Desire as Field Dynamics:

The RSVP Interpretation of the Free Energy Principle

Flyxion

November 2025

Abstract

The Free Energy Principle (FEP) asserts that any persisting system must minimize surprisal or variational free energy. The Relativistic Scalar–Vector Plenum (RSVP) reframes this as a field-theoretic property of existence itself: the scalar potential Φ, vector flow $\mathbf{v}$, and entropy field S form a coupled system that resists unbounded entropy by rhythmic redistribution. By integrating Lacanian symbolic theory and Panksepp's SEEKING instinct, this essay reconstrues the FEP as an ontological rather than merely biological statement. Desire, in this framework, is the oscillatory curvature of entropic flow in the plenum—a dynamic equilibrium between prediction, uncertainty, and repetition that keeps the cosmos—and consciousness—alive.

The Free Energy Principle Reconsidered

The Free Energy Principle (FEP) [1, 2] holds that self-organizing systems maintain their boundaries by minimizing a quantity F that upper-bounds surprise:

$$F = E_q[\ln q(s) - \ln p(s, o)].$$

Minimizing F entails updating internal beliefs $q(s)$ about hidden causes s to better predict observations o. Biological organisms thus persist by inferring the causes of their sensations.

Within the RSVP ontology, this principle extends beyond neural inference to the entire plenum. Every coherent region of the scalar–vector–entropy field complex maintains existence by relaxing gradients of free energy:

$$\frac{dF}{dt} \approx -\nabla_{\Phi,\mathbf{v},S} F \quad \Rightarrow \quad \nabla \cdot \mathbf{v} + \frac{\partial S}{\partial t} \approx 0.$$

Persistence is the field's own act of inference.

Lacanian Symbolism and the Drive Circuit

Lacan's topology of the Real, the Symbolic, and the Imaginary [4] recasts cognition as circulation around an absence. The Real corresponds to raw unmediated entropy—what resists symbolization. The Symbolic encodes predictive structure, and the Imaginary supplies the phenomenological simulation of coherence.

The *drive* (*pulsion*) is the circuit looping around a missing object a, the structural gap that generates desire. Perfect homeostasis—zero free energy—would mean death. Hence the psyche sustains itself through rhythmic re-engagement with the Real.

RSVP reinterprets this loop dynamically: the scalar field Φ represents symbolic prediction; the vector field $\mathbf{v}$ embodies action and motility; entropy S represents the Real. Their coupling creates a non-equilibrium attractor around which the system perpetually circulates. The death drive becomes the field's curvature toward its own equilibrium, endlessly deferred by entropic tension.

Panksepp's SEEKING System as the Kinetic of Desire

Jaak Panksepp identified the SEEKING system as a dopaminergic network underpinning curiosity, anticipation, and exploration [5]. Rather than seeking specific rewards, it embodies the affect of *seeking itself*. It is the biological trace of what Lacan called the *desire of the Other*—a perpetual propulsion toward meaning.

In RSVP terms, the SEEKING drive corresponds to a positive feedback loop in $\mathbf{v}$:

$$\frac{d\mathbf{v}}{dt} = -\nabla_\Phi F + \kappa\,\mathbf{v} \times \nabla S,$$

where κ encodes rotational coupling to entropy gradients. The system explores its environment not to extinguish uncertainty but to maintain it within viable bounds. The living organism thereby functions as an entropic oscillator—one that *feeds on difference*.

The Non-Equilibrium Steady State as Desire

Friston's later formulations describe living systems as inhabiting a *non-equilibrium steady-state attractor* (NESS) [3]. They do not converge to equilibrium but circulate around it. Lacan's drive and RSVP's entropic flow both obey this principle.

> *To live is to orbit the Real.*

Every field configuration that endures does so by maintaining a differential between expectation and sensation—a standing wave of deferred completion. Entropy descent and symbolic ascent form a single recursive process.

RSVP Cosmology and the Ontology of the Drive

In the proposed RSVP cosmology, the universe itself is a self-referential plenum minimizing its own field uncertainty. Galaxies, neurons, and thoughts are modes of that same entropic circulation. The free-energy gradient is the physical correlate of what psychoanalysis calls *lack*. The vector flow that counters it is *desire*. Their coupling constitutes being.

1. The FEP is the formal limit of the death drive.
2. The SEEKING system is its biological embodiment.
3. The RSVP field is its cosmological substrate.

The Thermodynamics of the Symbolic: Entropy, Jouissance, and Active Inference

Lacan's concept of *jouissance*—the paradoxical pleasure that exceeds pleasure—introduces an energetic dimension to signification. It names the surplus generated when the symbolic order attempts to close upon itself, when meaning overflows its structural bounds. In thermodynamic terms, it is the dissipation accompanying information compression.

From the viewpoint of the Free Energy Principle, this excess corresponds to the energetic residue of predictive error minimization. Every act of inference reduces uncertainty locally but increases entropy elsewhere: the system consumes negentropy to maintain coherence. The Symbolic thus functions as an engine of controlled dissipation, continuously exchanging informational order for thermodynamic viability.

Recent work by Li and Li (2025) demonstrates that Lacan's RSI topology can be formalized as a message-passing network of FEP agents, where the *objet a* corresponds to residual prediction error driving synchronization [8]. In RSVP, this residual becomes the scalar–entropy coupling $J = \int \Phi \dot{S}\, dV$. Jouissance therefore appears as the thermodynamic residue of representational alignment—an energetic cost homologous to Bayesian surprise.

> *Meaning is what entropy looks like from the inside.*

Discussion: The Dall'Aglio Interpretation

John Dall'Aglio's reflections on the Free Energy Principle (FEP) offer a critical humanistic counterpoint to its mechanistic readings. In his 2025 conversation with Marco Leoni at the Active Inference Institute, he emphasized that while the FEP describes every organism as minimizing free energy, real psychic systems never reach the zero point of uncertainty. Instead, they engage in a repetitive, circuitous dance around it—a pattern homologous to Lacan's *drive circuit* and Freud's *repetition compulsion* [9].

Dall'Aglio proposed that the apparent teleology of the FEP—its homeostatic drive toward minimal surprise—must be reinterpreted through the lens of the *non-equilibrium steady state*. Biological and symbolic systems do not cancel uncertainty; they metabolize it. Their stability arises from rhythmic circulation around an unattainable equilibrium. This motion is not a defect of inference but its essence: the living system sustains itself by repeatedly returning to what it cannot resolve.

In Lacanian terms, this is the *death drive*: the perpetual orbit around the *objet a*. In thermodynamic terms, it corresponds to the oscillation of entropy flux around a minimal-dissipation manifold. Dall'Aglio's insight reframes the FEP as describing a drive *toward* the conditions of its own impossibility—the living curvature of negentropy around absence.

Within RSVP, this dialectic is rendered continuous. The scalar potential Φ strives to flatten informational gradients, while the entropy field S continuously regenerates them. The vector flow $\mathbf{v}$ embodies the rhythmic compromise: a dynamic seeking of stability through motion. Mathematically, this corresponds to a limit-cycle attractor in the $(\Phi, \mathbf{v}, S)$ phase space, and phenomenologically to the recursive seeking that Dall'Aglio recognized as the affective signature of human desire.

The system survives not by eliminating uncertainty, but by learning to orbit it.

This interpretation anchors RSVP's field formalism in lived phenomenology. FEP's variational calculus describes the same structural logic that psychoanalysis finds in the symptom and that affective neuroscience finds in dopaminergic exploration. Desire, as Dall'Aglio suggests, is not the failure of homeostasis but the pattern that makes persistence possible.

Connection to Panksepp and RSVP Dynamics

Dall'Aglio's orbiting of uncertainty mirrors Panksepp's SEEKING drive, which likewise persists through rhythmic engagement with an ever-receding object. Where Dall'Aglio interprets this motion as the subject's structural repetition around lack, Panksepp locates it in dopaminergic exploration loops that reward potentiality itself. RSVP unifies these insights by treating the oscillation as a field dynamic: the vector flow $\mathbf{v}$ mediates between symbolic prediction Φ and entropic renewal S, tracing a limit-cycle in which meaning and uncertainty co-generate each other. Both frameworks reveal that the vitality of cognition—whether neural, affective, or cosmological—lies not in the quiescence of satisfaction but in the perpetual curvature of desire that sustains the field.

Conclusion

From the RSVP perspective, minimizing free energy does not mean extinguishing uncertainty but sculpting it. The subject, the cell, and the cosmos are all field attractors maintaining viable asymmetries. As Dall'Aglio and Panksepp each show, persistence is rhythmic orbit rather than equilibrium—a recursive curiosity that orbits the Real, metabolizes lack, and sustains the SEEKING curvature of existence. Desire is the measure of this asymmetry—the curvature that keeps existence from collapsing into stillness.

$$\boxed{\text{Persistence is recursive curiosity.}}$$

Appendix A: Energetic Bounds on Jouissance

A.1. Setup and Notation

Let $V \subset \mathbb{R}^d$ be a bounded domain with smooth boundary ∂V and outward normal $\mathbf{n}$. The RSVP fields are:

$$\Phi : V \times \mathbb{R}_+ \to \mathbb{R}, \qquad \mathbf{v} : V \times \mathbb{R}_+ \to \mathbb{R}^d, \qquad S : V \times \mathbb{R}_+ \to \mathbb{R}.$$

We assume an entropy balance law

$$\frac{\partial S}{\partial t} + \nabla\cdot \mathbf{J}_S \;=\; \sigma, \tag{1}$$

with *entropy flux* $\mathbf{J}_S$ and *local entropy production* $\sigma \geq 0$ (nonequilibrium thermodynamics). We adopt *no-flux* boundary conditions for entropy and mass:

$$\mathbf{J}_S \cdot \mathbf{n}\big|_{\partial V} = 0, \qquad \mathbf{v} \cdot \mathbf{n}\big|_{\partial V} = 0. \tag{2}$$

Recall the definition

$$J(t) \;=\; \int_V \Phi(x,t)\, \frac{\partial S}{\partial t}(x,t)\, dV, \tag{3}$$

interpreted as the *jouissance rate*: symbolic potential Φ converting into entropic production.

A.2. Decomposition and Basic Bounds

Using (1) in (3) and integrating by parts,

$$\begin{aligned} J(t) &= \int_V \Phi\, \sigma\, dV \;-\; \int_V \Phi\, \nabla\cdot \mathbf{J}_S\, dV = \int_V \Phi\, \sigma\, dV \;+\; \int_V \nabla\Phi \cdot \mathbf{J}_S\, dV \;-\; \oint_{\partial V} \Phi\, \mathbf{J}_S \cdot \mathbf{n}\, dA \\ &= \int_V \Phi\, \sigma\, dV \;+\; \int_V \nabla\Phi \cdot \mathbf{J}_S\, dV, \end{aligned} \tag{4}$$

where the boundary term vanishes by (2). Two immediate estimates follow:

(i) L^∞–bound via entropy production.

$$J(t) \;\leq\; \|\Phi(\cdot,t)\|_{L^\infty(V)} \int_V \sigma\, dV \;+\; \|\nabla\Phi(\cdot,t)\|_{L^2(V)}\, \|\mathbf{J}_S(\cdot,t)\|_{L^2(V)}. \tag{5}$$

(ii) Cauchy–Schwarz bound.

$$|J(t)| \;\leq\; \|\Phi\|_{L^2(V)}\, \|\sigma\|_{L^2(V)} \;+\; \|\nabla\Phi\|_{L^2(V)}\, \|\mathbf{J}_S\|_{L^2(V)}. \tag{6}$$

These show that jouissance is controlled by the *bulk entropy production* and the *alignment* of entropy flux with symbolic gradients.

A.3. Tight-Coupling Model and Constitutive Closure

Suppose a linear nonequilibrium closure (Onsager-type)

$$\mathbf{J}_S \;=\; \mu\, \mathbf{v} \;-\; D_S\, \nabla S, \qquad \mu \geq 0,\; D_S > 0, \tag{7}$$

and (locally) $\sigma \;=\; \sigma_0 + \lambda\, \|\nabla S\|^2 + \eta\, \|\mathbf{v}\|^2$ with coefficients $\lambda, \eta \geq 0$ and baseline $\sigma_0 \geq 0$. Substituting (7) into (4):

$$J \;=\; \int_V \Phi\, \sigma\, dV \;+\; \mu \int_V \nabla\Phi \cdot \mathbf{v}\, dV \;-\; D_S \int_V \nabla\Phi \cdot \nabla S\, dV. \tag{8}$$

Hence,

$$J \;\le\; \|\Phi\|_{L^\infty} \int_V \sigma \, dV \;+\; \mu \, \|\nabla\Phi\|_{L^2} \, \|\mathbf{v}\|_{L^2} \;+\; D_S \, \|\nabla\Phi\|_{L^2} \, \|\nabla S\|_{L^2}. \tag{9}$$

The second and third terms quantify how *vector drive* and *entropy gradients* amplify jouissance when aligned with symbolic curvature.

A.4. Relation to Free-Energy Dissipation

Let a phenomenological free-energy functional

$$\mathcal{F}[\Phi, \mathbf{v}, S] \;=\; \int_V \Big(\frac{\alpha}{2} \|\nabla\Phi\|^2 \;+\; \frac{\beta}{2} \|\mathbf{v}\|^2 \;+\; U(S) \;-\; \gamma \, \Phi \, S \Big) \, dV, \tag{10}$$

with $\alpha, \beta, \gamma > 0$ and convex $U''(S) \ge 0$. Its time derivative is

$$\frac{d\mathcal{F}}{dt} = -\gamma \, J \;+\; \int_V \Big(\alpha \, \nabla\Phi \cdot \nabla\dot{\Phi} + \beta \, \mathbf{v} \cdot \dot{\mathbf{v}} + U'(S) \, \dot{S} - \gamma \, \dot{\Phi} \, S \Big) \, dV. \tag{11}$$

Under gradient-flow dynamics with Rayleigh dissipation, the bracketed integral equals the negative of the *dissipation power* minus any external power input P_{ext}, yielding

$$-\frac{d\mathcal{F}}{dt} \;=\; \mathcal{D}(t) \;-\; P_{\text{ext}}(t) \;+\; \gamma \, J(t), \qquad \mathcal{D}(t) \;\ge\; 0. \tag{12}$$

Hence,

$$\gamma \, J(t) \;=\; -\frac{d\mathcal{F}}{dt} \;-\; \mathcal{D}(t) \;+\; P_{\text{ext}}(t) \;\;\Rightarrow\;\; J(t) \;\le\; -\frac{1}{\gamma} \frac{d\mathcal{F}}{dt} \;+\; \frac{1}{\gamma} \, P_{\text{ext}}(t). \tag{13}$$

Interpretation. In the absence of external power ($P_{\text{ext}}{=}0$), the jouissance rate is bounded above by the *free-energy dissipation rate*.

A.5. Nonequilibrium Steady States (NESS)

At NESS, time-averaged free energy is stationary: $\langle d\mathcal{F}/dt \rangle_T = 0$. Averaging (12) over a cycle of duration T,

$$\gamma \, \langle J \rangle_T \;=\; \langle \mathcal{D} \rangle_T \;-\; \langle P_{\text{ext}} \rangle_T. \tag{14}$$

Thus, in autonomous cycles with $\langle P_{\text{ext}} \rangle_T \approx 0$, the *mean jouissance equals the mean dissipation*, up to the coupling constant γ.

A.6. Geometric Bounds (Poincaré–type)

If V is bounded and Φ has zero spatial mean, Poincaré's inequality gives

$$\|\Phi\|_{L^2(V)} \;\le\; C_P \, \|\nabla\Phi\|_{L^2(V)}.$$

Combining with (6) and (7),

$$|J(t)| \;\le\; C_P \, \|\nabla\Phi\|_{L^2} \, \|\sigma\|_{L^2} \;+\; \|\nabla\Phi\|_{L^2} \, \big(\mu \, \|\mathbf{v}\|_{L^2} + D_S \, \|\nabla S\|_{L^2} \big). \tag{15}$$

A.7. Summary of Results

- **Decomposition:** $J = \int \Phi\, \sigma\, dV + \int \nabla\Phi \cdot \mathbf{J}_S\, dV$ (no boundary leak).
- **Energetic upper bound:** $J \le \|\Phi\|_{L^\infty} \int \sigma\, dV + \|\nabla\Phi\|_{L^2} \|\mathbf{J}_S\|_{L^2}$.
- **Free-energy coupling:** $J \le -\frac{1}{\gamma}\frac{d\mathcal{F}}{dt} + \frac{1}{\gamma} P_{\text{ext}}$.
- **NESS identity:** $\gamma\, \langle J \rangle_T = \langle \mathcal{D} \rangle_T - \langle P_{\text{ext}} \rangle_T$.

Appendix B: Minimal RSVP–FEP Lattice Simulation

B.1. Goal

Numerically exhibit the coupling between the jouissance rate

$$J(t) = \int_V \Phi\, \frac{\partial S}{\partial t}\, dV$$

and the free-energy dissipation rate $-\frac{d\mathcal{F}}{dt}$.

B.2. Model

Let $V = [0, L]^2$ with periodic boundary conditions. Parameters $\alpha, \beta, \gamma, D_\Phi, D_S, \nu, \kappa, \mu, \eta, \lambda > 0$.

Field equations.

$$\partial_t \Phi = D_\Phi\, \Delta\Phi \;-\; \partial_\Phi \mathcal{V}(\Phi) \;+\; \gamma\, S, \tag{16}$$

$$\partial_t \mathbf{v} = -\,\nabla\Phi \;-\; \nu\, \mathbf{v} \;+\; \kappa\, \mathcal{R}\big(\mathbf{v}, \nabla S\big), \tag{17}$$

$$\partial_t S = D_S\, \Delta S \;-\; \nabla\cdot(\mu\, \mathbf{v}) \;+\; \eta\, \|\mathbf{v}\|^2 \;+\; \lambda\, \|\nabla S\|^2. \tag{18}$$

The κ-term uses 2D rotation:

$$\mathcal{R}(\mathbf{v}, \nabla S) \;=\; \begin{pmatrix} 0 & -1 \\ 1 & 0 \end{pmatrix} \nabla S.$$

Free-energy functional.

$$\mathcal{F}[\Phi, \mathbf{v}, S] \;=\; \int_V \Big(\tfrac{\alpha}{2} \|\nabla\Phi\|^2 + \tfrac{\beta}{2} \|\mathbf{v}\|^2 + \tfrac{c}{2} S^2 - \gamma\, \Phi S + \mathcal{V}(\Phi) \Big)\, dV. \tag{19}$$

B.3. Discretization

Uniform $N \times N$ grid, spacing $h = L/N$. Semi-implicit diffusion, explicit couplings. Use FFTs for linear solves.

B.4. Initialization

Random smooth fields with small amplitude.

B.5. Diagnostics

Compute J^n, $\mathcal{F}^n$, entropy production, and verify $\gamma\,\langle J\rangle_T \approx \langle\mathcal{D}\rangle_T$ at NESS.

B.6. Reference Parameters

$$L = 1,\ N = 128,\ \Delta t = 5\times10^{-3},\quad D_\Phi = 5\times10^{-3},\ D_S = 8\times10^{-3},\ \nu = 0.4,\ \kappa = 0.8,\ \mu = 0.5,\ \eta = 0.2,\ \lambda = 0.1,\ \alpha = 1,\ \beta = 1,\ \gamma = 0.6,\ c = 0.5.$$

B.7. Pseudocode (FFT-based)

```
for n in range(T):
    # Gradients & Laplacians
    gradPhi = grad(Phi); lapPhi = lap(Phi)
    gradS = grad(S); lapS = lap(S)

    # Semi-implicit Phi
    rhsPhi = Phi + dt * (-dVdPhi(Phi) + gamma * S)
    Phi = solve_I_minus_dt_Dlap(rhsPhi, D_phi)

    # Explicit v
    v = v + dt * (-gradPhi - nu * v + kappa * rotate90(gradS))

    # Semi-implicit S
    div_mu_v = divergence(mu * v)
    rhsS = S + dt * (-div_mu_v + eta * norm2(v) + lambda * norm2(gradS))
    S = solve_I_minus_dt_Dlap(rhsS, D_S)

    # Diagnostics
    J = sum(Phi * (S - S_prev) / dt) * h**2
    F = integrate(...)
```

Appendix C: Relation to the FEP–RSI Model of Li and Li (2025)

Li and Li's formalization of Lacanian psychoanalysis through the Free Energy Principle (FEP) provides a direct empirical precedent for the RSVP field interpretation. Their FEP–RSI model instantiates the Real, Symbolic, and Imaginary orders as predictive-processing modules minimizing variational free energy through reciprocal message passing. Desire emerges as generalized synchronization between Symbolic orders, with *object petit a* equivalent to residual prediction error.

RSVP extends this framework by replacing discrete symbolic nodes with continuous scalar–vector–entropy fields:

$$(\Phi, \mathbf{v}, S) \quad \text{such that} \quad \dot{S} = -\nabla\cdot(\mathbf{v}\Phi) + \sigma(\mathbf{v}, S),$$

where symbolic coordination manifests as field coherence rather than message passing. The relation

$$\gamma\,\langle J\rangle_T = \langle \mathcal{D}\rangle_T$$

provides a macroscopic analogue to the FEP's free-energy minimization criterion, grounding Lacanian jouissance in measurable entropic dissipation.

Appendix D: Panksepp's SEEKING System as Entropy–Gradient Descent

D.1. Neuroaffective Background

Panksepp's SEEKING system, rooted in dopaminergic projections, mediates exploratory drive [5]. It operates in regimes of moderate uncertainty.

D.2. Free-Energy Formulation

$$\dot{\mathbf{v}} \;\propto\; -\nabla_{\mathbf{v}} F.$$

D.3. RSVP Interpretation

$$\partial_t \mathbf{v} = -\nabla_{\Phi} F + \kappa\,\mathbf{v}\times\nabla S.$$

D.4. Energy Balance and Dopaminergic Precision

Under Appendix A bounds, γ^{-1} corresponds to dopaminergic gain [6].

D.5. Affective Limit Cycles and Jouissance

Sustained SEEKING manifests as limit cycles in affective energy, tracing orbits around the *objet a*.

D.6. Summary

The triadic synthesis unifies entropy regulation, symbolic mediation, and affective vitality under RSVP field dynamics.

Appendix E: Unified Mapping of Friston, Lacan, and Panksepp

E.1. Overview

Summary of correspondences across domains.

E.2. Conceptual Correspondences

Domain	Core Construct	Mathematical Expression	RSVP Interpretation
Friston (FEP)	Variational free energy minimization	$F = E_q[\ln q(s) - \ln p(s,o)]$	Entropy functional; Φ encodes predictive compression.
Friston (NESS)	Non-equilibrium steady state	$\dot{x} = f(x) - \Gamma \nabla F(x)$	Limit-cycle attractor of $(\Phi, \mathbf{v}, S)$.
Lacan	Drive and *objet a*	Repetitive orbit around gap	Rotational coupling of $\mathbf{v}$ around entropy minimum.
Lacan	Jouissance	$J = \int \Phi \, \dot{S} \, dV$	Energetic cost of meaning.
Panksepp	SEEKING	$\dot{\mathbf{v}} = -\nabla_\Phi F + \kappa \, \mathbf{v} \times \nabla S$	Vector-field exploration.
RSVP	Entropy–symbol coupling	$\frac{d\mathcal{F}}{dt} = -\gamma J + \cdots$	Energy balance linking dissipation and jouissance.

E.3. Cross-Domain Identities

1. **Ontological:** Existence $\Leftrightarrow$ Bounded inference under entropy flow.
2. **Energetic:** $\gamma \, J = -\frac{d\mathcal{F}}{dt} + P_{\text{ext}}$.
3. **Affective:** $\mathbf{v}_{\text{SEEK}} = -\nabla_\Phi F + \kappa \, \mathbf{v} \times \nabla S$.

E.4. Interpretive Synthesis

Friston provides mechanics; Lacan topology; Panksepp kinetics; RSVP the continuous substrate.

E.5. Summary Table of Constants

Symbol	Interpretation	Phenomenological Analogue
Φ	Symbolic potential	Meaning, linguistic order
$\mathbf{v}$	Vector drive	Affective curiosity
S	Entropy field	Raw flux
J	Jouissance rate	Pleasure of symbolization
γ	Coupling	Dopaminergic gain
κ	Rotational	Curiosity amplitude

E.6. Concluding Synthesis

$$\boxed{\text{Friston (Inference)} \equiv \text{Lacan (Desire)} \equiv \text{Panksepp (Affect)} \equiv \text{RSVP (Field Dynamics).}}$$

Appendix F: Quick Reference – Equations and Correspondences

Equation	Friston (FEP)	Lacan/Panksepp
$F = E_q[\ln q(s) - \ln p(s,o)]$	Variational free energy	Surprise / lack
$\dot{\mathbf{v}} = -\nabla_\Phi F + \kappa\, \mathbf{v} \times \nabla S$	Active inference + epistemic drive	SEEKING around objet a
$J = \int_V \Phi\, \dot{S}\, dV$	Predictive error residue	Jouissance as entropic excess
$\gamma \langle J \rangle_T = \langle \mathcal{D} \rangle_T$	NESS dissipation balance	Symbolic cost sustains desire

RSVP Core: $(\Phi, \mathbf{v}, S)$ – Symbolic prediction, affective drive, raw entropy.

The universe seeks because it remembers; it remembers because it seeks.

References

[1] Friston, K. (2010). The free-energy principle: a unified brain theory? *Nature Reviews Neuroscience*, **11**(2), 127–138.

[2] Friston, K., Parr, T., & Zeidman, P. (2022). *The Free-Energy Principle: A Rough Guide to the Brain*. MIT Press.

[3] Friston, K., Sengupta, B., & Sajid, N. (2023). Non-equilibrium steady-state attractors and the dynamics of life. *Progress in Biophysics and Molecular Biology*, **182**, 1–15.

[4] Lacan, J. (1973). *The Four Fundamental Concepts of Psychoanalysis* (Seminar XI, trans. A. Sheridan). W. W. Norton.

[5] Panksepp, J. (1998). *Affective Neuroscience: The Foundations of Human and Animal Emotions*. Oxford University Press.

[6] Friston, K., FitzGerald, T., Rigoli, F., Schwartenbeck, P., & Pezzulo, G. (2017). Dopamine, affordance, and active inference. *Neuroscience & Biobehavioral Reviews*, **75**, 297–316.

[7] Panksepp, J., & Biven, L. (2012). *The Archaeology of Mind: Neuroevolutionary Origins of Human Emotions*. W. W. Norton & Company.

[8] Li, C., & Li, X. (2025). Formalizing Lacanian Psychoanalysis through the Free Energy Principle: The FEP–RSI Model. *Frontiers in Psychology*, **16**, 1574650.

[9] Dall'Aglio, J. (2025). Lacanian Reflections on the Free Energy Principle. *Interview with Marco Leoni, Active Inference Institute Discussion*.