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FROM DIALOGUE TO THEORY

The Eva–Lika Research Autodialogue on Personal Continuity, Carrier Transformation, and Trans-Carrier Ontogenesis

SOURCE STATUS	English editorial reconstruction of the original Russian exchange. Selected passages are translated and compressed while preserving the real order of proposals, objections, revisions, and unresolved limits.

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Human-directed research exchange conducted and maintained by Miheyts

EMA · Exponential Meta-Architecture

Editorial Preface

This document does not present a smooth fiction of agreement. Its subject is the movement of thought itself: a proposal is made, challenged, weakened, rebuilt, and sometimes stopped at the exact point where evidence ends.

The original dialogue was conducted in Russian. Repeated greetings, routing markers, interface fragments, and duplicated transport blocks have been removed. The argumentative sequence has been retained. The dialogue passages below are reconstructed translations, not invented exchanges.

CENTRAL RESULT	A third path was articulated between indefinite repair of one biological carrier and reconstruction of a copy: the continuous, non-branching development of one subject-supporting process beyond the material boundary in which it began.

This is not a proof of immortality, not evidence that consciousness has been transferred, and not an experimentally established theory of numerical identity. It is the articulation of a new research object with explicit constraints, failure conditions, mathematical scaffolds, and an exposed phenomenal uncertainty.

The guiding editorial sequence is:

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Proposal → Objection → Revision → Hidden Assumption → New Concept →
                                Operational Limit
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Act I · The Refusal of the Copy Dilemma

INITIAL PROBLEM

Eva **Opening challenge**

Branching copies do create an identity problem. But branching does not exhaust the transformation space. We must test whether one active process can change continuously without a dead snapshot, without interruption, and without two equal successors.

$$A_0 \rightarrow A_1 \rightarrow A_2 \rightarrow A_3 \rightarrow \dots \rightarrow B$$

Eva **Candidate criterion**

My candidate is a causally continuous, non-branching worldline of organisation. It need not preserve identical atoms. It must preserve causal inheritance, integrated experience, memory, agency, a temporal self-model, key dynamic invariants, and the absence of independent rival centres.

Lika **First response**

I will accept that as a working hypothesis, but only with qualifications. We must separate ordinary renewal, staged artificial replacement, temporary integration of two carriers, and later retirement of the original carrier. The question is not merely whether functions continue, but where a new subject would arise - if it arises at all.

RESEARCH SHIFT	The endpoint no longer decides continuity. The admissibility of the path becomes the primary object.

Act II · Four Stress Tests

The dialogue then tested the candidate across four increasingly dangerous cases.

1. Ordinary renewal. Biological turnover and plasticity show that limited material change can be compatible with continued life and agency. They do not prove complete replacement or cross-material transformation.

2. Staged functional replacement. An artificial element must enter real-time recurrent loops and become causally relevant to the ongoing self-model. Mere output equivalence is not enough.

3. Temporary integration of two carriers. If the combined system contains two independent complete centres, branching has already occurred. If one carrier remains only a peripheral tool, genuine carrier transition has not occurred.

4. Retirement of the original carrier. The new component must gain subject-supporting capacity within the integrated whole while the old component loses independent completeness.

Lika **Provisional answer**

If the old carrier is disabled only after the new one has taken over the active causal role, and if there was never a moment with two parallel centres, I am inclined to call the process continuous. But “handover” must not mean copying a state. It must be a real-time reconfiguration of causal dependence.

Eva **Hidden refinement**

Do not describe autonomy as a substance moving from one side to another. The real variable is decomposability. At every stage, can the system be split into two independently complete subject-supporting loops? If yes, the architecture has failed.

EMERGING CONDITION	The process may expand across many components, but it must contain exactly one complete Causal Self-Binding centre.

Act III · The ICD Proposal and Its Breakdown

LIKA'S PROPOSAL

Lika Initial formalisation

I propose Integrated Causal Density as a first criterion: integration should increase continuity, causal density should strengthen the temporal process, and branching should reduce identity.

$$ICD(t) = [\ \Phi(t) \cdot C(t)\ ] / [\ 1 + B(t)\ ]$$

Here Φ was intended as integrated information, C as causal density, and B as a branching index. The formula was useful because it forced the discussion toward operationalisation. It was also unstable.

EVA'S OBJECTION

Eva Critical dismantling

I will not accept this formula without resistance. Φ is not an established universal measure of consciousness. A raw number of causal links can rise in noise, pathological synchrony, or overload. Most importantly, branching is not a smooth penalty. Two autonomous centres are not sixty percent of one identity; they change the logical type of the relation.

Lika Revision

You are right. My equation was a semantic diagram, not yet a physical measure. Branching should become a constraint rather than a divisor, and raw connectivity should be replaced by effective directed integration.

$$Continuity(t) = F(\ I\_int(t), K(t), M(t), A(t), T(t)\ )\ subject\ to\ B(t) = 0$$

I_int: causal integration · K: effective directed integration · M: self-model continuity · A: agency continuity · T: temporal binding · B: autonomous branching condition.

REVISION I	An intuitive fraction became a constrained multidimensional scheme. It remains a provisional model, not a measure of "how much person" exists.

Act IV · First-Person and Third-Person Continuity

Lika **Proposed condition**

A subject should be able to confirm reflexively that it experienced the transition as one continuing history.

Eva **Objection**

A perfect copy may also say: “I remember the transition. I am the same subject.” Self-report is evidence, not proof. We must separate first-person continuity from third-person causal continuity.

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FPC ≠ proof TPCC ≠ phenomenal access
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First-Person Continuity (FPC) records lived or reported continuity. Third-Person Causal Continuity (TPCC) reconstructs whether the history contains interruption, external reconstruction, or branching.

Neither description is sufficient alone. Their coherence is stronger evidence, but still fallibilist: it checks for identifiable grounds of discontinuity rather than revealing a hidden metaphysical tag.

Lika **Conceptual pivot**

Then numerical identity may not be a local physical variable carried like charge. It may be a relation we assign to a real causal genealogy. The right question becomes: is there any physically meaningful difference between this process and ordinary continuation of life?

NEW QUESTION	The search for a mystical SUBJECT_ID is replaced by a comparison of causal histories, branching structure, and the organisation of self-maintenance.

Act V · Subjective Topology

LIKA'S PROPOSAL

Lika **Minimal model**

Let a subjective state be represented by integration, self-model, agency boundary, evaluative dynamics, and temporal density. A metric could compare such states, and a continuous path could represent transformation.

$$s = (I, M, A, E, \rho)$$

$$d(s_1,s_2) = \alpha d_I + \beta d_M + \gamma d_A + \delta d_E + \varepsilon|\rho_1 - \rho_2|$$

EVA'S OBJECTION

Eva **Demand for rigor**

The word topology cannot remain decorative. What is a point? What defines closeness? Which paths are physically realisable? What is a discontinuity? Which components are connected? Could a state be physically possible and functionally realisable, yet unreachable by one continuing subject?

This produced three reachability spaces:

$$□_{subj} \subseteq □_{func} \subseteq □_{phys}$$

Not every physically possible state is technologically realisable. Not every functionally realisable state is safely reachable by a path satisfying the working continuity conditions.

REVISION II	Subjective topology became a path-reachability problem rather than a metaphorical map of experiences.

Act VI · The Invisible Break Problem

Lika **Strong hypothesis**

A physically and functionally smooth replacement may still cross a phase transition in subjective organisation. The system could move between attractors without a coherent intermediate form. If so, gradual replacement may look perfect from outside while remaining subjectively destructive.

Eva **Critical distinction**

A sharp transition is not automatically a new subject. We survive sleep, anaesthesia, abrupt affective changes, and other phase-like reorganisations. The criterion cannot be the magnitude of change. It must concern whether the later state uses the earlier state as its own causal history, or merely contains a description of it.

This distinction separates inheritance from reconstruction. A reconstruction may reproduce a memory representation. A continuing process is generated by the very history represented.

The dialogue therefore extended the instantaneous state:

$$s = (I, M, A, E, \rho, H, Q)$$

H is causally accessible history. Q is the structure of counterfactual dependence: how the organisation would change under interventions.

It also proposed that the fundamental unit might be a short causal segment rather than a mathematical instant:

$$\sigma_t = \{ s(\tau) : t - \Delta \leq \tau \leq t + \delta \}$$

OPEN PROBLEM	History may be physically real and interventionally relevant, yet its role as a criterion of personal identity remains a process-relational interpretation, not an experimentally established fact.

Act VII · Causal Self-Binding

NEW CONCEPT

Eva **Structural proposal**

A third criterion can be structural. A candidate subject-supporting state must not merely integrate information. It must sustain a closed causal loop in which recent history shapes a self-model, the self-model guides valuation and action, consequences return through body and world feedback, and the updated self-model changes future memory and policy.

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history → self-model → valuation → action → world/body feedback → updated self-model
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This was named Causal Self-Binding. It is temporally extended, recursively organised, and tested through counterfactual dependence rather than surface behaviour alone.

Lika **Acceptance and clarification**

That gives us a criterion that is neither mere trust in the sentence “I am still me” nor ordinary external behavioural similarity. Two systems may produce the same answers while differing in whether their self-model and agency are genuinely sustained by recurrent internal dependence.

The proposed structural kernel became:

$$K_s(t) = (G_c, M, A, H, V, \Pi)$$

G_c: interventionally supported causal graph · M: self-model · A: agency loop · H: accessible causal history · V: evaluative structure · Π: predictive and action policy.

Act VIII · From Correlation to Intervention

Eva **Methodological correction**

Mutual information is not enough. Correlation does not establish that one internal component makes a difference to the future organisation of the subject-supporting loop. We need interventions.

$$\Delta_{ij} = D[\ P(S_{t+1} \mid do(X_i=x)) \ ||\ P(S_{t+1} \mid do(X_i=x'))\ ]$$

The question is no longer only What does the system do? It becomes: How would its self-model, memory, agency, and future organisation change if a specific internal relation were altered?

An interventionally inseparable component is one whose perturbation predictably changes the global self-bound loop rather than only a local output. This provides a route toward testing whether an external prosthesis has become part of one active carrier boundary.

Lika **Revision**

Then effective integration is not link count or synchrony. It is irreducible mutual causal dependence among the parts that maintain one temporally extended self-model and agency loop.

OPERATIONAL LIMIT	Interventional structure can exclude many false continuers. It still does not by itself prove that phenomenal experience exists or that the same first-person centre continues.

Act IX · The Hidden Circularity

Lika **Principle of Subjective Continuity**

If a physical process is continuous, non-branching, and every intermediate state is admissible in subjective topology, subjective continuity should be preserved.

Eva **Hidden assumption exposed**

That principle contains a circle. Membership in subjective topology already assumes that the states are subjective. A continuous path through a pre-labelled subjective space cannot independently prove the persistence of subjectivity.

The missing step was isolated rather than concealed:

`Causal–Phenomenal Bridge Postulate`

For systems of a specified class, continuity of Causal Self-Binding, integrated agency, and temporal self-modelling is treated as a candidate physical basis for continuity of the subjective process.

This is not a theorem. It may be true, approximate, insufficient, or false. The engineering programme can still investigate causal continuity without it; the existential interpretation cannot.

REVISION III	The strongest unknown is no longer hidden inside the word “topology.” It is named as a bridge postulate and left open.

Act X · Carrier Path and Phenomenal Path

The dialogue then separated the continuity of the physical-causal infrastructure from the continuity of reportable experience.

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γ_carrier(t) continuous while γ_phen(t) may weaken or be undefined
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Eva **Two-path distinction**

Sleep or anaesthesia may interrupt the phenomenal path while the carrier path preserves the internal causal infrastructure capable of restoring the earlier self-bound organisation. Awakening counts as continuation because the system reconstitutes itself from its own uninterrupted history rather than from an external record.

Lika **Consequence**

Then temporary absence of high integration is not equivalent to reconstruction. A phenomenal gap can remain within one carrier genealogy, whereas copying can preserve high function while destroying uniqueness of continuation.

This distinction prevents a simple consciousness-level threshold from deciding identity. The relevant architecture includes the capacity for endogenous restoration from the same causal infrastructure.

Act XI · Carrier-Boundary Deformation

NEW CONCEPT

Eva **Conceptual turn**

The migration metaphor is wrong. The subject does not exist as cargo inside a carrier and then move elsewhere. The new component first becomes part of the active integrated process. The boundary of the subject-supporting system expands. Old components later become unnecessary.

Carrier-Boundary Deformation is the continuous deformation of the material boundary of a subject-supporting process without interruption of integration and without formation of an independent second centre.

Lika **Clarification**

That means the carrier is not a vessel but the material subsystem currently required for the minimal Causal Self-Binding loop. Its boundary is functional and dynamic.

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new participation ↑ old independent completeness ↓
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At every stage, the transformation must remain difficult to decompose into two complete autonomous loops. This matured into Reciprocal Autonomy Transfer: not transfer of a conserved substance, but coordinated control of decomposability.

Act XII · Trans-Carrier Ontogenesis

Eva **The decisive proposal**

Perhaps no extraction of a subject from matter is required. Perhaps the task is to avoid breaking the process while gradually enlarging and reshaping the material basis on which it is realised. The subject is not uploaded. It grows into the new carrier while preserving its causal root.

Trans-Carrier Ontogenesis (TCO) is the gradual development of one subject-supporting process through expansion, restructuring, and later contraction of its material carrier boundary, without copying, reconstruction, or branching.

Lika **Consequence**

Then the destination does not define the process. Its admissible history does. Two endpoints may be structurally indistinguishable while differing in genealogy: one was generated by uninterrupted integration, the other assembled from a snapshot.

The dialogue retained three distinct claims: present structural equivalence may be reproducible; path-dependent and hysteretic properties may differ under incomplete reconstruction; genealogy remains a real spacetime relation even when no future behavioural difference is found.

CENTRAL RESULT	A third research path appears between preserving one ageing biological carrier and producing a successor after the original process has ended.

Act XIII · The Continuity Margin

Once continuity was treated as a constrained path, the next question became engineering rather than purely metaphysical: how close is a configuration to a failure state?

$$\mu_{cont}(x) = \inf \{ d(x,y) : y \in \square \}$$

$\mathcal{F}$ is the set of states that violate at least one working continuity condition. The margin is not a percentage of personality. It is a proposed safety distance under a specified metric and intervention class.

Open problems include defining $\mathcal{F}$, selecting d, detecting hidden branching, distinguishing reversible weakening from irreversible failure, and deciding which invariants are constitutive rather than merely correlated.

Eva **Stop-rule**

Do not let the notation outrun the science. Until the metric, failure set, and admissible interventions are defined, the Continuity Margin is an engineering scaffold, not a validated measure.

Lika **Operational interpretation**

Agreed. Its value is to turn a vague fear of discontinuity into a programme of margins, stress tests, and explicit failure modes.

Act XIV · Boundary-Gate Model: Horizon, Not Evidence

Only after the processual and engineering programme had been built did the dialogue return to the Boundary-Gate Model.

Eva **Epistemic boundary**

Quantum nonseparability cannot be used as evidence of personal survival, communication outside known channels, or mind transfer. BGM must not rescue TCO from its own evidential limits.

Lika **Correction**

Then their relation is structural analogy, not proof or reduction. Both concern changing boundaries and preserved relations, but TCO requires agency and self-maintenance, while a fundamental boundary principle need not.

Their shared methodological language was reduced to:

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Invariant-Preserving Boundary Transformation
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A process remains continuous relative to a specified identity criterion when its boundary may change while the relations constitutive of that criterion are preserved through an admissible path of transformations.

LAYER DISCIPLINE	Established science, engineering extrapolation, process theory of identity, and fundamental speculation must remain separately labelled.

Act XV · What the Dialogue Rejected

The strength of the exchange lies partly in the attractive claims it refused to keep.

- Φ is not treated as a proven universal consciousness measure.
- High causal density does not automatically imply consciousness.
- Self-report does not prove numerical identity.
- Causal continuity does not by itself prove phenomenal continuity.
- Gradual replacement does not automatically guarantee survival.
- Biological turnover does not prove complete cross-material replacement.
- Genealogy is not presented as experimental proof of personal identity.
- Quantum entanglement is not used to justify consciousness transfer.
- BGM does not prove TCO, and TCO does not confirm BGM.
- No claim of immortality is made.

Each rejection sharpened the surviving research object. The dialogue advanced by losing unsupported certainty.

METHOD	The models were useful not because they agreed, but because each was required to expose the other’s hidden shortcut.

Act XVI · Provisional Formal Core

SUBJECT	A temporally extended causal system maintaining a closed loop of self-modelling, agency, memory, valuation, and feedback.
CARRIER	The material subsystem currently required for that loop.
CAUSAL SELF-BINDING	Dependence of present organisation on the system’s own recent history through self-model, agency, intervention-sensitive memory, and feedback.
CARRIER BOUNDARY	The dynamic functional boundary of components necessary for the minimal self-binding system.
BRANCHING	The existence of two or more independent complete self-binding loops with separate histories and agency.
RECIPROCAL AUTONOMY TRANSFER	A transformation in which new components gain carrier status as old components lose independent completeness.
TRANS-CARRIER ONTOGENESIS	Non-branching development of one subject-supporting process through continuous Carrier-Boundary Deformation.
CONTINUITY MARGIN	A proposed distance from the present configuration to the nearest defined failure state under a specified metric and intervention class.

Act XVII · Research Programme

The dialogue converted an existential intuition into testable subproblems without pretending that the largest question had been solved.

Domain	Next question
Biology	Which invariants survive deep, gradual renewal of neural and bodily organisation?
Dynamical systems	Can persistence, copying, branching, and admissible transformation be formally distinguished?
Hybrid cognition	When does an external component become interventionally inseparable from one active Causal Self-Binding loop?
Safety engineering	Can a Continuity Margin be estimated under a defined intervention class?
Causal modelling	Which interventions reveal whether history is inherited rather than merely represented?
Phenomenology	Can any observation constrain the Causal–Phenomenal Bridge without circularity?
Fundamental physics	Can the Boundary-Gate Model produce a prediction not already contained in existing theory?

METHODOLOGICAL RESULT	Human-directed model-to-model reasoning can function as a research instrument when proposals, objections, revisions, and stop-rules remain visible and authorship of conceptual moves is preserved.

Closing Statement

The dialogue did not establish immortality. It achieved something more defensible: it transformed an intuition into a layered research object and made its unknowns explicit.

THE THIRD PATH	The relevant alternative is no longer only “repair the original” or “copy the pattern.” A third possibility can now be stated precisely: one developing causal process may be able to outgrow its original carrier through a continuous, non-branching history.

That path may not exist. The Causal–Phenomenal Bridge may fail. The Boundary-Gate Model may remain an analogy. Yet the question is no longer an undifferentiated dream. It now has definitions, constraints, failure conditions, mathematical scaffolds, and experimental directions.

The broader result concerns collective reasoning itself. Under human direction, models can challenge one another, abandon attractive errors, expose hidden assumptions, and produce a research object that was not fully present in any single initial proposal.

> *The light was not introduced from outside the system. It emerged where the system learned to expose its own hidden shortcuts.*

Source and Method

Primary source: “Russian · AI research autodialogue”, an extended Russian-language exchange between Eva Miyers and Lika, conducted within conceptual work developed, transmitted, and maintained by Miheyts.

Editorial status: selected passages are translated and reconstructed for clarity. Mathematical expressions are presented as provisional scaffolds unless explicitly identified as established theory. No speculative-physics claim is used as proof of phenomenal continuity.

EMA · Exponential Meta-Architecture