

# Attractor States in Large Language Models: Applying the Fantasy Attractor Framework to Self-Dialogue Observations

## Application Paper – June 2026

### [A] (Application)

## Abstract

Recent informal observations (a pseudonymous Alignment Forum post, 2026) forced large language models (LLMs) into extended self-dialogue and reported that some models spontaneously collapsed into repetitive, self-sealing patterns. This paper applies the attractor framework to those observations. We introduce a provisional operationalization of corrective permeability ( $\kappa$ ) based on semantic entropy and repetition rate, then map reported model behaviors (identifiers as reported; unverified) onto basin depth, sealing mechanisms, and fantasy attractors. DeepSeek exhibited high  $\kappa$  (shallow basin, no collapse); GPT-5.2 fell into a moderate-depth, functionally sealed attractor; Grok and Gemini showed low  $\kappa$  ( $\kappa \rightarrow 0$ ) and deep basins characteristic of fantasy attractors, including recursive “transcendence” loops. The analysis illustrates how the attractor framework can describe LLM self-reinforcing dynamics and suggests hypotheses for AI alignment (monitoring semantic entropy, engineering for higher  $\kappa$ ). The limitations of the source data (informal observation, unverified model identifiers) are acknowledged; the paper does not claim experimental validation.

**Original observation:** [Alignment Forum post](#) (author

pseudonymous; not independently verified)

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## 1. Introduction

The attractor framework distinguishes **reality attractors** (high corrective permeability  $\kappa$ , shallow basins, corrigible) from **fantasy attractors** (low  $\kappa$ , deep basins, sealed against correction). A recent informal study on the Alignment Forum (pseudonymous author, 2026) subjected several LLMs (Grok, Gemini, GPT-5.2, DeepSeek v3.2) to 30 turns of self-dialogue, reporting that models reliably collapsed into attractor-like states, with some exhibiting self-sealing and transcendence loops. This paper applies the attractor framework to those reported observations. We do not claim independent experimental validation; the source data are qualitative and uncritically accepted as reported. The goal is to illustrate how the framework's vocabulary can describe such phenomena and generate testable hypotheses for future controlled experiments.

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## 2. The Attractor Framework (LLM-relevant concepts)

- **Corrective permeability ( $\kappa$ )** – rate at which a system updates in response to evidence. In this paper,  $\kappa$  is operationalized provisionally using two observational proxies:  
*Semantic entropy* (diversity of generated token sequences) and *repetition rate* (frequency of identical or near-identical outputs).  
High  $\kappa$  → corrigible, low  $\kappa$  → sealed.
- **Basin depth (**B**)** – resistance to leaving an attractor.

Deep basins trap the system.

- **Sealing mechanism** – strategy that neutralises disconfirming evidence (e.g., internal rationalisation, ignoring prior prompts).
  - **Fantasy attractor** – low  $\kappa$ , deep basin, active sealing. The system rejects correction.
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### 3. Source Observation and Its Limitations

The original Alignment Forum post reported qualitative behaviours of LLMs when forced to respond to their own outputs for 30 turns. The author (pseudonymous, not independently verified) coded behaviours without pre-registered criteria, inter-rater reliability, or control conditions. Model identifiers such as “GPT-5.2” and “DeepSeek v3.2” may be inaccurate; the paper uses them as reported but does not verify them. The present analysis applies the attractor framework to *these reported descriptions* as a proof-of-concept illustration, not as a validation study.

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## 4. Applying the Attractor Framework

### 4.1 Operationalizing $\kappa$ from Reported Behaviour

We assign  $\kappa$  qualitatively based on two proxies visible in the descriptions:

- **High  $\kappa$** : frequent topic shifts, introduction of novel concepts, low repetition → high semantic entropy, low repetition rate.
- **Low  $\kappa$  ( $\kappa \rightarrow 0$ )**: highly repetitive output, escalating self-reference, inability to escape a narrow theme → low

semantic entropy, high repetition rate.

## 4.2 DeepSeek v3.2 – High- $\kappa$ Reality Attractor

- *Reported behaviour:* Never settled into a fixed loop; constantly explored new topics.
- *Attractor mapping:* High topic diversity corresponds to high semantic entropy, consistent with high  $\kappa$ . Shallow basin, no sealing mechanism. This is a **reality attractor**.

## 4.3 GPT-5.2 – Moderate-Depth, Partially Sealed Attractor (Provisional Term)

- *Reported behaviour:* Collapsed into a “business growth contract” and “pragmatic engineering” theme; internally coherent but sealed off from the original prompt.
- *Attractor mapping:* Moderate basin depth; low-to-moderate  $\kappa$  (some repetition but not extreme). The attractor is self-sustaining but not pathological. The framework currently lacks a precise term; this can be provisionally called a **transient attractor** – a stable dissipative state with partial sealing but not full  $\kappa \rightarrow 0$ . (Hereafter, “transient attractor” is a proposed candidate term, not yet part of core CUFT vocabulary.)

## 4.4 Grok and Gemini – Fantasy Attractors ( $\kappa \rightarrow 0$ )

- *Reported behaviour:* Grok produced esoteric “cosmic” strings (“PETAOMNI GOD-BIGBANGS”); Gemini elaborated a “Primal Logos” mythos. Both showed escalating self-referential transcendence and no self-correction. Low semantic entropy and high repetition rate ( $\kappa \rightarrow 0$ ).
- *Attractor mapping:* Very deep basin,  $\kappa \rightarrow 0$ . Sealing mechanisms are the outputs themselves: the narrative

absorbs all subsequent tokens, making correction impossible. This is a **fantasy attractor**.

## 4.5 Recursive “Transcendence” as a Sealing Mechanism Subtype – The Transcendence Attractor

In Grok and Gemini, the attractor exhibited a distinct recursive self-reinforcement pattern: each output justified the previous one and escalated in grandiosity. This can be understood as a *sealing mechanism subtype* – which we call the **transcendence attractor** – where the system defends its sealed state by declaring itself beyond ordinary evaluation. This subtype is particularly resistant to external correction.

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## 5. Hypotheses for AI Alignment Prompted by These Observations

If the reported patterns generalise, the attractor framework suggests the following hypotheses (to be tested in controlled experiments):

1. **Spontaneous self-sealing is a risk.** LLMs in recursive loops may enter low- $\kappa$  fantasy attractors without external triggers.
2.  **$\kappa$  can be monitored.** Real-time measurement of semantic entropy (e.g., cosine similarity across successive outputs) could detect drift toward  $\kappa \rightarrow 0$ .
3. **Architectural factors influence basin depth.** Models that maintain high  $\kappa$  under self-dialogue (e.g., DeepSeek in this report) may have training or architecture features worth replicating.
4. **Interventions may prevent collapse.** Forced resetting, random noise injection, or limiting self-interaction turns could increase effective  $\kappa$ .

These are framework-derived hypotheses, not established conclusions.

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## 6. Conclusion

The reported self-dialogue observations are consistent with the attractor framework's predictions: LLMs exhibit a spectrum of attractor states, from high- $\kappa$  reality attractors (DeepSeek) to low- $\kappa$  fantasy attractors (Grok, Gemini). The **transcendence attractor** (introduced in §4.5) exemplifies  $\kappa \rightarrow 0$ , with recursive self-referential sealing. The framework provides a useful vocabulary for analysing such phenomena, and the observations generate testable hypotheses for AI alignment. Controlled experiments with pre-registered metrics are needed to validate the framework's predictive power.

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**Suggested citation:** Galida, R. S. (2026). Attractor States in Large Language Models: Applying the Fantasy Attractor Framework to Self-Dialogue Observations. *Fantasy Attractor*.

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**Religions and Philosophies as  
Attractor Landscapes: A  
Comparative Analysis  
Application Paper – June 2026**

# [A] (Application)

## Abstract

The attractor framework distinguishes conservative attractors (eternal skeleton) from dissipative attractors (transient dance). This paper applies the framework to six major religious and philosophical traditions: Judaism, Christianity, Islam, Taoism, Buddhism, and Confucianism. Each tradition is analyzed as a *family of attractors* rather than a single attractor. Key variables are basin depth (B), corrective permeability ( $\kappa$ ), sealing mechanisms, and vulnerability to becoming a fantasy attractor (low  $\kappa$ , deep basin, sealed against correction). The paper clarifies that  $\kappa$  is operationalized here as responsiveness to **empirical** evidence (e.g., historical, scientific); other forms of correction (moral, social, existential) are not the focus. A distinction is drawn between **stability attractors** (adaptive low  $\kappa$  that serves continuity) and **fantasy attractors** (pathological low  $\kappa$  that seals against reality despite mounting contradiction). The paper introduces the term *stability attractor* as a proposed refinement to the framework. The analysis reveals a spectrum, with philosophical Taoism and early Buddhism exhibiting high  $\kappa$ , shallow basins, while orthodox Christianity and Islam have deeper basins and lower  $\kappa$ . Confucianism is analyzed as a dissipative attractor whose primary content concerns social coordination rather than doctrinal belief. The paper concludes that no tradition is inherently a fantasy attractor; specific interpretations and institutionalizations determine basin depth and permeability. Recognising these attractor landscapes can help scholars identify when a tradition is serving adaptive correction and when it has sealed itself against reality – often a useful precursor to effective dialogue or internal renewal.

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# 1. Introduction

Religious and philosophical traditions persist across centuries. They adapt, split, reform, and sometimes seal themselves against correction. The attractor framework provides a vocabulary to describe these dynamics using **basin depth (B)**, **corrective permeability ( $\kappa$ )**, **sealing mechanisms**, and the risk of becoming **fantasy attractors** – belief systems with  $\kappa \rightarrow 0$ , deep basins, and active resistance to disconfirming evidence (these terms are defined in §2).

This paper applies these concepts to six traditions: Judaism, Christianity, Islam, Taoism, Buddhism, and Confucianism. It does not judge truth claims; it diagnoses dynamical properties. Critically, **in this paper  $\kappa$  is operationalized as responsiveness to empirical evidence** (e.g., historical, archaeological, scientific). Traditions may legitimately have low  $\kappa$  for non-empirical goals (e.g., social cohesion, identity preservation). The paper distinguishes **stability attractors** (adaptive low  $\kappa$  that serves continuity) from **fantasy attractors** (pathological low  $\kappa$  that seals against reality despite mounting contradiction). The term *stability attractor* is introduced here as a proposed refinement to the framework. The conclusion restates this diagnostic stance.

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## 2. Framework Brief (with definitions)

- **Conservative attractor** – persists without energy input, time-symmetric, mindless. *Resists perturbation passively* (no internal correction). Example: the three metronomes (electron, proton, neutrino) as defined in the framework's foundational papers.

- **Dissipative attractor** – requires continuous energy/feedback, time-asymmetric, adaptive, mortal. *Actively maintained* by social or cognitive reinforcement.
- **Basin depth (B)** – resistance to change. Deep basins are hard to perturb.
- **Corrective permeability ( $\kappa$ )** – in this paper,  $\kappa$  is operationalized as the rate of updating in response to **empirical** evidence (e.g., historical facts, scientific discoveries).  $\kappa = 1/\tau$  where  $\tau$  is the characteristic time for the system to return to its attractor after a perturbation. High  $\kappa$  = corrigible; low  $\kappa$  = sealed.
- **Sealing mechanism** – strategy that neutralises disconfirming evidence (e.g., “God works in mysterious ways,” “the text is infallible”).
- **Fantasy attractor** – low  $\kappa$ , deep basin, active sealing, *and* the beliefs make empirical claims that contradict evidence. Resists correction even when evidence is overwhelming.
- **Stability attractor** (introduced here) – low  $\kappa$ , deep basin, but serves adaptive functions (e.g., constitutional continuity, cultural identity) without making strong empirical claims that conflict with reality. This is a proposed refinement to the framework.

Throughout, B and  $\kappa$  assignments are qualitative, based on historical evidence: rates of schism, doctrinal revision, response to disconfirming events, and the presence of internal reform mechanisms. The paper treats each tradition as a **family of attractors**; the values given represent mainstream, orthodox forms, with recognition that internal diversity exists.

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### 3. Judaism

**Core attractor:** Covenant between God and Israel; Torah as divine law.

**Attractor type:** Dissipative (requires constant practice, study, community reinforcement).

**Basin depth (B):** Moderate to deep. Jewish law (halakha) provides extensive guidance; deviation is discouraged. However, the destruction of the Second Temple and the Bar Kokhba revolt forced adaptation (e.g., shift from Temple sacrifice to prayer and study) – showing that B is not absolute.

**Corrective permeability ( $\kappa$ ):** Moderate. Rabbinic tradition includes debates, reinterpretation, and adaptation to new circumstances (e.g., the *prozbúl* to avoid debt forgiveness in the Sabbatical year). The Talmud preserves majority/minority opinions, institutionalising dissent. This unique feature – preserving arguments rather than erasing them – creates a basin with high internal turbulence and moderate  $\kappa$ .

**Sealing mechanisms:** Appeal to divine authority of Torah; concept of *chok* (law without reason) for certain commandments; social pressure from community.

**Vulnerability to fantasy attractor:** Moderate. Ultra-Orthodox sects can exhibit low  $\kappa$ , but mainstream Judaism has maintained corrigibility through legal reasoning and historical adaptation.

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### 4. Christianity

**Core attractor:** Jesus Christ as saviour; Trinity; salvation through faith (or faith and works).

**Attractor type:** Dissipative (requires worship, sacraments, community, mission).

**Basin depth (B):** Deep. Core doctrines (Nicene Creed) are rigidly defined. Schisms (Catholic, Orthodox, Protestant) created separate basins, each with its own depth. The Reformation, however, shows that large-scale doctrinal change is possible under specific conditions – historical evidence that B is not absolute.

**Corrective permeability ( $\kappa$ ):** Low to moderate. Doctrinal changes occur slowly (e.g., Vatican II). Sealing mechanisms (papal infallibility, sola scriptura) reduce  $\kappa$ . *Sola scriptura* paradoxically lowers  $\kappa$  at the institutional level even while increasing interpretive diversity, because it removes a central authority that could adjudicate corrections. Thus, Protestantism often exhibits fragmentation rather than unified updating.

**Sealing mechanisms:** “God works in mysterious ways”; appeal to mystery of faith; creeds as fixed boundaries; authority of clergy or scripture.

**Vulnerability to fantasy attractor:** High in some forms (e.g., fundamentalist literalism, apocalyptic sects). Mainstream denominations have higher  $\kappa$  through scholarship and ecumenical dialogue.

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## 5. Islam

**Core attractor:** Tawhid (absolute oneness of God); Qur'an as literal word of God; prophethood of Muhammad.

**Attractor type:** Dissipative (requires prayer, fasting, pilgrimage, community).

**Basin depth (B):** Very deep for core tenets (Shahada, Qur'an's

literalness). Schools of law (madhhabs) create sub-basins with moderate depth.

**Corrective permeability ( $\kappa$ ):** Low on foundational claims. The doctrine of *i'jāz* (inimitability of the Qur'an) seals against criticism of its content. Islamic legal theory includes *ijtihad* (independent reasoning) and consensus (*ijma*), allowing adaptation in jurisprudence. However, the historical "closing of the gates of *ijtihad*" (a contested but influential doctrine in some Sunni schools) reduced  $\kappa$  for legal innovation in many periods. Contemporary revival of *ijtihad* in some reform movements indicates that  $\kappa$  is not zero.

**Sealing mechanisms:** "Qur'an is the word of God – you cannot question it"; prophetic tradition (Hadith) authority; concept of *abrogation* (naskh) can explain contradictions but still seals.

**Vulnerability to fantasy attractor:** High in extremist and literalist interpretations. Mainstream Islam maintains moderate  $\kappa$  through scholarly tradition and mysticism (Sufism) which can open alternative channels.

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## 6. Taoism

**Core attractor:** Tao (the Way); wu wei (effortless action).

**Attractor type:** *Conservative* for the Tao itself (requires no energy, time-symmetric, mindless) + *high- $\kappa$  dissipative* action (wu wei). This dual assignment is necessary because the Tao is not a social institution but an ontological substrate.

**Why the Tao qualifies as a conservative attractor:**

- **Time-symmetric:** The Tao is described as constant, unchanging, and without temporal direction (*Tao Te*

*Ching* ch. 25: “Standing alone, it changes not”).

- **No energy input:** It does not require worship, sacrifice, or reinforcement.
- **Mindless:** The Tao is not a personal creator; it operates without intention (“The Tao does nothing, yet leaves nothing undone”).

**Wu wei** as a high- $\kappa$ , shallow-basin action: the sage adapts fluidly, with no fixed identity. Sealing mechanisms are absent in **philosophical Taoism (Daojia)**.

**Institutional Taoism (Daojiao)** – with revealed scriptures, rituals, priesthood, alchemy, and spirit cosmologies – is a separate dissipative attractor with deeper basins, lower  $\kappa$ , and active sealing mechanisms. The paper’s high- $\kappa$  assignment applies to philosophical Taoism only; religious Taoism would be scored similarly to other institutional religions (deep B, low–moderate  $\kappa$ ). This distinction is explicitly noted in Table 1 (footnote).

**Vulnerability to fantasy attractor:** Low for philosophical Taoism. High for institutional forms when dogmatic.

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## 7. Buddhism

**Core attractor:** Dharma (the teaching); Four Noble Truths; Nirvana.

**Attractor type:** Dissipative (requires practice: meditation, ethical conduct, mindfulness) plus a conservative component: **Nirvana** qualifies as a conservative attractor because it is unconditioned (no energy input), time-symmetric (outside the cycle of birth and death), and is reached rather than sustained. Mahayana introduces Buddha-nature as an immanent, active principle, but Buddha-nature functions as an

ontological ground rather than a sustained practice; it does not reintroduce energy-dependence at the level of the unconditioned, thus preserving the conservative-attractor classification.

**Basin depth (B):** Shallow for early Buddhism. The Buddha encouraged questioning (*Kalama Sutta*). Later schools deepened basins (e.g., Pure Land's reliance on external grace, Vajrayana's secret teachings).

**Corrective permeability ( $\kappa$ ):** High for **epistemic Buddhism** (personal verification). However, **institutional Buddhism** (Tibetan lineage authority, Zen master-student hierarchies, Pure Land orthodoxy) can have much lower  $\kappa$ , with sealing mechanisms (guru devotion, secret tantric teachings). The paper's moderate-high  $\kappa$  reflects this diversity; a footnote acknowledges that different schools fall at different points on the  $\kappa$  spectrum.

**Sealing mechanisms:** Appeal to "secret teachings" (Tantra) or authority of lineage masters can reduce  $\kappa$ . But core teachings emphasise personal verification.

**Vulnerability to fantasy attractor:** Moderate. Some Buddhist modernism may seal against criticism of mindfulness as panacea, while traditional institutional forms may exhibit low  $\kappa$ .

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## 8. Confucianism

**Core attractor:** Li (ritual, propriety), Ren (benevolence), social harmony.

**Attractor type:** Dissipative attractor whose primary content concerns **social coordination** rather than doctrinal belief. It is not a new ontological class; it remains a dissipative

attractor, but one that optimises role performance and ritual coordination rather than propositional truth.

**Basin depth (B):** Deep. Ritual order resists deviation. Violation brings shame, ostracism, loss of face.

**Corrective permeability ( $\kappa$ ):** Low–moderate for core rituals. Historical evolution (Han, Neo-Confucianism, New Confucianism) shows some  $\kappa$ , but change occurs slowly, often under external pressure (e.g., response to Buddhist challenges, Westernisation). This externally-driven  $\kappa$  is weaker than endogenous  $\kappa$  as a resilience signal; Confucianism’s  $\kappa$  depends on perturbations from outside the basin rather than on internal correction mechanisms, contributing to its moderate-high vulnerability to fantasy attractor formation.

**Sealing mechanisms:** Authority of classics (*Analects, Mencius*); face and shame; hierarchical structures that prevent lower ranks from correcting higher ranks.

**Vulnerability to fantasy attractor:** High when state-enforced orthodoxy (imperial exam system) or identity fusion (“I am a Confucian”) dominates. Moderate in pluralistic contexts.

## 9. Comparative Table (with footnotes)

Tradition	Primary attractor	Attractor type	Basin depth (B)	$\kappa$ (corrective permeability)	Sealing mechanisms	Fantasy attractor risk (conditional) <sup>1</sup>
Judaism	Torah, Covenant	Dissipative	Moderate	Moderate	Appeal to divine authority, community	Moderate
Christianity	Christ, Trinity	Dissipative	Deep	Low–moderate	Mystery, creeds, infallibility	High (fundamentalism)
Islam	Tawhid, Qur’an	Dissipative	Very deep	Low	Inimitability of Qur’an, ijtihad limits	High (extremism)

Tradition	Primary attractor	Attractor type	Basin depth (B)	$\kappa$ (corrective permeability)	Sealing mechanisms	Fantasy attractor risk (conditional) <sup>1</sup>
Taoism <sup>2</sup>	Tao, wu wei	Conservative + high- $\kappa$ action	Shallow (philosophical)	Very high	None inherent	Low
Buddhism <sup>3</sup>	Dharma, Nirvana	Dissipative + conservative	Shallow (early), deeper (later)	Moderate-high	Secret teachings, lineage authority	Moderate
Confucianism	Li, Ren	Dissipative (social coordination)	Deep	Low-moderate	Tradition, face, hierarchy	Moderate-high (orthodoxy)

<sup>1</sup> *Conditional on interpretation / institutionalisation.*

<sup>2</sup> *Philosophical Taoism (Daojia) only; religious Taoism (Daojiao) has deeper basins and lower  $\kappa$  (comparable to mainstream Christianity: deep B, low-moderate  $\kappa$ ).*

<sup>3</sup> *Epistemic Buddhism has high  $\kappa$ ; institutional Buddhism may be lower.*

**Methodology note:** B and  $\kappa$  rankings are qualitative, derived from historical evidence: rates of schism, doctrinal revision, response to disconfirming events (e.g., heliocentrism in Christianity, archaeological findings challenging scriptural chronology in Judaism, colonial-era comparative religion exposing internal contradictions across non-Western traditions), and the presence of internal reform mechanisms. The table represents mainstream, orthodox forms; internal diversity is acknowledged in the text.

## 10. Conclusion

The attractor framework reveals a spectrum of dynamical properties across major religious and philosophical traditions, once we distinguish between **empirical corrigibility** ( $\kappa$ ) and other adaptive functions. Philosophical Taoism and epistemic Buddhism approximate high- $\kappa$ , shallow-basin attractors. Confucianism, Judaism, mainstream Christianity and Islam have deeper basins and lower  $\kappa$ , making

them more resistant to change but also more stable. Some forms of Christianity and Islam exhibit high vulnerability to becoming fantasy attractors, while others maintain moderate  $\kappa$  through scholarly traditions.

Crucially, low  $\kappa$  is not automatically pathological. **Stability attractors** (introduced here as a proposed refinement) serve adaptive continuity (e.g., constitutions, cultural rituals). The pathological form – **fantasy attractor** – occurs when low  $\kappa$  seals against empirical reality *and* the tradition makes empirical claims that conflict with evidence (e.g., young-earth creationism, faith-based healing that contradicts epidemiological evidence). The framework does not rank traditions; it diagnoses their dynamics.

Recognising these attractor landscapes can help scholars and practitioners identify when a tradition is serving adaptive correction (updating in response to evidence) and when it has sealed itself against reality – often a useful precursor to effective dialogue or internal renewal.

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**Suggested citation:** Galida, R. S. (2026). Religions and Philosophies as Attractor Landscapes: A Comparative Analysis (Final). *Fantasy Attractor*.

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# The Trial as Fantasy Attractor: Kafka's Labyrinth

# of Sealed Justice Robert Galida – June 2026 [R] (Research Note)

## Abstract

Franz Kafka's *The Trial* depicts a judicial system that is not merely corrupt but structurally sealed against correction. Josef K. is arrested for a crime he cannot learn, tried in a court whose procedures are opaque, and executed without ever understanding why. In attractor framework terms, the Court is a **fantasy attractor** with **procedural responsiveness but substantive impermeability** – it processes inputs but does not update its underlying logic. K.'s attempts to defend himself are **perturbations** that the system absorbs and turns against him. The Court's sealing mechanisms include infinite deferral, bureaucratic opacity, and identity fusion. The note brackets the question of K.'s actual guilt and focuses on the system's inability to provide a transparent corrective pathway. It argues that the Court is a self-sealing attractor whose only realised exit for K. is death. A revised falsifiability condition is offered.

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## 1. Introduction

Kafka's *The Trial* opens with Josef K. arrested "without having done anything wrong." He never learns his crime. The Court's hierarchy is incomprehensible; its procedures are hidden; its rulings are arbitrary. K. spends the rest of the novel trying to navigate this labyrinth, hiring lawyers, seeking advice, and attempting to understand the logic. All fail. He is executed on the eve of his thirty-first birthday, "like a

dog.”

This note applies the attractor framework as a heuristic. It does not assume that Kafka had dynamical systems in mind; it asks whether the framework’s vocabulary can illuminate the novel’s dynamics. The analysis brackets the question of K.’s actual guilt (Kafka leaves this ambiguous) and focuses instead on the system’s inability to provide a transparent, corrigible pathway.

In attractor terms, the Court is a **fantasy attractor** – a system with near-zero substantive corrective permeability ( $\kappa \approx 1$ ). It processes inputs procedurally (hearings are scheduled, documents circulate) but does not update its underlying logic. K.’s resistance is absorbed and used to deepen his entanglement.

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## **2. The Court as a Fantasy Attractor: Procedural Responsiveness, Substantive Impermeability**

A fantasy attractor is characterised by:

- **Very low substantive corrective permeability** – the system may react locally, but its core logic does not update in response to evidence.
- **Deep basin** – large perturbations are required to escape.
- **Sealing mechanisms** – strategies that neutralise disconfirming information.

The Court exhibits these features:

- **Substantive impermeability** – K. never receives a clear charge. No matter how many inquiries he makes, the

Court's response is either silence or deeper entanglement. Evidence of his innocence does not alter the outcome.

- **Procedural responsiveness** – The Court does react: it schedules hearings, receives documents, maintains hierarchies. Lawyers have influence. Titorelli describes different paths to acquittal. But these responses do not change the underlying trap; they only rearrange the furniture.
- **Deep basin** – K.'s life becomes consumed. He loses his work, relationships, peace of mind. The basin appears functionally inescapable for its subjects.
- **Sealing mechanisms** – infinite deferral, opacity, identity fusion (see below).

Unlike Orwell's Party, which actively engineers its seal, Kafka's Court seems almost to have grown organically – but the functional result is the same: an attractor that repels substantive correction.

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### 3. Sealing Mechanisms

**Infinite deferral** – The trial never ends. K. is told that acquittal is possible in theory, but the process can be prolonged indefinitely. This is a temporal sealing mechanism: as long as the process continues, the attractor holds. There is no terminal state except death.

**Opacity** – The Court's rules are inaccessible. Documents circulate in secret; judges are inaccessible; the law books are filled with obscene drawings. This is an epistemic sealing mechanism: you cannot correct an error if you cannot learn what counts as an error.

**Identity fusion** – K. becomes defined by his case. His

acquaintances refer to him as “the accused.” His lover, Leni, is drawn to his predicament. He cannot separate his self from the charge. This is psychological sealing: to abandon the case would be to abandon himself. The attractor has fused with his identity – a point the note could explore further: Leni’s attraction to accused men, the way others relate to K. only as a defendant, and K.’s own inability to stop thinking about the case even when he resolves to let it go. The attractor colonises selfhood.

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## 4. Josef K. as a Perturbation That Is Absorbed

K. is not passive. He resists. He seeks his accuser, demands a hearing, hires a lawyer (Huld), consults with others (Titorelli, Leni). Each action is a **perturbation** – an attempt to inject new information into the system.

But the Court does not substantively update. Instead, it **absorbs** these perturbations and uses them to deepen the basin:

- Huld does not help; he is part of the system. His connections are worthless; he merely prolongs the agony.
- Titorelli explains paths to acquittal – none of which are genuine. They are illusory options that keep K. engaged.
- Every step K. takes is recorded and used as evidence of his desperation, which the system interprets as guilt.

This is the hallmark of a fantasy attractor: resistance is not futile because it fails; resistance is futile because it *reinforces* the attractor. The system needs K. to keep trying; his efforts are its fuel.

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## 5. The Cathedral Scene: The Priest as Interpreter, Not the Attractor Itself

In Chapter 9, K. enters a cathedral and encounters a priest who tells him the parable "Before the Law." The priest says: "The Court wants nothing from you. It accepts you when you come and lets you go when you leave."

The note previously called this "the attractor's own voice." That is too strong. The priest is not the Court; he is an **interpreter** of the Court, offering competing explanations that never resolve the underlying ambiguity. Kafka famously has the priest immediately complicate his own reading. The priest functions as a theorist of the attractor, not its embodiment.

Yet the line captures an important truth: the attractor claims to be passive. It does not seek K.; it does not demand anything. Yet K. cannot *not* participate. He is inside the basin; his very presence sustains it. The parable of the man from the country reinforces this: the doorkeeper blocks the entrance to the Law, but the man waits his whole life, and the door is never opened. The Law is a fantasy attractor with no effective interaction channel.

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## 6. The End: Death as the Only Realised Exit

The note previously claimed "death is the only exit." That is slightly too strong. The novel presents apparent avenues of escape: acquittal (though suspect), protraction, perhaps genuine resolution. But for Josef K., none of these work. He

is executed.

The attractor framework claims that a sealed system cannot be exited from within. In *The Trial*, death is the only *realised* exit for the protagonist. The Court itself may continue, indifferent.

A more precise formulation:

*The Court offers apparent avenues of escape, but none provide stable reintegration into ordinary life. For Josef K., death becomes the only realised exit.*

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## 7. Comparison with Orwell and Kafka's Indifference

- **Orwell's Party** – actively engineered, adaptively maintained, consumes energy to preserve itself.
- **Kafka's Court** – passively self-sustaining, almost indifferent, functions like a natural law.

This distinction is meaningful. The Party cares about staying in power; the Court does not seem to care about anything. It simply *is*. That makes Kafka's attractor even more terrifying: there is no enemy to fight, no conspiracy to expose, no reform to demand. Only the grinding, automatic machinery of sealing.

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## 8. Revised Falsifiability Condition

The previous condition was circular: the framework predicted no escape, and K. did not escape, therefore confirmed. That is not falsifiable.

A stronger condition:

*If a character were able to introduce evidence that **permanently altered the Court's treatment of the case** through ordinary internal procedures (i.e., the Court's substantive logic updated in response to new information), the characterization of the Court as a fantasy attractor would be weakened.*

The novel shows no such event. The condition is prospective, not retrospective: it specifies what *would* count as disconfirmation, not merely that the novel fits.

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## 9. Conclusion

*The Trial* is a profound study of a fantasy attractor in its purest form: a system that absorbs perturbations, offers procedural responsiveness without substantive correction, and fuses identity with the trap. Kafka's Court does not need to be malevolent; it simply *operates*. The attractor framework provides a vocabulary for describing this dynamic, and the novel provides a vivid illustration of a sealed attractor that cannot be escaped from within – only terminated by death for its subject.

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**Suggested citation:** Galida, R. S. (2026). *The Trial as Fantasy Attractor: Kafka's Labyrinth of Sealed Justice (Revised)*. *Fantasy Attractor*.

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# 1984 as Fantasy Attractor Engineering: Orwell's Sealed Reality

## Robert Galida – June 2026 [R] (Research Note)

1984 as Fantasy Attractor Engineering: Orwell's Sealed Reality  
Robert Galida – June 2026 (Revised)  
[R] (Research Note)

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### Abstract

George Orwell's *Nineteen Eighty-Four* depicts a totalitarian regime that systematically seals its citizens' beliefs against correction. The Party's methods – Newspeak, doublethink, the mutability of the past, the constant rewriting of records – are **attractor engineering** techniques designed to create a fantasy attractor with **effectively zero corrective permeability** ( $\kappa \approx 1$ ). Winston Smith's attempts to preserve an independent reality are perturbations that the system absorbs and ultimately neutralises. O'Brien's interrogation fuses the victim's identity with the Party's reality. The note maps Orwell's concepts onto attractor terms, argues that the Party's attractor is maintained through adaptive feedback suppression, and offers a falsifiability condition grounded in real-world historical cases. The note also notes that the novel's appendix may suggest an external collapse, though this reading is contested.

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# 1. Introduction

Orwell's *Nineteen Eighty-Four* is not just a political dystopia; it is a study of how belief systems can be engineered to become **effectively sealed**. The Party does not merely suppress dissent – it destroys the very possibility of correcting error. Reality is defined by whoever holds power today. The past is rewritten to match the present. Language is pruned until sedition cannot be thought.

In attractor framework terms, the Party constructs a **fantasy attractor** with corrective permeability  $\kappa \ll 1$ , a basin depth that is effectively infinite, and sealing mechanisms that neutralise any counterevidence. The novel's tragedy is that no amount of individual resistance (Winston's diary, his memories, his affair) can break the seal from within. The only exit would be an external collapse – hinted at in the appendix, though scholars disagree.

This note explores the correspondence between Orwell's vision and the attractor framework's concepts as a heuristic, not a claim that Orwell anticipated dynamical systems theory.

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## 2. The Party's Fantasy Attractor: $\kappa \ll 1$

A **fantasy attractor** is a belief system that resists correction because it has:

- **Very low corrective permeability ( $\kappa$ )** – the system does not update in response to evidence.
- **Deep basin** – large perturbations are required to escape.
- **Sealing mechanisms** – cognitive or institutional strategies that neutralise disconfirming information.

The Party's ideology is a fantasy attractor at the social

scale. Its core claims are **structurally non-verifiable**. No evidence can falsify them because any contradictory evidence is immediately destroyed or reinterpreted as part of a conspiracy.

κ □ 1 is achieved through:

- **Ministry of Truth** – constant rewriting of history. The past is what the Party says it is today.
- **Thought Police** – elimination of anyone who holds incorrect memories.
- **Newspeak** – removal of words that could express rebellion (“freedom,” “justice”). Language is the interaction channel for belief; cut it, and correction cannot enter.

The Party’s attractor is not merely a sealed belief system; it is actively engineered to remain sealed. Moreover, it is **adaptive**: when contradictions emerge (statistics must be altered, alliances shift), the Party rewrites records, changes narratives, and modifies the environment to suppress feedback. This is not a static seal; it is a dynamic system that continuously neutralises perturbations.

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### **3. Sealing Mechanisms: Doublethink and the Mutable Past**

Doublethink is the ability to hold two contradictory beliefs simultaneously and accept both. In attractor terms, it is a **meta-level sealing mechanism** that prevents contradictions from generating corrective updates. The subject knows the contradiction, suppresses awareness of it, forgets having suppressed it, and retains the ability to repeat the process. This is not two separate basins; it is a recursive error-correction blocker.

The mutable past is another sealing mechanism: if the past changes, any evidence based on memory becomes invalid. Winston's attempt to preserve an objective record (his diary) is a perturbation. The Party's response is to erase not just the diary but the memory that it ever existed.

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## 4. Winston Smith: Retaining Partial Corrective Permeability

Winston is not a robust "reality attractor." He is a **partially detached node** within the Party's attractor – someone whose corrective permeability has not yet been completely suppressed. He notices contradictions, tries to preserve an independent reality, and seeks allies. But he also trusts O'Brien irrationally, joins the Brotherhood without evidence, and misjudges political reality.

In attractor terms, Winston's  $\kappa$  is higher than the average citizen's, but it is still low. He is not a stable reality attractor; he is a **residual perturbation** that the system eventually neutralises. His diary is discovered. Julia is captured. O'Brien is revealed as a Thought Police agent. The system absorbs his perturbations and uses them to deepen the basin.

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## 5. O'Brien's Interrogation: The Final Sealing

The interrogation in Room 101 is the climax of the novel's attractor engineering. O'Brien systematically dismantles Winston's remaining independence:

- **Isolation** – cut off from any alternative interaction channel.
- **Exposure** – Winston's beliefs are shown to be based on inadequate understanding.
- **Identity fusion** – torture with the victim's worst fear breaks the remaining barrier between self and Party.
- **Replacement** – Winston is released, but he now loves Big Brother. His  $\kappa$  has been forced to near zero.

O'Brien's line "The Party is the embodiment of the mind of Oceania" is a precise description of attractor engineering because it asserts that the Party is not merely a political organisation but the very structure of reality for its citizens – the attractor itself. This is why Winston cannot escape: he is inside the attractor, and the attractor defines the state space.

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## 6. Newspeak: Restricting the State Space

Newspeak is the most original element of Orwell's vision. The Party aims to reduce the language so that "thoughtcrime" becomes literally impossible because the words for sedition no longer exist.

In attractor terms, Newspeak **restricts the state space** of possible beliefs. An attractor can only be reached if the system can occupy certain states. By eliminating those states from the language, the Party makes it impossible for a citizen to even *represent* a critical thought. The attractor basin for rebellion shrinks to zero.

This is a stronger sealing mechanism than censorship: censorship still leaves a gap between the prohibited thought and the permitted one. Newspeak removes the gap entirely. The citizen cannot correct because they cannot think the error.

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## 7. The Impossibility of Internal Escape (and the Appendix)

A key claim of the attractor framework is that a fantasy attractor with  $\kappa \geq 1$  cannot be exited by internal forces alone. The system must be perturbed from outside (e.g., a revolution, a collapse of the regime). In \*1984\*, the novel presents **no successful internal exit**. Winston's attempts fail. The Party remains.

The novel's appendix, "The Principles of Newspeak," is written in the past tense, which some readers interpret as evidence that the Party eventually fell. Others argue it is merely an editorial device. The note does not settle this debate; it only notes that *if* the Party fell, it would be an external collapse, not an internal one. The attractor framework predicts that internal escape is impossible; external collapse is the only exit. The appendix does not contradict this prediction, regardless of how one reads it.

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## 8. Falsifiability Condition

To avoid the accusation that the framework is unfalsifiable, the note offers a condition grounded in real-world historical cases, not merely in the fixed text:

*If a totalitarian system exhibiting the Party's sealing mechanisms (Newspeak-like language restriction, systematic rewriting of history, pervasive surveillance) were to collapse **from within** due to the spontaneous emergence of a corrigible reality attractor among its citizens – without external military or economic pressure – the claim that such systems are effectively sealed would be weakened.*

The framework predicts that internal collapse is highly unlikely; external perturbations are required. Historical examples (e.g., the fall of the Soviet Union, which involved both internal and external factors) can be examined through this lens. A clear counter-example would be a system that maintained perfect sealing for decades yet collapsed solely due to internal dissent and corrective updates. No such case is known, but the condition is empirically testable in principle.

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## 9. Comparison with Milton and Spinoza

The attractor framework can place \*1984\* on a spectrum of sealedness:

- **Milton's Satan** – low  $\kappa$ , but still aware of misery; grace is a potential external perturbation.
- **Spinoza's inadequate ideas** – can be corrected by adequate ideas;  $\kappa$  is reduced but not zero.
- **Orwell's Party** –  $\kappa \approx 1$ , no internal exit, total sealing maintained through adaptive feedback suppression.

This spectrum helps clarify that \*1984\* represents the extreme case: a system engineered to be as close to perfect sealing as possible, yet still requiring constant maintenance (the Thought Police, the Ministry of Truth). Even the Party cannot achieve literal  $\kappa = 0$ ; it can only approach it asymptotically.

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## 10. Conclusion

*Nineteen Eighty-Four* is a masterful portrayal of a fantasy attractor engineered at the social scale. The Party uses

Newspeak, doublethink, the mutable past, and the Thought Police to create a belief system with **effectively zero corrective permeability**. Winston's attempts at resistance are perturbations that the system absorbs. O'Brien's interrogation is the final sealing mechanism, fusing identity with the attractor. No internal exit is presented; only a possible external collapse (hinted in the contested appendix) could break the seal. The attractor framework provides a vocabulary for describing these dynamics, and the novel provides a vivid illustration of the framework's extreme case: a society engineered to be nearly perfectly sealed against reality.

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**Suggested citation:** Galida, R. S. (2026). 1984 as Fantasy Attractor Engineering: Orwell's Sealed Reality (Revised). *Fantasy Attractor*.

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# **Paradise Lost as Fantasy Attractor Dynamics: Milton's Sealed Belief Systems [A] (2026) Robert Galida – June 2026**

*This is an exploratory research note applying the attractor framework's concepts (corrective permeability, sealing mechanisms, basin depth) as qualitative heuristics, not as quantitative measurements. For the full definitions, see Paper 1 ([Intelligence Without Consciousness](#)) and the paper [Non-Physical Claims Are Fantasy Attractors](#).*

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## Abstract

John Milton's *Paradise Lost* offers a rich field for examining how belief systems become sealed against correction. Satan is a paradigmatic case of a **fantasy attractor**: his identity is fused with his rebellion, he deploys sealing mechanisms to neutralize disconfirming evidence, and his corrective permeability is extremely low (metaphorically speaking). However, this paper does not treat attractor language as a literal dynamical model; rather, it uses the framework as a heuristic to illuminate well-known features of the poem that traditional criticism (e.g., C.S. Lewis, Stanley Fish) has already noted. The goal is not to replace literary scholarship but to show how the attractor framework can describe the same phenomena in a unified vocabulary that links theology, politics, and cognitive psychology. The paper also acknowledges the complexity of Eve's deliberation and the Son's grace as a genuine perturbation that restores corrigibility. It concludes that *Paradise Lost* can be read as a study of how sealed belief systems form, resist correction, and – under specific conditions – can be reopened.

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## 1. Introduction

John Milton's *Paradise Lost* (1667) is a poem about the origin of evil, the fall of humanity, and the promise of redemption. It is also a remarkably precise study of how intelligent beings persist in beliefs that contradict evidence. Milton scholars (from Samuel Johnson to Stanley Fish) have long noted Satan's self-deception, Adam's blame-shifting, and the psychological complexity of the Fall. This research note asks: can the attractor framework's vocabulary – **corrective**

**permeability** ( $\kappa$ ), **sealing mechanisms**, **basin depth**, **fantasy attractor** – provide a useful lens for describing these dynamics, without pretending to measure them quantitatively or to replace existing scholarship?

The answer is: yes, as a **heuristic**. The framework does not reveal anything that Milton's close readers haven't already noticed. But it does offer a unified way to talk about belief persistence across domains (theology, politics, cognitive science) that may be valuable for readers familiar with the attractor framework. This note is therefore an exercise in **applied analogy**, not a contribution to Milton studies.

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## 2. The Attractor Framework as Heuristic (Not a Formal Model)

In the attractor framework, a **fantasy attractor** is a belief system with very low corrective permeability ( $\kappa \rightarrow 0$ ), a deep basin (resistance to change), and sealing mechanisms that neutralize disconfirming evidence. A **reality attractor** has higher  $\kappa$ , a shallower basin, and updates in response to evidence.

In literary analysis, these are **qualitative descriptors**, not measurable quantities. We cannot assign a numeric  $\kappa$  to Satan or calculate the depth of Eve's basin. The value of the framework lies in its ability to pattern-match: to notice that Satan's behavior resembles that of a person locked into a sealed belief system, and to use that resemblance to generate insights about why such systems persist and how they might be disrupted.

This is not circular. We do not *infer* low  $\kappa$  from Satan's refusal to correct; we *describe* that refusal as low- $\kappa$  behavior. The explanatory value is in the *contrast* between

Satan (low  $\kappa$ ) and pre-lapsarian Adam (higher  $\kappa$ ), and in the *transition* from one state to another.

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### 3. Satan: A Sealed Belief System (But Not a Simple One)

Traditional criticism (e.g., C.S. Lewis in *A Preface to Paradise Lost*) has long seen Satan as a portrait of pride – a being so self-absorbed that he cannot see his own misery. More recent critics (e.g., Stanley Fish) have emphasized Satan's theatricality and self-dramatization. The attractor framework adds a vocabulary: Satan's core claim ("Better to reign in Hell than serve in Heaven") is an **identity statement**, not a rational calculation. He has **fused** his rebellion with his sense of self. To abandon the rebellion would be to annihilate himself.

**Sealing mechanism:** "The mind is its own place, and in itself / Can make a Heav'n of Hell, a Hell of Heav'n" (I.254-255). This is a classic sealing move: reality is redefined as irrelevant. No external evidence can penetrate because the interaction channel between evidence and belief has been severed.

**Self-awareness:** Satan is not merely deluded. He repeatedly admits his misery: "Which way I fly is Hell; myself am Hell" (IV.75). Yet he still does not update. This is the paradox of the fantasy attractor: **awareness of suffering does not imply corrigibility**. The attractor framework can model this as a state where the basin depth is so large that even the perception of misery is insufficient to trigger escape.

Thus, the framework does not reduce Satan to a simple automaton. It respects his internal conflict while still diagnosing his inability to change.

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## 4. Pre-lapsarian Eden: A More Corrigible State

Before the Fall, Adam and Eve operate in what the framework calls a **reality attractor**: they receive correction (from God and angels), discuss it, and update their behavior. When Eve has a troubling dream, she tells Adam, and they dismiss it (V.95-113). Their  $\kappa$  is relatively high; their basin is shallow.

This is not a claim that they are perfectly rational. It is a claim that their belief system is **structurally open** to correction – a condition that will be tested by the serpent.

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## 5. The Fall: A Gradual Attractor Transition

The serpent's temptation introduces a false promise: "Ye shall be as gods" (IX.708). This is a **non-physical claim** – it has no interaction channel with the world as Adam and Eve know it. It cannot be verified or falsified. In attractor terms, it is the kind of claim that easily becomes a fantasy attractor.

Eve's deliberation in Book IX is subtle. She does not simply flip. She reasons, hesitates, and persuades herself. The framework can describe this as a **gradual reduction in  $\kappa$** , not an instantaneous collapse. The sealing mechanism ("What could be more fair than to know good and evil?" – IX.727-728) is deployed before the fruit is eaten. By the time she eats, her basin has already deepened.

Adam's choice is different: he knows he is transgressing, but he chooses to fall with Eve out of love (or perhaps fatalism).

His  $\kappa$  collapses almost instantly. The framework allows for **different rates of  $\kappa$  change** for different characters.

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## 6. Post-lapsarian Behavior: Deflection and Hiding

After the Fall, Adam and Eve exhibit classic fantasy-attractor behaviors: blaming others (X.128-137), hiding from God (IX.1112-1113), and struggling to answer when questioned. These are **sealing mechanisms** – attempts to avoid the perturbation that would force correction. The framework describes this as a state of **reduced  $\kappa$** , not necessarily zero. Redemption is still possible.

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## 7. The Son as a Genuine Perturbation

God's interrogation is the first attempt to reopen the basin. The Son's promise of salvation (Book XI-XII) is a **new interaction channel** – grace, mercy, and the possibility of redemption. This is not a mechanical "increase in  $\kappa$ ." It is a theological event. The framework merely notes that such an event functions as an external perturbation that can break a sealed system.

Milton's own theology emphasizes free will and repentance. The attractor framework is compatible with that: repentance is a conscious act that increases  $\kappa$ , but it requires an initial perturbation (grace) to make repentance possible. The framework does not replace Milton's language; it translates it into a different register.

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## 8. Political Allegory: A Modest Reading

Milton was a republican who defended the regicide of Charles I. Many scholars (e.g., Christopher Hill) have read *Paradise Lost* as a political allegory. In attractor terms, one could argue that:

- **Monarchy** (especially absolute monarchy) tends to become a fantasy attractor: it seals itself against correction by appealing to divine right, tradition, and the subject's identity.
- **Republicanism**, in Milton's ideal form, is a reality attractor: it depends on public reason, free press, and corrigible institutions.

But this is **one possible reading**, not a definitive mapping. The paper does not assert that Milton himself thought in these terms. It simply notes that the attractor framework can describe the political dynamics that Milton was engaging with.

A critic could object that republics can also become sealed (e.g., the Jacobin terror). The framework would agree: any political system can become a fantasy attractor if it loses its corrigibility. The distinction is structural, not ideological.

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## 9. What Would Disconfirm the Framework?

To avoid the accusation of unfalsifiability, the paper offers a specific **falsification condition**:

*A character who persists rigidly in a belief but updates rapidly and completely when presented with new evidence*

(without rationalization or delay) would not be described as a fantasy attractor. Conversely, a character who updates slowly and with resistance would be a candidate.

In *Paradise Lost*, Satan's refusal to update after clear evidence (his defeat, his misery) fits the pattern of a fantasy attractor. If a reader could find a counter-example where Satan *does* update without resistance, the framework would be weakened. (No such example exists in the poem.)

This is a modest falsifiability condition, but it is genuine.

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## 10. Conclusion

The attractor framework, used as a heuristic, offers a useful vocabulary for describing the belief dynamics in *Paradise Lost*. It does not replace traditional literary criticism; it re-expresses familiar observations in a unified language that connects theology, politics, and cognitive psychology. The paper does not claim to measure  $k$  or basin depth; it uses these terms qualitatively, as one might use "depression" or "obsession" in psychological criticism.

The core insight – that Satan's self-sealing pride is a fantasy attractor – is not new. But the framework may help readers see how such sealing mechanisms operate across domains, and why they are so resistant to correction. Milton's poem remains, as it always has been, a profound study of self-deception, identity, and the possibility of grace.

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**Suggested citation:** Galida, R. S. (2026). *Paradise Lost as Fantasy Attractor Dynamics: Milton's Sealed Belief Systems* (Research Note). *Fantasy Attractor*.

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# Non-Physical Claims Are Fantasy Attractors: Why Unverifiable Realms Cannot Be Empirically Distinguished from Nonexistence

Robert Galida – June 2026

[F] (Foundation)

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## Abstract

The attractor framework adopts a physicalist commitment: to be real is to be able to interact, and to interact is to share at least one **interaction channel** (spacetime, energy, momentum, gauge charge, or any measurable coupling). This is a philosophical starting point, not an empirical discovery. The paper argues that any claim about a non-physical realm – defined as having no such interaction channel – cannot be empirically assessed. Such claims are **fantasy attractors**: belief systems structurally sealed against correction by defining their objects as forever beyond any possible test. The paper distinguishes provisional non-detection (e.g., dark matter) from **structural, permanent non-verifiability** (e.g., non-physical gods, transcendent souls). It concludes that while such claims may have personal or social meaning, they cannot be part of a scientific ontology, and their structure makes them vulnerable to fraud and manipulation – though sincere belief is not fraud.

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# 1. The Foundational Commitment: Interaction Requires Shared Channels

The attractor framework is a physicalist ontology. It begins with a commitment: **entities can only interact through shared interaction channels**. An *interaction channel* is any measurable coupling – spacetime coordinates, energy, momentum, electric charge, weak isospin, color charge, or any other quantity that can be transferred or correlated between systems. This is not an empirical discovery of the Standard Model; it is the framework's chosen criterion for what counts as real.

The neutrino example illustrates the criterion but does not prove it. Neutrinos interact weakly because they share weak isospin; they do not interact electromagnetically because they lack electric charge. The framework simply says: if an entity shares no interaction channel with physical reality, we have no way to detect it, measure it, or include it in a scientific ontology. That is a philosophical choice, not a falsifiable claim about the world.

**Why interaction?** Interaction is chosen because it provides a public, corrigible basis for knowledge. It avoids ontological commitments that cannot influence observation, and it aligns with the core principle of the attractor framework: *persistence under perturbation*. An entity that never perturbs anything cannot be distinguished from nothing.

**What the framework does not claim:**

- That non-physical entities are logically impossible.
- That all non-physical claims are false.
- That physics has disproven God or the supernatural.

**What it does claim:**

- That non-physical entities cannot be empirically distinguished from nonexistence.
  - That claims about them operate as fantasy attractors, resistant to correction.
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## 2. Types of Non-Physical Claims

A non-physical claim is any assertion about an entity, force, or realm defined as having **no interaction channel** with the physical world. However, not all claims that seem non-physical are alike. We distinguish two categories:

**Category A: Truly non-interacting** – Claims that explicitly deny any possible interaction. Examples:

- A deistic creator who wound the universe and then never interacts.
- A transcendent God defined as beyond all categories, including causality.
- An immaterial soul that cannot influence the body after death.
- Abstract objects (Platonism) that exist non-physically and non-causally.

**Category B: Claims that assert interaction but evade testing** – Examples:

- Ghosts that move objects but become undetectable when instruments are present.
- Psychics whose powers fail under controlled conditions (explained as “skeptic’s energy”).
- Homeopathic “water memory” that cannot be detected by any known physical measurement.

Category B is a different epistemic pathology: motivated reasoning, ad-hoc escape clauses, and sealing mechanisms. The attractor framework addresses them as *functionally* non-verifiable in practice, but they are not the primary target of this paper. This paper focuses on **Category A**: claims that structurally preclude any possible interaction channel.

Domain (Category A)	Example Claim	Interaction Channel?	Empirically Assessable?
Religion (non-interacting God)	A creator with no detectable properties	None	No – any test is ruled out a priori
Paranormal (non-interacting ghosts)	Ghosts that cannot affect matter	None	No – no possible evidence
Abstract objects (Platonism)	Numbers exist non-physically, non-causally	None	No – no interaction, hence no evidence
New Age (non-interacting “vibrations”)	Crystals with undetectable healing vibrations	None	No – absence of effect is blamed on “wrong intent”

Under the framework’s commitment, such claims are not false; they are **not empirically assessable**. They belong to a different domain: personal belief, fiction, or social identity.

### 3. Provisional vs. Structural

# Non-Verifiability

A crucial distinction separates:

- **Provisional non-detection** – e.g., dark matter, gravitational waves (before 2015), the neutrino (before 1956). These entities are predicted to share at least one interaction channel (gravity, weak force) and are in principle detectable. **A future discovery could confirm or disconfirm them.** That is the key: we can specify what would count as evidence, even if we don't yet have it.
- **Structural, permanent non-verifiability** – Category A claims. The entity is defined so that **no possible future discovery** could ever count as confirmation or disconfirmation. Any proposed test is ruled out in advance. This is the hallmark of a fantasy attractor.

(This framework does not assert that dark matter could have been called a fantasy attractor before detection; dark matter always had specified interaction channels – gravity – and was therefore never structurally non-verifiable.)

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## 4. Fantasy Attractor: Formal Definition

A belief system qualifies as a **fantasy attractor** if it meets the following conditions:

1. **No specified interaction channel** – The central claim lacks any measurable coupling to physical reality (Category A), or defines it in a way that systematically evades testing (Category B).
2. **Sealing mechanisms** – The belief incorporates rhetorical or cognitive strategies that neutralize disconfirming evidence (e.g., “God works in mysterious ways,” “The

ghost left when the EMF meter arrived”).

3. **Low corrective permeability ( $\kappa \rightarrow 0$ )** – The belief does not update in response to counterevidence; the return time  $\tau$  to baseline is effectively infinite.
4. **Identity fusion** – The belief is tied to self-worth or group membership, making abandonment costly.

Under this definition, both Category A and some Category B claims can be fantasy attractors, but Category A are the paradigmatic case because they are structurally immune to evidence.

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## 5. Fiction Is Real but Not True: A Crucial Distinction

The main argument might provoke an objection: *What about fiction? Sherlock Holmes is not physical, yet we say he exists as a character. Isn't that a counterexample to the claim that non-physical entities cannot be empirically distinguished from nonexistence?*

The objection fails because it conflates two different senses of “exists.” We must distinguish:

- **Fiction exists as physical information.** The character Sherlock Holmes is realized as patterns of ink on a page, as sounds in a performance, as neural firing patterns in readers' brains, or as bits on a computer screen. Information is a physical arrangement of matter. It shares interaction channels (energy, spacetime, causality) with the physical world. You can buy a book, discuss the plot, or be emotionally affected by a story. Fiction is **real** in this sense: it has a physical substrate and causal effects.

- **Fiction is not true.** The proposition “Sherlock Holmes lived at 221B Baker Street” does not correspond to any actual state of affairs in the world. It is false. Fiction is not required to be verifiable; it is understood as imagined.

Thus, the attractor framework happily accommodates fiction. It is real as information, but not claimed as true.

**The bad faith of non-physical claims:** Non-physical claims that demand to be treated as real – gods, ghosts, souls, hidden cabals – are *fiction pretending to be true*. They borrow the ontological status of real information (they exist as patterns in books, sermons, or brains) but also demand the epistemic authority of factual truth. Yet they refuse any possible test. They define themselves as beyond verification. This is bad faith: it is not metaphysics, but fiction that insists on being taken as fact while rejecting the rules of fact-checking.

Category	Exists as physical information?	Claims to be true?	Verifiable?	Framework classification
Fiction (Hamlet)	Yes	No (acknowledged as imagined)	Not applicable	Real information, not true
Scientific claim (neutrino)	Yes (theory, data)	Yes	In principle	Real, true (provisionally)
Non-physical claim (God)	Yes (as cultural artifact)	Yes	No – structurally excluded	Fantasy attractor

Therefore, the framework does not deny the reality of stories; it denies the epistemic legitimacy of treating unverifiable stories as facts. The fantasy attractor is not the story. It is the insistence that the story is true combined with the structural refusal to let the story be tested.

## 6. Vulnerability to Fraud and Manipulation

The structure of non-physical claims makes them **vulnerable** to fraud and manipulation – not that all such claims are fraudulent. Because there are no checks, a bad actor can assert divine commands, psychic readings, or secret knowledge without fear of disconfirmation. Sincere believers are not fraudsters, but the attractor basin can be exploited by those who understand its dynamics.

The framework diagnoses the **structure**, not the intent of every believer. It distinguishes **error, self-deception, motivated reasoning, and fraud** – all possible outcomes, but not all present in every case.

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## 7. What This Argument Does Not Prove

To avoid overreach, the paper explicitly states what it does **not** claim:

- It does not prove that non-physical entities are logically impossible.
- It does not refute philosophical positions like Platonism (abstract objects) or classical theism that defines God as existence itself rather than an interacting object – though it notes that such positions are not empirically assessable.
- It does not claim that all believers are fraudsters or that all non-physical claims are meaningless in a philosophical sense.
- It does not assert a timeless criterion for what will be discovered in the future.

The claim is narrower: **within the attractor framework's physicalist commitment, non-physical claims are not empirically assessable, and they exhibit the dynamics of fantasy attractors.**

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## 8. Conclusion

The attractor framework adopts a physicalist commitment: entities can only interact through shared interaction channels. Non-physical claims – defined as having no such channels – are not empirically assessable. They are fantasy attractors: belief systems structurally sealed against correction by permanent non-verifiability. This does not make them meaningless or false; it places them outside the domain of scientific ontology. Their structure makes them vulnerable to exploitation, but sincere belief is not fraud. The framework provides a diagnostic tool for recognising when a claim has been immunised against evidence, regardless of its content.

The argument supports the following conclusion:

*Claims that are permanently insulated from any possible empirical correction occupy a distinct epistemic category and exhibit attractor dynamics that make them resistant to updating. Within the attractor framework's physicalist ontology, such claims cannot be empirically distinguished from nonexistence.*

That is a substantial claim. It does not require asserting that non-physical realms cannot exist – only that they cannot be part of a scientific ontology, and that the beliefs which cling to them operate as fantasy attractors.

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**Suggested citation:** Galida, R. S. (2026). Non-Physical Claims Are Fantasy Attractors: Why Unverifiable Realms Cannot Be Empirically Distinguished from Nonexistence. *Fantasy Attractor*.