



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

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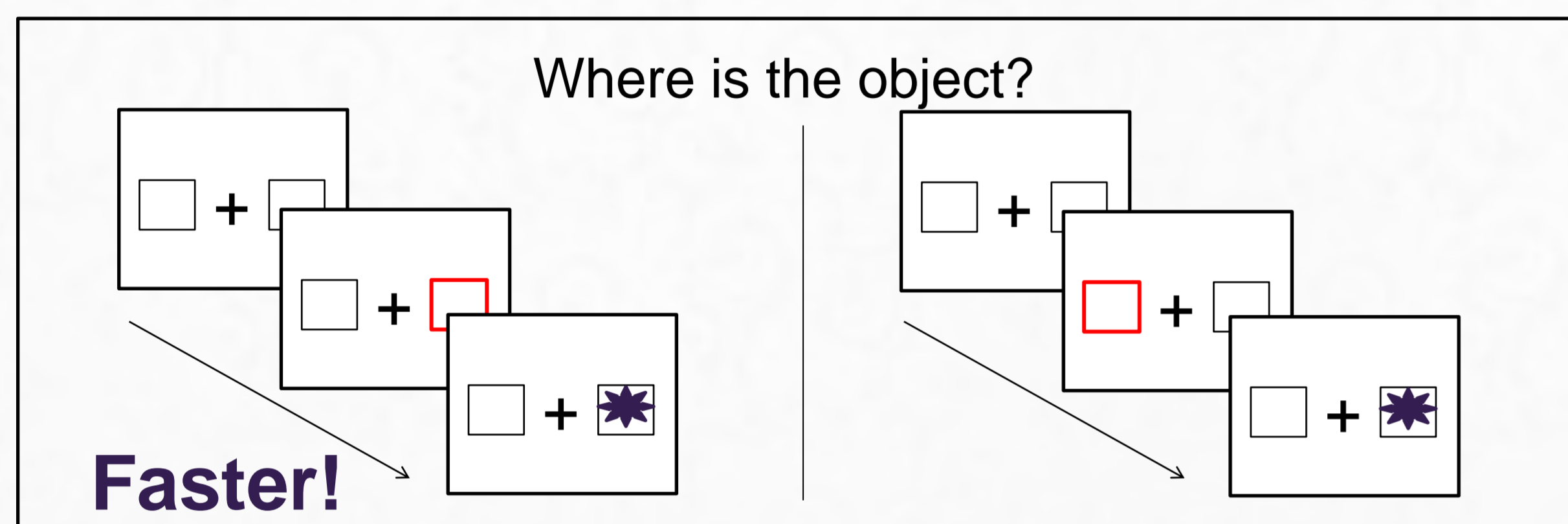


Visual Cognitive Neuroscience Lab

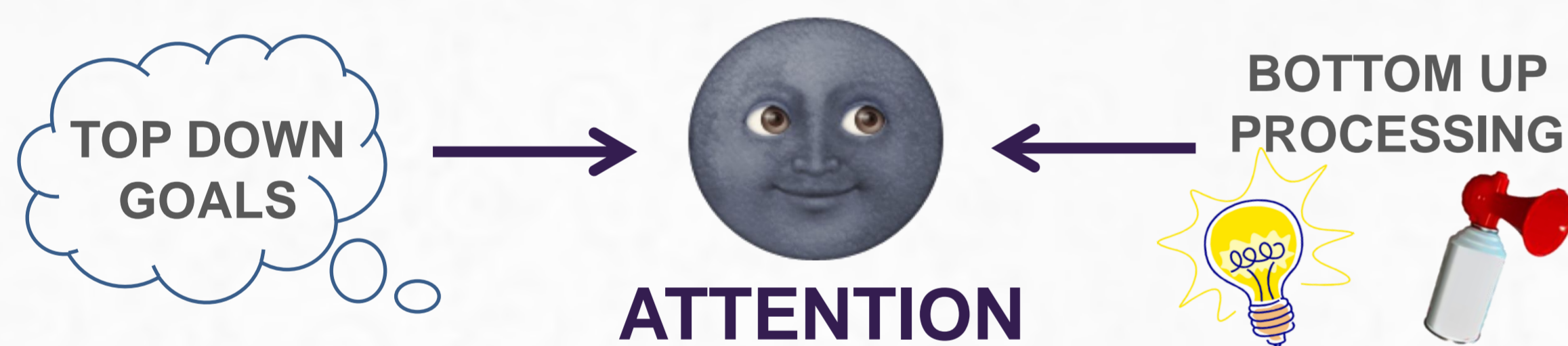
## Background

### Attentional Capture

- Salient objects in the environment capture visual attention<sup>1</sup>



- Visual attention is also captured by higher-level representations<sup>2,3,4</sup>



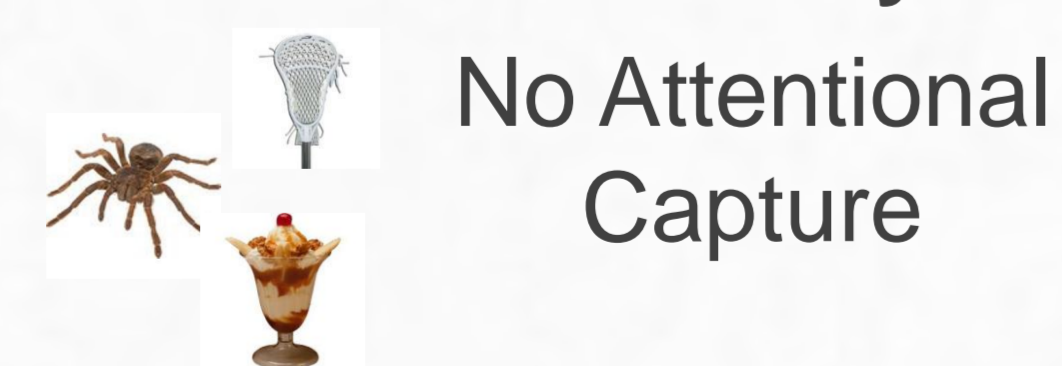
Do objects in our environment automatically capture attention if they resemble items in our long-term memory?

## Hypotheses

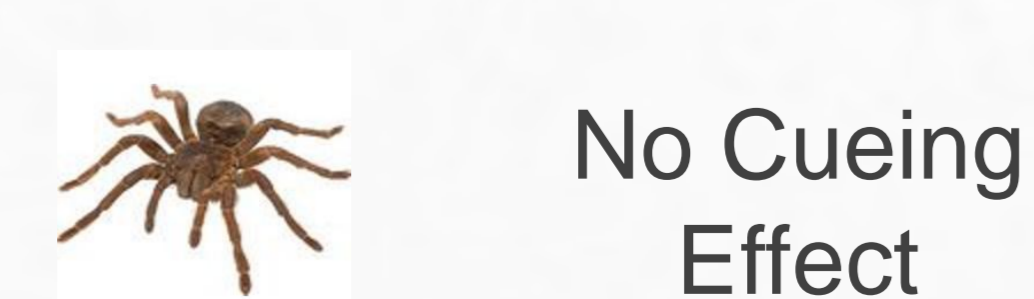
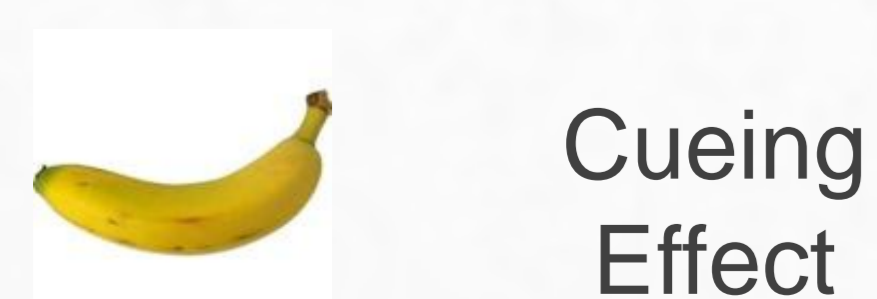
### Long-Term Memory Items



### Novel Items Not in Memory



### Behavioural Effect

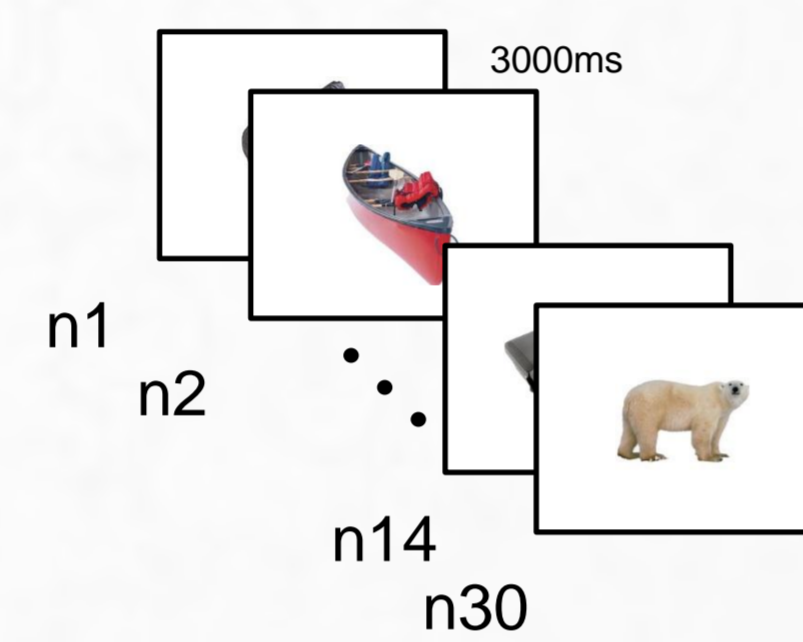


Selective cueing effect for LTM items

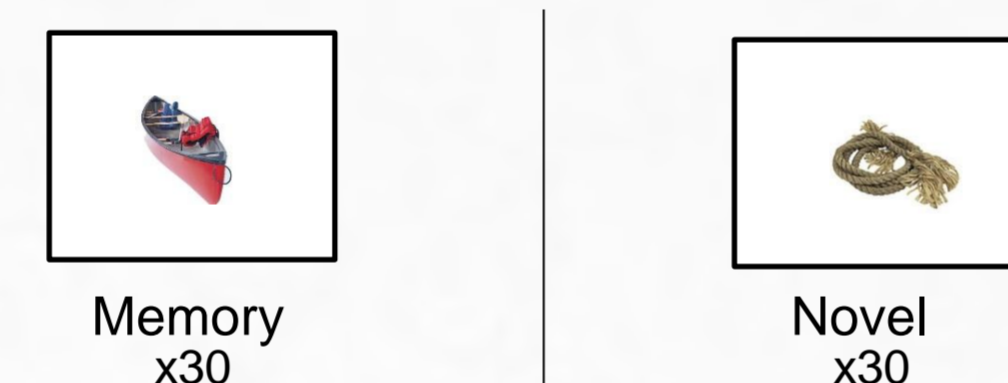
## Methods

### Phase 1: LTM Training

#### Memory Items

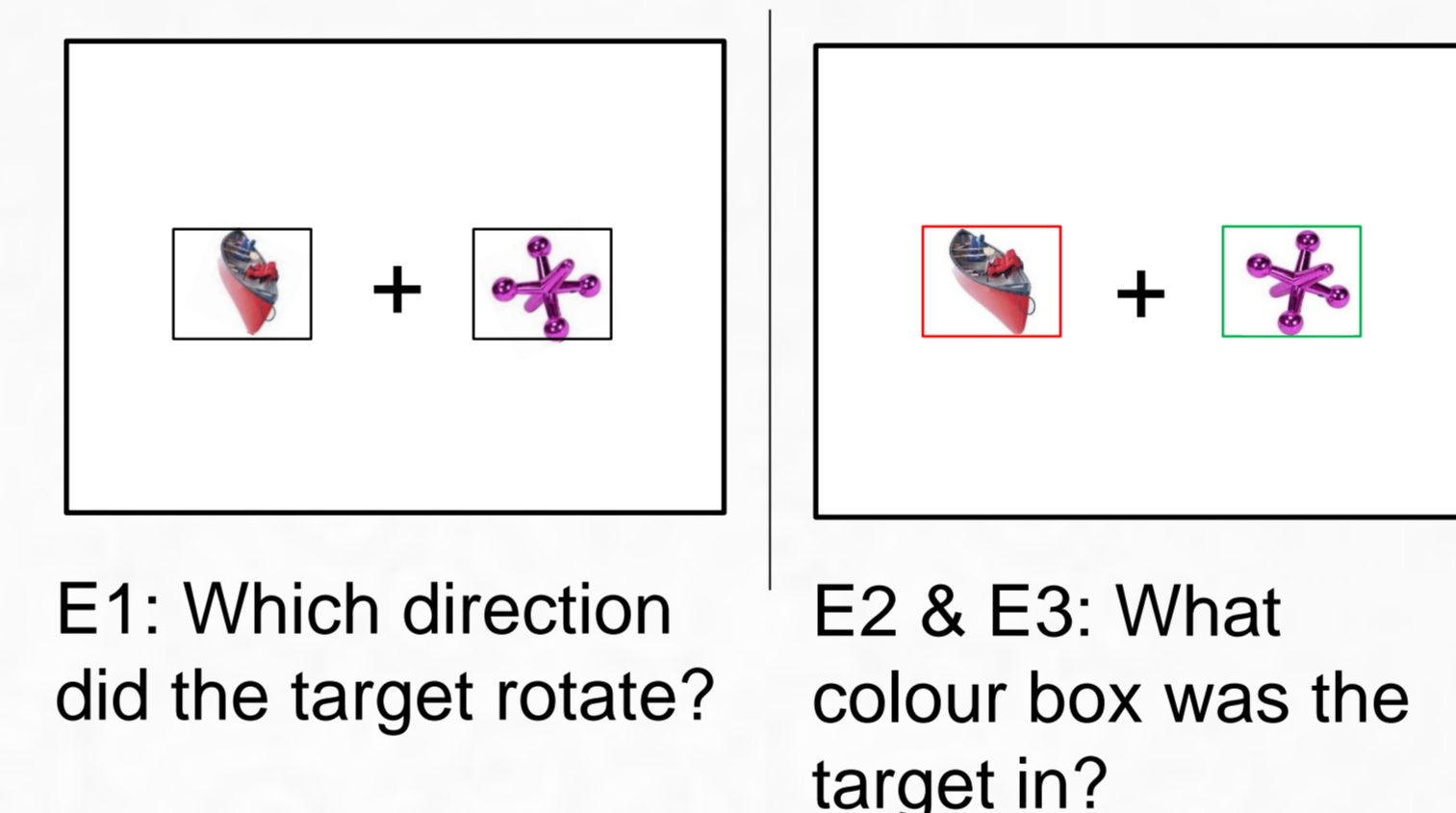
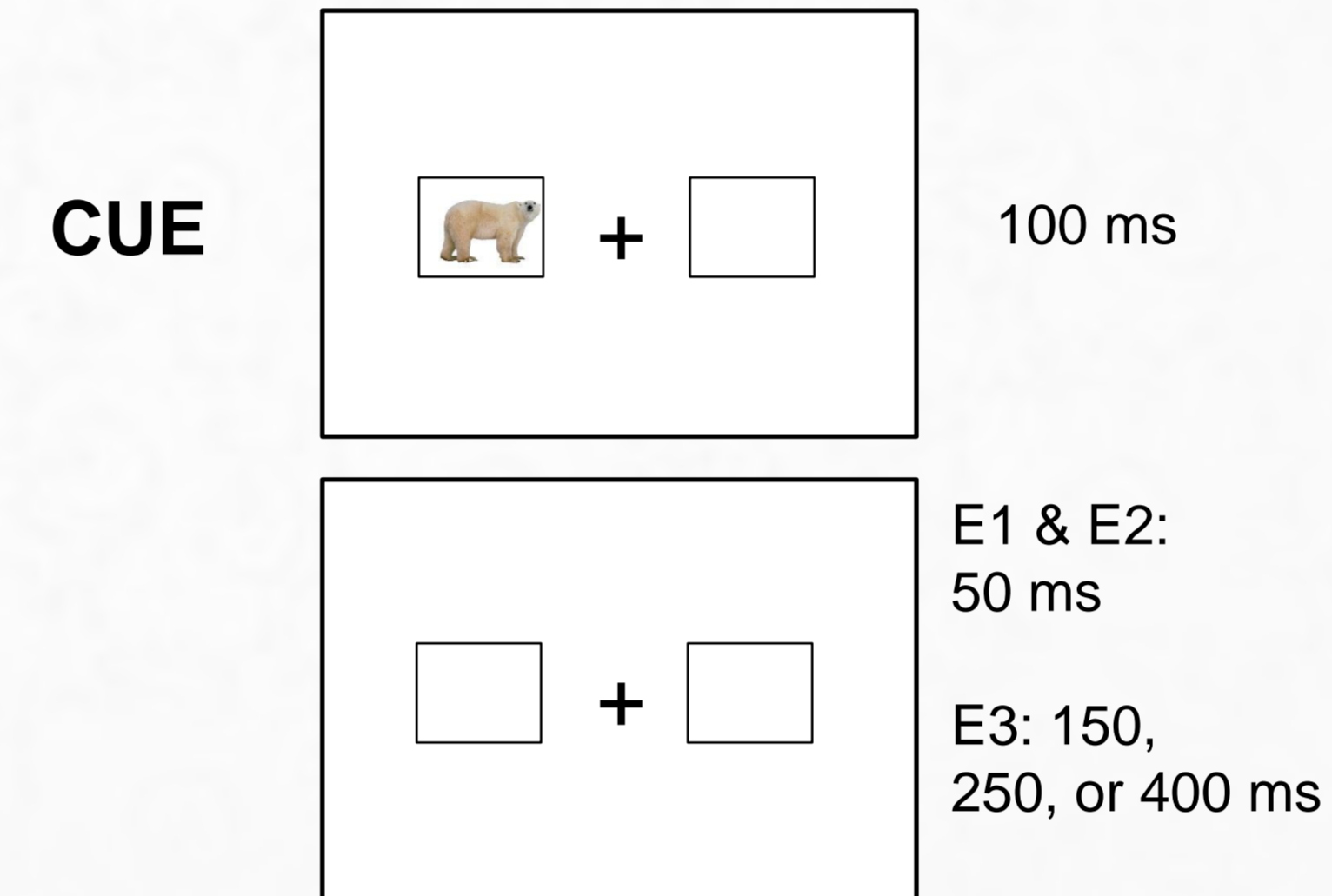


#### Novel or Memory Item?



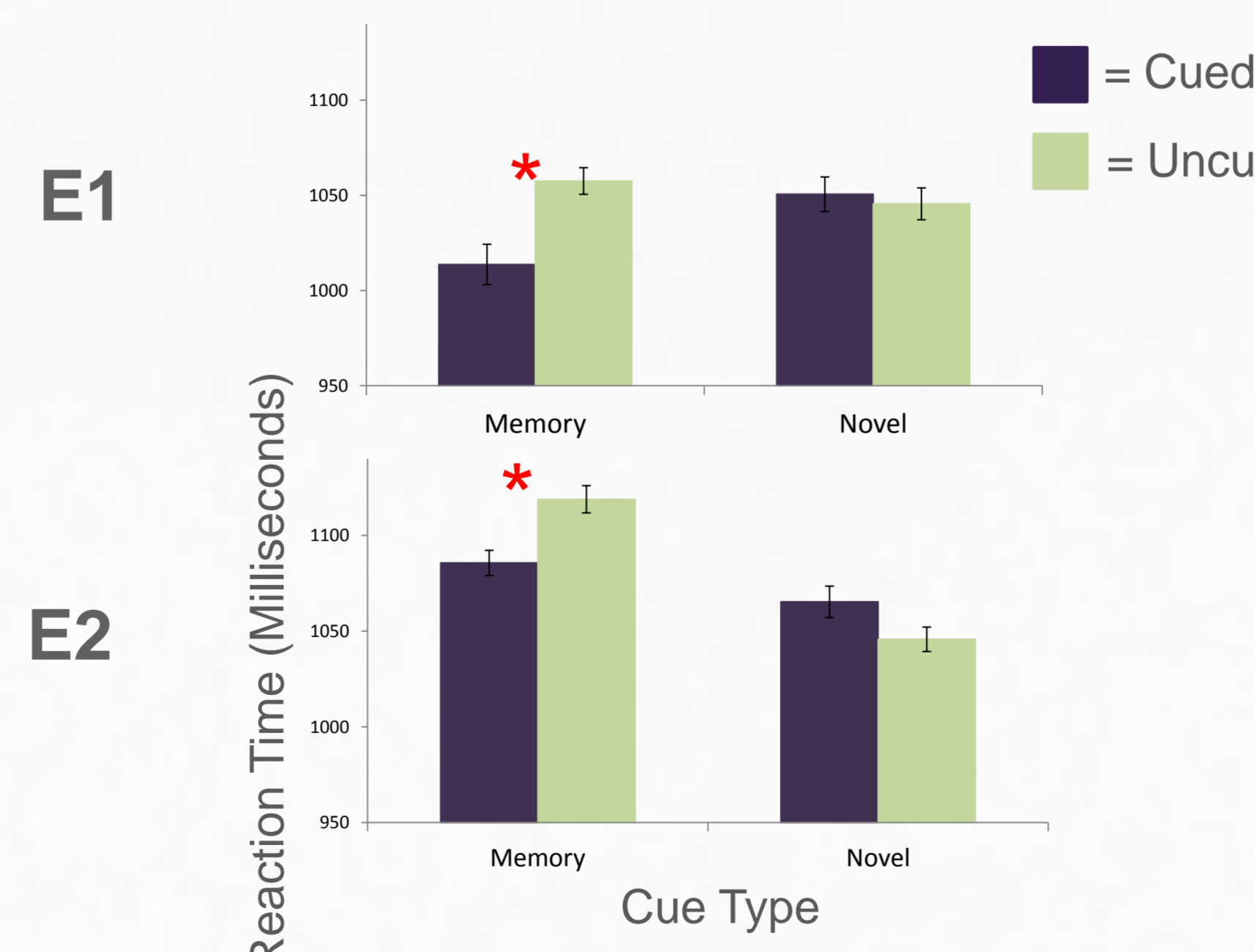
### Phase 2: Spatial Attention Posner Cueing Paradigm

Task: Find the item from Memory

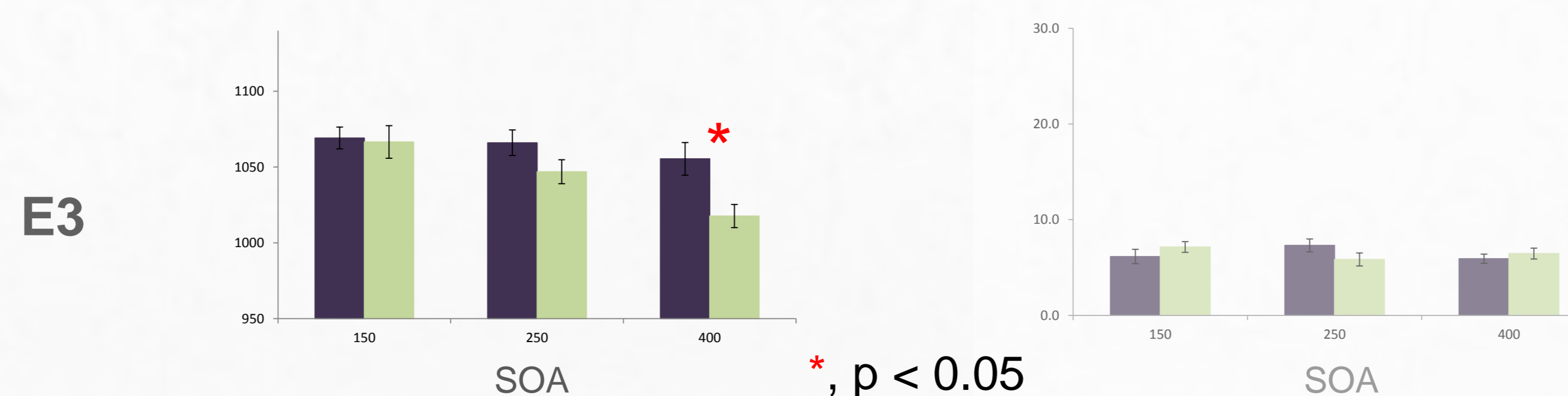
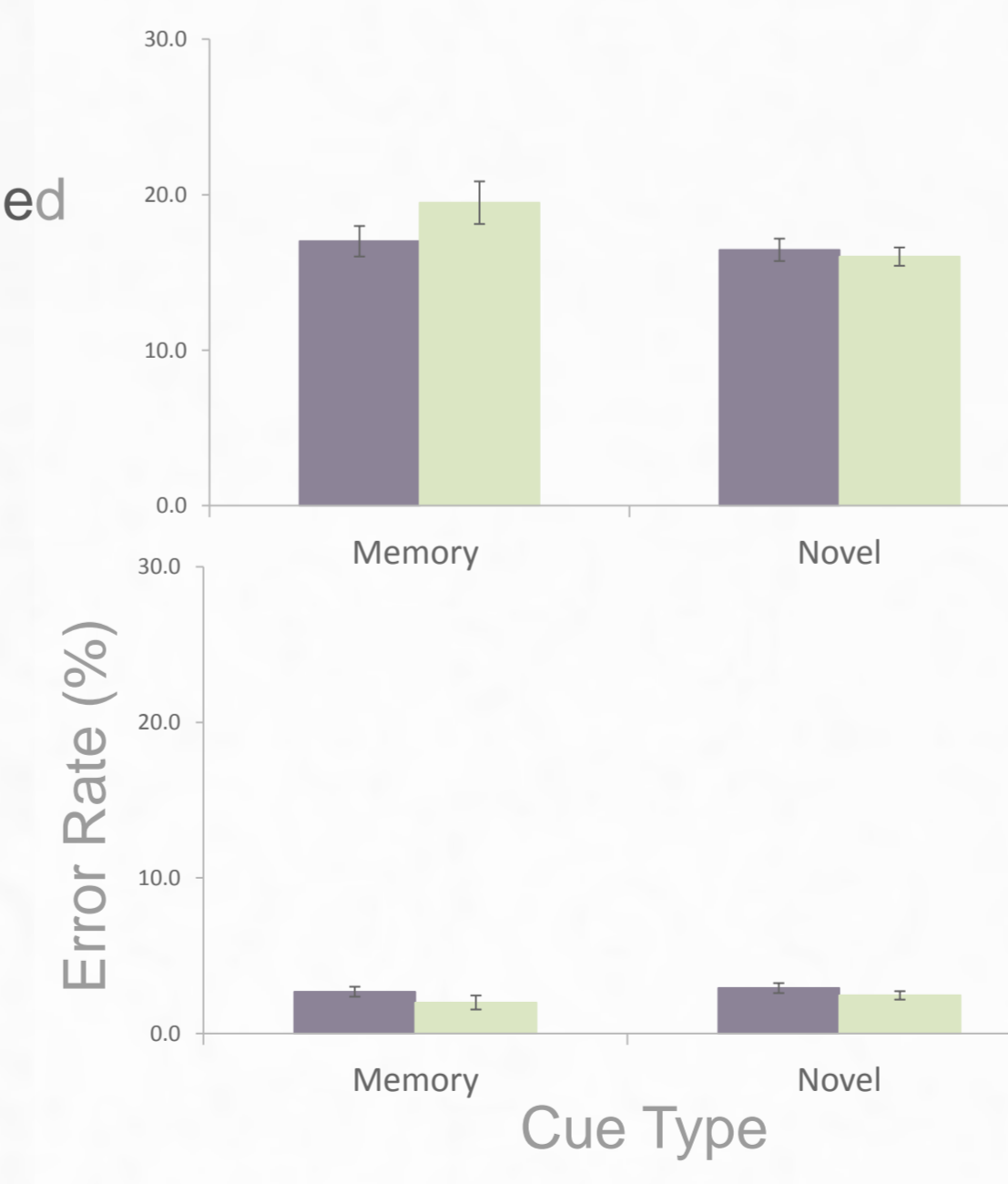


## Results

### Reaction Times



### Accuracy



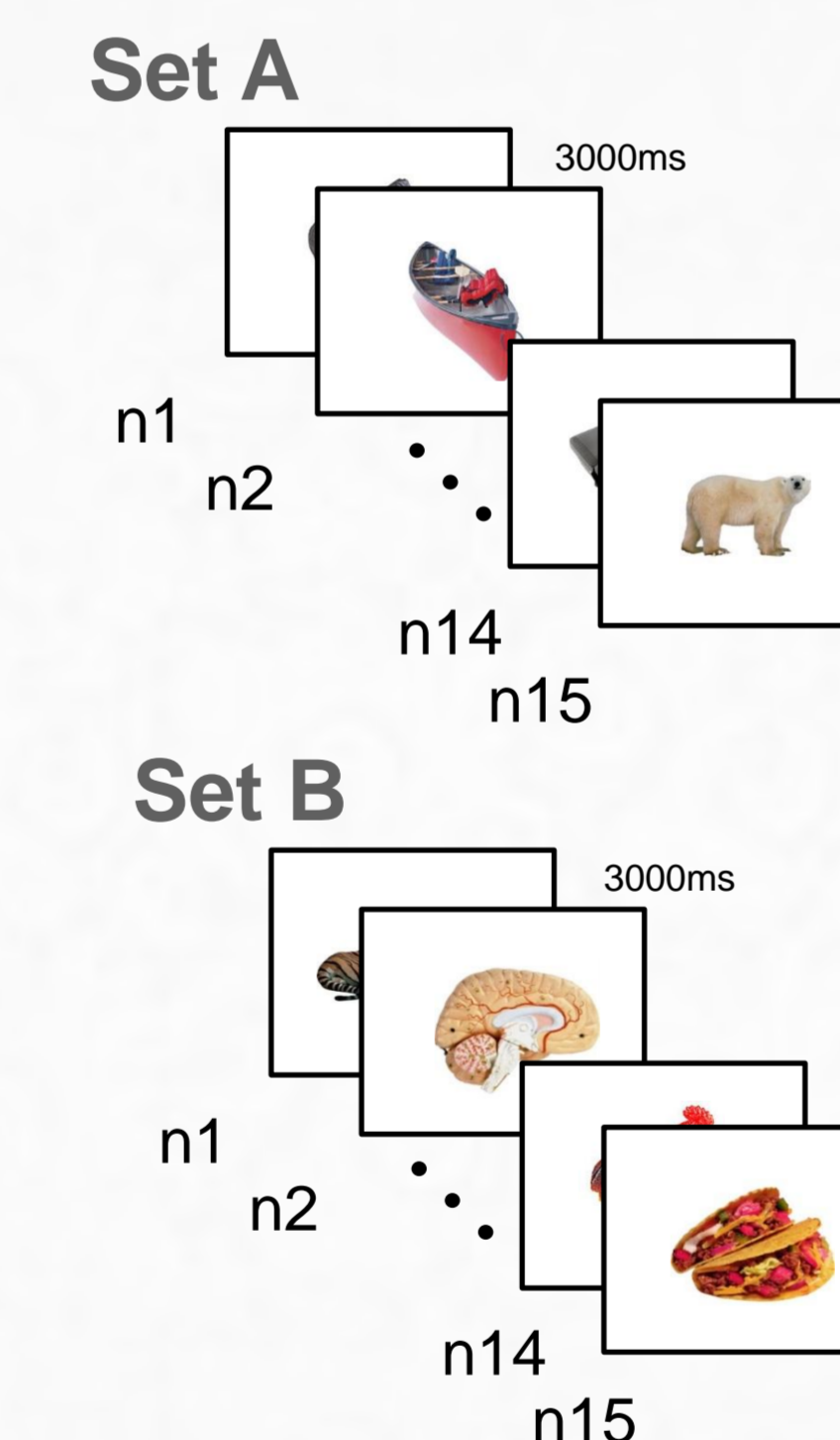
## Conclusions

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

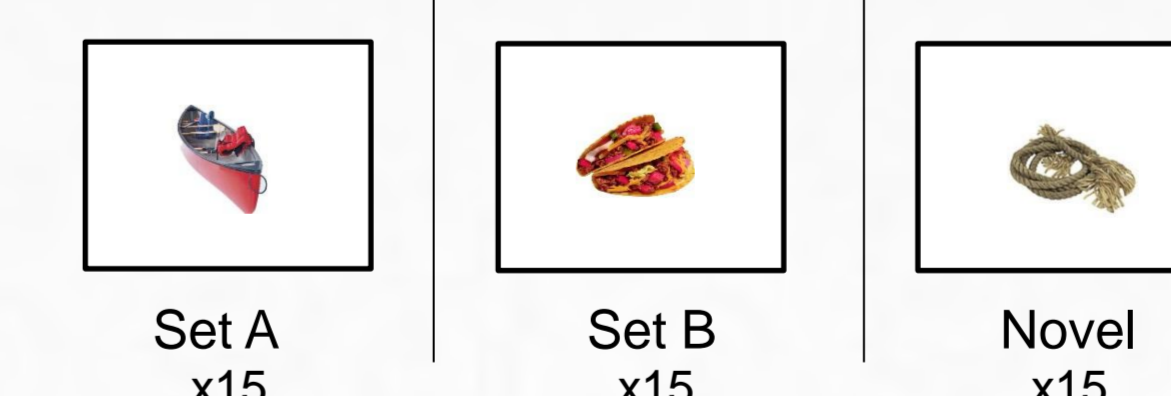
## Type of LT Memory?

### Phase 1: LTM Training

#### Memory Items

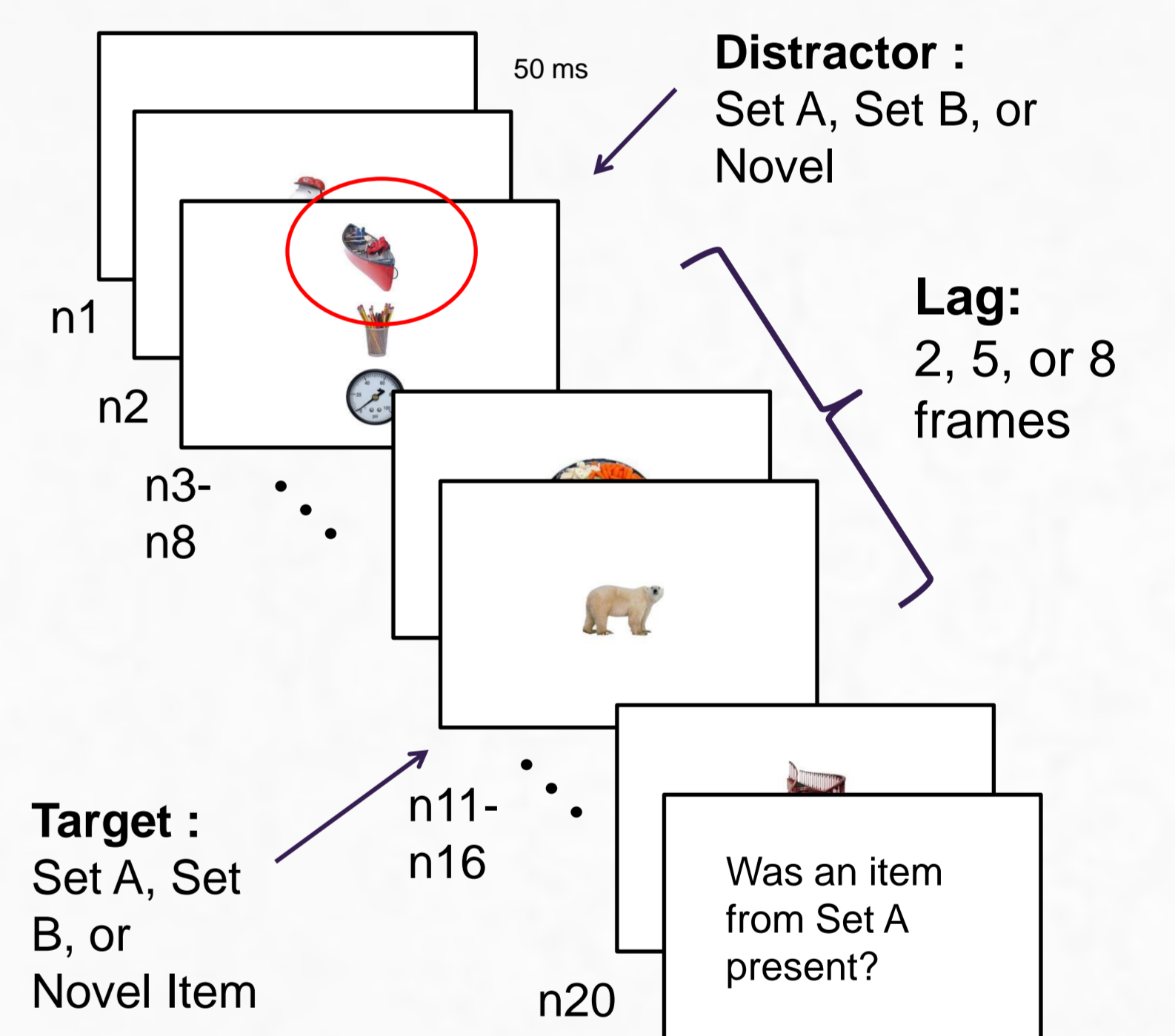


#### Set A, B, or neither?

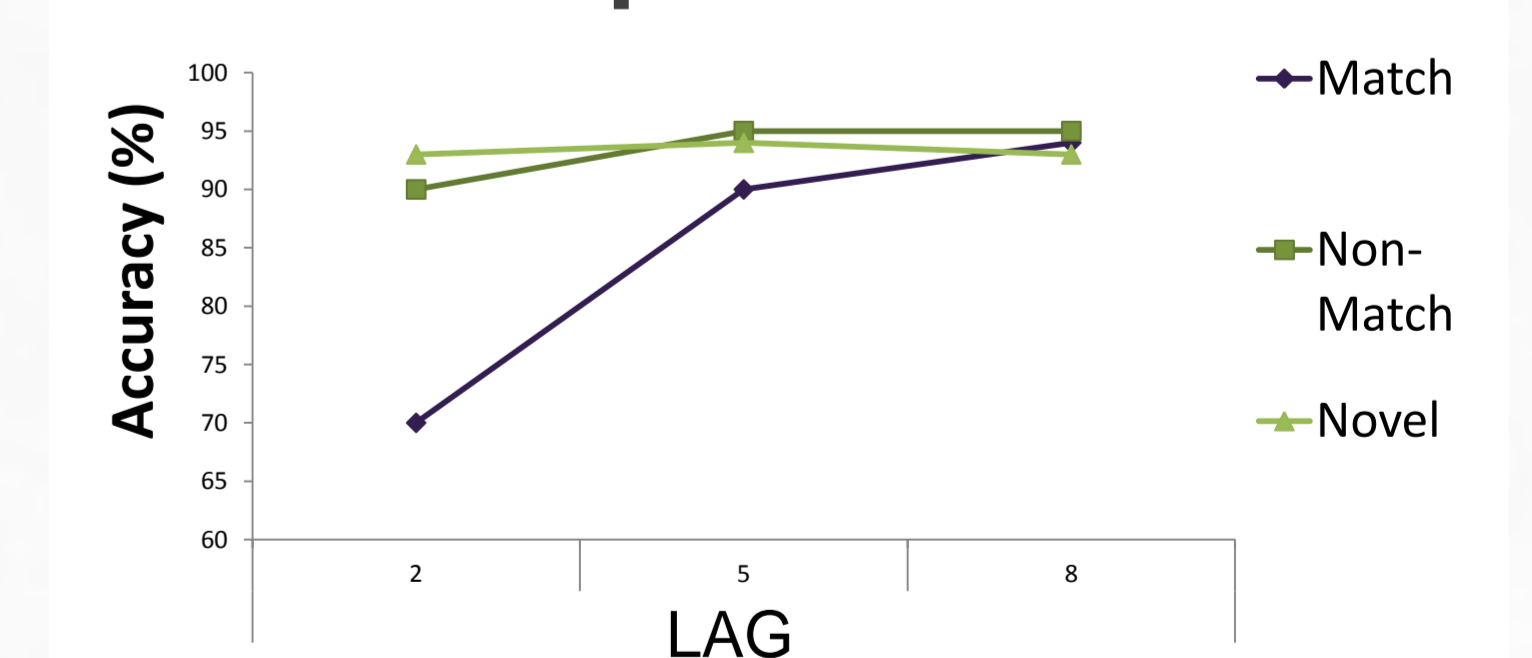


### Phase 2: Attentional Blink RSVP Task

Task: Did an object from Set A appear?



### Anticipated Results



## References

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This work was supported in part by a Natural Science & Engineering Research Council grant to Naseem Al-Aidroos

