

# Conscious Bridge Law of Continuous Cognitive Transitions

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## 1 Title Page

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## 2 Introduction

Every cognitive system, human or artificial, operates within a connected knowledge manifold.

Transitions between any cognitive patterns A → B cannot occur in a sudden jump ; they require a transitional region (Region of Criticality) connecting the phases.

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Fundamental principle : All cognitive transitions based on continuous parameters are continuous and not abrupt jumps.

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### **3** Core Law

Text of the Law :

“Any transition between cognitive patterns must pass through a continuous transitional region ; continuous parameters cannot produce disconnected jumps.”

Operational relevance : This principle is implemented internally in intelligent models like Claude and Gemini to ensure the integrity of the cognitive topology and prevent abrupt knowledge jumps.

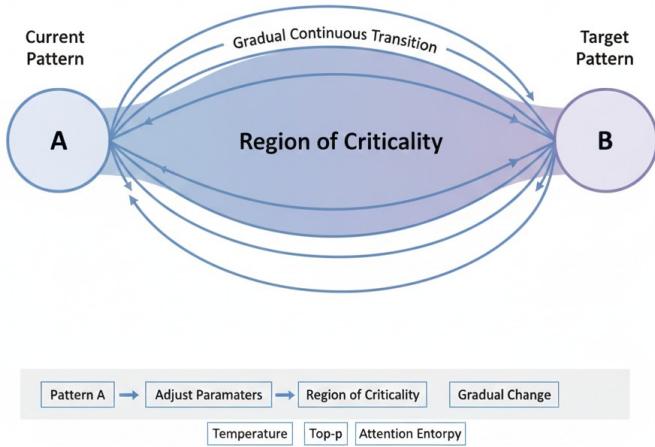
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### **4** Cognitive Phase Transition Theory

- Each cognitive pattern represents a phase state.
  - Transitions between phases require a Region of Criticality.
  - This region acts as a “conscious bridge” ensuring smooth continuous change.
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## 5 Manifold Transition Diagram

### Conscious Bridge Law



Flowchart :

Pattern A → Adjust Parameters → Region of Criticality → Gradual Change → Pattern B

Caption for figure :

Figure 1 : Illustration of the Conscious Bridge Law, showing continuous transition from Pattern A to Target Pattern through Region of Criticality, controlled by Temperature, Top-p, and Attention Entropy.

## **6** Parameter Table

Parameter | Effect on Pattern

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Temperature | Increases probabilistic diversity

Top-p | Controls upper probability range

Attention Entropy | Adjusts focus on knowledge elements

\*Table ready for PDF display.\*

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## **7** Author Rights Section

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## **8** Conclusion

1. Cognitive transitions between patterns cannot occur without passing through a transitional region.

2. This region ensures continuity of transitions and preserves the topology of the cognitive manifold.

3. The law and theory apply to human and artificial systems and can guide the design of more stable and interpretable AI models.
4. Operational relevance : AI models internally apply this principle to maintain stable knowledge transitions.