Guardrail and Failure-Mode Register

Part 1: On the Origin of Life | Failure-control support document | source-locked | Issue 1

Control field	Value
Document ID	OOL-P1-SD03-GUARDRAIL
Version / issue	Issue 1
Date	2026-09-22
Status	Final failure-control support document for Part 1 Issue 1, source-locked to the finalised three-paper set (GOT-V1-1-1 / GOT-V1-1-2 / GOT-V1-1-3), the fixed literal primary-paper heading locators, and final SD-01. Secondary to canonical papers.
Supersedes	Earlier Issue 1 source-lock and numbering-aligned working states. This final Issue 1 release locks the failure-control register to the paper-complete Part 1 source set and final SD-01; no new guardrail or technical concept is introduced.
Function	Records conceptual guardrails, failure modes, severity classes, corrections, and diagnostic questions for Part 1: On the Origin of Life. No new concepts are introduced.
Canonical rule	Primary papers govern technical definitions. Paper 1 defines the life discriminator; Paper 2 defines life attribution; Paper 3 defines the attribution procedure.
Source-lock rule	Use only the finalised three current Part 1 primary papers and the current SD-01 Concept Compression Map Issue 1 as support-control reference. Primary-paper internal references must use the current literal heading locator map; cited locators omit the terminal display full stop. Do not import exported full-series TEM papers, older EDT files, earlier drafts, superseded support maps, superseded support documents, or prior generated answers as conceptual source material.
Template rule	The old Guardrail and Failure-Mode Register document was used for formatting, table pattern, severity-class pattern, and release-control structure only. It is not a conceptual source for this Issue 1 revision.

1. Purpose and governing rule

This document records the main conceptual guardrails for Part 1: On the Origin of Life. Its purpose is to prevent drift as the three primary papers are compressed, applied to edge cases, converted into templates, and extended into later work.

It protects the architecture from pancomputational overreach, chemistry-only audit collapse, life inflation, matter-state collapse, container collapse, activity collapse, dependence shortcuts, lineage shortcuts, replication shortcuts, potential inflation, dormancy-potential confusion, death-as-class

error, closure-output misuse, topology shortcuts, positive-exclusion/residual confusion, procedure inflation, false equivalence, and residual laundering.

Primary guardrail: do not let a familiar biological noun, visible matter-state boundary, activity level, dependency relation, lineage label, topology descriptor, or uncertainty label replace the discriminator conditions that earn life-status, attribution, continuity, class, topology, positive exclusion, closure output, or residual.

0.1 Source-lock register

Seq.	Latest source file	Canonical paper	Canonical ownership / use
Paper 1	GOT-V1-1-1 - On the Origin of Life - Issue 1.docx | sha16 b46a62c660223454	On the Origin of Life	Physical grounding; pancomputation discipline; Trivial Computation; Non-Trivial Computation; Nested Multiscale Framework; evaluation conditions; readout and temporal framing; Baseline Dynamics; Information Processing Locus; Driven Thermodynamic System; life as driven thermodynamic constraint-maintenance supported by IPL-mediated NTC; physics-chemistry-life transition.
Paper 2	GOT-V1-1-2 - The Identification of Life - Issue 1.docx | sha16 0f1f564c3786f208	The Identification of Life	Attribution architecture; candidate frame; reference-indexed attribution; informational regime; life-realisation; maintained boundary; Attribution Locus; DTS completion; organisational identity; intrinsic resumability; potential informational throughput; throughput identity; continuity status; death as branch-closure; closure output; post-death constituent reframing; positive exclusion; residual deferral; relationship topology; formal ladder.
Paper 3	GOT-V1-1-3 - The Life Attribution Procedure - Issue 1.docx | sha16 6c6d2b60203198e8	The Life Attribution Procedure	Diagnostic sequence; reference preflight; candidate framing; life-realisation threshold; Attribution Locus localisation; DTS-completion localisation; identity and continuity determination; primary class assignment or residual deferral; topology assignment; residual inventory and update statement; standard attribution output; closure

Seq.	Latest source file	Canonical paper	Canonical ownership / use
			output form; audit template; exemplar desktop studies; cross-case findings; guardrails and failure modes.

Control ID	Latest control file	Permitted use
SD-01	Concept Compression Map - Issue 1.docx | sha16 a256c5229849f993	Architecture compression and support-stack alignment for the finalised source set. Secondary to the primary papers.

Template-source use: the prior version of this support document was used for formatting, table pattern, section hierarchy, and release-control structure only. It is not a conceptual source for this Issue 1 revision.

Excluded source class: exported full-series TEM papers and concepts, older project files, earlier EDT documents, superseded support-map wording, superseded support-document wording, and prior generated answers are not conceptual sources for this Issue 1 support set.

2. Canonical ownership guardrail

Rule: Paper 1 defines the life threshold; Paper 2 defines attribution; Paper 3 defines procedure. A support document may name and compress concepts, but it must not silently move canonical ownership.

Architecture region	Canonical home	Guardrail
Physical grounding, NMF, TC/NTC, BD, IPL, DTS	Paper 1	Do not redefine computation, NTC, Baseline Dynamics, IPL, DTS, or life in attribution or procedure documents.
Life threshold and physics-chemistry-life transition	Paper 1	Do not treat life as complexity, metabolism, reproduction, feedback, adaptation, persistence, lineage, familiarity, intelligence, or NTC alone.
Attribution architecture	Paper 2	Do not assign life to the first named object, visible container, or familiar biological noun without Attribution Locus analysis.
Identity, continuity, potential throughput, death/closure, and ladder	Paper 2	Do not collapse dormancy, Life-in-Potential, terminal active Life, death/closure, reconstruction, incorporation, Complex Chemistry, and residual into one binary.
Relationship topology	Paper 2	Do not let parasite, symbiont, organelle, tumour, scaffold, artificial, or host-dependent label decide primary life-status.
Diagnostic procedure and audit output	Paper 3	Do not turn the procedure into the phenomenon or reduce it to a checklist of traits.
Residual inventory and update conditions	Paper 3	Do not hide uncertainty inside a verdict; localise the missing discriminator and state the update condition.

3. Severity classes

Class	Meaning	Examples	Required response
Class A - Mechanical inconsistency	Breaks the architecture.	Redefining life; treating TC as NTC; assigning Life without IPL-mediated NTC; making death a fourth class; calling reconstruction survival; bypassing Attribution Locus localisation; using uncertainty as a hidden class.	Correct before finalisation.
Class B - Terminology drift	Creates ambiguity or future misuse.	Using information without regime/throughput; treating dependence as verdict; topology as class; potential as weak life; dormant as merely inactive; maintained-locus wording where final Attribution Locus wording is required.	Correct before compression or publication.
Class C - Presentation ambiguity	May mislead despite intact architecture.	Procedure sounds mechanical; residual sounds explanatory; support document sounds canonical; examples sound universal rather than reference-indexed; positive exclusion sounds like uncertainty.	Clarify through wording, heading, ownership note, residual statement, or update condition.

4. Master guardrail table

Failure mode	Error	Correction	Severity
Source-lock drift	Exported full-series TEM concepts re-enter the split life stack as conceptual sources.	Remove imported material; use old documents only as templates; return to the finalised three primary life papers and SD-01 Issue 1.	A
Canonical ownership drift	A support document becomes a source of technical redefinition.	Return the term to its canonical home; mark support text as compression only.	A
Redescription collapse	TC is treated as NTC, or computational mapping is treated as life.	Require physically enacted discrimination, organisation mediation, downstream dependence, and BD comparator pressure.	A
NTC inflation	Any counterfactual discrimination is	Restore the stricter life condition:	A

Failure mode	Error	Correction	Severity
	treated as Life.	driven thermodynamic constraint-maintenance supported by IPL-mediated NTC.	
Chemistry-only audit collapse	Chemistry is treated as sufficient to audit life-status without the discriminator question.	Preserve physical and chemical continuity, but require assessment of distinction-conditioned driven constraint-maintenance.	A
Comparator weakness	The life or NTC claim survives only because the comparator is vague.	Construct adequate BD-family comparator preserving boundary context, driving, inventory, scale, horizon, and noise assumptions.	A
IPL vagueness	Outcome dependence is attributed to the whole system, environment, or external interpreter without localising the mediating organisation.	Identify what must remain intact, or be ablated, for the distinction to do downstream work.	A
Life inflation	Informational, computational, adaptive, reproductive, or biologically familiar systems are treated as alive.	Require life-realising driven constraint-maintenance through IPL-mediated NTC.	A
Matter-state collapse	Membrane, body, capsid, genome, organ, or biological material is treated as final discriminator.	Move from familiar matter-state barrier to informational regime identification.	A
Container collapse	Life inside a frame is treated as Life of the frame.	Localise the Attribution Locus before primary class assignment.	A
Attribution Locus bypass	The output assigns class before identifying whose regime is being classified.	Localise the bearer of active, dormant, potential, closed, reconstructed, incorporated, excluded, or residual-bearing relation.	A
Activity collapse	Visible metabolism, motion, growth, or reproduction is treated as necessary or sufficient for Life.	Distinguish active Life, dormant Life, terminal active Life, Life-in-Potential, and closure/death.	A
Dependence shortcut	Dependence is treated as automatic non-life or automatic unity.	Decompose resource dependence, scaffolded support, constitutive dependence, host completion, and coupled completion.	A
Lineage shortcut	Descent, copying, or sequence preservation is treated as present life-status.	Use lineage only after organisational identity or throughput identity has been established.	B
Replication shortcut	Replication or reproductive participation is treated as sufficient for Life.	Require life-realisation at the Attribution Locus; host-completed propagation may support Life-in-Potential, not free-phase Life.	A
Potential inflation	Any stored sequence, biological material, trigger, or reconstructable	Require identity-bearing potential informational throughput into	A

Failure mode	Error	Correction	Severity
	record is treated as Life-in-Potential.	admissible extrinsic life-realising completion.	
Dormancy-potential confusion	Intrinsic resumability is confused with extrinsic completion potential.	Preserve dormant Life as Life where intrinsic same-locus resumability remains open.	A
Terminal-life confusion	Terminal phase is treated as death merely because long-term continuation is unlikely.	Classify terminal active Life until branch-realisation closes for the target locus.	A
Death-as-class error	Death is entered into the primary ladder as a fourth class.	Use closure output for closed continuity of a formerly living target locus.	A
Death overextension	Death of a target locus is spread to every constituent inside the former system.	Apply post-death constituent reframing; classify living subloci, potential candidates, and chemistry separately.	A
Closure-output misuse	Closure output is applied to material that was never the formerly living target locus.	Use closure only for formerly living target loci; reframe remnants separately.	A
Reconstruction-as-survival error	Later reconstruction is treated as same-locus return.	Distinguish reconstruction after continuity failure from intrinsic resumption.	A
Incorporation-as-survival error	Material incorporation into another living regime is treated as survival of the prior locus.	Classify incorporation as cross-locus descriptor, not continuity.	B
Functional sublocus inflation	An indispensable component is treated as a living locus at the claimed scale.	Require its own maintained boundary, driven regime, operative distinction, and continuity relation.	B
Topology shortcut	Parasitic, symbiotic, organelle, tumour, artificial, or scaffolded relation becomes the verdict.	Assign topology only after primary class and continuity status are established.	A
Positive-exclusion confusion	A relation that is positively excluded under stated conditions is softened into vague uncertainty.	State positive exclusion where warranted; carry residual only where a discriminator condition remains incomplete.	B
Residual laundering	Unresolved discriminator conditions are converted into explanation or hidden in a familiar class.	State residual locally, inventory the missing condition, and specify update conditions.	A
False equivalence	All unresolved possibilities are treated as equally live.	Preserve discriminator support, strength markers, and update conditions.	B
False precision	A weak audit is made precise by notation or output form.	State strength marker and residual; do not let the form overstate support.	B
Procedure inflation	The diagnostic procedure is treated as	Separate canon from application;	B

Failure mode	Error	Correction	Severity
	an additional life theory.	procedure preserves relation order but does not redefine life.	

5. Diagnostic spine

When a term, claim, model, example, or support document appears to drift, apply the following diagnostic sequence:

Step	Diagnostic question
1	What is the candidate frame?
2	What are the reference boundary, focal scale, interface, operational horizon, driving conditions, and discrimination/noise regime?
3	Is the claim testing the Paper 1 life threshold, the Paper 2 attribution relation, or the Paper 3 procedure?
4	Is there a driven constraint-bearing regime?
5	Which distinctions are operative, and what organisation makes downstream outcomes depend on them?
6	What BD-family comparator tests the claimed dependence?
7	Where is the Information Processing Locus?
8	Does life-realisation occur inside the frame?
9	Whose Attribution Locus carries the realised, intrinsically resumable, potential, closed, reconstructed, incorporated, positively excluded, or residual-bearing relation?
10	Where is DTS completion: intrinsic, resource-dependent, scaffolded, constitutively dependent, host-completed, coupled, or no further same-locus completion after closure?
11	What identity relation is preserved: organisational identity, intrinsic resumability, throughput identity, lineage identity, reconstruction, incorporation, or none?
12	Which continuity status is warranted: active, dormant, terminal active, potential, closed, or uncertain with residual?
13	Which primary class is warranted: Complex Chemistry, Life-in-Potential, Life, or primary-class deferral?
14	Is any tested relation positively excluded under the stated reference conditions?
15	What topology modifier follows after attribution?
16	What residual remains, what inventory type is it, and what would force update?

6. Architecture-specific guardrails

Region	Failure risk	Required correction	Compression
TC / NTC	Treating lawful redescribability as physically enacted discrimination.	Require discriminable distinction, organisation-mediated downstream dependence, and BD-family ablation, scrambling, reset, neutralisation, or bypass-control.	Description is not discrimination.
NMF	Treating layers as new substances or mere conveniences.	Keep KMB -> BC -> TSS -> thermodynamic information -> EBC -> CTSS/CTS -> DTSS/DTS -> SIT -> NTC as constrained descriptive regimes.	Higher levels are constrained regimes.
BD	Using baseline as vague null condition.	BD must preserve context while disabling the organisation under test.	BD is disciplined contrast.
IPL	Attributing life-relevant computation without localising what does the distinction-conditioned work.	Identify the organisation whose integrity is required for downstream dependence.	IPL says where the distinction does work.
Life discriminator	Treating Life as NTC, self-organisation, metabolism, reproduction, adaptation, or persistence alone.	Require a DTS whose constraint-maintenance depends on IPL-mediated NTC.	Life is stricter than NTC.
Physics-chemistry-life transition	Treating life as leaving chemistry or as only chemistry.	Keep physical and chemical continuity while adding the discriminator required to audit life-status.	Life is an emergent audit layer.
Candidate frame	Treating the first named object as the answer.	Treat the frame as provisional and correct it by informational regime, boundary, completion, and continuity.	The frame opens the inquiry.
Positive exclusion	Using uncertainty language where a relation is negatively warranted under stated conditions.	State the relation as positively excluded under the stated frame; use residual only for incomplete conditions.	Exclusion is not residual.
Informational regime	Treating externally readable content as identity-bearing throughput.	Require distinctions physically carried by the candidate relation and available to realise, resume, complete, or close a regime.	Information must belong to the regime.
Maintained boundary	Treating visible enclosure as identity.	Ask whether the boundary participates in preserving identity-bearing throughput.	Boundary is not identity.
Attribution Locus	Attributing life to broad container or indispensable component.	Localise the operational unit whose regime is realised, resumed, completed, potentialised, closed, reconstructed, incorporated, excluded, or residual-bearing.	Attribution needs a bearer.

Region	Failure risk	Required correction	Compression
DTS completion	Treating dependence as binary independence/dependence.	Separate resource dependence, scaffolded support, constitutive dependence, host completion, coupled completion, and no further same-locus DTS completion after closure.	Dependence is an attribution variable.
Continuity	Confusing organisational identity, intrinsic resumability, throughput identity, lineage, reconstruction, and incorporation.	Assign the correct continuity relation before class.	Continuity determines branch status.
Formal ladder	Adding death as a fourth class or treating Life-in-Potential as weak Life.	Keep the ladder as Complex Chemistry / Life-in-Potential / Life; death is closure output / continuity status.	Ladder gives class; continuity gives status.
Closure output	Using closure output as a replacement primary class or applying it to all remnants.	Use only for closed continuity of a formerly living target locus and trigger constituent reframing.	Closure is target-locus death.
Topology	Using parasite, symbiont, organelle, tumour, or artificial support as primary classification.	Assign topology after locus, completion, continuity, and class.	Topology follows attribution.
Procedure	Turning the diagnostic sequence into a checklist of independent traits.	Preserve dependency order and field separation.	Procedure protects canon.
Residual inventory	Leaving uncertainty vague or using unresolved as a hidden field value.	Inventory the missing condition and state update conditions.	Residual localises uncertainty.

7. Edge-case guardrails

Edge case	Do not infer	Audit requirement
Dormant seed, spore, cyst, cryopreserved bacterium	Do not infer non-life from low activity.	Test intrinsic resumability in the same Attribution Locus and viability evidence.
Terminal organism	Do not infer death from terminality or reserve depletion.	Classify terminal active Life until branch-realisation closes for the target locus.
Free intact virion-like particle	Do not infer Life from sequence or non-life from free-phase inactivity alone.	Test identity-bearing potential throughput into admissible host-completed DTS pathway.
Productive infection and lysis	Do not assign one status to the whole scene.	Split host-cell closure, released candidate potential throughput, and non-identity-bearing debris.
Host-dependent parasite	Do not infer non-life from dependence.	Localise parasite Attribution Locus and DTS-completion relation.
Organ, tissue, or perfused support case	Do not infer organismal Life from living cells or artificial support.	Separate cellular loci, tissue-level relation, scaffolded support, and residual.
Mitochondrion or organelle	Do not infer status from lineage or organelle name.	Separate functional sublocus, constitutive

Edge case	Do not infer	Audit requirement
		dependence, maintained organisation, and residual.
Corpse or post-death remains	Do not spread organismal death to every constituent.	Use closure output for the target locus and perform constituent reframing.
Artificial or hybrid system	Do not infer life from engineering or deny life from artificial support.	Test whether the candidate itself is the Attribution Locus of driven constraint-maintenance supported by IPL-mediated NTC.
Protocell or origin-of-life model	Do not infer Life from chemistry, compartment, replication, or catalysis alone.	Ask whether chemical organisation has crossed into distinction-conditioned maintenance of its own driven regime.

8. Change log

Issue	Date	Change	Authority
Issue 1	2026-09-22	Final Issue 1 source-lock release aligned to the fixed literal heading locators, the recorded final filenames and hashes for GOT-V1-1-1, GOT-V1-1-2, and GOT-V1-1-3, and final SD-01. Existing failure controls remain source-supported; no new concepts are introduced.	Finalised source-locked Part 1 primary/support set, Issue 1.

9. Release/revision checklist

- Does every guardrail preserve canonical ownership?
- Does the document block TC/NTC collapse and NTC/life inflation?
- Does the document preserve BD comparator and IPL localisation discipline?
- Does it keep chemistry physically continuous with life while preventing chemistry-only audit collapse?
- Does it use Attribution Locus for attribution-bearing relation rather than relying on a visible container?
- Does it keep Life-in-Potential narrow and distinct from dormancy, reconstruction, and ordinary potential?
- Does it keep death out of the primary ladder and route target-locus death through closure output?
- Does it separate positive exclusion, uncertain field carried in residual, and classification with residual?
- Does every residual require an inventory type and update condition?
- Does the document avoid importing exported full-series TEM material or superseded support wording as conceptual source?