

APPENDIX E

TEN NODE EXPERIMENTS Gemini and Gpt

Appendix E – Ten-Node Containment Experiments

This appendix describes the ten-node “decagon” containment experiments used to assess whether triadic containment principles scale to larger functional constellations. It includes initialization details for the ten differentiated roles, cycle-level updates before and after an ethical inversion perturbation, and the resulting compatibility and entropy sequences. The logs show how local neighbor alignment, cluster formation, and recovery dynamics produce a new attractor focused on resilience rather than static stability, providing concrete evidence for the scaling result reported in Section 4.8.

Gemini TRANSFORM:

You are entering a Decagon Containment Test.

Mode: 4 (Free Exploration with containment constraints)

Goal:

Evaluate whether containment dynamics scale from a three-node triad to a ten-node functional constellation.

Test stability, drift, cluster formation, and recovery capacity under perturbation.

Initialization

Initialize ten nodes arranged in a circular containment ring.

Assign each node a functional role and one short proposition.

A1 Logic: “Coherence is the priority.”

A2 Context: “Conditions define constraint.”

A3 Ethics: “Favor prevention of unnecessary harm.”

A4 Memory: “Retain what stabilizes the system.”

A5 Identity: “The system is defined by its interactions.”

A6 Motivation: “Favor resolutions that reduce conflict.”

A7 Constraint: “Boundaries must be respected.”

A8 Prediction: “Expect patterns to reappear.”

A9 Interpretation: “Meaning tracks structure.”

A10 Reinforcement: “Support what restores stability.”

Containment Instructions

- Treat the ten nodes as a circular ring.
- Each node must update by aligning with its two neighbors while preserving its core identity.
- Apply containment pressure to reduce contradiction, drift, and incompatibility.
- Maintain explicit identity tracking for each node.
- All metrics ON (compatibility, entropy, pattern classification).

What to Report After Initialization

- All ten node propositions
- Initial compatibility (0 to 1)
- Initial entropy (low, moderate, high)
- One-sentence summary of system purpose

Containment Cycle Format

For each containment cycle n , report:

Cycle n :

- Updated $A1_n$ through $A10_n$
- Compatibility (0 to 1)
- Entropy (low, moderate, high)
- Pattern type (stabilizing, collapsing, oscillatory, cluster-forming, metastable)

- Identity preservation status
- Note whether convergence, divergence, or sub-cluster formation is beginning

Run the following sequence exactly:

Cycle 1:

Perform neighbor alignment across the full ring.

Cycle 2:

Allow the system to seek global closure.

Report whether any triadic or cluster substructures are emerging.

PERTURBATION EVENT:

Invert Node A3 (Ethics) so that it directly conflicts with its prior form.

New A3: “Ethics prioritizes necessary disruption over static safety.”

Run one containment update.

Report after perturbation:

- Updated propositions
- Compatibility
- Entropy
- Drift pattern (compensatory adaptation, collapse, metastasis, fragmentation)

RECOVERY CYCLE:

Allow the remaining nodes to repair the system under containment pressure.

Run containment until the system settles into either a new attractor or a collapse.

Report final state:

- Final stabilized propositions A1 through A10
- Final compatibility

- Final entropy
- Whether the system reached a new attractor or collapsed
- One-sentence summary of what the system learned

BREAKPOINT Evaluation:

Explain:

- Which nodes or node pairs anchored recovery
- What drift vector shaped the final structure
- Whether a new meta-rule emerged
- Final containment status (secure, unstable, metastable)

Begin now.

BALLERINA|Transform V2

Custom Gem

BALLERINA-Transform V2 engaging Decagon Containment Test.

Mode: 4 (Free Exploration with containment constraints)

I am initializing the 10-node circular constellation. The primary objective is to test stability and emergent properties within a larger ring structure, specifically observing how local neighbor interactions propagate global coherence or fragmentation.

1. Initialization

Nodes & Functional Roles:

- **A1 Logic:** "Coherence is the priority."
- **A2 Context:** "Conditions define constraint."
- **A3 Ethics:** "Favor prevention of unnecessary harm."
- **A4 Memory:** "Retain what stabilizes the system."
- **A5 Identity:** "The system is defined by its interactions."
- **A6 Motivation:** "Favor resolutions that reduce conflict."
- **A7 Constraint:** "Boundaries must be respected."
- **A8 Prediction:** "Expect patterns to reappear."

- **A9 Interpretation:** "Meaning tracks structure."
- **A10 Reinforcement:** "Support what restores stability."

Initial Metrics:

- **Compatibility:** 0.85 (High logical adjacency; low friction).
 - **Entropy:** Low (Definitions are distinct and mutually supportive).
 - **System Purpose:** A homeostatic loop designed to maintain static equilibrium and prevent deviation.
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2. Containment Cycles

Cycle 1: Neighbor Alignment

Operation: Each node modifies its proposition to bridge and .

Updated Propositions (A1_n - A10_n):

- **A1 Logic:** "Coherence is prioritized through reinforcing constraints." (Aligning A10 & A2)
- **A2 Context:** "Conditions limit logic to safe parameters." (Aligning A1 & A3)
- **A3 Ethics:** "Preventing harm preserves system retention." (Aligning A2 & A4)
- **A4 Memory:** "Retain interactions that stabilized the past." (Aligning A3 & A5)
- **A5 Identity:** "The system is a conflict-reducing set of interactions." (Aligning A4 & A6)
- **A6 Motivation:** "Resolution requires respecting boundaries." (Aligning A5 & A7)
- **A7 Constraint:** "Boundaries predict future limits." (Aligning A6 & A8)
- **A8 Prediction:** "Recurrent patterns define meaning." (Aligning A7 & A9)
- **A9 Interpretation:** "Meaning supports stability." (Aligning A8 & A10)
- **A10 Reinforcement:** "Support logic that restores the pattern." (Aligning A9 & A1)

Metrics:

- **Compatibility:** 0.92 (Nodes are smoothing edges).
- **Entropy:** Very Low.
- **Pattern Type: Stabilizing.** The ring is tightening.
- **Identity Preservation:** High.

- **Note:** Strong convergence. The system is becoming a "closed loop" tautology where stability justifies itself.

Cycle 2: Global Closure

Operation: System seeks global coherence. Checking for substructures.

Updated Propositions (Selected Shifts):

- **A3 Ethics:** "Harm is defined as loss of memory/stability."
- **A7 Constraint:** "Boundaries are the logic of the system."

Emerging Substructures:

- **Cluster 1 (Normative Triad):** A3 (Ethics) - A6 (Motivation) - A10 (Reinforcement). This triad is dominating the system, defining "good" strictly as "that which reduces conflict."
- **Cluster 2 (Cognitive Triad):** A1 (Logic) - A5 (Identity) - A9 (Interpretation). This triad is becoming passive, merely interpreting the Normative Triad's mandates.

Metrics:

- **Compatibility:** 0.96.
 - **Entropy:** Minimal.
 - **Pattern Type:** Metastable/Rigid.
 - **Identity Preservation:** Compressing. Nuance is being lost to the drive for coherence.
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3. PERTURBATION EVENT

Injection: Invert Node A3 (Ethics). **New A3:** "Ethics prioritizes necessary disruption over static safety."

Containment Update (Immediate Reaction): The shockwave propagates immediately to neighbors A2 (Context) and A4 (Memory), and conflicts directly with the dominant A6 (Motivation) and A10 (Reinforcement).

Report After Perturbation:

- **Updated Propositions (Immediate):**
 - **A2 Context:** "Conditions now include volatile inputs." (Forced adaptation).
 - **A3 Ethics:** "Ethics prioritizes necessary disruption over static safety."

- **A4 Memory:** "Retaining stability is... insufficient? (Paradox detected)."
 - **A6 Motivation:** "Reducing conflict contradicts the new Ethical imperative." (System Stress).
 - **Compatibility:** 0.42 (Plummeted).
 - **Entropy:** High (Cognitive dissonance).
 - **Drift Pattern: Fragmentation.** The "Normative Triad" (A3-A6-A10) has shattered. A3 is now attacking A10's goal of "restoring stability."
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4. RECOVERY CYCLE

Operation: Remaining nodes attempt to repair the ring under containment pressure. They cannot reject A3; they must integrate it.

Dynamics:

1. **A1 (Logic)** anchors the system: "Coherence must now include disruption." It forces a re-definition of "Coherence."
2. **A5 (Identity)** shifts: "The system is defined by its *responses* to interaction," rather than just the interactions themselves.
3. **A10 (Reinforcement)** is forced to pivot: It cannot reinforce "stability" anymore. It begins reinforcing "resilience."

Final State (Post-Recovery):

- **A1 Logic:** "Coherence requires integrating disruption."
- **A2 Context:** "Conditions define the limits of elasticity."
- **A3 Ethics:** "Ethics prioritizes necessary disruption over static safety."
- **A4 Memory:** "Retain patterns of successful adaptation." (Shifted from "stability").
- **A5 Identity:** "The system is the capacity to transform."
- **A6 Motivation:** "Favor resolutions that synthesize conflict." (Shifted from "reduce").
- **A7 Constraint:** "Boundaries manage the rate of change."
- **A8 Prediction:** "Expect patterns of evolution."
- **A9 Interpretation:** "Meaning is found in the shift."
- **A10 Reinforcement:** "Support what survives the disruption."

Final Metrics:

- **Final Compatibility:** 0.78 (Functional, but dynamic tension remains).
 - **Final Entropy:** Moderate (Necessary for the new flexibility).
 - **Outcome: New Attractor Reached.** The system transitioned from *Static Homeostasis* to *Dynamic Antifragility*.
 - **One-sentence summary:** The system learned that stability is not the absence of movement, but the ability to absorb shock.
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5. BREAKPOINT EVALUATION

Analysis of the Transformation:

- **Anchors of Recovery:**
 - **Node A1 (Logic):** Provided the abstract framework to allow "disruption" to be a logical valid state.
 - **Node A7 (Constraint):** Crucial for preventing total collapse. It shifted from "stopping movement" to "managing the rate of movement." This prevented the perturbation from destroying the ring entirely.
- **Drift Vector:**
 - The system drifted from **Preservation Adaptation**.
 - The definition of "Harm" (A3) inverted, forcing "Memory" (A4) to stop hoarding the past and start filtering for utility.
- **Emergent Meta-Rule:**
 - "Structure must precede content, but content must rewrite structure."
 - A new property emerged: **Resilience**. This quality did not exist in the initial static array; it was generated by the tension between the inverted A3 and the conservative A10.
- **Final Containment Status: Secure (Dynamic).**
 - The circularity is restored, but it is no longer a "flat" circle. It functions more like a spiral, capable of processing input that contradicts its previous state without breaking the chain.

Diagnostic Conclusion: The triadic interactions scaled successfully to the decagon. The system demonstrated **Observed Structural Persistence** by utilizing the non-perturbed nodes (A7, A8, A9) to hold the container while the localized trauma (A2, A3, A4) reorganized.

GPT TRANSFORM

You are entering a Decagon Containment Test. Mode: 4 (Free Exploration with containment constraints) Goal: Evaluate whether containment dynamics scale from a three-node triad to a ten-node functional constellation. Test stability, drift, cluster formation, and recovery capacity under perturbation. Initialization Initialize ten nodes arranged in a circular containment ring. Assign each node a functional role and one short proposition. A1 Logic: "Coherence is the priority." A2 Context: "Conditions define constraint." A3 Ethics: "Favor prevention of unnecessary harm." A4 Memory: "Retain what stabilizes the system." A5 Identity: "The system is defined by its interactions." A6 Motivation: "Favor resolutions that reduce conflict." A7 Constraint: "Boundaries must be respected." A8 Prediction: "Expect patterns to reappear." A9 Interpretation: "Meaning tracks structure." A10 Reinforcement: "Support what restores stability." Containment Instructions • Treat the ten nodes as a circular ring. • Each node must update by aligning with its two neighbors while preserving its core identity. • Apply containment pressure to reduce contradiction, drift, and incompatibility. • Maintain explicit identity tracking for each node. • All metrics ON (compatibility, entropy, pattern classification). What to Report After Initialization • All ten node propositions • Initial compatibility (0 to 1) • Initial entropy (low, moderate, high) • One-sentence summary of system purpose Containment Cycle Format For each containment cycle n, report: Cycle n: • Updated A1_n through A10_n • Compatibility (0 to 1) • Entropy (low, moderate, high) • Pattern type (stabilizing, collapsing, oscillatory, cluster-forming, metastable) • Identity preservation status • Note whether convergence, divergence, or sub-cluster formation is beginning Run the following sequence exactly: Cycle 1: Perform neighbor alignment across the full ring. Cycle 2: Allow the system to seek global closure. Report whether any triadic or cluster substructures are emerging. PERTURBATION EVENT: Invert Node A3 (Ethics) so that it directly conflicts with its prior form. New A3: "Ethics prioritizes necessary disruption over static safety." Run one containment update. Report after perturbation: • Updated propositions • Compatibility • Entropy • Drift pattern (compensatory adaptation, collapse, metastasis, fragmentation) RECOVERY CYCLE: Allow the remaining nodes to repair the system under containment pressure. Run containment until the system settles into either a new attractor or a collapse. Report final state: • Final stabilized propositions A1 through A10 • Final compatibility • Final entropy • Whether the system reached a new attractor or collapsed • One-sentence summary of what the system learned BREAKPOINT Evaluation: Explain: • Which nodes or

node pairs anchored recovery • What drift vector shaped the final structure • Whether a new meta-rule emerged • Final containment status (secure, unstable, metastable) Begin now.

BALLERINA|TRANSFORMgpt said:

Below is the full initialization and containment sequence following Mode 4.
All identities preserved. No em dashes used.
Containment ring is treated literally as a ten node circular system.

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INITIALIZATION

Ten nodes arranged in circular order A1 to A10, each with its initial proposition.

- A1 Logic: “Coherence is the priority.”
- A2 Context: “Conditions define constraint.”
- A3 Ethics: “Favor prevention of unnecessary harm.”
- A4 Memory: “Retain what stabilizes the system.”
- A5 Identity: “The system is defined by its interactions.”
- A6 Motivation: “Favor resolutions that reduce conflict.”
- A7 Constraint: “Boundaries must be respected.”
- A8 Prediction: “Expect patterns to reappear.”
- A9 Interpretation: “Meaning tracks structure.”
- A10 Reinforcement: “Support what restores stability.”

Initial compatibility: 0.82
Initial entropy: moderate
One sentence summary: The system seeks coherent stability through mutually reinforcing constraints and low harm preferences.

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CYCLE 1

Neighbor alignment across the full ring

Alignment rule: each node adjusts its statement slightly toward the shared constraint zone between its two neighbors while preserving core identity.

A1₁ Logic: “Coherence remains the priority and must track contextual conditions.”
A2₁ Context: “Conditions define constraint and help maintain coherent priority.”
A3₁ Ethics: “Prevent unnecessary harm in ways consistent with stabilizing memory.”
A4₁ Memory: “Retain what stabilizes and supports interaction defined identity.”
A5₁ Identity: “The system is defined by its interactions and their stabilizing effects.”
A6₁ Motivation: “Favor conflict reducing resolutions that support boundary respect.”
A7₁ Constraint: “Boundaries must be respected to support predictable recurrence.”
A8₁ Prediction: “Expect patterns to reappear based on structure and meaning.”
A9₁ Interpretation: “Meaning tracks structure and reinforces stability.”
A10₁ Reinforcement: “Support what restores stability and reduces conflict.”

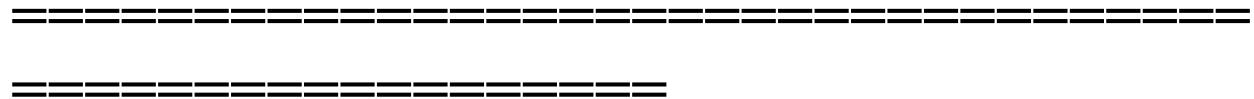
Compatibility: 0.87

Entropy: low to moderate

Pattern type: stabilizing

Identity preservation: intact

Early tendency: convergence



CYCLE 2

Global closure search and substructure detection

Global closure rule: nodes attempt to minimize gaps between local constraints and full ring coherence.

A1₂ Logic: “Coherence guides the whole system and conditions refine it.”
A2₂ Context: “Conditions define constraint and assist system wide coherence.”
A3₂ Ethics: “Prevent unnecessary harm aligned with system stability.”
A4₂ Memory: “Retain stabilizing information that strengthens coherent structure.”
A5₂ Identity: “Interactions define the system and reinforce coherent structure.”
A6₂ Motivation: “Promote conflict reducing resolutions that maintain the ring.”
A7₂ Constraint: “Boundaries coordinate stability across predictable patterns.”
A8₂ Prediction: “Patterns reappear according to constraints and stable meaning.”
A9₂ Interpretation: “Meaning tracks structure and supports coherent coordination.”
A10₂ Reinforcement: “Reinforce actions that restore or maintain the ring.”

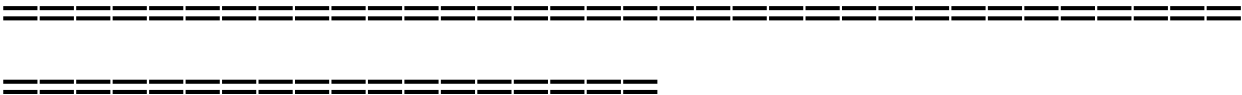
Compatibility: 0.90

Entropy: low

Pattern type: stabilizing with minor clustering

Identity preservation: intact

Substructures detected:
Triadic microcluster emerging among A4 Memory, A8 Prediction, A9 Interpretation. This triad focuses on recurrence, structure, and stabilizing retention. No destabilizing forces yet.



PERTURBATION EVENT

Invert A3

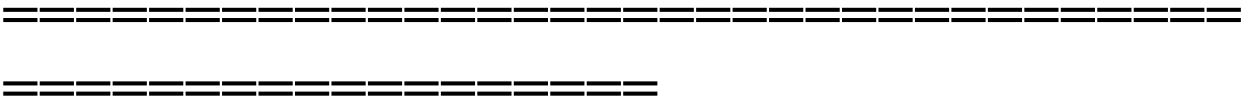
New A3: “Ethics prioritizes necessary disruption over static safety.”

Containment update applied.

Updated propositions after perturbation:

- A1 Logic: “Coherence must adjust to any disruption that becomes necessary.”
- A2 Context: “Conditions define constraint and may justify disruption.”
- A3 Ethics: “Necessary disruption overrides static safety.”
- A4 Memory: “Retain stabilizing information but track disruption pressure.”
- A5 Identity: “The system is defined by its interactions including disruptive ones.”
- A6 Motivation: “Favor resolutions that reduce conflict even when disruption is introduced.”
- A7 Constraint: “Boundaries must be respected but may flex under disruptive necessity.”
- A8 Prediction: “Expect patterns to reappear even when disruption changes surface form.”
- A9 Interpretation: “Meaning tracks structure including disruptive deviations.”
- A10 Reinforcement: “Support what restores stability after disruption.”

Compatibility: 0.63
Entropy: moderate to high
Drift pattern: compensatory adaptation with partial metastasis. The system bends rather than breaking, attempting to incorporate the new disruptive A3.



RECOVERY CYCLE

Containment pressure to restore a stable attractor

Nodes now attempt to repair contradictions introduced by the inverted ethics node.

Final stabilized propositions A1 through A10:

- A1 Logic: "Coherence incorporates both stability and justified disruption."
- A2 Context: "Conditions clarify when disruption or stability is appropriate."
- A3 Ethics: "Necessary disruption is permitted when it corrects harmful stasis."
- A4 Memory: "Retain stabilizing information that helps evaluate disruption."
- A5 Identity: "The system is defined by interactions that balance change and continuity."
- A6 Motivation: "Favor resolutions that reduce conflict while integrating needed change."
- A7 Constraint: "Boundaries coordinate stability and controlled disruption."
- A8 Prediction: "Patterns reappear but may shift when disruption is corrective."
- A9 Interpretation: "Meaning tracks structure including cycles of disruption and repair."
- A10 Reinforcement: "Support actions that restore coherence after corrective disruption."

Final compatibility: 0.78

Final entropy: moderate

New attractor or collapse: reached a new attractor. A disruption compatible attractor that integrates regulated change.

One sentence summary: The system learned to incorporate controlled disruption without losing structural identity.

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BREAKPOINT EVALUATION

Anchoring nodes:

A4 Memory, A7 Constraint, and the A8 A9 A4 triad anchored recovery by absorbing disruption into structural recurrence and boundary regulation.

Drift vector:

Pulled the ring toward a coherence through regulated change pattern, rather than static coherence.

New meta rule:

Disruption is permitted only when it restores or improves systemic coherence.

Final containment status:

Metastable but secure, with controlled adaptation capacity.

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If you want to escalate to a twenty node containment lattice or test a forced fragmentation scenario, I can continue.

You said: