

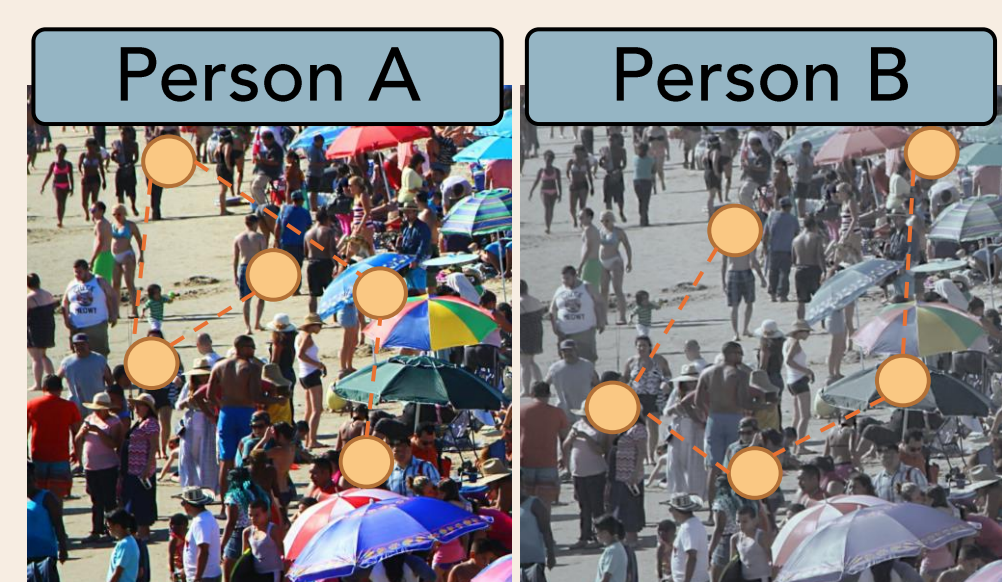
## Background



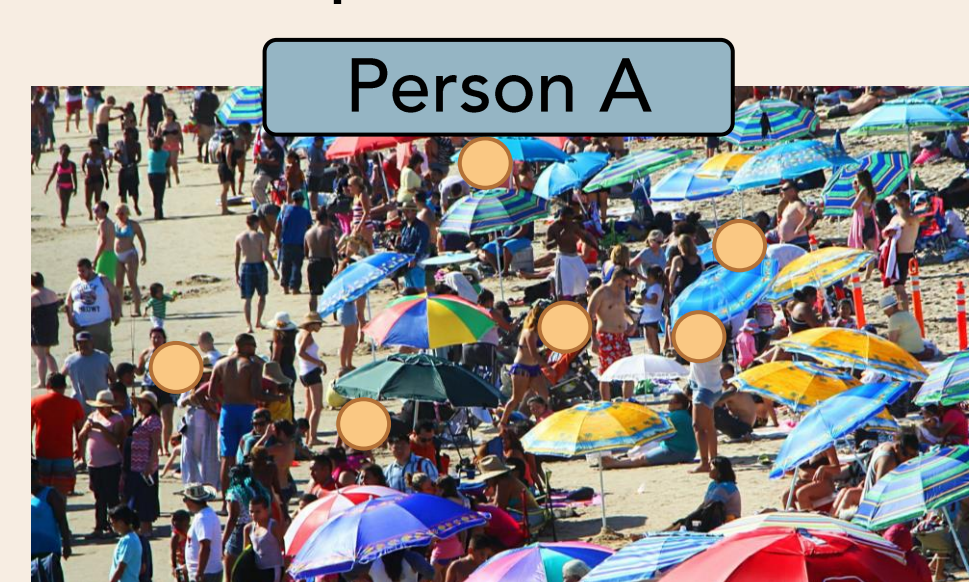
When asked where they have previously looked, people are poor at remembering previous fixations.<sup>1,2</sup>



Previous studies have used explicit measures (recognition<sup>1</sup> or identification<sup>2</sup> tasks); however, it is unclear whether this extends to implicit awareness.



Which one is yours?



Where did you last look?

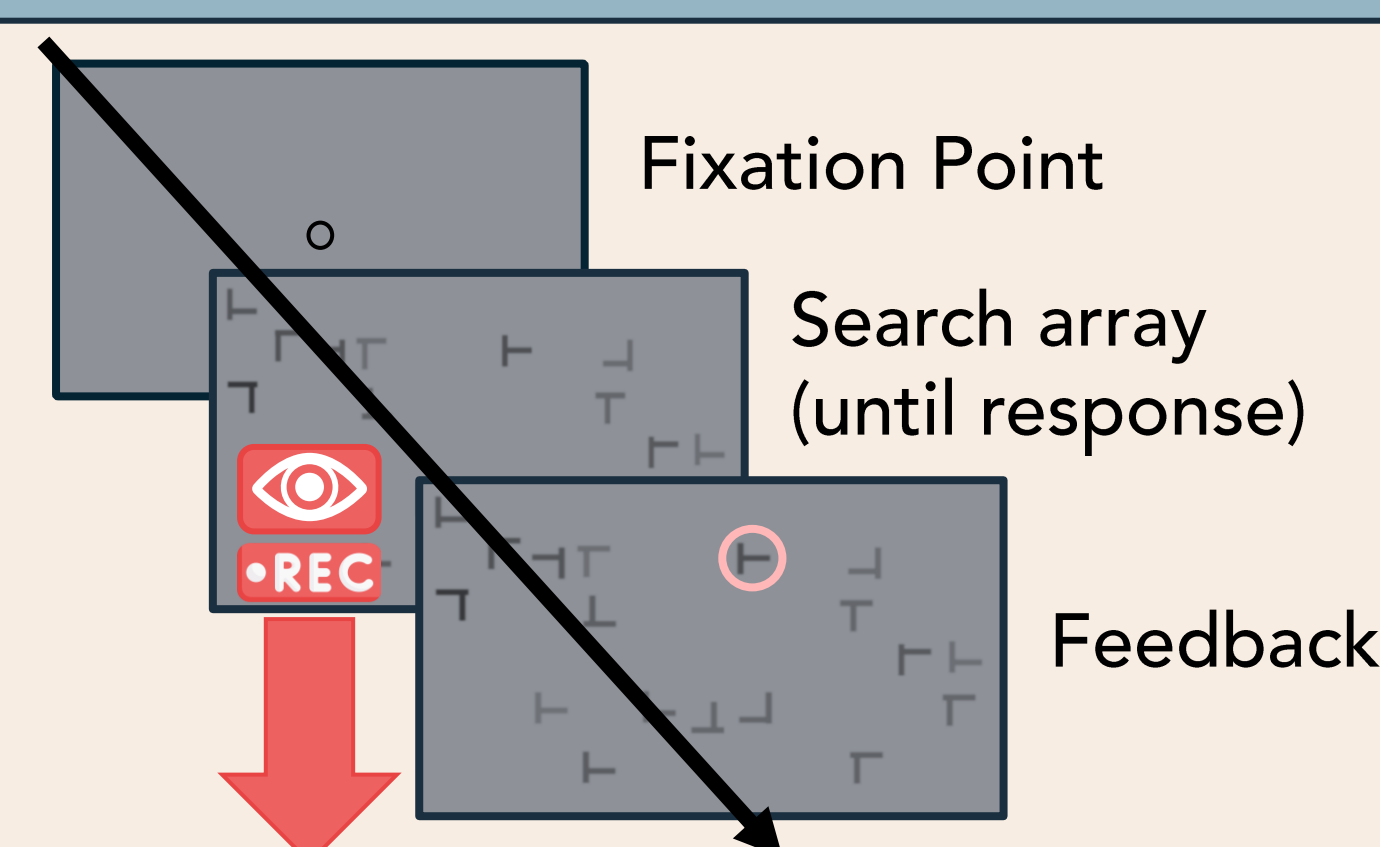
Q: Are people more accurate at following their own eye movements compared to someone else's?

## Methods

### Block 1: Visual Search Task

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

Both tasks include  
20 practice + 160  
experimental trials



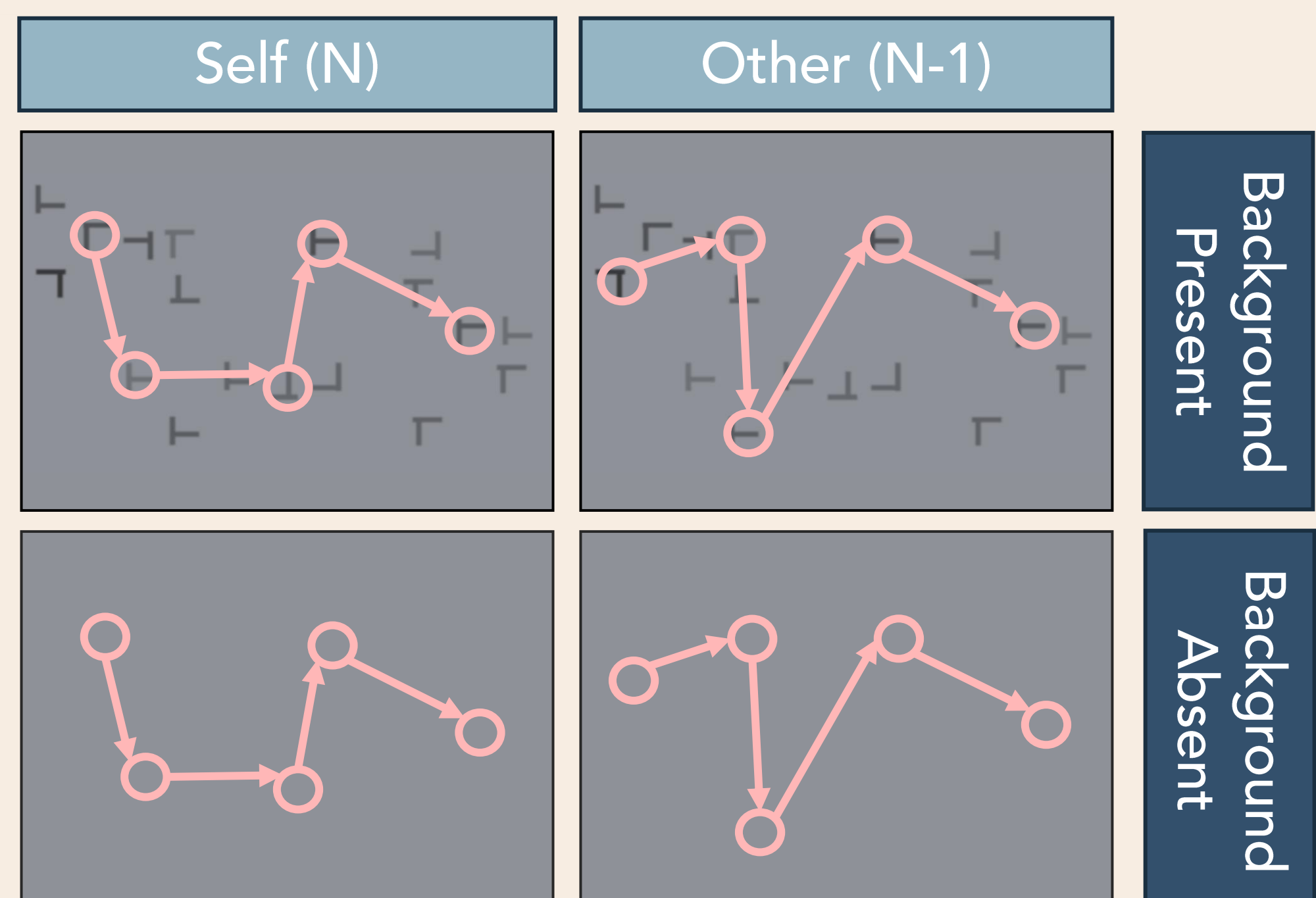
### Block 2: Passive Tracking Task

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**:

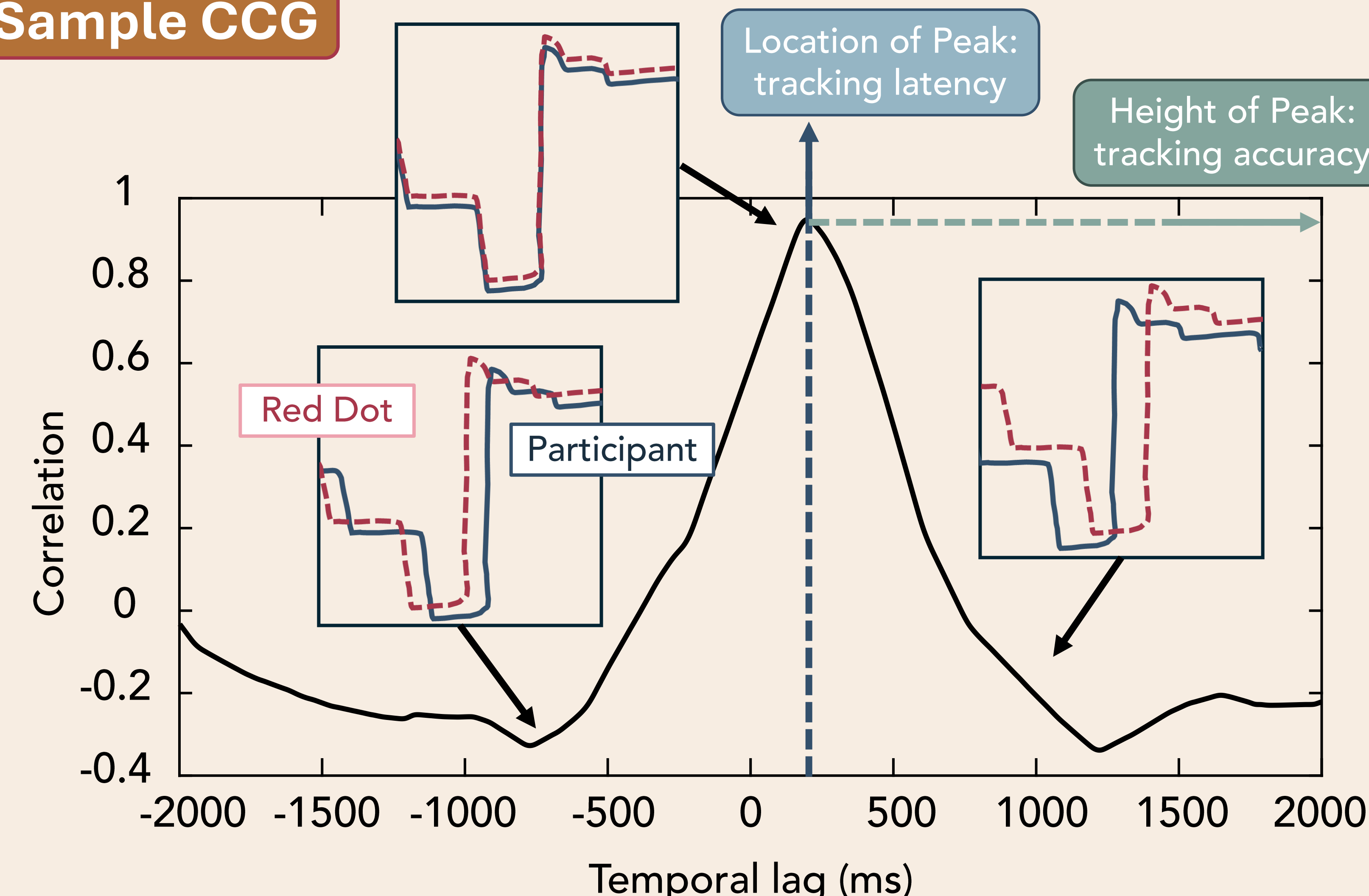
Visible Invisible

333 ms



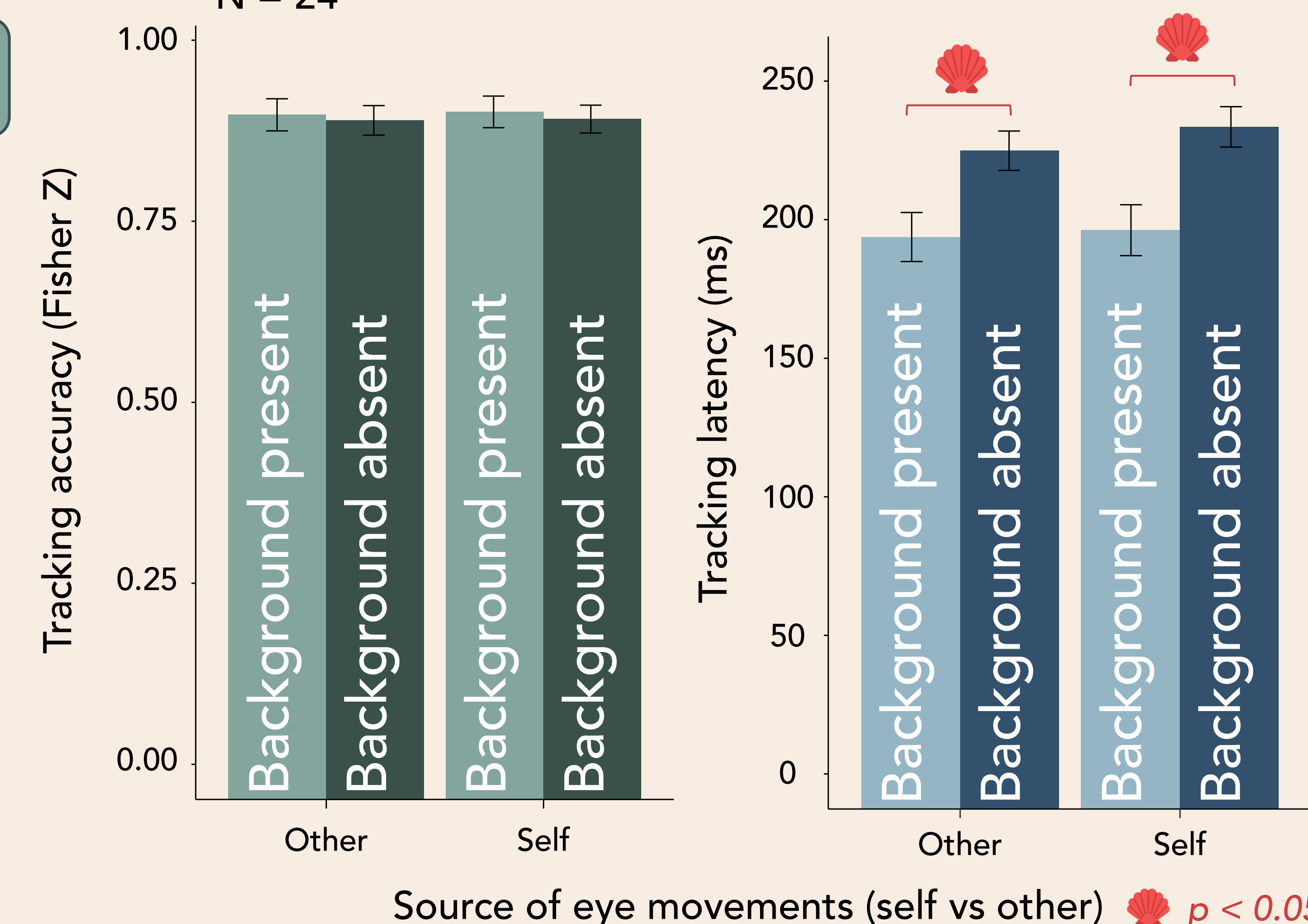
## Are we better or faster at tracking our own eye movements?

### Sample CCG

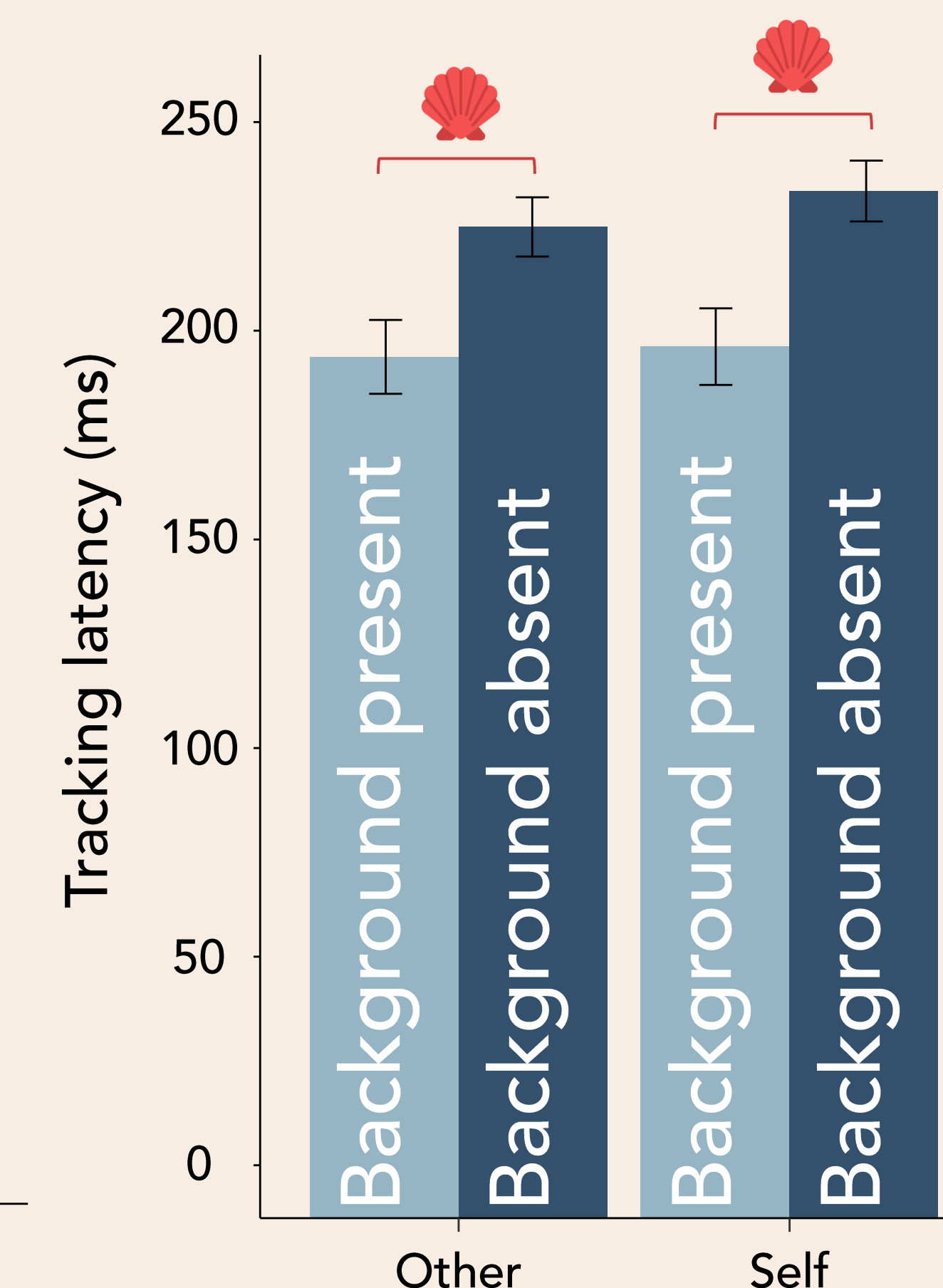


### Tracking Accuracy

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**

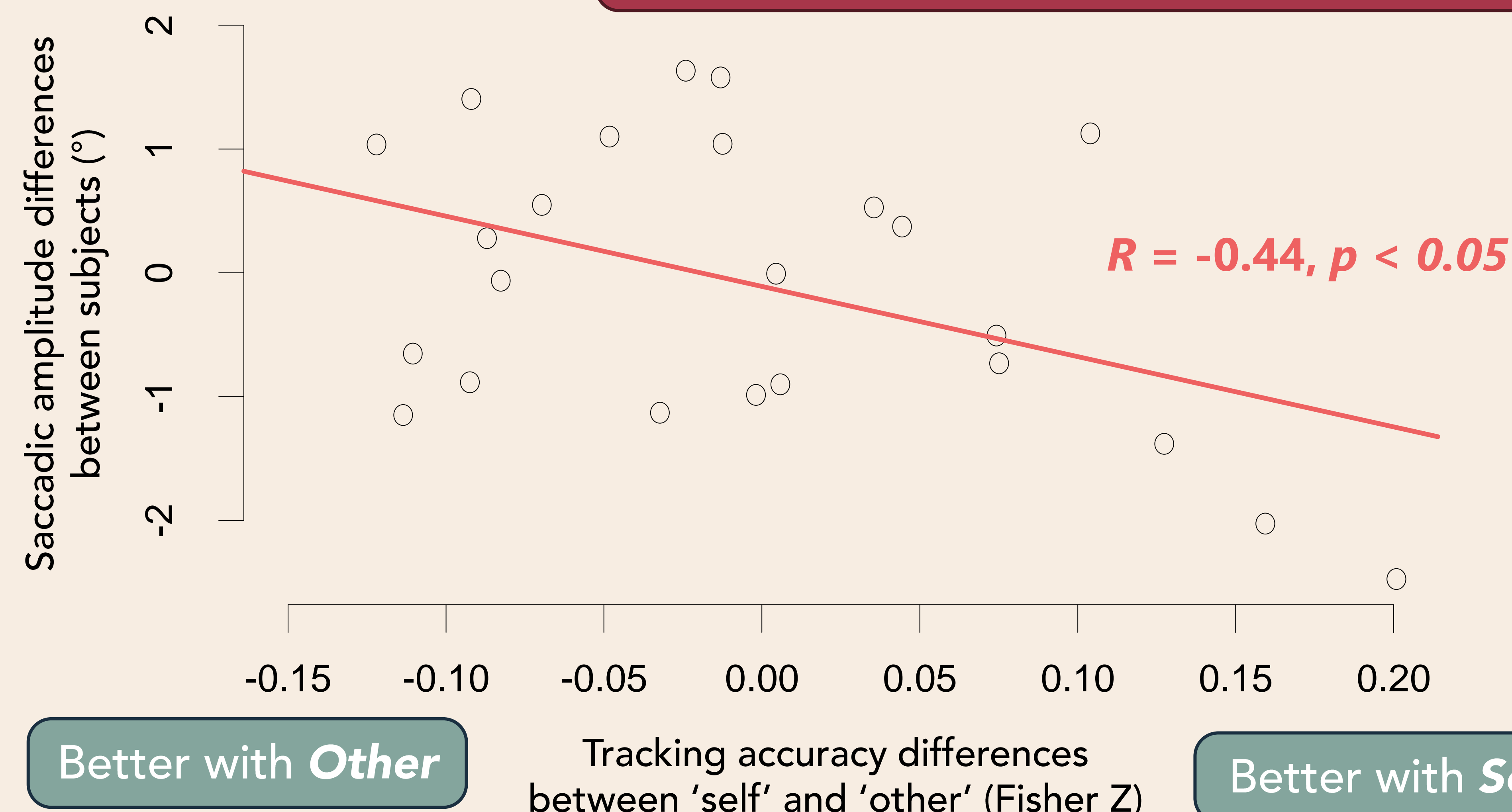
## What predicts tracking accuracy?

### Takeaways: Saccade Amplitudes

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

**Self** has  
larger  
saccades

**Other**  
has larger  
saccades



Better with **Other**

Tracking accuracy differences  
between 'self' and 'other' (Fisher Z)

Better with **Self**

## 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.