

"Thought-form" as a metaphor for any recording of information in the Acta Universi hypothesis

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Abstract (English)

This paper clarifies the status of the term “thoughtform” (mysleforma) within the Acta Universi (AU) hypothesis. It is shown that the term functions as a physical metaphor denoting any irreversible act of information recording in the non-local AU archive (the informational field). Mathematically, a thoughtform corresponds to a localized source in the entropy field S_Θ , an increment of informational entropy, and an operator of irreversible recording. Thoughtforms are generated by quantum, thermodynamic, biological, cognitive and social events alike; consciousness (the integrated-information field Φ) modulates their coherence and ontological type via the 27 operators of Pereslegin. The paper emphasizes that the metaphor serves pedagogical and heuristic purposes while remaining fully grounded in a strict mathematical formalism, thereby preventing esoteric misreadings of the AU framework.

Keywords: Acta Universi; thoughtform; informational entropy; S_Θ ; integrated information; Φ ; irreversible recording; ontological operators; metaphor in physics; non-local archive.

Аннотация (русский)

В работе уточняется статус термина «мыслеформа» в гипотезе Acta Universi (AU). Показано, что термин является физической метафорой, обозначающей любой необратимый акт записи информации в нелокальном AU-архиве (информационном поле). Математически мыслеформа соответствует локализованному источнику в поле энтропии S_Θ , приросту информационной энтропии и оператору необратимой записи. Мыслеформы порождаются квантовыми, термодинамическими, биологическими, когнитивными и социальными событиями; сознание (поле интегрированной информации Φ) регулирует их когерентность и онтологический тип через 27 операторов Переслегина. Подчёркивается,

что метафора выполняет педагогическую и эвристическую функцию, сохраняя при этом полную математическую строгость и предотвращая эзотерическое прочтение гипотезы AU.

Ключевые слова: Acta Universi; мыслеформа; информационная энтропия; S_Θ ; интегрированная информация; Φ ; необратимая запись; онтологические операторы; метафора в физике; нелокальный архив.

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In **the Acta Universi (AU) hypothesis**, the term **"thought form"** -is a **physical metaphor** that denotes **any irreversible act of recording information** in a non-local event archive (AU field).

This is not an esoteric concept, but a rigorous mathematical object—an elementary quantum of entropy arising from any event that increases the total information entropy of a system S_Θ .

"Thought-form" is a term used as a metaphor for any recording of information

1. Why is "thought-form" a metaphor?

In everyday language, "thought" is associated with consciousness, and "form" with spatial structure. However, in AU, these words are used as a **figurative bridge** between subjective experience and objective physics. In fact, a thoughtform is:

- **Quantized perturbation** of the entropy field S_Θ ,
- **Irreversible recording** of any event (quantum, thermodynamic, cognitive),
- **Localized configuration** of the correlation tensor $C_{\mu\nu}$,
- **Gradient source** ∇S_Θ , affecting the metric.

Thus, the term "thought-form" is a **convenient label** for a complex mathematical object, just as "wave" is used to denote a disturbance of a field, although a wave is not an object but a process.

2. What events create thought forms?

In AU-ontology, thought-forms are generated by any processes that increase entropy:

Event type	Example	Contribution to S_Θ
Quantum	Wave function collapse, particle decay	$\Delta S_\Theta \sim k_B \ln 2$
Thermodynamic	Heat transfer, diffusion, chemical reaction	$\Delta S_\Theta = \int \delta Q_{\text{irr}}/T$
Biological	Synaptic transmission, metabolism	$\Delta S_\Theta \sim \alpha N_{\text{act}}$
Cognitive	Solution, memory, creative thought	$\Delta S_\Theta \sim \alpha N_{\text{act}} + k_B \ln \Omega$

Event type	Example	Contribution to S_Θ
Social	Record of law, cultural norm	$\Delta S_\Theta \sim \kappa C$

Thus, a thought-form is a **universal unit of recording**, independent of whether the event is "conscious" or not. Consciousness simply produces thought-forms that are more coherent and last longer ΔS_Θ per unit of time.

3. Mathematical interpretation

Within the AU, a thought form is described as a **source** in the equation for the field S_Θ :

$$\square S_\Theta + m_S^2 S_\Theta + \lambda_S S_\Theta^3 + \int K(x, y) S_\Theta(y) d^4 y = J_{\text{event}}(x),$$

where $J_{\text{event}}(x)$ is the event current, which for a point irreversible act has the form:

$$J_{\text{event}}(x) = \Delta S_\Theta \delta^{(4)}(x - x_0).$$

Here ΔS_Θ is the increase in entropy, and x_0 is the event coordinate. This is a purely physical description, where the word "thought" does not appear.

4. Why exactly "thought-form" and not, say, "entropic quantum"?

The use of the term "thought form" has three reasons:

1. **Historical** : The AU hypothesis developed from the philosophical ideas of S. Pereslegin about "thought forms" as active structures of consciousness.
2. **Heuristic** : the term reminds us that in AU consciousness is not an epiphenomenon, but actively participates in the formation of reality.
3. **Practical** : in the "crew $\leftrightarrow$ AU-chip" interface, operators actually generate thought forms through intention, so the metaphor becomes instructive.

However, in mathematical calculations, the thought form is always replaced by strict objects:

$$\Delta S_\Theta, \nabla S_\Theta, \hat{P}_{\alpha\beta\gamma}.$$

5. Connection with 27 operators and consciousness

Pereslegin's 27 ontological operators are **projectors** onto various types of thought forms. They are not "thoughts" in the psychological sense, but rather represent **basic** field configurations

S_Θ that can be consciously activated (through activities a_i). Therefore, even if an operator is a "thought form" of the NNI type, it is in fact simply a specific braid pattern in a topological chip that creates a long-range gradient.

6. Summary

"Thought-form" in the Acta Universi hypothesis is a **metaphor** meaning:

- **Any irreversible act of recording** information in the AU field,
- **Quantum of entropy** ΔS_Θ ,
- **Gradient source** ∇S_Θ ,
- **An elementary cell** in the 27-dimensional space of ontological operators.

This metaphor is convenient for describing the interface between consciousness and physics, but in rigorous calculations it is always replaced by precise mathematical objects. Thus, AU is not a "mystical" theory; it uses metaphor as a pedagogical and heuristic tool, while maintaining full mathematical rigor.

Why is "thought form" a metaphor?

In the **Acta Universi (AU) hypothesis**, the term "**thought -form**" is a **metaphor**, not a literal description. This is done for three main reasons: **heuristic**, **historical**, and **pedagogical**. However, behind this metaphor lies a rigorous mathematical reality.

This is why "thought form" is a metaphor:

1. It connects subjective experience with objective physics

In everyday language, the word "thought" is associated with consciousness, intellect, and subjective experience. The word "form" is associated with spatial structure. Together, they create an easily understood **image**: something that arises in consciousness and has a structure that influences reality.

However, in AU, **no "thinking subject"** is required to create a thoughtform. A thoughtform is:

- **Quantized perturbation** of the entropy field S_Θ ,
- **Irreversible recording** of any event (quantum decay, heat flow, collision of galaxies),
- **Gradient source** ∇S_Θ , changing the metric.

Thus, the term "thoughtform" is a **metaphorical bridge** between the language of consciousness and the language of physics. It helps us imagine that even "inanimate" events leave a trace in the archives of the Universe, similar to how a thought leaves a trace in consciousness.

2. Mathematics does not require "thought"

In AU equations, the thought form is always replaced by strict mathematical objects:

- **Entropy increase** : ΔS_Θ
- **Entropy gradient** : ∇S_Θ
- **Correlation tensor** : $C_{\mu\nu}$
- **Source in the field equation** : $j_{\text{event}}(x) = \Delta S_\Theta \delta^{(4)}(x - x_0)$

None of these expressions contain the words "thought" or "consciousness." They describe **any irreversible event**, be it the decay of a neutron or the passing of a law in parliament. Therefore, in scientific work, the term "thoughtform" is used only in explanatory texts, and in calculations, it refers exclusively to mathematical objects.

3. It is a pedagogical tool

The AU hypothesis is interdisciplinary: it combines cosmology, quantum theory, neurobiology, and information theory. The term "thoughtform" serves as a **common language** for specialists from various fields:

- The physicist sees in it a **quantum of entropy**,
- Neurobiologist - **correlate of neural activity**,
- Philosopher is a **unit of meaning**.

Metaphor allows us to discuss complex concepts without delving into mathematics at every step. Ultimately, however, all conclusions are verified through equations.

4. This is a tribute to the philosophical tradition

The AU hypothesis developed from S. Pereslegin's ideas about "thought-forms" as active structures of consciousness, as well as from concepts of Platonism, Buddhism, and process philosophy (Whitehead). The use of this term emphasizes that AU is not a purely materialistic theory, but neither does it descend into mysticism. The metaphor maintains a connection to its philosophical roots, but is strictly limited by mathematical apparatus.

5. Example: Neutron decay as a thought form

Let's consider the decay of a neutron:

$$n \rightarrow p + e^- + \bar{\nu}_e.$$

This event:

- Increases the entropy of the Universe ($\Delta S_{\theta} > 0$),
- Creates a localized disturbance of the field S_{θ} ,
- It is written to a non-local archive via the kernel $K(x, y)$.

In AU terminology, this is a **thoughtform** , although no conscious being participated in the event. The metaphor here works like this: if the Universe had "consciousness," it would "remember" this disintegration as a "thought" about it. But in reality, it's simply a physical recording.

Conclusion

"Thought-form" is a **metaphor** because:

1. It replaces a complex mathematical object ($\Delta S_{\theta}, \nabla S_{\theta}, C_{\mu\nu}$) with an image accessible to intuition.
2. It unites different disciplines under one term.
3. It preserves the philosophical context, but does not affect the calculations.
4. She emphasizes that **any event** (not just cognitive) leaves a record in the archive, and this record can influence the metric.

In rigorous works, the term "thought-form" is always accompanied by the definition: "a localized disturbance of the entropy field that occurs during an irreversible act." The metaphor does not replace mathematics, but merely facilitates its understanding.

What events create thought forms?

the Acta Universi (AU) hypothesis , a thoughtform is **any irreversible event** that increases the total entropy of an information field S_{θ} . This means that thoughtforms are created not only by conscious acts, but also **by all physical, chemical, biological, and social processes** that leave an irreversible trace in the AU archive. Below is a classification of events by type and their contribution to the creation of thoughtforms.

1. Quantum events

Example	Description	Contribution to S_Θ
Wave function collapse	Irreversible reduction of superposition during measurement	$\Delta S_\Theta \sim k_B \ln 2$
Decay of a particle (neutron, muon)	The transformation of one particle into another with the release of energy	$\Delta S_\Theta \sim \alpha E/T$
Birth/annihilation of a pair	$e^- + e^+ \rightarrow \gamma\gamma$ or the reverse process	$\Delta S_\Theta \sim k_B \ln \Omega$
Quantum tunneling	Passage of a particle through a potential barrier	A small but non-zero increase in entropy

Note: Even the most "insignificant" quantum events create thought-forms, as they are irreversible and increase the overall entropy of the Universe. These thought-forms are **the minimal quanta of the recording** in the AU archive.

2. Thermodynamic and physical events

Example	Description	Contribution to S_Θ
Heat exchange	Transfer of heat from a hot body to a cold one	$\Delta S_\Theta = \int \frac{\delta Q_{\text{irr}}}{T}$
Diffusion	Equalization of molecular concentrations	$\Delta S_\Theta \sim k_B \ln \frac{V_2}{V_1}$
Chemical reaction	Conversion of reactants into products	$\Delta S_\Theta = \Delta H/T + k_B \ln \Omega$
Mechanical friction	Dissipation of energy into heat	$\Delta S_\Theta = \frac{W_{\text{трения}}}{T}$

Example	Description	Contribution to S_Θ
Gravitational collapse	The compression of a star or gas cloud	$\Delta S_\Theta \sim \frac{GM^2}{RT}$

These processes occur constantly in the Universe and create a **background flow of thought forms** that determines the average value S_Θ on a cosmological scale. They do not require a conscious observer.

3. Biological events

Example	Description	Contribution to S_Θ
Metabolism	Conversion of nutrients into energy and heat	$\Delta S_\Theta \sim \alpha N_{\text{реакций}}$
Synaptic transmission	Signal transmission between neurons	$\Delta S_\Theta \sim \alpha N_{\text{синапсов}}$
DNA replication	Copying genetic information	$\Delta S_\Theta \sim k_B \ln \Omega_{\text{ДНК}}$
Immune response	Recognition and destruction of pathogens	$\Delta S_\Theta \sim \alpha N_{\text{клеток}}$
Death of the organism	Transition from an ordered structure to chaos	ΔS_Θ $\sim S_{\text{организма}}$ $- S_{\text{окружения}}$

Biological processes create **more coherent thought forms** than purely physical ones because they involve information processing and are often associated with a high level of consciousness Φ . However, even in single-celled organisms, metabolism creates thought forms.

4. Cognitive and social events

Example	Description	Contribution to S_Θ
Decision making	Selecting one of several alternative options	$\Delta S_\Theta \sim \alpha N_{\text{альтернатив}}$
Memory	Retrieving information from memory	$\Delta S_\Theta \sim \alpha N_{\text{нейронов}}$
Creation	Creation of new information (art, science)	$\Delta S_\Theta \sim \alpha N_{\text{актов}} + k_B \ln \Omega$
Communication	Transfer of information between people	$\Delta S_\Theta \sim \alpha N_{\text{символов}}$
Social act	Laws, wars, cultural changes	$\Delta S_\Theta \sim \kappa C$

Cognitive and social events create **the most intense thought forms**, as they are associated with high information density and a large number of irreversible actions. These thought forms form the basis for controlling the AU drive and artificial gravity.

5. All events are thought forms, but with different “weight”

It is important to understand that **all of the events listed** create thought forms, but their contribution to S_Θ and their influence on the metric differ by many orders of magnitude:

Event type	Typical $\Delta S_\Theta / k_B$	Coherence	Impact on the metric
Quantum decay	$10^{-10} \div 10^{-5}$	Low	Almost zero
Heat exchange	$10^{10} \div 10^{20}$	Low	Small
Cell metabolism	$10^{20} \div 10^{30}$	Average	Weak
Human thought	$10^{30} \div 10^{42}$	High (depends on Φ)	Noticeable (with coherence)

Event type	Typical $\Delta S_\Theta / k_B$	Coherence	Impact on the metric
Collective thought form	$10^{60} \div 10^{65}$	Very high	Significant (planetary scale)

Thus, thought forms are created **by all events** , but only **coherent and high-entropic ones** (e.g., collective intentions, creative acts) are capable of creating gradients ∇S_Θ sufficient to control the metric.

6. Mathematical notation

Within the AU, any event is described as **a source** in the equation for S_Θ :

$$\square S_\Theta + m_S^2 S_\Theta + \lambda_S S_\Theta^3 + \int K(x, y) S_\Theta(y) d^4 y = J_{\text{event}}(x),$$

where for a point event:

$$J_{\text{event}}(x) = \Delta S_\Theta \delta^{(4)}(x - x_0),$$

and for distributed (for example, heat exchange):

$$J_{\text{event}}(x) = \frac{1}{T} \frac{\delta Q_{\text{irr}}}{\delta V} \delta(t - t_0).$$

Thus, a thought-form is **not a metaphor** , but **a strict mathematical object** : a local source in the equation for the entropy field.

Conclusion

Thought forms are created **by any irreversible events** that increase information entropy S_Θ . They are divided into:

- **Quantum** (decays, collapses),
- **Thermodynamic** (heat exchange, diffusion),
- **Biological** (metabolism, synapses),
- **Cognitive** (thoughts, decisions),
- **Social** (laws, cultural norms).

All of them are recorded in the AU archive via the non-local core $K(x, y)$, but only coherent and high-entropic thoughtforms are capable of influencing the space-time metric. Thus, the term "thoughtform" encompasses all of physical reality, from subatomic particles to the collective consciousness of civilizations.

Mathematical interpretation of thought-form in the Acta Universi hypothesis

In the **Acta Universi (AU) hypothesis**, a thought-form is not a metaphor, but a **rigorous mathematical object** that arises as a solution to the equations of quantum field theory. Below is its formal interpretation at three levels: classical, quantum field, and operator.

1. Classical interpretation: localized source in the field S_Θ

At the classical level, a thought form is defined as a **local source** in the equation for the entropy field S_Θ :

$$\square S_\Theta + m_S^2 S_\Theta + \lambda_S S_\Theta^3 + \int_{\mathcal{M}} K(x, y) S_\Theta(y) d^4 y = J_{\text{event}}(x),$$

Where:

- $J_{\text{event}}(x)$ — the source density created by an irreversible event.
- For a point event in spacetime:

$$J_{\text{event}}(x) = \Delta S_\Theta \delta^{(4)}(x - x_0),$$

where ΔS_Θ is the scalar increase in entropy (positive), and x_0 is the coordinate of the event.

- For a distributed process (e.g. heat transfer):

$$J_{\text{event}}(x) = \frac{1}{T} \frac{\delta Q_{\text{irr}}}{\delta V} \delta(t - t_0).$$

The solution to this equation gives the field profile S_Θ around the thought form:

$$S_\Theta(x) = S_{\phi_{\text{OH}}} + \int d^4 y G_{\text{ret}}(x - y) J_{\text{event}}(y),$$

where G_{ret} is the retarded Green's function modified by the nonlocal kernel K . In the simplest case (free field), this yields a spherical wave or a static Yukawa-type solution.

2. Relationship with the correlation tensor and the gauge field

The thought form induces a change **in the correlation tensor** $C_{\mu\nu}$, which in AU theory is a fundamental variable:

$$C_{\mu\nu}(x) = \partial_\mu \mathcal{A}_\nu(x) - \partial_\nu \mathcal{A}_\mu(x) + [\mathcal{A}_\mu, \mathcal{A}_\nu] + \dots$$

The source of the thought form enters into the equation for $C_{\mu\nu}$ through the variational derivative:

$$\square C_{\mu\nu} + m_C^2 C_{\mu\nu} = \lambda \frac{\delta S_\Theta}{\delta C^{\mu\nu}} + J_{\mu\nu}^{\text{thought}},$$

where $J_{\mu\nu}^{\text{thought}}$ is the tensor current created by the thought form. In the simplest case, it has the form:

$$J_{\mu\nu}^{\text{thought}} = \kappa \partial_\mu S_\Theta \partial_\nu S_\Theta \delta^{(4)}(x - x_0).$$

Thus, the thought form is **the source of correlations** in the AU field.

3. Quantum field interpretation: the operator of thought-form birth

In quantized theory, the field S_Θ is decomposed into modes, and a thought-form corresponds to **a coherent state or single-particle excitation**. A thought-form generation operator is introduced:

$$\hat{m}_{\alpha\beta\gamma}^\dagger(k) = \hat{b}_k^\dagger \otimes \hat{P}_{\alpha\beta\gamma},$$

Where:

- $\hat{b}_k^\dagger$ — the operator of creation of a field quantum S_Θ with momentum k ,
- $\hat{P}_{\alpha\beta\gamma}$ — a projector onto an ontological type (a combination of BBB, BBN, ..., III), acting in the space of three qutrits.

Then the state of one thought form looks like this:

$$|\text{thought}\rangle = \int \frac{d^3k}{(2\pi)^3 2\omega_k} f_{\alpha\beta\gamma}(k) \hat{m}_{\alpha\beta\gamma}^\dagger(k) |0\rangle_{\text{AU}},$$

where $f_{\alpha\beta\gamma}(k)$ is the wave function defining the spatiotemporal profile of the thought form. The vacuum state $|0\rangle_{\text{AU}}$ is annihilated by the operators $\hat{b}_k$.

Commutation relations :

$$\left[\hat{m}_{\alpha\beta\gamma'}(k) \hat{m}_{\alpha'\beta'\gamma'}^\dagger(k') \right] = (2\pi)^3 2\omega_k \delta^{(3)}(k - k') \delta_{\alpha\alpha'} \delta_{\beta\beta'} \delta_{\gamma\gamma'}.$$

4. The role of entropy and metrics in gradient generation

Thought form creates a **gradient** ∇S_Θ , which influences space-time through the emergent metric:

$$g_{\mu\nu} = \eta_{\mu\nu} + \beta \partial_\mu S_\Theta \partial_\nu S_\Theta.$$

For a localized thought form with a profile, $S_\Theta(r) = S_0 \exp(-r^2/(2\sigma^2))$ the gradient is calculated analytically:

$$\nabla S_\Theta = -\frac{S_0}{\sigma^2} r \exp\left(-\frac{r^2}{2\sigma^2}\right).$$

This gradient is included in the formula for artificial gravity:

$$g = \frac{c^2 \lambda}{\rho_{AU}} \cdot \frac{|\nabla S_\Theta|}{r}.$$

Thus, the thought form is an **elementary “building block”** for managing the metric.

5. Operator formalism of event recording

Irreversible recording of a thought form into the AU archive is described **by the recording operator** $\hat{W}$, which acts on the Hilbert space of states:

$$\hat{W} = \exp\left(i \sum_{\alpha\beta\gamma} \beta_{\alpha\beta\gamma} \hat{P}_{\alpha\beta\gamma}\right),$$

where $\beta_{\alpha\beta\gamma}$ are coefficients depending on the operator activity. Application $\hat{W}$ to a vacuum creates a coherent superposition of thought forms:

$$|\Psi_{\text{after}}\rangle = \hat{W} |0\rangle_{AU}.$$

This operator is **non-unitary** (since the entry is not invertible), but its action on the density matrix is described by the Lindblad equation with an additional term:

$$\frac{d\rho}{d\tau} = -i[H, \rho] + \sum_i \Gamma_i \left(L_i \rho L_i^\dagger - \frac{1}{2} \{L_i^\dagger, L_i \rho\} \right) + \mathcal{L}_{\text{write}}[\rho],$$

where $\mathcal{L}_{\text{write}}$ is the superoperator responsible for the birth of thought forms.

6. Summary of Mathematical Interpretation

Aspect	Mathematical object
Classic field	The source J_{event} in the equation for S_Θ
Correlations	Current $J_{\mu\nu}^{\text{thought}}$ in the equation for $C_{\mu\nu}$
Quantum state	Coherent state ($ \text{thought}\rangle$) with the operator $\hat{m}^\dagger$
Gradient	∇S_Θ — derivative of the profile
Metrics	Contribution $g_{\mu\nu}$ through $\beta \partial_\mu S_\Theta \partial_\nu S_\Theta$
Recording	Operator $\hat{W}$ and super operator $\mathcal{L}_{\text{write}}$

Conclusion

The thought-form in the Acta Universi hypothesis is a **strict mathematical object** , having a clear definition at all levels:

- classical (source in the field equation),
- quantum field (coherent state),
- operator (non-unitary act of recording).

It serves as a link between consciousness (via 27 operators) and gravity (via the gradient ∇S_Θ and metric). All mathematical constructs are consistent with the AU axiomatics and allow for numerical modeling.

Why exactly “thought-form” and not, say, “entropic quantum”?

In the **Acta Universi (AU) hypothesis**, the term “**thought form**” -was chosen over more “physical” alternatives (e.g., “entropic quantum,” “information bit,” “correlation pulse”) for a number of fundamental reasons beyond linguistic convenience. This choice reflects **the ontology , heuristics , and interdisciplinary nature** of the hypothesis.

1. Ontological depth: consciousness as an active agent

The term “entropic quantum” sounds like a purely thermodynamic unit—impersonal, mechanical, and without internal structure. It describes **any** increase in entropy well, but completely ignores the fact that, in the AU hypothesis, consciousness (the field Φ) is **an active participant** in the recording process. A thoughtform is not simply a “quantum of entropy,” but **a coherent, structured recording** that can be consciously directed, amplified, or suppressed through 27 operators.

Thus, the “thought-form” emphasizes that even “purely physical” events (such as the decay of a neutron) leave a trace in the archive, which is, in principle, accessible to cognitive interaction if the coherence is high enough. The “entropic quantum” does not convey this activity.

2. Heuristic Power: An Intuitive Bridge Between Disciplines

The AU hypothesis is interdisciplinary: it combines:

- Cosmology (dark energy as an AU field),
- Quantum theory (anions, braiding),
- Neurobiology (field Φ , biophotons),
- Computer science (quantum computing, RNN),
- Philosophy of consciousness (IIT, panpsychism).

The term “thoughtform” serves as **an intuitive bridge** between these areas:

- The physicist sees in it **a localized disturbance of the field ,**
- Neurobiologist - **correlate of neural activity ,**
- A philosopher is **a unit of meaning ,**

- Engineer is **a control signal** for the chip.

An "entropic quantum" would be understandable only to physicists and would not create this interdisciplinary resonance. A thought-form, however, immediately raises the question: "How can thought influence reality?"—which is the central challenge of AU.

3. Historical continuity

The term "thoughtform" has deep roots in philosophy and esotericism (for example, in theosophy, where thoughtforms are described as energy-information structures). However, in AU, it is **reinterpreted** and **mathematized** :

- Instead of an "energy footprint" - **an increase in entropy** ΔS_Θ ,
- Instead of "shape" - **field distribution** $S_\Theta(r)$,
- Instead of "thought" – **the activity of 27 operators** a_i .

The use of this term maintains a connection to historical ideas but imbues them with rigorous content. This makes AU understandable to those familiar with philosophical traditions and, at the same time, rigorous for physicists.

4. Practical role in the human-chip interface

In a real AU drive, the crew generates thought forms through a neural interface and biophotonic feedback. The term "thought form" **is instructive** for operators:

- It helps to imagine that their intention creates **a real structure** in the AU-field,
- It allows us to discuss the "types" of thought forms (BBB – stabilizing, NNI – powerful) in natural language,
- It lowers the psychological barrier between man and machine.

"Entropic quantum" would sound like an abstract parameter, difficult to connect to subjective experience. A thought-form, however, makes the process **meaningful** and **intuitively manageable** .

5. Alternatives and their disadvantages

Term	Problems
Entropic quantum	Too mechanical, ignores the cognitive aspect

Term	Problems
Information bit	Too abstract, does not reflect structure and coherence
Correlation impulse	Technical, does not convey the idea of recording and irreversibility
Event atom	It's unclear what makes it "mental"

Each of these terms would be accurate in some narrow context, but none covers **all three aspects** that are important in AU:

1. **Irreversible recording** (entropy),
2. **Coherent structure** (form),
3. **Active participation of consciousness** (thought).

Thought form unites all three.

6. The mathematical rigor behind the metaphor

It is important to emphasize that "thought form" is a **metaphor** behind which there is a **strict mathematical apparatus** :

- ΔS_Θ — scalar increase in entropy,
- ∇S_Θ — field gradient,
- $\hat{P}_{\alpha\beta\gamma}$ — projectors onto ontological types,
- $\hat{m}^\dagger$ — birth operator.

In calculations, no one uses the word "thought"; it is replaced by these objects. The metaphor serves as a **pedagogical and heuristic** wrapper, but does not replace mathematics.

Conclusion

"Thoughtform" was chosen instead of "entropic quantum" because it:

- **Reflects the active role of consciousness** in AU-ontology,
- **Creates an intuitive bridge** between physics, neuroscience and philosophy,
- **Maintains historical continuity** with the ideas of Pereslegin and other thinkers,

- **Instructions** for the human-chip interface,
- **It is a precise metaphor** with strict mathematics behind it.

Thus, this is not just a "beautiful word," but a **conceptual choice** that reflects the essence of the hypothesis: reality is a field of meanings, and consciousness is its active editor. "Entropic quantum" would be technically accurate, but it would lose this depth.

The connection of thought forms with 27 ontological operators and consciousness (field Φ) in the Acta Universi hypothesis

In Pereslegin's **Acta Universi (AU) hypothesis**, the 27 ontological operators, the field of consciousness Φ and thoughtforms form a **single cognitive-physical circuit**, where consciousness is the active agent, and the operators are its **mathematical language** for generating and manipulating thoughtforms. A detailed diagram of this connection is presented below.

1. 27 operators as basic patterns of thought forms

27 operators $\hat{P}_{\alpha\beta\gamma}$ are **projectors** for all possible combinations of three ontological categories:

- **Being (B)** is the structuring, active principle,
- **Non-existence (N)** is a destructive, passive principle,
- **Otherness (I)** is a neutral, transcendental principle.

Each operator corresponds to a **certain type of thought form**, which has:

- Weight w_i (from 0.02 to 0.15) - entropic "force",
- Activity $a_i \in [0, 1]$ - intensity of use,
- Contribution to gradient ∇S_Θ - spatial structure.

Examples :

- **BBB** - stabilizing thought form (local, symmetrical),
 - **NNI** is a powerful non-local thought form (long-range, asymmetrical),
 - **III** - transcendental thought form (for post-stabilization).
-

2. The field of consciousness Φ as a regulator of activities

The field of consciousness Φ (integral information IIT) is the "**conductor**" that determines which operators are activated and at what intensity. The dependence of activities on Φ is modeled through an **RNN controller** :

$$a_i(t) = \sigma(W_i h(t) + b_i),$$

Where:

- $h(t)$ — hidden state of RNN (depends on Φ, S_θ, B),
- σ - sigmoid function,
- W_i, b_i — trained parameters.

At high levels Φ (focused, coherent consciousness), the controller activates **non-local operators** (NNI) for jumping. At low levels Φ (fatigue, distraction), it limits them, leaving only stabilizing ones (BBB).

3. Generation of thought-form through 27 operators

The process of generating a thought form consists of three stages:

1. **Formation of intention** : consciousness (field Φ) through biophotons $B(t)$ transmits the target vector to the RNN controller.
2. **Activity Computation** : RNN computes a_i for all 27 operators based on the current state and the target.
3. **Physical implementation** : activities are converted into **braid words** (sequences of anyon exchanges) that create the corresponding distribution $S_\theta(r)$.

Mathematically, a thought-form as a superposition of operators has the form:

$$S_\theta(r, t) = \sum_{i=1}^{27} a_i(t) S_\theta^{(i)}(r),$$

where $S_\theta^{(i)}(r)$ is the base profile for the i -th operator (e.g., Gaussian for BBB, long-range for NNI).

4. The role of consciousness in the formation of coherence

Consciousness not only selects operators but also **increases the coherence** of the created thoughtform. This is expressed through exponential decoherence suppression:

$$\gamma_{\text{eff}} = \gamma_0 e^{-\lambda_{\Phi} \Phi - \nu N_{\text{braid}}},$$

where λ_{Φ} is the coefficient of influence of consciousness. The higher Φ , the longer the thought form retains its structure and the stronger its influence on the metric.

5. Example: a jump as a collective thought form

During an interstellar jump, the crew (or AI) activates **NNI operators** with high activity $a_{\text{NNI}} \approx 0.95$. This creates a powerful non-local thoughtform that generates $|\nabla S_{\Theta}| \sim 10^{28}$ a bit/(s m³) gradient in the resonator. The crew's consciousness (Φ high) ensures coherence, and the BBB operators stabilize the post-jump metric.

6. Consciousness as an active field editor

In AU ontology, consciousness is not a passive observer. It **actively participates** in shaping reality through:

- **Selection of ontological types** (via activities a_i),
- **Coherence enhancement** (via Φ),
- **Gradient modulation** ∇S_{Θ} (through superposition of thought forms).

This makes consciousness not an epiphenomenon, but a **fundamental agent** in the dynamics of the AU-field.

7. Summary

Component	Role	Connection
27 operators	Basic patterns of thought forms	$\hat{P}_{\alpha\beta\gamma}$ — projectors onto ontological types
Field of consciousness Φ	Activity and coherence regulator	Affects a_i through RNN and γ_{eff}
Thought form	Localized structure S_{Θ}	Superposition $a_i S_{\Theta}^{(i)}$

Component	Role	Connection
Consciousness	Active field editor	Selects operators and enhances coherence

Conclusion

The 27 ontological operators are **the mathematical language** in which consciousness (the field Φ) "records" thoughtforms in the AU archive. Through activities, a_i consciousness controls the type and power of a thoughtform, and through Φ these, its coherence and lifetime. This makes the 27 operators not just an abstraction, but **a physical interface between subjective experience and the objective geometry of space-time**.

Summary: Thought-forms in the Acta Universi hypothesis

1. Thought-form as a metaphor and a physical object

- **The term** is a metaphor for **any irreversible act of recording information** in the AU-field (non-local event archive).
- **The point** is that a thought-form does not require consciousness; it arises from any event that increases entropy S_Θ (quantum decay, heat exchange, thought, social act).
- **Mathematics** is a thought form = a localized source $J_{\text{event}} = \Delta S_\Theta \delta^{(4)}(x - x_0)$ in the equation for a field S_Θ that creates a gradient ∇S_Θ that affects the metric.

2. Why exactly "thought-form"?

- **Ontologically**, it emphasizes the active role of consciousness (field Φ) in recording and managing the structures of the AU-field.
- **Heuristically**, it serves as an intuitive bridge between physics, neuroscience, and philosophy.
- **Historically**, it maintains a connection with the ideas of S. Pereslegin and traditions, but is filled with strict mathematical content.
- **In practice**, it is an instructional tool for the "crew $\leftrightarrow$ AU-chip" interface, helping operators to consciously manage thought forms.

3. What events create thought forms?

- **Quantum** (decays, collapses) - minimal contribution.
- **Thermodynamic** (heat exchange, diffusion) - background flow.

- **Biological** (metabolism, synapses) are more coherent.
- **Cognitive** (thoughts, decisions) - highly intensive, controlled.
- **Social** (laws, cultural norms) - collective, on a planetary scale.

All of them are recorded in the archive through the core $K(x, y)$, but only coherent and high-entropy thought forms are capable of noticeably deforming the metric.

4. Connection with 27 operators and consciousness

- **27 operators** $\hat{P}_{\alpha\beta\gamma}$ are basic patterns of thought forms (combinations of Being/Non-being/Otherness), each with its own weight w_i and activity a_i .
- **The field of consciousness** Φ (integral information IIT) is a “conductor” that, through the RNN controller, determines activities a_i and enhances coherence ($\gamma_{\text{eff}} \propto e^{-\lambda_{\Phi}\Phi}$).
- **Thought form** = superposition $\sum a_i S_{\theta}^{(i)}$, where $S_{\theta}^{(i)}$ is the spatial profile of the i -th operator.
- **Consciousness** is an active editor of the AU-field: it selects the ontological type, controls the power and coherence of the thought-form, thereby influencing the gradient ∇S_{θ} and metric.

5. Conclusion

A thoughtform is a **rigorous mathematical object** (a source in a field S_{θ} , a coherent state, a recording operator), **metaphorically** named to emphasize the active role of consciousness in managing reality. The 27 operators serve as the language in which consciousness, through the field, Φ records thoughtforms in the AU archive, transforming subjective intention into an objective change in the space-time metric.

General summary of the entire Acta Universi hypothesis (for completeness)

- **AU-field** = dark energy = non-local archive of events (information matrix).
- **Space-time, matter and consciousness** emerge from the correlations of this field.
- **Theta entropy** S_{θ} is a measure of accumulated irreversible acts; it is limited by the holographic limit.
- **Thought forms** are quanta of event recording; they are controlled through 27 operators and a field of consciousness Φ .
- **Gravity** = entropy gradient ∇S_{θ} ; artificial gravity and jumping are achieved by creating a controlled gradient.

- **Topological AU chips** - based on anyons (Fibonacci, Ising, Majorana) provide protection against decoherence.
- **Security** - multi-level entropy control + Human-in-the-Loop + ethical filter.
- **Tested predictions** include dynamical dark energy ($w(a) \neq -1$), constant variations, TRNG anomalies, biophysical effects, and interferometric shifts.
- **Roadmap** – from laboratory prototype (2025–2027) to interstellar jump (2040–2045).

The AU hypothesis proposes **a unified information-entropy paradigm** , where consciousness is an active agent and physics is a projection of information processes.