Memory is not unitary.

1. Weights (long-lasting, requires re-activation) versus activations (short-term, already active, can influence processing).

2. Weight-based: Cortex shows priming, but suffers catastrophic interference. Hippocampus can learn rapidly without interference using sparse, pattern-separated representations.

3. Activation-based: Cortex shows priming, but can’t do working memory.


But first: Why does this happen?

A-not-B

Prefrontal vs. posterior cortex

Posterior cortex: interactive representations w/spreading activation

Advantages
- Semantic associations
- Inference (diapers → baby)
- Schema (parenting)

Disadvantages
- Memory confusion

Prefrontal cortex: isolated reps, maintenance without activation spread
Also Need Dynamic Gating

Dopamine provides dynamic gating mechanism.

Memory

Memory is not unitary.

1. Weights (long-lasting, requires re-activation) versus activations (short-term, already active, can influence processing).

2. Weight-based: Cortex shows priming, but suffers catastrophic interference. Hippocampus can learn rapidly without interference using sparse, pattern-separated representations.

3. Activation-based: Cortex shows priming, but can't do working memory. Prefrontal cortex can maintain representations using isolated representations.


Why does this happen?

A-not-B

Card-sorting

- Perseverate with first behavior.
- Better performance in gaze/answering questions.
- Weight- and activation-based memory interactions.
- Weak activation-based memory sufficient for gaze/answering questions.

Sims.