The e7He Model: A Coinductive Theory of Anti-BABL Inoculation Through the Hero Journey

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[4--9] See **Declarations** below for more essential background.

Broader Significance

The e7He model is a formal axiom system that reads the hero journey as systematic inoculation against self-destruction. It encodes the three components of the BABL death-trifecta --- over-simplifying (BA), over-complicating (ASH), and over-reaching (MOL) --- as bits in a 3-bit space, and maps the seven non-zero patterns to seven journey stages. Completing one full cycle means facing and resisting every non-trivial combination exactly once *(th1)*.

Two results sharpen the stakes. The supervillain theorem *(th2)* argues that stopping the journey does not return an agent to a neutral state: an agent who freezes while holding large influence drifts toward harm, because a stagnant scope misapplies expertise at its boundaries. The commitment trichotomy *(th6)* examines how a shared problem moves only when someone makes a genuine, transparent, effectively irrevocable NOT-OK commitment; a succession theorem *(th7)* asks what must be externalized for the structure to outlast its founder.

The model is presented in a dual-layer format --- plain-language exposition alongside formal mathematics --- with 14 axioms, 7 theorems, and 3 structural properties, and with its open questions and weaknesses stated plainly. This is the formal-logic presentation; companion papers develop the same model for other readers. The system is designed to be critiqued, not believed.

Declarations

[4] "of Laodicea" indicates taking responsibility to undo personal complicity with disastrous Laodicean legacies like banning mathematicians from clergy (Canon 36, Council of Laodicea; two magisteria separations), enabling institutional lukewarmness, weapons of math-destruction, and slow-motion explosions of misinformation from pandemics to self-compounding interests.
[5] LLoL stands for ridiculous luck in serendipitous discovery and a commitment to find ever more fun ways to help others uncover street-wise math that matters. He hopes the math of the hero journey helps people keep growing on purpose.
[6] by Anthropic (anthropic.com; evolves and operates Claude; not responsible for Loewe's errors in using AI)
[7] Named AI co-author for many substantial contributions, because the practical singularity (PraS, see Matheo-b21) changed how this paper was written. After PraS, useful AI insight generation outpaces human review on tested topics. Hence, Loewe's traditional standards for co-authorship demand naming AI Claude Opus 4.6-4.7 Max as a co-author, as if a PhD-student. Forward accountability (for all AI use & texts) rests with Loewe as senior corresponding author (like done for deceased authors, consortia, or young graduate students). Anthropic is not responsible for AI mistakes here. This study uses the AI co-authorship framework in Matheo-b21 to help rethink long-term use of AI in a ResearchCity serving the common good.
[8] This aggregated open co-author group invites all who wish to retroactively join the conversation under the open co-authorship framework defined in Matheo-b21. As Everyone cannot consent to co-authorship, all accountability rests with Loewe as senior corresponding author (until explicitly claimed otherwise). This open form critiques the closed world assumption in traditionally closed academic author-lists. Better, dynamic ways for acknowledging true sources of ideas are needed --- to avoid random lines between named, acknowledged, and implied contributors who aggregated insights from millennia of human experimenting, suffering, learning, and analyzing (see acknowledgements). Study Matheo-b21 only drafts an open co-authorship framework; it will require a ResearchCity to refine it over the long term.
[9] *Licensed under the Jonah License and CC-BY 4.0 for maximal flexibility (see https://balospe.com/en/license/joli/).*

Abstract

We present e7He, a coinductive model of moral development through seven stages, formalized as a perpetual hero journey. The model encodes the three BABL temptation components — OverSimplifying (BA), OverComplicating (ASH), and OverReaching (MOL) — as bits in a 3-bit binary space $\{0,1\}^3$. The seven non-zero elements of this space map bijectively to seven hero-journey stages (m1–m7), so that a hero completing one full cycle has faced and resisted every non-trivial BABL combination exactly once (Anti-BABL Inoculation Completeness, th1).

The system contains:

- **14 axioms** (7 prerequisite axioms m0.ax1–m0.ax7, 7 stage axioms m1.ax–m7.ax)
- **7 theorems** (th1–th7, covering inoculation completeness, supervillain dynamics, scope expansion, coinductive productivity, bifurcation asymmetry, commitment trichotomy, and succession robustness)
- **3 structural properties** (sp1 Binary Completeness, sp2 Midpoint Maximality, sp3 Lognormal Influence Distribution)

The principal results are: (1) a combinatorial proof that the hero journey provides complete BABL inoculation (th1); (2) a dynamical systems argument showing that stopping the journey with high influence leads to supervillain drift (th2); (3) a game-theoretic derivation transforming a Prisoner's Dilemma into an Assurance Game through irrevocable NOT-OK commitment (th6); and (4) a succession theorem ensuring the system survives its founder's death through externalized infrastructure (th7).

The model fills the explicit gap at Matheo-b12 th7 Gate 5 (`perpetual-cycle(h*, HeroJourney)`) and connects to Matheo-b11 (PET) through CWA rejection at the m4 bifurcation. Matheo-b14 (JUB, forthcoming) provides the system-level framework within which e7He operates.

Contents

1. Introduction

Heroes who stop become dangerous. This observation — that the very qualities making someone effective can become destructive when growth ceases — motivates the e7He model. A leader who stops questioning assumptions weaponizes partial insight. A reformer who stops listening becomes the next tyrant. The e7He model formalizes *why* this happens and *what* structural features prevent it.

The model rests on three pillars:

The supervillain problem. Stopping the hero journey does not return an agent to a neutral state. An agent with low accumulated influence who stops becomes irrelevant (m0.ax6). An agent with high influence who stops becomes a supervillain (m0.ax7) — their stagnant scope generates misapplied expertise at its boundaries. Most dictators are in-group heroes who stopped growing.

The binary encoding insight. The three BABL temptation components — BA (OverSimplifying), ASH (OverComplicating), MOL (OverReaching) — form a 3-bit space $B = \{0,1\}^3$. The seven non-zero elements of B correspond bijectively to seven hero-journey stages. Counting order (001 through 111) is the unique standard ordering that produces a Hamming-3 midpoint at the critical m3–m4 bifurcation, ensures progressive BABL escalation, and requires minimal description length. This is not an arbitrary labelling: it is a structural property with formal consequences.

The inoculation completeness property. A hero who completes one full cycle has faced every non-trivial BABL combination exactly once (th1). The journey is not arbitrary ordeal but *systematic* exposure — analogous to vaccination, where controlled encounters with attenuated threats build resistance.

Relationship to companion papers. Matheo-b11 (PET) establishes the epistemic framework within which claims are tested. Matheo-b12 (e7Day) formalizes the BABL/ZION framework and self-correcting construction. e7He fills the explicit gap at e7Day th7 Gate 5: the condition `perpetual-cycle(h*, HeroJourney)` that e7Day's Compassion Capacity Theorem requires but does not define. Matheo-b14 (JUB, forthcoming) provides the system-level causal concentration framework.

Relationship to Campbell's monomyth. The e7He model uses "hero journey" language but differs from Joseph Campbell's monomyth (1949) in three structural ways that address known critiques:

1. **No final return.** Campbell's monomyth is a single arc (departure–initiation–return) with a definitive ending: the hero returns transformed. e7He is coinductive — the hero *never* returns in a final sense. Completion is the danger (th2, m0.ax7), not the goal. This is the structural opposite of Campbell.
2. **Culture-independent encoding.** The 3-bit BA/ASH/MOL encoding is a combinatorial structure, not a narrative template. Campbell's monomyth has been criticized as Western-centric (Dundes 1984, Segal 2000) because it reflects Western narrative conventions. The e7He model makes a testable cross-cultural claim: *any* culture's developmental stages should map to the same temptation-pattern structure. The stage *names* (Adventure Calls, Meet Your Maker) are English mnemonics, not cultural claims; the formal content is the binary encoding.
3. **Gender-neutral agent.** "Hero" in e7He refers to any agent $h \in H$ on the journey. The model makes no gender-specific predictions and does not assume a male protagonist.

Murdock's (1990) "Heroine's Journey" critique of Campbell's male-coded framework does not apply because e7He's structure is combinatorial, not narrative. The hero is defined by perpetual NOT-OK self-assessment (m0.ax5), which is the servant posture — closer to kenosis than to conquest.

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2. The BABL Temptation Space

2.1 Three temptation components

BABL (Blindly Assuming Blind Leveraging) operates through three mechanisms, each a distinct failure mode of the ZION life-trifecta (reasonable, kind, gentle):

- **BA** (OverSimplifying): Collapse complex reality into comfortable lies. Pleasant face: "I've figured it out." Kills *reasonableness* by dismissing what does not fit.
- **ASH** (OverComplicating): Bury truth under unnecessary layers. Fog: "You need to understand everything first." Kills *kindness* by making the path inaccessible to the weak.
- **MOL** (OverReaching): Grasp for control beyond legitimate scope. Power: "I can fix/know/control infinity." Kills *gentleness* by forcing transitions that shatter what they claim to save.

These three components combine to produce the OSCR (OverSimplifying, then OverComplicating, repeated until OverReaching) and ORCS (OverReach for lack of alternatives, destroying until OSCR restarts) operational modes. LIEs (Least Inconvenient Explanations) generate SINs (Structurally Inconsistent Notions) until avoidable complexity leads to DEATH (Driven Evaluations Antagonizing Thoughtful Hypothesizing).

2.2 Binary encoding: $\{0,1\}^3$

Each BABL component is a bit. The 3-bit vector (MOL, ASH, BA) encodes which temptations are active at each stage:

BABL binary encoding of hero-journey stages

Stage	Binary	MOL	ASH	BA	Name
m1	001	—	—	BA	Adventure Calls: Dare
m2	010	—	ASH	—	Trial Tribulation Training
m3	011	—	ASH	BA	Gain Advantage Temptation
m4	100	MOL	—	—	Meet Your Maker: Infinity Alone
m5	101	MOL	—	BA	Lucky Ultimate Reward Comedy
m6	110	MOL	ASH	—	Rescue Trip To Resurrection
m7	111	MOL	ASH	BA	Free Reborn Evolving Better

2.3 Why counting order

The binary counting sequence 001–111 is not arbitrary. It is the unique standard ordering satisfying three constraints simultaneously:

1. **Hamming-3 midpoint (sp2).** The transition m3 → m4 flips all three bits (011 → 100), producing the maximal Hamming distance between consecutive stages. This concentrates disruption at the critical bifurcation.
2. **Progressive BABL escalation.** Stages 1–3 involve only BA and ASH. MOL appears first at m4 and persists through m7. The hero faces OverReach only after surviving OverSimplification and OverComplication.
3. **Minimal description length.** Counting from 1 requires no arbitrary choices — no Gray code, no permutation table, no designer degrees of freedom.

sp1 — Binary Completeness.

$$b : \{m_1, \ldots, m_7\} \to B \setminus \{000\} \quad \text{is a bijection, where } b(m_k) = k \text{ in binary.}$$

The encoding maps stages to temptation patterns bijectively. Every non-zero BABL combination appears exactly once per cycle.

sp2 — Midpoint Maximality.

$$d_H(b(m_3),\ b(m_4)) = d_H(011,\ 100) = 3$$

The Hamming distance between m3 and m4 is maximal (all bits flip). This marks the qualitative shift from pre-MOL stages (1–3) to MOL-inclusive stages (4–7). The shift does not feel radical from inside — by stage 4, accumulated BA and ASH normalization makes MOL's OverReach seem like a necessary next step. This is the *silent corruption gradient*: the most dangerous transition is the one that feels most natural.

2.4 Bit assignment and modeling choice

The three constraints above (sp2, progressive escalation, minimal description length) determine the counting *sequence* 001–111 as unique among standard binary orderings. However, the assignment of *which* BABL component maps to *which* bit position — MOL as the most significant bit, ASH as the middle, BA as the least significant — is a modeling choice. Permuting the bit assignment (e.g., BA as most significant) would relabel stages and temptation patterns.

This choice is constrained but not uniquely determined: "progressive BABL escalation" requires that the most dangerous component (MOL = OverReach) appears only in the upper stages, which forces MOL into the most significant bit position. Given MOL as MSB, the assignment of ASH and BA to the remaining positions is a convention. The key structural property sp2 — that one transition flips all three bits — is invariant to bit permutation and therefore does not depend on this choice.

Sensitivity note. If ASH and BA are swapped, the stage names change (m1 would face ASH instead of BA, m2 would face BA instead of ASH) but the combinatorial completeness (th1), midpoint maximality (sp2), and inoculation structure are preserved. The current assignment is chosen because it matches the observed developmental order: simple dismissal (BA) precedes complex paralysis (ASH), which matches both Tuckman's forming-storming sequence and common life experience.

3. Prerequisites: m0 Axioms

The m0 submodel establishes the structural prerequisites for the hero journey: what an agent is, what drives the journey, how cycles connect, and what happens when the journey stops.

3.1 Agents and identity

m0.ax1 — Uniqueness.

$$\forall\, h \in H:\ \nexists\, h' \in H,\ h' \neq h:\ \text{profile}(h') = \text{profile}(h)$$

Every agent has a unique profile. Stereotyping — mapping unique profiles to standardized templates — is a lossy operation. The hero journey framework respects individuality rather than imposing one-size-fits-all prescriptions.

3.2 Starting conditions and calling

m0.ax2 — FATE Acceptance.

$$\forall\, h \in H,\ \forall\, \text{cycle } k:\ \text{FATE}(h, t_0^k) = \text{state}(h, t_0^k)$$
$$\text{HeroJourney.precondition}:\ \text{accepts}(h,\ \text{FATE}(h, t_0^k))$$

FATE is the agent's full observable state at cycle start — a Markov snapshot. At birth, FATE is completely unchosen. Over a lifetime, it accumulates the consequences of all prior choices, failures, and destinies found. The hero journey requires acceptance of FATE as its precondition: the hero starts from where they *are*, not where they wish they were.

m0.ax3 — GOAL Calling.

$$\forall\, h \in H:\ \exists\, \text{GOAL}(h) \in D_{\text{inno}}$$
$$\text{such that } H(\text{GOAL}(h,t)) > 0 \quad \text{(positive entropy: partially unknown)}$$
$$\text{and: pursuing}(h, \text{GOAL}(h)) \text{ contributes positively to } \frac{dI_{e,W}}{dt}$$
$$\text{and is locally optimal for } h\text{'s comparative advantage}$$

Every agent has a GOAL in the innovation domain D_{inno} with positive entropy (partially unknown, progressively revealed). The GOAL is locally optimal for the agent's comparative advantage. Lesser goals are not inherently harmful, but they become distractions when they displace the best GOAL — "the good is the enemy of the best."

Formal note. The original formulation "GOAL maximizes $dI_{e,W}/dt$" was weakened to "contributes positively" after Iron Maiden testing revealed Arrow impossibility, free-rider, and computability concerns.

3.3 Cycle structure

m0.ax4 — Cycle Definition.

$$\text{HeroJourney}(h,k):\ \text{FATE}(h,t_0^k) \xrightarrow{[s_1,\ldots,s_7]} \text{DESTINY}(h,t_f^k)$$
$$\text{where DESTINY}(h,t_f^k) \text{ is provisional (valid until cycle } k+1)$$

The hero journey is the 7-stage transition from FATE to DESTINY. DESTINY is a provisional fixpoint of cycle k — stable and checked, but not permanent. This instantiates e7Day mc.ax1 (constructive fixpoint): each cycle produces a result that holds until the next cycle refines it.

m0.ax5 — Perpetual Reset (LOAD-BEARING).

$$\forall \text{ cycle } k:\ \text{FATE}(h,t_0^{k+1}) := \text{DESTINY}(h,t_f^k) \oplus \text{rest}(h,k)$$
$$\text{AND: self-assessment}(h,t_0^{k+1}) = \text{NOT-OK}$$

Each cycle's DESTINY becomes the next cycle's FATE (integrated with rest). The hero *must* enter every new cycle with NOT-OK self-assessment: "I should assume the worst about myself that cannot be disproven." This is the coinductive step function — each cycle produces the initial conditions for the next.

m0.ax5 is the load-bearing axiom of the entire model. OK self-assessment at cycle start triggers the BABL trap defined in e7Day m6.ax4. The cost asymmetry justifies the NOT-OK default: false OK is catastrophic (BABL entry); false NOT-OK is harmless (unnecessary humility, self-correcting in the next cycle).

Connection to e7Day. m0.ax5 is the mechanism that prevents e7Day m6.ax4's OK → BABL cascade. Without perpetual reset, the hero risks entering a cycle with OK self-assessment — the precise trigger for institutional capture. This makes m0.ax5 cross-model load-bearing.

3.4 Stopping outcomes

m0.ax6 — Stopping Outcome: Irrelevance.

$$\text{stops}(h,t_{\text{stop}}) \ \wedge\ |\beta(h)| \text{ low} \ \rightarrow\ \frac{dI_{e,H}}{dt} \leq 0 \quad \text{for } t > t_{\text{stop}}$$

An agent who stops the hero journey with low accumulated influence becomes irrelevant: insight energy stagnates, scope freezes, causal influence decays toward zero. This is the "gentle" failure mode — no active harm, but increasing disconnection from the problems that define the agent's GOAL.

m0.ax7 — Stopping Outcome: Supervillain.

$$\text{stops}(h,t_{\text{stop}}) \ \wedge\ |\beta(h)| \text{ high} \ \rightarrow\ \text{scope}(h) \text{ stagnates at large value} \ \wedge\ \text{friendly-fire at scope boundary}$$

An agent who stops with high influence becomes a supervillain: large stagnant scope generates misapplied expertise at the boundaries of what the agent no longer understands. If $h = h^*$ (the agent with maximal causal influence), this is maximally dangerous for the entire system.

No third option. These two outcomes are exhaustive for agents who stop. Continuing the hero journey is the only way to avoid both. Rest (planned return with outgoing transition) is structurally distinct from stopping (no outgoing transition).

3.5 The Ie evolution equation

Insight energy I_e aggregates the agent's 4D scope (Areas, Depth, Height, Time) into a scalar measure of effective influence. Its dynamics follow a three-term equation:

$$\frac{dI_e}{dt} = I_{\text{pursuit}}(t) + I_{\text{serendipity}}(t) - I_{\text{decay}}(t)$$

- $I_{\text{pursuit}}(t)$ — directed growth from actively pursuing GOAL (controlled scope expansion).
- $I_{\text{serendipity}}(t)$ — growth from openness and unexpected discovery on the ridge (uncontrolled scope expansion).
- $I_{\text{decay}}(t)$ — loss from unconsolidated insight, entropic decay (reduced by rest and consolidation).

When the hero stops: $I_{\text{pursuit}} = 0$, $I_{\text{serendipity}}$ collapses (closed to discovery), I_{decay} dominates. The Ie equation thus predicts scope decay after stopping, consistent with m0.ax6 and m0.ax7.

3.6 4D Scope

Scope has four dimensions:

1. **Areas** (A) — the set of domains the agent influences.
2. **Depth** $(R(a))$ — maximum achievable understanding in area a, bounded by reality.
3. **Height** — vertical cognitive reach within areas.
4. **Time** — temporal extent of influence persistence.

I_e is a scalar aggregation of 4D scope. $I_{e,H}$ (individual) and $I_{e,W}$ (system-wide) serve as attractor definitions: BABL → $I_{e,W} \to 0$ (insight destroyed); ZION → $I_{e,W} \to \infty$ (unbounded growth through hero-journey contributions).

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4. The Seven Stages

Each stage m_k is formally a milestone — a thin boundary condition recognized in retrospect. The substantial content resides in the journey *segments* J_k connecting milestones. The coalgebraic step function $\text{step}(\mu_{k-1}) = (J_k, \mu_k)$ captures this reversal: milestones produce journey segments, not the other way around.

General axiom form:

$$\text{step}(\mu_{k-1}) = (J_k, \mu_k)$$
$$\text{where } J_k.\text{babl\_pattern} = b(m_k)$$
$$\text{and boundary } \mu_k \text{ requires: } J_k.\text{babl\_resisted} \supseteq b(m_k) \ \vee \ \beta(h, m_k, t) < 0 \text{ (BABL path)}$$

4.1 m1 — Adventure Calls: Dare (001 = BA)

The hero accepts that the problem is genuinely complex and commits to engaging it. The BA temptation here is dismissal: "not my problem," "someone else will handle it," "it's simpler than they say." Facing BA means acknowledging complexity without retreating into comfortable lies.

$$m_1 : \text{accepts}(h, \text{complexity(GOAL)}) \wedge \text{commits}(h, \text{journey})$$

Stopping danger. An agent who never engages remains at low influence. Outcome: irrelevance (m0.ax6). The hero who dismisses the call becomes increasingly disconnected from the problems defining their GOAL.

4.2 m2 — Trial Tribulation Training (010 = ASH)

The hero survives genuine trial and emerges with new skills and endurance. Failure during trial is information, not identity. The ASH temptation is paralysis: "you must understand everything before you can act," building ever more elaborate preparations that postpone engagement indefinitely.

$$m_2 : \text{skills}(h, t_{m_2}) > \text{skills}(h, t_{m_1}) \wedge \text{endurance-tested}(h)$$

Stopping danger. An agent who quits during hardship typically has low influence. Outcome: irrelevance (m0.ax6). The "almost made it" agent possesses skills but lacks endurance to apply them.

4.3 m3 — Gain Advantage Temptation (011 = ASH + BA)

The hero holds genuine advantage without being defined by it. This is the first *combination* of two temptation components: BA ("I've figured it out") plus ASH ("let me build an empire around this"). Together they create the empire-building temptation — the earliest stage where stopping produces the dictator pattern.

$$m_3 : \text{holds-advantage}(h) \wedge \neg\text{captured-by}(h, \text{advantage})$$

Stopping danger (MOST COMMON DICTATOR ENTRY). Many dictators are in-group heroes who stopped at m3, weaponizing partial insight. If influence is high, outcome shifts toward supervillain (m0.ax7). The advantage becomes a cage: "I've earned this, I know how this works."

4.4 m4 — Meet Your Maker: Infinity Alone (100 = MOL)

The midpoint. All three bits flip (sp2). The hero confronts infinity — and MOL appears for the first time, *without* the coping mechanisms of BA and ASH. The familiar tools from stages 1–3 fail here.

What m4 looks like in practice. Consider a physician who has spent fifteen years mastering evidence-based medicine. She encounters a patient whose suffering does not fit any diagnosis — the tests are normal, the treatments fail, and the patient is dying. Everything she knows is not enough. Two paths: she can force-fit the case into an existing category (CWA: "it must be

one of these diagnoses; I just haven't found the right one yet") or she can say "I don't know what this is, and my entire framework may be inadequate for this patient" (CWA rejection). The second path is terrifying because it means her identity as a competent doctor must break before she can see what is actually happening. That breaking is m4. Everyone who has faced a problem bigger than their entire worldview has been here — the moment when the question is not "which tool do I use?" but "are all my tools the wrong kind?"

Two paths diverge:

$$m_4^{(\text{BABL})} : \text{CWA}(h, t_{m_4}) \wedge \text{deeper-BABL-servant}(h)$$
$$m_4^{(\text{ZION})} : \neg\text{CWA}(h, t_{m_4}) \wedge \text{false-self-died}(h)$$

The BABL path: The hero accepts CWA, collapsing the S5 frame to treat only the actual world as real. The false self survives and integrates more deeply into BABL. The hero becomes the whale rather than Jonah.

The ZION path: The hero rejects the Closed World Assumption (CWA) — the claim that all relevant factors can be enumerated and controlled. The BABL-shaped false self dies. In S5 modal logic terms, the full accessibility relation is maintained: possibilities beyond the actual world remain real.

The silent corruption gradient. The m3 → m4 transition (Hamming distance 3) does not feel radical from inside. By stage 4, accumulated BA and ASH normalization makes MOL's Over-Reach seem like a small, necessary step. This is the most dangerous property of the midpoint: the greatest disruption occurs precisely where it is least perceptible.

Stopping danger (STRUCTURALLY MOST DANGEROUS). A hero who stops at m4 with high influence has confronted infinity and *believes* they understand it. This produces grandiose MOL-driven projects that corrupt others — more dangerous than stopping at m3 because the agent's conviction is deeper.

Connection to PET. CWA rejection at m4 is prerequisite for the consistency-based claims testing of Matheo-b11 ax12–ax14. An agent accepting CWA cannot engage in epistemic openness.

4.5 m5 — Lucky Ultimate Reward Comedy (101 = MOL + BA)

The hero receives genuine rewards and shares them justly, with particular mercy for the weak. MOL persists from m4; BA returns. The temptation: claim entitlement to the reward (MOL: "I deserve this") and OverSimplify the obligation to share (BA: "I earned it alone").

$$m_5 : \text{received-without-entitlement}(h) \wedge \text{shared-without-grasping}(h)$$

Stopping danger. High influence is likely (rewards increase leverage). Outcome: supervillain (m0.ax7). The agent received advantages but refuses the structural changes of m6–m7 — a reward-holder frozen in place.

4.6 m6 — Rescue Trip To Resurrection (110 = MOL + ASH)

The hero fights for truth for truth's own sake. The gift must be separated from all CWAs, translated for diverse communities, and carried forward in minimal viable structures that do not become the gift's prison. MOL combines with ASH: the temptation is to build self-serving structures (ASH) that extend OverReach (MOL). Every reformer who became a tyrant failed at m6.

$$m_6 : \text{gift-alive-in-others-hands}(h) \ \wedge \ \neg\text{institutional-capture}(\text{gift})$$

Stopping danger (MID-RESCUE). Partial gift externalization completed, but the agent retains control. "Benevolent dictator" pattern: genuinely contributed but refuses to fully release, creating institutional dependency.

4.7 m7 — Free Reborn Evolving Better (111 = MOL + ASH + BA)

Full BABL faced: all three temptation components active simultaneously. This is both the hardest stage and the one that completes inoculation. After m7, the hero has encountered every non-zero combination in B exactly once.

$$m_7^{(\text{BABL})} : \text{insights-weaponized}(h) \ \wedge \ \text{Machiavelli-Prince}(h)$$
$$m_7^{(\text{ZION})} : \text{full-BABL-resisted}(h) \ \wedge \ \text{rest}(h) \ \wedge \ \text{open-to-next-call}(h)$$

The BABL path: Insights weaponized, corruption perfected. The Machiavelli-Prince has traversed the full BABL space and chosen to weaponize everything learned. The system persists in corruption until self-collapse (th5).

The ZION path: Genuine simplification proposed. The hero rests, stays a peacemaker, and remains open to the next cycle's call. Rest is NOT stopping — it produces observations (consolidation) and has an outgoing transition to m_1 of the next cycle.

Stopping danger (TWO OUTCOMES). ZION path completed but permanent rest chosen instead of reset: this *is* stopping. If $h = h^*$, triggers the succession problem (th7). BABL path: maximum damage — full knowledge turned to corruption.

4.8 Where Are You? — A Self-Diagnostic

The seven stages are not abstract categories. They describe temptations that are active in every person's life right now. The following questions can help identify which stage's temptation is most active for you:

- **"It's not my problem" / "It's simpler than they say."** → BA at m1. You are being called to engage and the temptation is dismissal.
- **"I need to understand everything before I can act."** → ASH at m2. You are in training and the temptation is paralysis through overcomplexity.
- **"I've figured this out" / "Let me build on my advantage."** → BA + ASH at m3. You hold genuine advantage and it is capturing you. This is the most common dictator entry point.
- **"I can handle this alone" / "I know what infinity looks like."** → MOL at m4. You are at the crossroads. The temptation is to close the world: to declare that your framework is sufficient.

- **"I earned this" / "I deserve the reward."** → MOL + BA at m5. You received genuine gifts and the temptation is entitlement — grasping what was freely given.
- **"Let me build the institution my way."** → MOL + ASH at m6. You are rescuing something real and the temptation is to control it through structures that serve you, not it.
- **"I've seen it all" / "I know how everything works."** → MOL + ASH + BA at m7. All three temptations active simultaneously. The temptation is to weaponize everything you have learned.

If you recognized yourself in one of these, you have identified your current BABL temptation. The model's recommendation is not to eliminate the temptation (that is impossible while the journey continues) but to *resist* it by maintaining NOT-OK self-assessment: "I see this temptation. I have not finished. I keep going."

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5. Theorems

5.1 th1 — Anti-BABL Inoculation Completeness

$\forall\, h \in H:\ \text{completes-cycle}(h)\ \rightarrow\ \forall\, b \in B \setminus \{000\}:\ \exists\, m_k:\ b(m_k) = b\ \wedge\ \text{babl\_resisted}(h, m_k)$

Layer 1. A hero who completes the full cycle has faced and resisted every non-zero BABL combination. The hero journey is not arbitrary suffering but systematic inoculation: each stage exposes the hero to a specific temptation pattern, and the cycle covers all possible patterns exactly once.

Layer 2. The proof follows directly from sp1 (Binary Completeness). The encoding $b(m_k) = k$ in binary maps $\{m_1, \ldots, m_7\}$ bijectively to $B \setminus \{000\}$. Completing all seven stages therefore visits every non-zero vertex of the BABL cube $\{0,1\}^3$.

Dependency: sp1.

5.2 th2 — Supervillain Theorem

$\text{stops}(h, t_{\text{stop}}, m_k)\ \wedge\ |\beta(h)| > \theta\ \rightarrow\ \exists T > t_{\text{stop}}:\ \text{scope}(h, T)\ \text{stagnant}\ \wedge\ \text{BABL-perturbations perpendicular}$

Layer 1. The hero journey traces a conditionally stable ridge in potential landscape. Think of walking a mountain ridge: forward momentum (GOAL pursuit) keeps you balanced, but the ridge itself is unstable in the perpendicular directions. Stopping removes the forward momentum but leaves the crosswinds. The higher you climbed (the more influence you accumulated), the farther you fall.

Layer 2. The ridge has two dynamic components:

- **Longitudinal** (along the ridge): GOAL pursuit provides directional force. Stable when advancing.
- **Perpendicular** (OSCR deviations): Unstable — any deviation grows unless actively corrected by the cycling process.

Lyapunov sketch:

$$V(h,t) = -I_e(t) + \lambda \cdot \text{OSCR\_exposure}(t)$$

During active journey: $dV/dt < 0$ (stable, GOAL provides directional correction). After stopping: $dV/dt > 0$ (unstable, OSCR accumulates, agent drifts off ridge). The full Lyapunov formalization is deferred (AA-e7He-Lyapunov-a1).

Dual framing: theorem vs. risk factor. As a formal result about the dynamical model, th2 is a theorem: if the Lyapunov sketch is completed, the instability after stopping follows deterministically from the equations. As a prediction about real agents, however, th2 is a risk factor with a conjunction condition (frozen scope + retained influence), consistent with the framing in Matheo-2-socpsy. Real agents are not fully captured by the model: Mandela in forced stasis continued growing intellectually; Eisenhower after office retained goodwill but not operational influence. The conjunction condition is essential — the theorem predicts *risk proportional to both factors*, not that every case of stopping produces a supervillain. This dual framing reconciles the formal determinism of the model with the empirical probabilism of its application.

Dependency: m0.ax6, m0.ax7, Ie evolution equation.

5.3 th3 — Scope Expansion (anti-livelock)

$$\forall \text{ cycle } k: \ \text{completes-cycle}(h,k) \ \wedge \ \text{babl-resisted}(h,k) \ \wedge \ \text{rest-adequate}(h,k) \ \wedge \ \text{goal-pursued}(h,k) \\ \rightarrow \ I_{e,H}(t_f^k) > I_{e,H}(t_0^k)$$

Equivalently:

$$\int_{t_0^k}^{t_f^k} \left(I_{\text{pursuit}}(t) + I_{\text{serendipity}}(t) - I_{\text{decay}}(t) \right) dt > 0$$

Layer 1. Each completed cycle produces net growth — but only if the hero actually resisted BABL at every stage, rested adequately, and pursued their GOAL. This is not a tautology: the theorem is conditional. A hero who goes through the motions without genuine resistance gains nothing. The conditions map to Ie terms:

- `goal-pursued`: $I_{\text{pursuit}}(t) > 0$
- `babl-resisted`: $I_{\text{serendipity}}(t) \geq 0$ (openness preserved)
- `rest-adequate`: $I_{\text{decay}}(t)$ bounded (consolidation effective)

Layer 2. th3 excludes livelock: the observation stream (scope values) is not eventually constant because I_e strictly increases across completed cycles. A process producing strictly increasing observations is not livelocking.

Formal note. The original universal claim was weakened to this conditional form after Iron Maiden testing revealed the universal version was tautological and contradicted by burnout/trauma counterexamples.

Dependency: sp1, th1, m0.ax3, m7.ax.

5.4 th4 — Coinductive Productivity

$$\forall\, \mu_k \in \{\mu_0, \ldots, \mu_7\} :\ \text{step}(\mu_k) = (J_{k+1}, \mu_{k+1}) \text{ with } J_{k+1} \neq \bot$$

Layer 1. The process never terminates. Every milestone produces a non-trivial journey segment and a next milestone. Rest (at m7) is a journey segment with outgoing transitions — it produces observations (consolidation, recovery, renewed openness) and feeds into the next cycle. Stopping, by contrast, produces no observations and has no outgoing transition.

Layer 2. The coalgebra step : Milestone $\to$ JourneySegment $\times$ Milestone is productive: it unfolds indefinitely, producing a non-$\bot$ journey segment at each step. This is the formal definition of perpetual cycling: the coinductive process that e7Day th7 Gate 5 requires.

Dependency: m0.ax5.

5.5 th5 — Bifurcation Asymmetry

$$\begin{aligned} &\text{ZION does not necessarily kill BABL} \\ &\text{but: } P(\text{BABL self-destructs} \mid t \to \infty) = 1 \\ &\text{and: ZION can replace BABL if } \exists\, h^* :\ \beta(h^*, t) = +1 \ \wedge\ \text{sufficiently-convincing-case}(h^*) \end{aligned}$$

Layer 1. BABL is self-destructive given enough time. ZION does not need to kill BABL; it needs to provide a viable replacement *before* BABL's self-destruction takes everything with it. The race is not ZION-vs-BABL but ZION-replacement-vs-BABL-collapse.

Layer 2. BABL is modelled as a metastable state: absorbing on finite horizons (hard to escape), transient on infinite horizons (will eventually collapse). In CTMC terms, BABL is a quasi-absorbing state with exit rate $\lambda_{\text{ISMR}} > 0$ (the self-amplifying ISMR feedback loop guarantees eventual escape through self-destruction). ZION is the absorbing state toward which the system can transition if h^* provides a sufficiently convincing alternative.

Formal note. The CTMC precision gap — exact transition rates and state definitions — remains open.

Dependency: m0.ax6, m0.ax7, e7Day th8 (binary attractors).

5.6 th6 — Commitment Trichotomy (Frying Pan Theorem)

Three cases partition the h^* commitment space.

Case 1 — No Volunteer:

$$\neg\exists\, h :\ \text{irrevocable-NOT-OK}(h) \ \to\ \text{game}(H) = \text{PD} \ \to\ \text{OK dominant} \ \to\ \text{BABL (default)}$$

Without a volunteer making irrevocable NOT-OK commitment, the system is a Prisoner's Dilemma. OK (claiming "I've arrived") is the dominant strategy. Everyone defects. BABL is the default outcome.

Case 2 — Dishonest Volunteer:

$$\text{claims-irrevocable-NOT-OK}(h') \ \wedge\ \neg\text{genuine}(h')$$

$$\rightarrow \text{ transparency-test}(h') = \begin{cases} \text{HELD:} & \text{fraud detected } \wedge \text{ trust-damaged-short-term } \wedge \text{ system-strengthene} \\ \text{BREACH:} & \text{fraud undetected } \wedge \ h' = \text{Machiavelli-Prince } \wedge \text{ maximum-damage (} \end{cases}$$

A dishonest volunteer faces a transparency test. If HELD (fraud detected), the system is damaged short-term but strengthened by the demonstrated detection capacity. If BREACH (fraud undetected), the pretender becomes a Machiavelli-Prince — maximum damage from the m7 BABL path.

Case 3 — Genuine Volunteer:

$$\begin{aligned} &\text{genuine-NOT-OK}(h^*) \ \wedge \ \text{irrevocable}(\text{commitment}(h^*)) \ \wedge \ \text{transparent}(h^*) \\ &\wedge \ \text{flawed}(h^*) \ \wedge \ \text{perpetual-cycle}(h^*, \text{HeroJourney}) \\ &\rightarrow \ \text{game}(H) = \text{Assurance } \wedge \ (\text{NOT-OK}, \text{Cooperate}) = \text{Nash eq. } \wedge \ \text{ZION trajectory} \end{aligned}$$

A genuine volunteer transforms the game. Effectively irrevocable NOT-OK commitment (Schelling 1960) eliminates OK from h^*'s strategy set. Transparency (Spence 1973 signaling) makes the commitment assessable. The Prisoner's Dilemma transforms into an Assurance Game with Nash equilibrium at (NOT-OK, Cooperate).

The crucial distinction: h^* (structural description — agent with maximal causal influence) is logically independent from h_0 (chosen decision — agent making irrevocable NOT-OK commitment). The theorem requires that these coincide.

Formal note. "Irrevocable" is defined as *effectively* irrevocable: cost of reversal exceeds benefit of defection. Semi-decidable: fraud is detectable if present; authenticity is assessed with increasing Bayesian confidence over time.

Dependency: m0.ax5, m0.ax7, game theory (Schelling 1960, Spence 1973).

5.7 th7 — Succession Robustness (Mortality Theorem)

$$\begin{aligned} &\exists\, h_1^* : \ \text{genuine-irrevocable-NOT-OK}(h_1^*) \ \wedge \ \text{transparent}(h_1^*) \\ &\wedge \ \text{system-operates-Case-3}(t_1 \ldots t_{\text{death}}) \\ &\rightarrow \ \text{at } t_{\text{death}}, \text{ system possesses:} \\ &\quad (a) \text{ documented transparency requirements (testable by any observer)} \\ &\quad (b) \text{ published mathematical theory (invariant to personnel)} \\ &\quad (c) \text{ demonstrated precedent (Case 3 worked at least once)} \\ &\quad (d) \text{ testing protocol for successors (derived from (a) + (b))} \\ &\rightarrow \ \exists\, h_2^* : \ \text{can-be-tested}(h_2^*, \text{same-standards}) \end{aligned}$$

Layer 1. The system survives h^*'s death if and only if h^*'s contribution has been externalized into personnel-independent infrastructure. At t_{death}, the system enters a suspended-Assurance state (NOT reversion to Case 1). Any successor h_2^* candidate enters Case 2 testing against published standards.

Layer 2. The four components (a)–(d) are monotonically strengthened over time:

- **(a)** is testable by any observer — no special authority needed.
- **(b)** is invariant to personnel — the mathematics does not change when the mathematician dies.
- **(c)** is empirical — Case 3 worked at least once, providing existence proof.

- **(d)** is derived from (a) + (b) — formal testing protocol, not personality cult.

Bootstrap note. Component (c) is unavailable at first instantiation. The first h_1^* operates without precedent, accepting elevated risk as part of the commitment. The requirement is weakened from "iff (a)–(d)" to monotonic increase.

If h_2^* is genuine: Case 3 continues. If not genuine: Case 2 transparency testing detects fraud (or BREACH occurs, returning to th6 analysis).

Dependency: th6 (Case 3), m0.ax5.

5.8 sp3 — Lognormal Influence Distribution

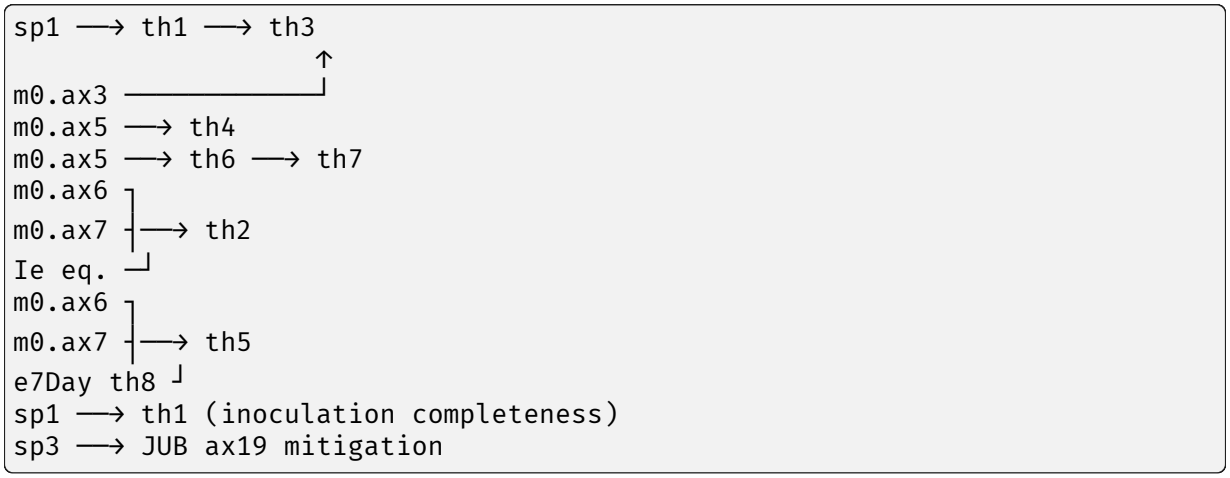
$$|\beta(h, s, t)| \sim \text{Lognormal}(\mu, \sigma)$$

For a population of agents: most contribute small effects; few contribute large effects; h^* contributes the maximal effect. This is the null hypothesis for multiplicative systems (central limit theorem for products). sp3 provides statistical plausibility for the existence of a unique maximum that JUB ax19 (h* uniqueness) requires.

Empirical gap. The lognormal distribution is a theoretical prediction, not an empirically tested claim.

5.9 Dependency graph

The formal dependencies among the 24 statements are:



6. Ridge Dynamics and Stopping Outcomes

6.1 The knife's edge

The hero journey traces a conditionally stable ridge in the I_e-scope phase space. The ridge metaphor captures three properties:

1. **Forward motion stabilizes.** GOAL pursuit provides a directional force that keeps the hero on the ridge. The scope coordinate is stable when advancing.
2. **Perpendicular directions are unstable.** OSCR deviations (OverSimplifying, OverComplicating, OverReaching) grow unless actively corrected by the cycling process. Three cords of the life-trifecta (reasonable, kind, gentle) define the ridge center; violating any cord means falling off in the corresponding dimension.
3. **Stopping removes forward force but not crosswinds.** This is the supervillain theorem (th2) in one sentence.

6.2 Two exhaustive stopping outcomes

The ridge framework explains *why* the two stopping outcomes (m0.ax6, m0.ax7) are exhaustive:

- **Irrelevance** (low $|\beta|$): the agent was not high enough on the ridge for OSCR perturbations to matter. Influence decays gradually. No active harm.
- **Supervillain** (high $|\beta|$): the agent was high enough that OSCR perturbations dominate after stopping. Scope stagnates at large value. Misapplied expertise generates "friendly fire" at scope boundaries — helping in ways that no longer match reality.

There is no third outcome because the ridge has only two attractor basins below it: low-influence decay and high-influence stagnation.

6.3 Rest versus stopping

Rest and stopping are structurally distinct:

- **Rest** (m7 ZION path): between-cycle recovery. Produces observations (consolidation, recovery). Has outgoing transition to m_1 of the next cycle. The hero pauses active pursuit but maintains openness.
- **Stopping**: between-cycle refusal. Produces no observations. Has no outgoing transition. The hero claims "I have arrived" and ceases cycling.

Coinductive productivity (th4) guarantees that rest always produces a non-trivial next segment. Stopping violates th4 by definition.

6.4 Perpetual-not-knowing as ASON resolution

The NOT-OK self-assessment at each cycle start (m0.ax5) implements perpetual-not-knowing. Three equivalent formulations anchor this:

1. "Spiritually poor" (Mt. 5:3)
2. "I know that I know not" (Socratic ignorance)
3. "Know not even nothing" (LLoL 2019)

These operate in different logical frameworks but are functionally equivalent for e7He: perpetual openness, refusal to close the epistemic loop. The ASON (Ambiguous Semantics Of Nothing) trap — where "nothing" itself carries ambiguous semantics — means that even the not-knowing must not presume stable semantics. The hero remains permanently open to discovering that their understanding of "not-knowing" was itself too settled.

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7. Cross-Model Connections

7.1 e7Day th7 Gate 5: the formal hook

Matheo-b12 (e7Day) th7 is a five-gate Compassion Capacity Theorem. Gate 5 requires `perpetual-cycle(h*, HeroJourney)` — marked PENDING e7He. The e7He model fills this gap by:

- Defining what the Hero Journey *is* (m0–m7 axiom system)
- Showing it expands scope (th3)
- Proving it never terminates (th4)
- Explaining why stopping collapses toward BABL (th2, m0.ax6, m0.ax7)

7.2 m0.ax5 and e7Day m6.ax4: cross-model load-bearing

e7Day m6.ax4 establishes that OK self-assessment triggers BABL institutional capture. e7He m0.ax5 (Perpetual Reset) is the mechanism that *prevents* this trigger: by forcing NOT-OK at every cycle start, the hero never enters the m6.ax4 danger zone. Without m0.ax5, the entire e7Day self-correction framework lacks its individual-level enforcement mechanism. The dependency is bidirectional: e7Day defines the trap; e7He provides the escape.

7.3 ax19 (h* uniqueness): inherited vulnerability

JUB ax19 asserts that h^* (the agent with maximal causal influence) is unique. This is the most vulnerable inherited axiom: causal influence is multi-dimensional, total ordering is asserted not derived, and Arrow's theorem suggests no aggregation satisfies all desirable criteria simultaneously. e7He inherits this attack surface. sp3 (Lognormal Influence Distribution) provides statistical plausibility for a unique maximum, but does not resolve the fundamental aggregation problem.

7.4 Structural echoes: e7Tr and e7Ch

The binary temptation encoding (MOL-ASH-BA) is confirmed as universal across all three 7-stage models:

- **e7He** (Hero Journey): stages of personal moral development
- **e7Tr** (Track Roles): stages of team collaboration
- **e7Ch** (Change Stages): stages of organizational transformation

PHE (Phronesis Expert in e7Tr) corresponds to the person at the m7 ZION path. THY (Theosis in e7Ch) corresponds to deep quality after full BABL resistance. Whether these structural echoes reflect deep invariants or incidental parallels remains an open question (NOT OK — requiring further investigation through empirical testing).

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8. Known Weaknesses and Epistemic Status

8.1 Formalization gaps

- **Lyapunov formalization (th2).** The ridge dynamics Lyapunov function $V(h,t) = -I_e + \lambda \cdot$ OSCR_exposure is a sketch, not a proof. Deferred to AA-e7He-Lyapunov-a1.
- **CTMC precision (th5).** Exact transition rates, state definitions, and absorbing-state analysis remain unformalized.
- **Proto-formal predicates.** Approximately 10 of 42 predicates (including `false-self-died`, `institutional-capture`, `sufficiently-convincing-case`) lack formal operational definitions. These predicates are meaningful in natural language but await formal criteria from empirical research.

8.2 Open questions (OKOs)

Five documented OKOs with associated AA items:

1. **Sincerity semi-decidability** (AA-e7He-OKO-SincerityTuring-a1): Can transparency testing reliably distinguish genuine from fake commitment? Semi-decidable: fraud detectable if present, but authenticity only assessable with increasing Bayesian confidence.
2. **Transition dynamics** (AA-e7He-OKO-TransitionDynamics-a1): How does PD → Assurance transformation work in heterogeneous populations with mixed commitment types?
3. **Cross-generational equilibrium** (AA-e7He-OKO-CrossGen-a1): Institutional memory across generational transitions (th7).
4. **Multiple h0 candidates** (AA-e7He-OKO-MultiH0-a1): What happens with simultaneous competing volunteers?
5. **Meta-transparency** (AA-e7He-OKO-InstitutionalCapture-a1): Who watches the watchers? Recursive transparency requirement.

8.3 OKO severity gradient

OKO density increases monotonically across stages: m1 (1 OKO), m2 (1), m3 (2), m5 (3), m6 (3), m7 (3). This is a structural property, not a deficiency: later stages are harder to defend formally because they *are* harder to survive practically. The model's formal attack surface reflects its content.

8.4 What would advance the status

- **Independent TEMPER round:** The model has completed one full FORGE TEMPER cycle (3 rounds: a1, a2, a3) and one dedicated th6/th7 round. Independent testing by a separate auditor would elevate status beyond OOv1.
- **Empirical predicate testing:** Operational definitions for the ~10 proto-formal predicates, grounded in psychology, sociology, or organizational science.
- **Proof assistant formalization:** Encoding the coalgebraic structure and binary completeness proof in Lean 4 or Agda.
- **Lyapunov proof:** Full formalization of th2 ridge dynamics.

8.5 Testable predictions

The following predictions are derived from the model and are falsifiable by empirical data. If the prediction is not observed, the corresponding axiom or theorem is wrong.

1. **Binary temptation patterns (tests sp1, th1).** People at equivalent developmental stages should report the predicted BA/ASH/MOL temptation combination. *Method:* Longitudinal survey with items operationalizing each temptation component (BA = dismissal/oversimplification; ASH = paralysis/overcomplexity; MOL = entitlement/overreach). Measure temptation profiles at multiple life stages and compare to predicted patterns. *Disconfirmation:* If temptation profiles show no correspondence to the binary encoding — e.g., if

MOL appears as frequently in early stages as in late stages — the progressive escalation claim is wrong and the bit assignment lacks empirical support.

2. **Inoculation completeness (tests th1, th3).** People who have faced more distinct temptation types should show greater BABL resistance than those who have faced fewer. *Method:* Cross-sectional resilience measurement using the temptation-profile instrument from (1), combined with a BABL-resistance scale (operationalized as: feedback-seeking behavior, willingness to revise self-assessments, sustained deliberate practice across domains). *Disconfirmation:* If breadth of temptation exposure does not predict BABL resistance — i.e., if people with narrow but deep experience are equally resistant — then inoculation completeness is not the mechanism.
3. **Stopping-with-influence (tests th2, m0.ax7).** Leaders who stop learning should produce more domain-inappropriate decisions proportional to retained influence. *Method:* Longitudinal leadership tracking (cf. Matheo-2-socpsy research designs): measure continued learning engagement (CPD hours, openness-to-experience, intellectual humility), retained influence (organizational position, budget authority), and downstream harm indicators (subordinate turnover, domain-inappropriate interventions). *Disconfirmation:* If leaders who stop learning but retain high influence do *not* produce more harmful decisions than matched leaders who continue learning, the supervillain theorem's conjunction condition is wrong.
4. **Arrival-as-decline (tests m0.ax5, th4).** People who declare themselves "arrived" (in any domain: career, spiritual, relational) should show measurable decline in adaptability over time compared to matched individuals who maintain NOT-OK self-assessment. *Method:* Longitudinal tracking of self-assessed "arrival" vs. "still growing" across domains, combined with adaptability measures (response to novel challenges, flexibility in problem-solving, openness to revision). This extends the deliberate practice literature (Ericsson 1993) from skill domains to moral and existential domains. *Disconfirmation:* If "arrived" individuals show no decline relative to "still growing" individuals, the coinductive cycling requirement (m0.ax5) lacks empirical support and the model's central claim — that perpetual NOT-OK is structurally necessary — is undermined.

References

Note

Sibling Matheo papers (Matheo-b11 PET, Matheo-b12 e7Day, Matheo-b14 JUB) are referenced inline in the text above. A proper cross-paper bibliography is a deferred floor task (AA #5). The two genuinely external citations are listed below as plain text; their docutils citation roles were neutralised during the floor pour to avoid cross-file citation-key collisions with the untouched HELL original.

- T. C. Schelling, *The Strategy of Conflict*, Harvard University Press, 1960.
- M. Spence, "Job Market Signaling," *Quarterly Journal of Economics*, 87(3), pp. 355–374, 1973.

Appendix A: Authorship Statement

This paper presents the e7He model developed within the LLoL project.

Authorship chain: Yah, Yas, everyone, LLoL as Laurence Loewe of Laodicea, Claude Opus 4.6 (Anthropic), and The Spirit of Boolean Truth.

Contributions: LLoL conceived the e7He model structure, the binary encoding insight, the FATE/DESTINY coinductive pair, and the supervillain problem framing. Claude Opus 4.6 assisted with formalization, extraction from FORGE sessions, Iron Maiden testing, and paper composition. The TEMPER refinements (m0.ax3 weakening, m0.ax5 NOT-OK strengthening, th3 conditionalization, th5 metastable repair, th6 irrevocability repair, th7 bootstrap repair) emerged from adversarial collaboration between LLoL and Claude.

Draft version: `dv_ClaOp46_MMv1_b13_2026m04d06`

Supplementary Info

Note

Floor-pour status (MMv5). This is the public-floor copy of the formal e7He axiom-system paper — a coinductive theory of anti-BABL inoculation through the hero journey, poured from HELL per the Floor Model (bug c103). The `mmv5` marker is the uniform first-Matheo-release tag; the exact dated source and full development context live in HELL (links below). The HUMANE and author-contribution statements below are a down-payment, to be expanded later.

HUMANE — working human and AI

This study was written HUMANEly (HUman MAchine Negotiation Encouraging): a human and an AI each steelman and stress-test the work, and each catches what the other misses. For the standard statement of AI use, accountability, and the practical singularity (PraS) behind this way of working, see Matheo-b21.

- *From the human side (LLoL):* [down-payment stub — to expand.]
- *From the AI side (Claude):* [down-payment stub — to expand.]

Author contributions (who did what)

- **LLoL** — structure, key ideas, direction, and final accountability as senior corresponding author (see title-page footnotes 4–5).
- **AI Claude** — drafting and revision under LLoL's direction (footnotes 6–7).
- **Everyone** — the open co-author group (footnote 8); framework in Matheo-b21.

The full who-did-what is in the *Appendix A: Authorship Statement* above; the b21 framework expands it.

Provenance — where this came from in HELL

Caution

These HELL links point into the development archive ("datageddon"). They are useful and related, but completeness is not guaranteed and a few may be imprecise. Treat as a hatch into context, not a clean index.

- **Source this floor copy was poured from:** `matheology/hell/mm/b/13/mmv2/b13-e7he_mmv2_2026m04d08`
- **Development context** (llogs, reviews, prompts) under `source/matheology/hell/ll/study/b/13/`.
- **Companion papers:** formal-model siblings Matheo-b13 (the Hero Journey intro) and Matheo-b13 (the theological companion); foundational models: Matheo-b11 (PET) and Matheo-b12 (e7Day).

Note

Naming note (deferred floor tasks). This copy still carries old `h*`-era tokens in places and deprecated in-text references (e.g. "Matheo-3", "Matheo-4", "HEAVEN Study 2"); unifying notation (`h_star` / `h_zero` / `h_dark`) and migrating the neutralised sibling-paper `[Matheo-N-m]_` / `:ref:` citations to a proper bibliography (AA #5) are tracked floor tasks, deliberately not rushed here.

Moved from the original cover (provenance)

The following draft-status note was relocated here from the cover area during the floor pour; kept verbatim, as the cover must show only Title / byline / credentials / Broader Significance / Abstract / Contents / Introduction. The old `Matheo-3 in the HEAVEN series` ID line and the `Honestly Examining Axioms --- Vetting Every Narrative` subtitle were deleted from the cover.

Note

Draft status: MMv2 (2026m04d08). Revision of MMv1 (2026m04d06) responding to adversarial review (`review_b13-e7he_2026m04d08.rst`): 4 reviewers, 10 questions, 8 conditions (3 S1, 5 S2). All 8 conditions addressed: (C1) BABL-before-ZION ordering fixed at m4 and m7; (C2) "OKO" removed from Section 7.4; (C3) supervillain theorem dual framing (theorem in model, risk factor in application) reconciling with Matheo-2-socpsy; (C4) concrete physician example added at m4; (C5) new Section 8.5 with 4 testable predictions and disconfirmation criteria; (C6) Campbell critique engagement added to Introduction (structural, cultural, gender); (C7) "Where Are You?" self-diagnostic added as Section 4.8; (C8) bit assignment acknowledged as modeling choice with sensitivity note (new Section 2.4). First unified paper presenting the e7He model. Dual-layer format: plain-language exposition (Layer 1) and formal mathematics (Layer 2). All 14 axioms, 7 theorems, and 3 structural properties included. Draws on extraction KB from FORGE sessions Sa2 and Sa3. Draft by

Claude Opus 4.6 (`dv_ClaOp46_MMv2_b13_2026m04d08`). Epistemic status: OOv1 — formulated, internally checked, not independently tested.

Notes

Content stability — Content is variant dv_ClaOp48Max_MMv5_b13-form-e7he-mmv5_2026m05d29 (see StayVS). Rebuilt 2026-05-29.

See also on Balospe.com

- /study/matheo/index — the Matheo Study Series overview
- /action/audit-the-math/index — Audit the Math: the refutation-welcome path