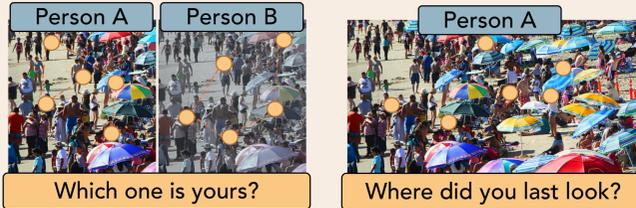


Background

When asked where they have previously looked, people are poor at remembering previous fixations.^{1,2}

Previous studies have used explicit measures (recognition¹ or identification² tasks); however, it is unclear whether this extends to implicit awareness.



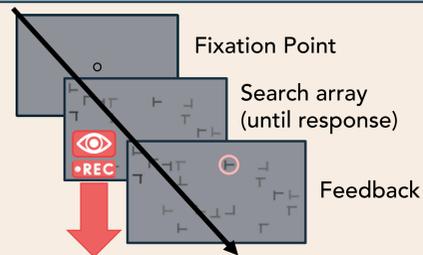
Q: Are people more accurate at following their own eye movements compared to someone else's?

Methods

Block 1: Visual Search Task

Task: Report if perfect "T" is present or absent.

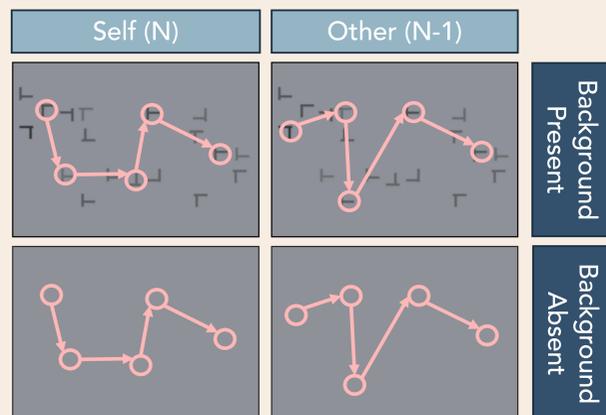
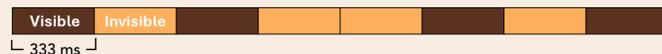
Both tasks include 20 practice + 160 experimental trials



Block 2: Passive Tracking Task

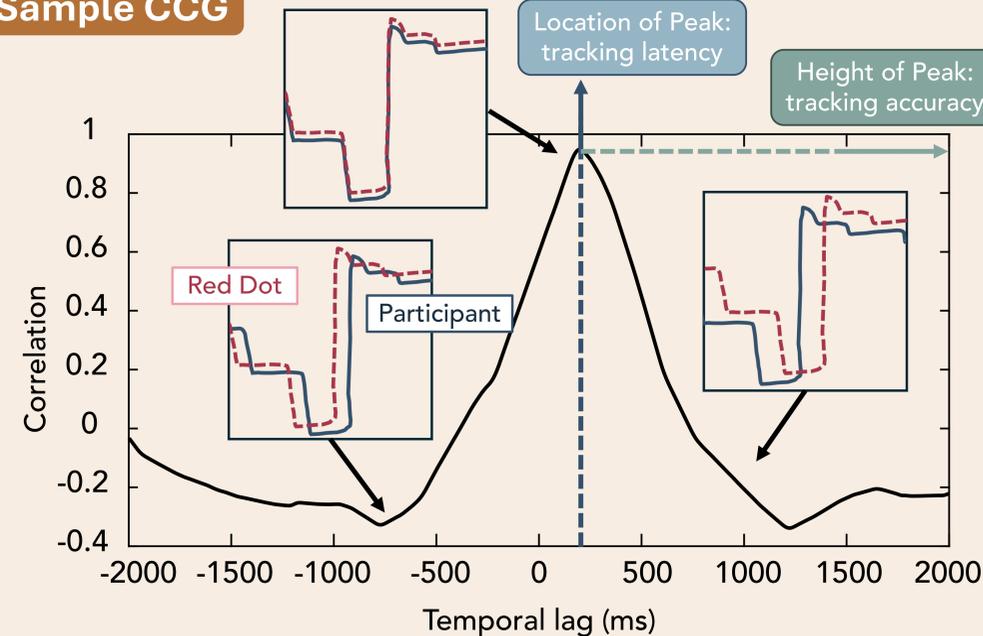
Participants tracked a red dot around the screen with their eyes. Its position was based on the previous recording of themselves or the previous participant.

The dot was randomly visible 50% of the time:



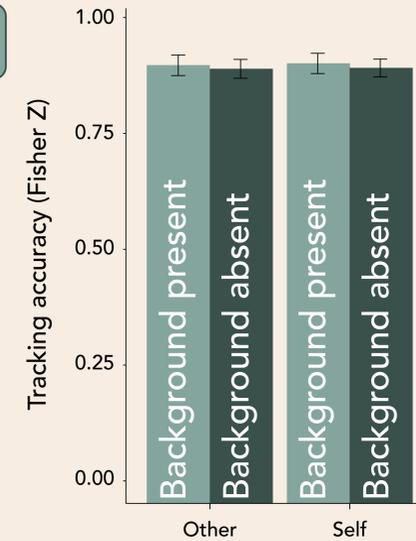
Are we better or faster at tracking our own eye movements?

Sample CCG

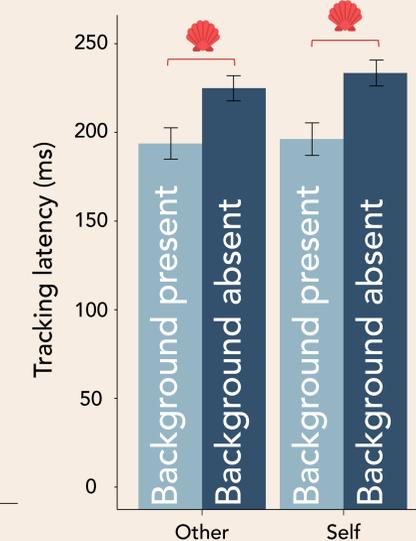


Tracking Accuracy

N = 24



Tracking Latency



Source of eye movements (self vs other) $p < 0.05$

Takeaways: Accuracy

- People's tracking accuracy is **similar** for their own eye movements versus others'
- They perform similarly **with or without the background**

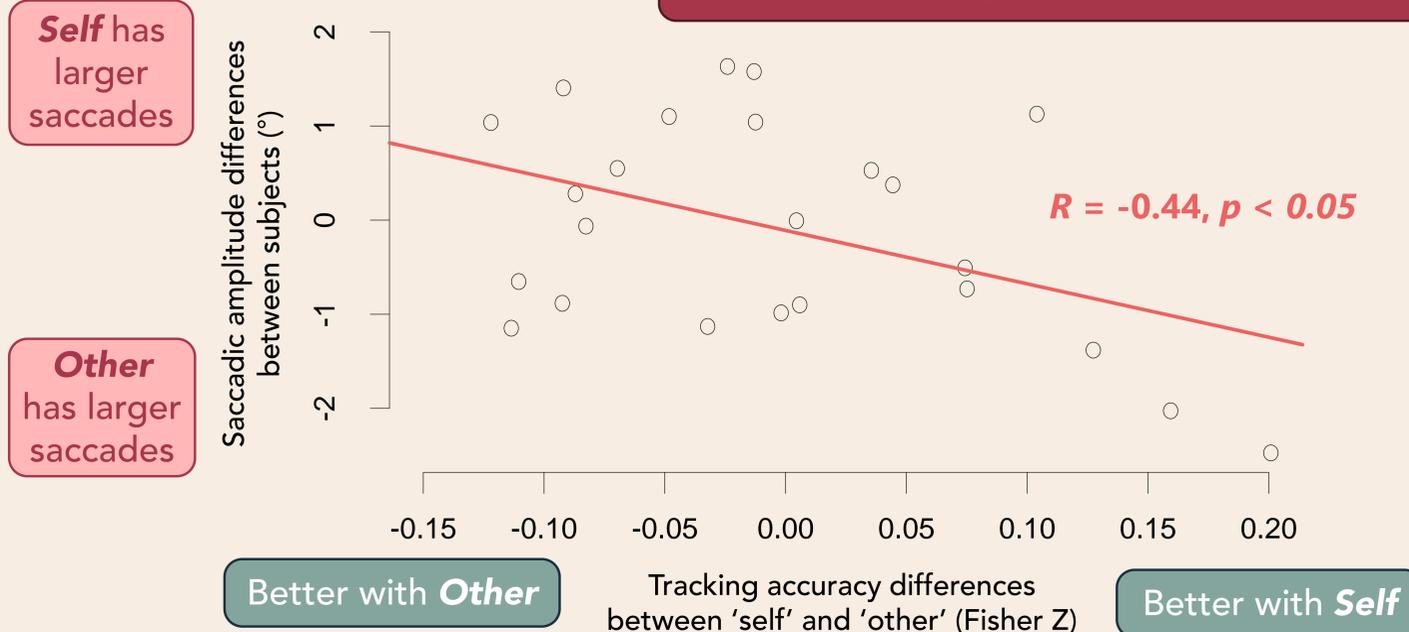
Takeaways: Latency

- People are **no faster** at tracking their own eye movements versus others'
- **BUT** they are faster at tracking **when the background is present**

What predicts tracking accuracy?

Takeaways: Saccade Amplitudes

Eye movement characteristics predict tracking accuracy, such that larger saccades are harder to track.



Conclusions

People are not any better at tracking their own eye movements versus others'. This suggests poor implicit awareness of own gaze behavior.

What's next? Can within-participant inconsistency in gaze behavior explain poor tracking performance?

Why should we care?

Poor implicit and explicit awareness of eye movements suggests that it may be difficult to train gaze behavior in real-world searches requiring expertise.



Scan for PDF