Temporal Attention Capture by Portions of Unconsciously Processed Familiar Objects
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Background
Figural priors bias the black, closed regions as figures and the white regions as shapeless grounds.

Portions of familiar objects are suggested on the groundside of Type B Novel objects.

Their shape & semantics activated but they’re ultimately rejected for conscious perception

Question
Can activated objects that are not consciously perceived capture attention?

• Plan: Adapt an attentional blink paradigm

Methods
Task: Familiar object present? (Yes/No button press)
Distractors are Type B novel figures they suggest familiar objects on their groundsides

Stream of 12 black figures
2 Repeated Blocks (128 trials each)
  96 Familiar Targets/block (1X / block; position 6-9)
  64 Distractors/block
    32 distractors (2X / block; position 4-7)

48 Target-Present, Distractor-Present trials / block
48 Target-Present, Distractor-Absent trials / block
16 Target-Absent, Distractor-Present trials / block
16 Target-Absent, Distractor-Absent trials / block

688 ‘Filler’ novel silhouettes (1X / block)
Trials randomized within block

References

Results

Target-Present Trials
Target detection lower after distractor

Target-Absent Trials
No effect of distractor

Attentional Blink
Distractor reduces target detection per se and not just response

Conclusions
Unconsciously processed familiar objects can capture attention in time
• Even though they are rejected as objects present in the scene

Not in accordance with late theories of attentional selection

A follow up experiment with longer frame duration didn’t produce significant results – performance may have reached ceiling