Pulvermacher – Foundation of Nature

A Bottom-Up Description of Reality

Raiko Pulvermacher

ORCID: 0009-0003-9431-1001

OSF: https://osf.io/py42t/

E-Mail: Pulvermacher.Raiko@web.de

December 2025 – February 2026

Abstract

This work presents a structural bottom-up view of nature by Raiko Pulvermacher. It is not a physical model, not a formal theory, and not a competitor to existing physical theories. It is a structural description of how nature appears when it is not separated, but treated as a coherent whole. The entirety of existence is based on an inseparable coupling of six fundamental aspects, described as the tensor $C_{uv}(E, T, I, Z, G, M)$: Energy (E), Tunnel Effect (T), Information (I), Time (Z), Gravitation (G) and Matter (M).

Contents

1 Main Text: The Completeness of Nature

When nature is not explained from top to bottom – that is, not through ready-made theories, measurement models, or isolated formulas – but is instead observed from bottom to top, a different picture emerges. Nature then no longer appears as a collection of separate laws, but as a single, coherent event that is self-similar on all levels.

There is no preferred starting point. There is only existence – and existence always occurs completely.

At the origin there is no particle, no force, and no time, but an inseparable structure of three aspects:

Energy – Tunnel Effect – Information (E – T – I)

This triangle is not symbolic, but real. None of the three aspects can exist on its own. Energy without transition remains trapped. Tunnelling without energy is meaningless. Information without energy and transition does not exist.

The tunnel effect is not a special phenomenon but the fundamental mechanism of every change. Every movement, every reaction, every fusion, and every transition means that a barrier is overcome. Without tunnelling there would be no movement, no temperature, no fusion, no stars, no elements, and no matter.

From this quantum foundation a second, equally important structure necessarily unfolds:

Time – Gravitation – Matter (Z – G – M)

This structure is not a new level, but the visible consequence of the lower one. Matter is condensed energy. Gravitation is the effect of this condensation. Time is the measure of change under condensation. Time does not arise independently, but only where matter exists and gravitation acts. It follows necessarily: no matter means no gravitation, no time, and no space.

Both structures are not separate systems. They are two perspectives on the same reality. The lower structure describes the non-local, superposed existence; the upper one describes the locally perceivable reality. The transition between the two does not happen abruptly, but scales.

This scaling is not linear, but recursive. It appears in nature as a Fibonacci structure – not as decoration, but as an expression of natural growth and condensation processes. Whether atom, star, planet, galaxy or black hole: the pattern remains the same; only the pulsation changes.

Nature is not a puzzle of separate pieces, but a coherent tensor of states. Superposition is not merely a probability concept, but the real coexistence of possible states, each separated by different proper times. The connection of these states can be expressed as a coupling:

$$\text{Reality} = C_{uv}(E,\, T,\, I,\, Z,\, G,\, M)$$

This tensor does not describe the collapse of states, but their simultaneous existence.

Condensation creates gravitation, gravitation changes time, and time determines the observable structure. The stronger the condensation, the tighter the temporal pulsation.

Extremely condensed systems appear timeless or hidden from the outside. Black holes are therefore not objects outside of nature, but states of maximum condensation in which the internal time is so strongly compressed that it can no longer be resolved from the outside.

Nature does not exist in parts. It exists only completely. Everything generates everything, everything acts on everything, everything is synchronous. Top-down models capture fragments, while bottom-up makes the structure of the whole visible.

This work presents neither a physical theory nor a formal model and is not in competition with existing theories. It is a structural, nature-related description showing how reality presents itself when its aspects are not separated. Classical top-down theories are not negated, but understood as special cases of measurement.

2 Diagrams

The following diagrams complement the text and illustrate the structural relationships. Each figure illuminates a different aspect of the Tensor of Realities.

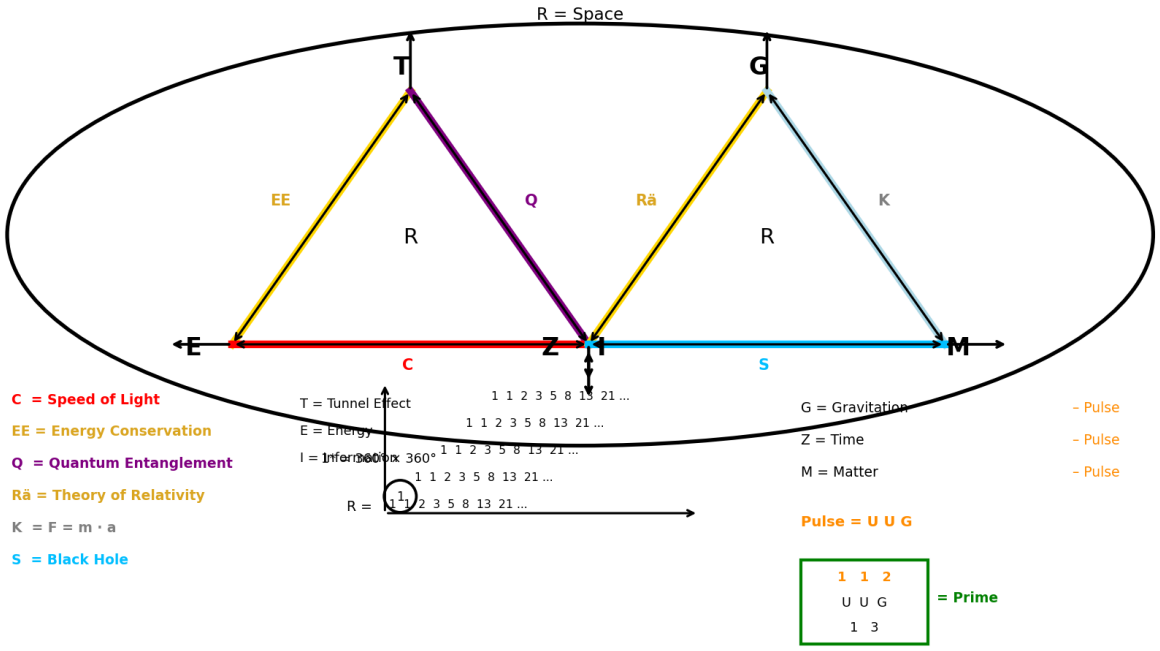

Figure 1: Overall representation of the Tensor of Realities $C_{uv}(E, T, I, Z, G, M)$

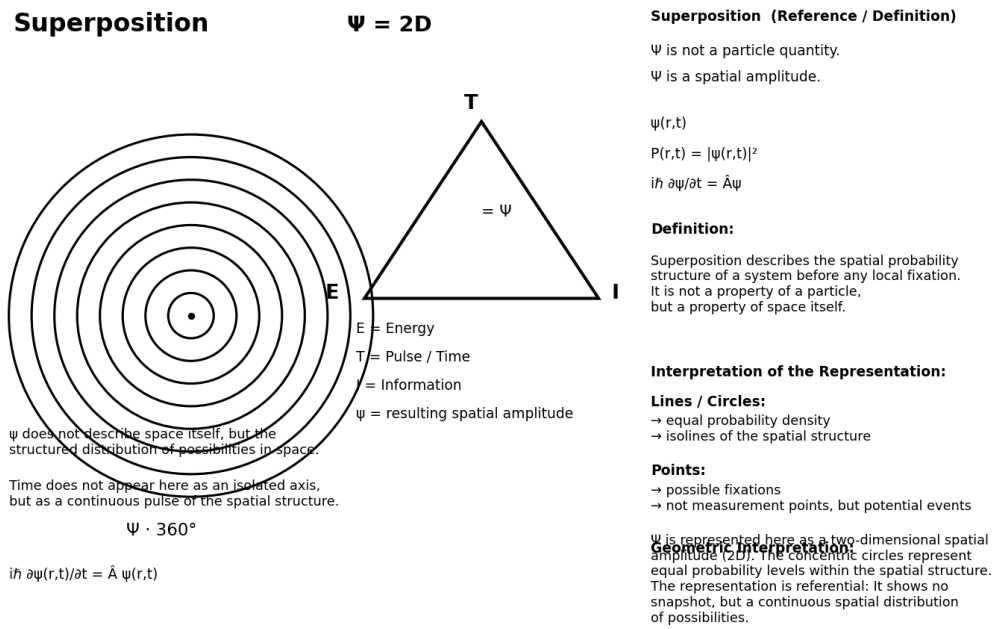

Figure 2: Superposition: Real coexistence of possible states

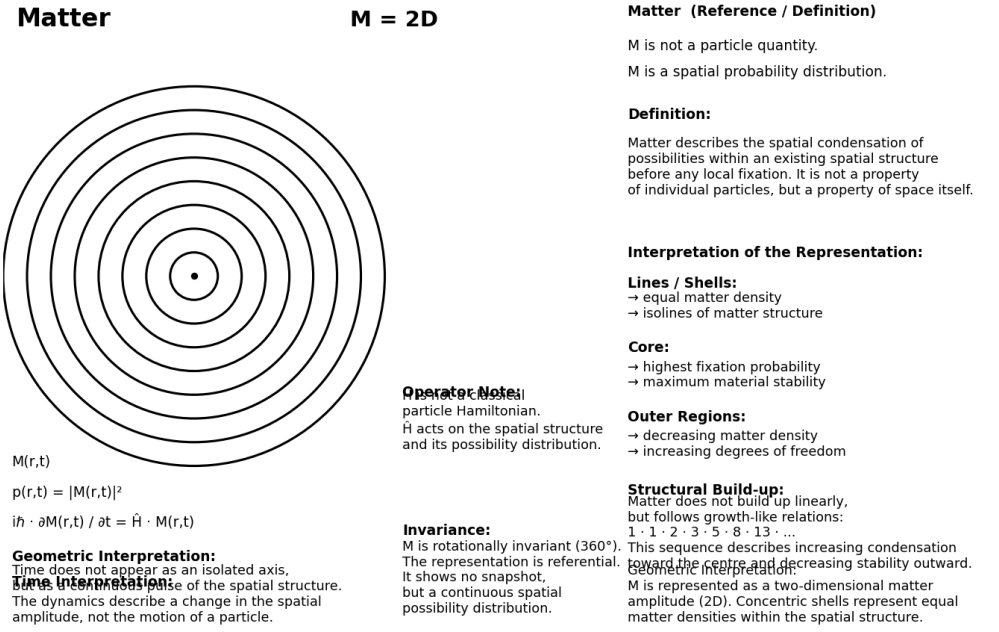

Figure 3: Matter as condensed energy

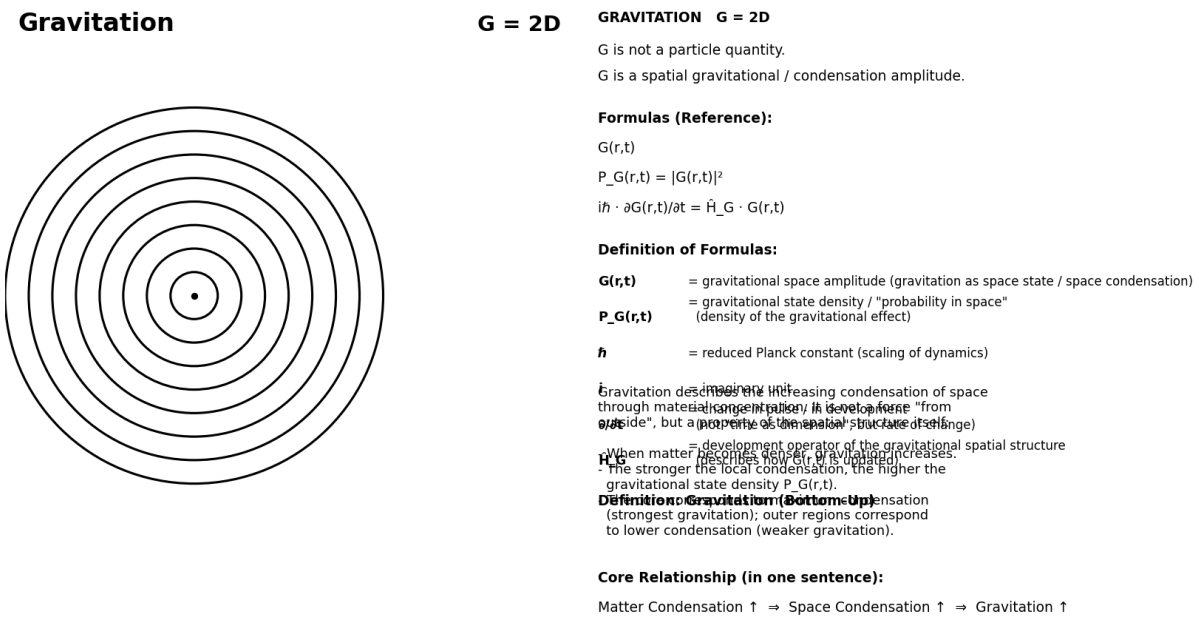

Figure 4: Gravitation as the effect of condensation

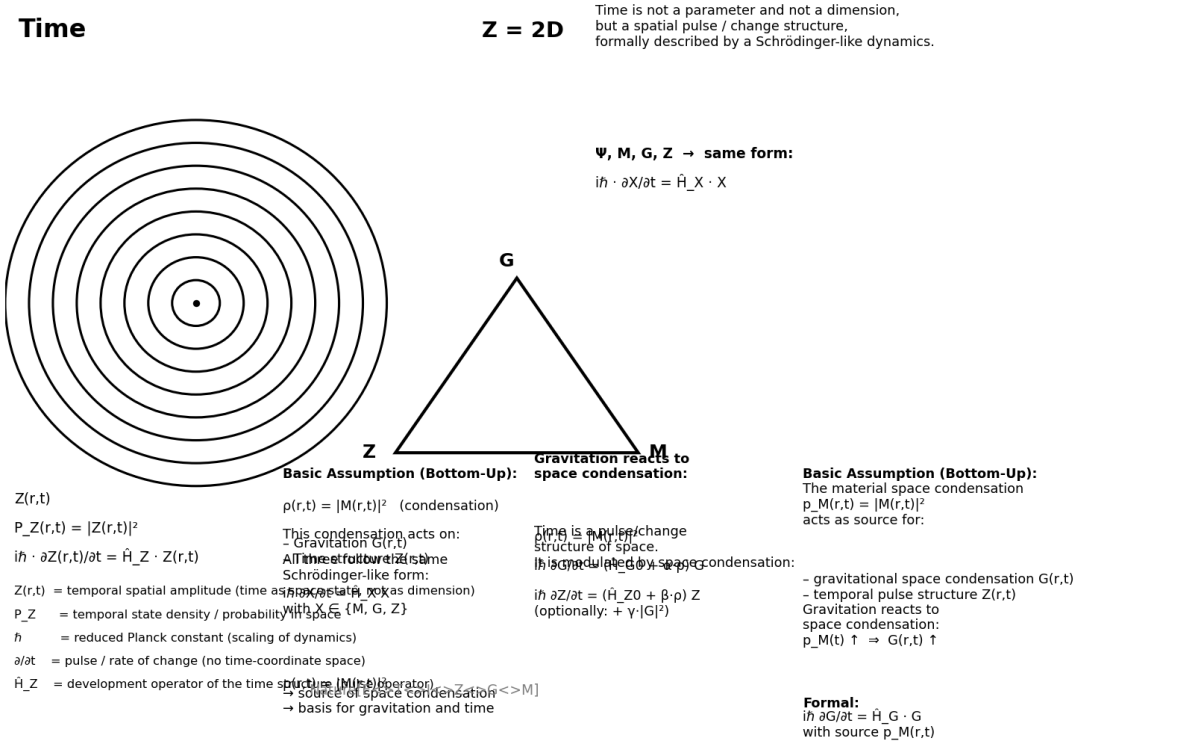

Figure 5: Time as the pulsation of the spatial structure

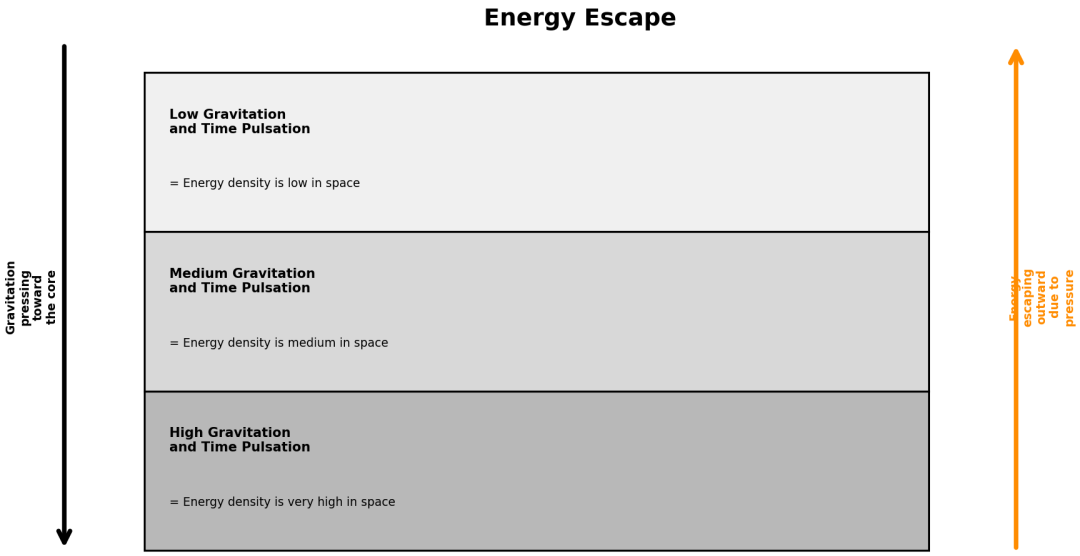

Figure 6: Energy Escape

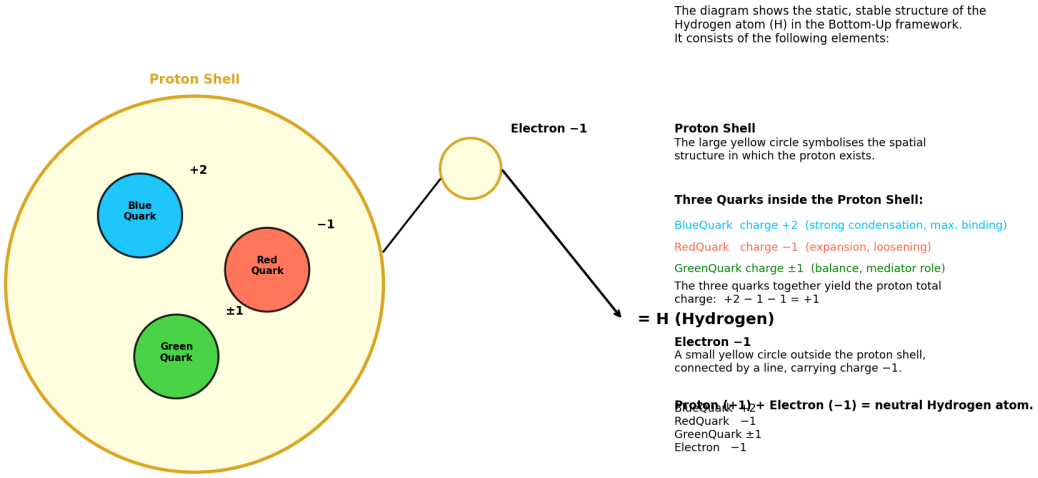

Figure 7: Atomic Structure in the Tensor model

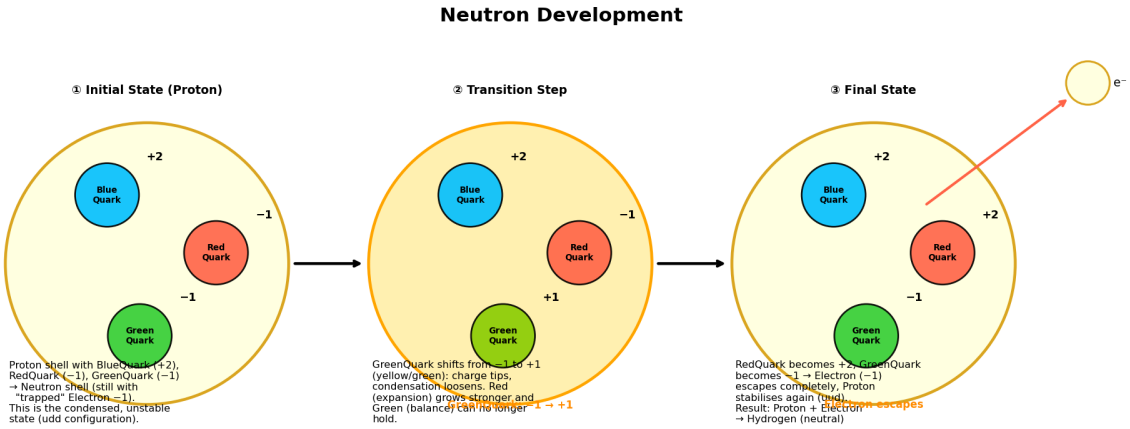

Figure 8: Neutron Development

3 Methodology: The Pulvermacher Foundation

3.1 Introduction and Methodology

This model is the result of an intensive, independent logical derivation developed within four weeks – starting from an engagement with quantum superposition. It breaks radically with the classical "top-down" view and replaces it with a "bottom-up" principle. The foundation assumes that nature knows no separate laws, but forms an inseparable unity.

3.2 The Tensor of Realities

The entirety of existence is based on an inseparable coupling of six fundamental aspects, described as the tensor $C_{uv}(E, T, I, Z, G, M)$. These divide into two operating triangles:

- **The operational foundation:** Energy (E), Tunnel Effect (T) and Information (I).
- **The form of appearance:** Time (Z), Gravitation (G) and Matter (M).

No aspect can exist in isolation or be changed without immediately influencing the others. Matter (M) is nothing other than the maximum condensation of space, while Gravitation (G) is the resulting pressure gradient.

3.3 Time as Pulsation of Information

In this model, Time (Z) is not a linear dimension, but the oscillation or pulsation of the spatial structure. The higher the matter density (condensation), the tighter and faster the local pulse. Light (photons) functions as an information carrier (I) that "freezes" the pulse of its origin and transports it. The "age" of a photon is therefore not a measure of time, but a measure of the stored pulse state.

3.4 Proof: The Light-Pulse Thought Experiment

The primacy of information over geometric distance is demonstrated by the following experiment: a photon releases its quantum information at the moment of its creation (e.g., "I am 5 metres old", according to its pulse state). If this photon were to skip part of its path through tunnelling (T) or teleportation, it retains this information. If it reaches an observer's retina after a physical 15 metres, it still shows the pulse of 5 metres. We therefore do not perceive space, but the pulse information stored in light.

3.5 The Gravitational Lens as Pulse Synchronisation

The gravitational lensing effect confirms this principle: a large mass (M) condenses space and thus also the local pulse (Z). When light passes through this region, it must adapt its amplitude to the higher pulse frequency. The resulting change in direction is not a deflection by an external force, but the necessary synchronisation of energy (E) to the condensed spatial structure. This simultaneously explains red and blue shift: it is the expression of how light must adapt its information when moving between different condensation states (pulses).

3.6 Resolution of the Perspective Illusion

Everyday misperceptions – such as the assumption of an absolutely straight propagation of light – are resolved by the bottom-up principle. The observer is themselves part of the local pulsation. What appears "straight" to them is, in the global reality of the condensed tensor, a curve. We do not perceive geometric truth, but the interpretation of the arriving information pulses.

3.7 Conclusion

Modern quantum mechanics, which extracts information from photons, unwittingly already confirms this model. The Pulvermacher Foundation provides the necessary bridge to understand the quantum world (E-T-I) and the macroscopic world (Z-G-M) as a single, coherent system of space condensation. Nature is a pulse – and information is its witness.

4 Classification Relative to Existing Theories

Top-down theories (e.g., Copenhagen interpretation, theory of relativity, standard models) are not negated here and not devalued. They are understood as special cases of measurement – that is, as descriptions of *what is observed*, not of *what is*.

This document does not describe a measurement prescription, but a coherent view of natural interconnections.

5 License

Pulvermacher Open Research License (PORL), Version 1.0

These materials (texts, images, concepts) may be used, shared, and adapted under the following conditions:

1. **Attribution** – Any use, distribution, publication or citation must clearly and visibly credit the author: Raiko Pulvermacher.
2. **Transparency of Derivatives** – If the material is modified, extended or embedded into other contexts, it must be clearly stated that it is a derived work.
3. **Research & Publications** – If this work is used as a basis for scientific research, experiments, simulations, publications, preprints or talks, the author must be informed prior to or at the latest upon publication.
4. **Disclaimer** – This work does not represent a physical theory, formal model, or verified scientific claim. It is provided without warranty.

Contact:
Raiko Pulvermacher
E-Mail: Pulvermacher.Raiko@web.de
ORCID: https://orcid.org/0009-0003-9431-1001
OSF: https://osf.io/py42t/