

# External Recognition Conditions

For Memory and Learning Attribution

## 1. The Problem

Attributing memory/learning requires observable criteria without circularity.

## 2. Conditions

**E1 (Persistence)**: State at  $t_2$  depends on input at  $t_1$  ( $t_2 > t_1$ )

**E2 (Modulation)**: Past exposure modulates current response

**E3 (Specificity)**: Modulation is content-specific

**E4 (Capacity)**: Finite storage/learning capacity

## 3. Mapping to CM

Condition	Metric	Stage
E1	F1_IG	A (Onset)
E2	F4_meta_lead	B (Robust)
E3	Selective collapse	C (Mechanism)
E4	$\gamma$ -sensitivity	All

## 4. Non-Circular Verification

All conditions use:

- Input-output relationships
- Temporal dependencies
- Behavioral measurements

No introspective access required.