cosmos being *"fine tuned for life"*. This instantly reveals that the neutrino and weak-force decay theory must be invalid, and that isolating the decay event from cosmic structure is a mistake.

Our article The Proton and Neutron: A Philosophical Case for the Primacy of the Electron provides an alternative explanation for the decay process: the neutron is a state of a proton resulting from higher order structure binding by an electron.

What is claimed to be *"decay"* (reduction of complexity) is the **unbinding** of the relation of the *proton + electron* from its higher-order structure context. The electron departs with a variable but average-coherent time (for the neutron it is ~15 minutes, with practical values ranging from minutes to over 30 minutes) and an infinitely divisible *"continuous energy spectrum"* (the kinetic energy of the departing electron can have an potential infinity of possible values).

In this alternative theory, cosmic structure is the root and baseline of transformation events. It explains the apparent randomness of decay times naturally: they only appear pseudo-random due to the *Why*-question of cosmic structure.

CHAPTER 1.4.

Quantum *"Magic"* and Computational Irreducibility

In the case of disrupted proton states, such as in the LHCb experiment at CERN, the self-healing inherent in the proton's renormalization process (which is framed as '*radioactive decay*') represents a mathematical situation that quantum information theorists call *"quantum magic"* — a measure of non-stabilizerness and computational irreducibility.

The *"path"* of quantum spin values mathematically represents the system's structural '*navigation*' from disrupted chaos back to baseline proton order. This path is not determined by a deterministic, classical chain of cause and effect, yet it contains a clear pattern. This *"magical pattern"* is the foundation of quantum computing, explored further in our article Quantum Magic: Cosmic Structure and the Foundation of Quantum Computing.

A recent study provides evidence.

> (2025) Particle Physicists Detect '*Magic*' at the Large Hadron Collider (LHC)
> Source: Quanta Magazine

The study combined quantum information theory and particle collider physics (CMS and ATLAS, November 2025), and revealed *"quantum magic"* in top quarks (quasiparticles). A critical analysis exposes that this *"magic"* is not a property of quarks, but of an observation of the renormalization dynamics of a disrupted proton. The observed *"pattern"* in quantum spin values is the manifestation of a complex system returning to baseline without a deterministic reducibility. The root of *"magic"* lies in the renormalization phenomenon, and its qualitative root lies in cosmic structure *itself*.

This brings us to the core of the 2025 discovery. The LHCb collaboration measured a difference in how fast disrupted protons and anti-protons renormalize (decay) and labeled it a CP asymmetry. However, the *"quantum magic"* study reveals that the observed difference is rooted in the '*indeterminate*' structure context.

By treating disrupted protons and anti-protons as separate entities, physics assigns them unique structure contexts that differ. This structure discrepancy causes the decay rates to diverge.

CHAPTER 1.5.

Disrupted Protons and the Illusion of Exotic Particles

When the LHC forces protons to collide, the protons are smashed into a disrupted state. Scientists and popular science media often claim that these disrupted proton states concern *"exotic particles"*, and CERN's CP Violation claim for *"baryons"* as a category builds on this idea. In reality however, exotic particles merely concern mathematical snapshots of a continuous and dynamic process that almost instantaneously renormalizes the disrupted proton back to its normal state.

The *"exotic baryon"* is mathematical snapshot of a temporary anomaly in the proton as it attempts to resolve the high-energy disruption.

CHAPTER 2.

Conclusion

The headlines celebrating *"CP Violation in Baryons"* are misleading and commit a double category error. They conflate a continuous, dynamic structure formation and maintenance process with a static object, and they treat a transient state of a disrupted proton as an independent *"exotic particle"*.

The exotic baryon is not a new particle, but a fleeting snapshot of a disrupted proton in the act of self-healing. The idea that these snapshots concern independent particles is illusory.

Beyond the double category error, what LHCb actually observed was a statistical artifact that arises from a different error: treating matter and antimatter as independent entities, measured in

unique mathematical perspectives that are isolated from their respective '*higher-order structure context*'.

By neglecting the structure context, a neglect that is fundamentally embedded in neutrino physics in an attempt to save the '*fundamental law*' of energy conservation, the resulting difference in renormalization (decay) speed is mistaken for CP Violation.

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