Contingent attentional capture by stimuli that match long-term memory representations.

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Background

Attentional Capture

- Salient objects in the environment capture visual attention¹
- Visual attention is also captured by higher-level representations²,³,⁴

Do objects in our environment automatically capture attention if they resemble items in our long-term memory?

Methods

Phase 1: LTM Training

Memory Items

E1: Which direction did the target rotate?

E2 & E3: What colour box was the target in?

Phase 2: Spatial Attention Posner Cueing Paradigm

Task: Find the item from Memory

CUE

E1 & E2: 50 ms
E3: 150, 250, or 400 ms

Results

Reactions Times

Accuracy

E1

Memory Novel

E2

Cue Type

Matched Novel

E3

SOA

References


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Conclusions

- Long-term memory can guide attentional capture
- Requires fast matching of perceptual input to LTM
- Possible interaction between attentional capture and rapid recollection?

Type of LT Memory?

Phase 1: LTM Training

Memory Items

E1: Which direction did the target rotate?

E2 & E3: What colour box was the target in?

Phase 2: Attentional Blink RSVP Task

Task: Did an object from Set A appear?

set A, B, or neither?

Anticipated Results

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