

Effects of Feedback on Individual Differences in Attentional Asymmetries

APPLY LAB



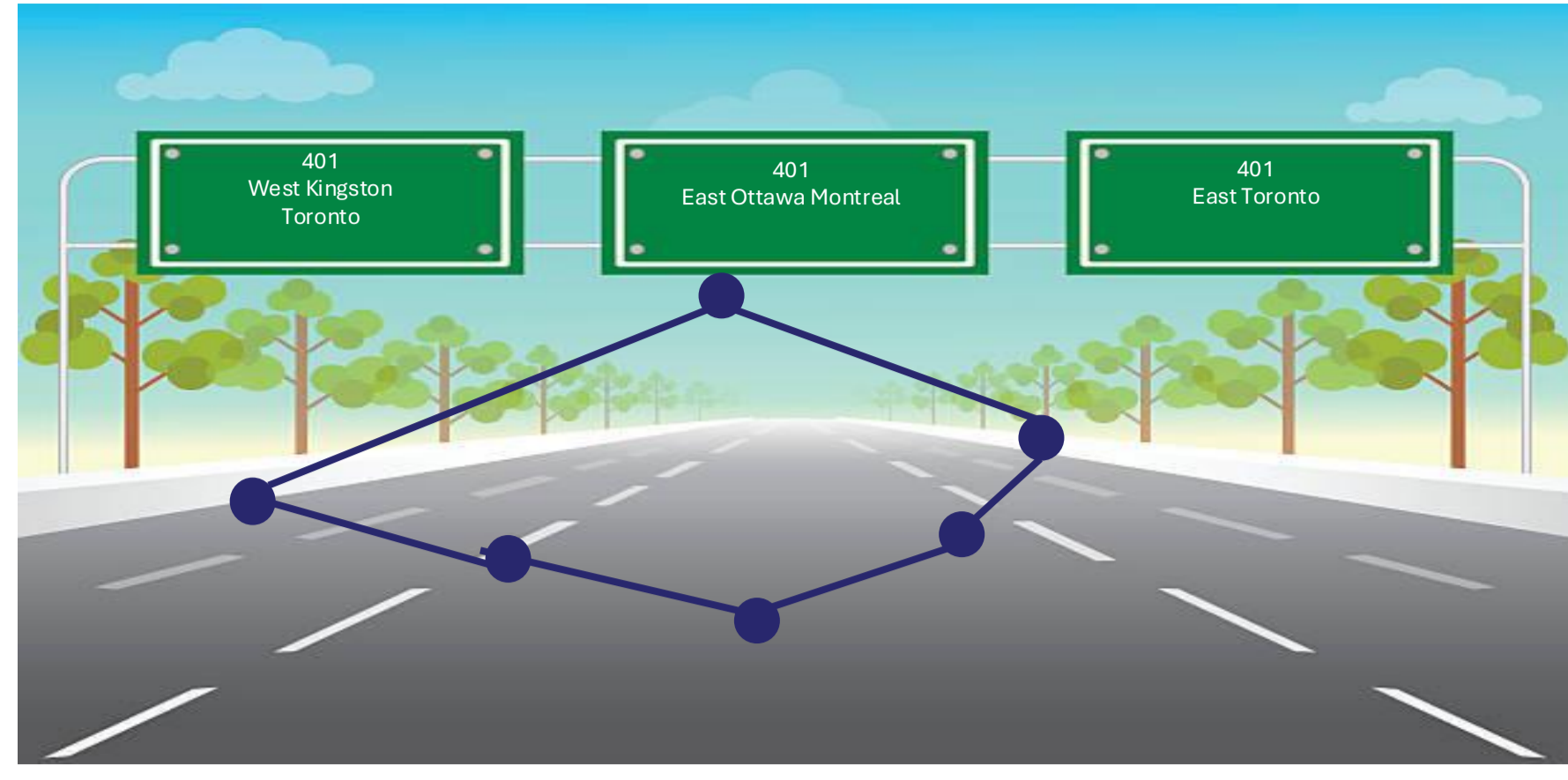
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Individuals distribute attention unevenly within the functional visual field (FVF).

These patterns are stable and idiosyncratic, such that some areas are prioritized over others. These are covert attentional asymmetries.



Q1: Are covert attentional asymmetries stable, or can they be modified through feedback?

Q2: Does metacognitive accuracy predict the efficacy of feedback?

Covert Visual Search Task:

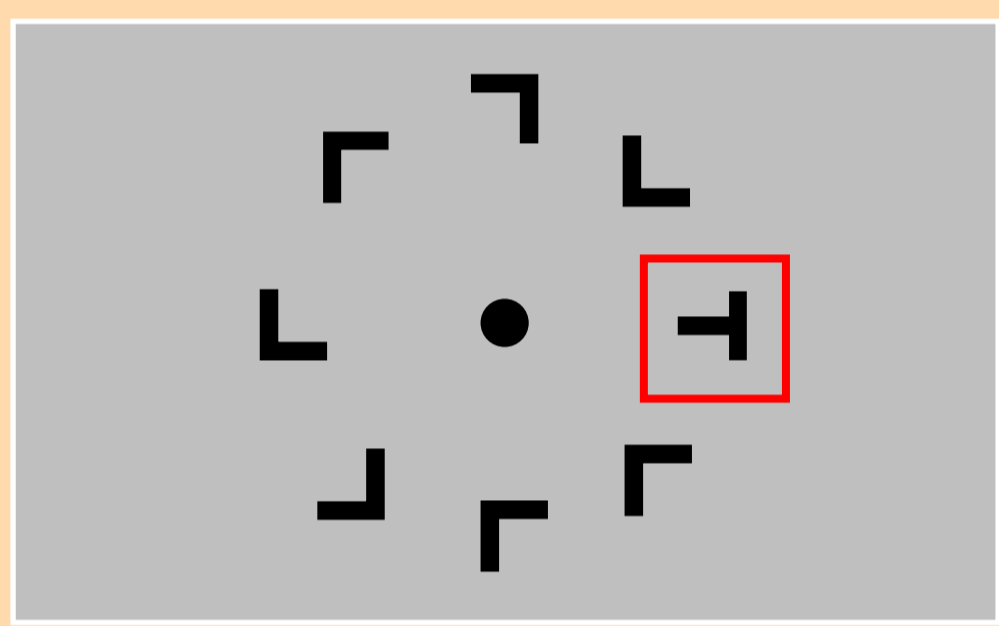
N = 31

Block 1: No Feedback Condition

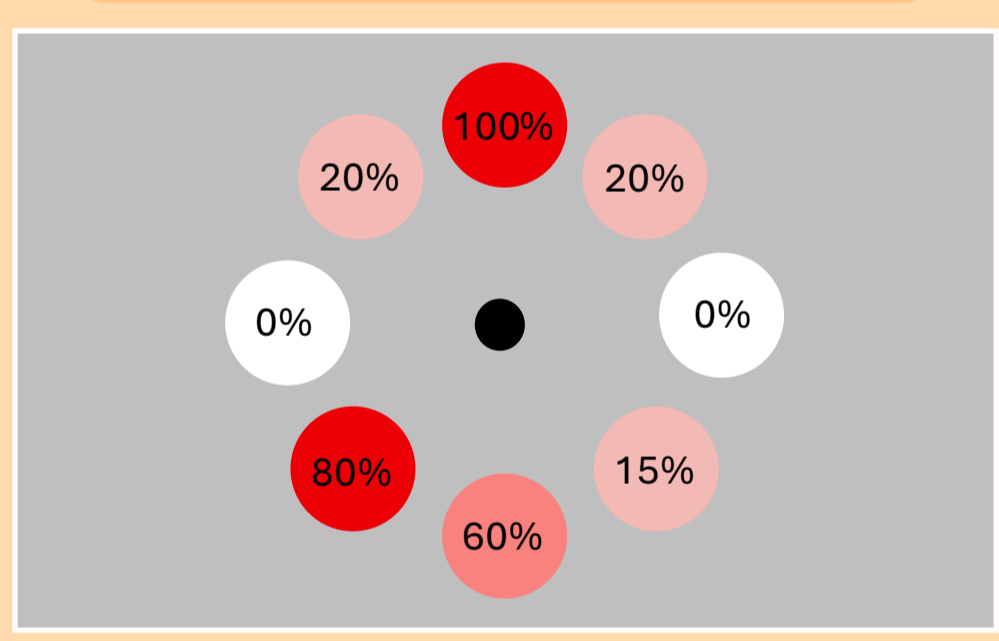
Block 2: Feedback Condition

Two types of feedback added:

After each trial



After each block



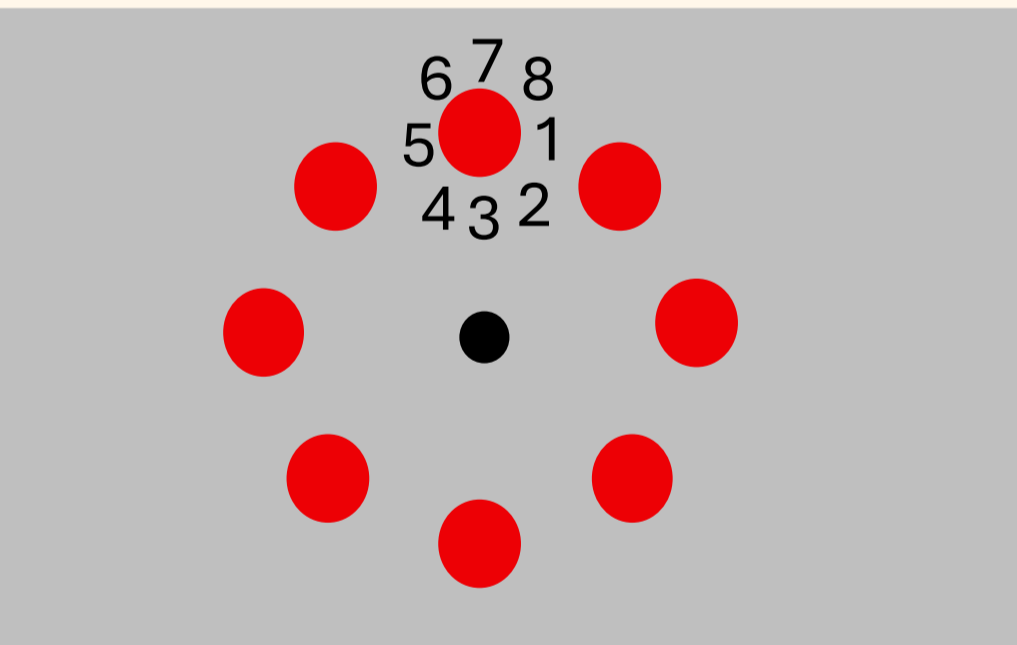
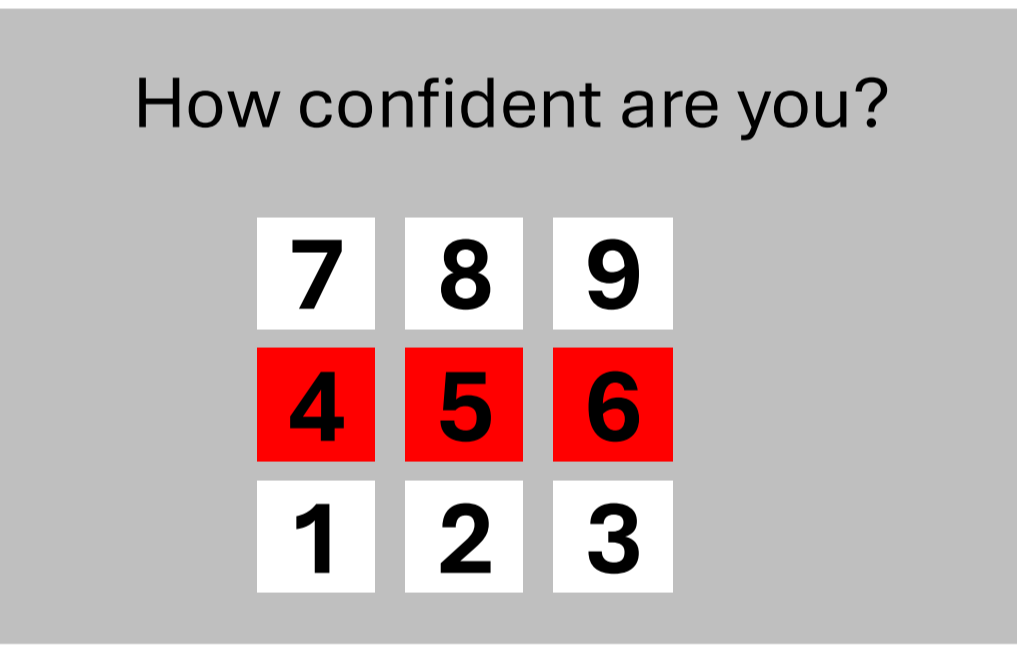
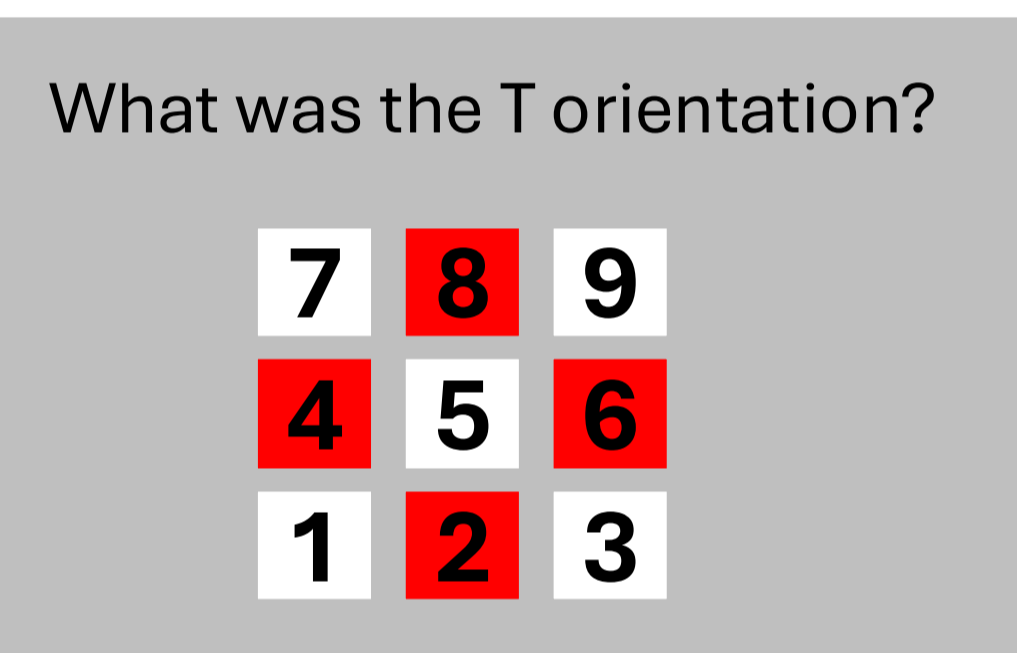
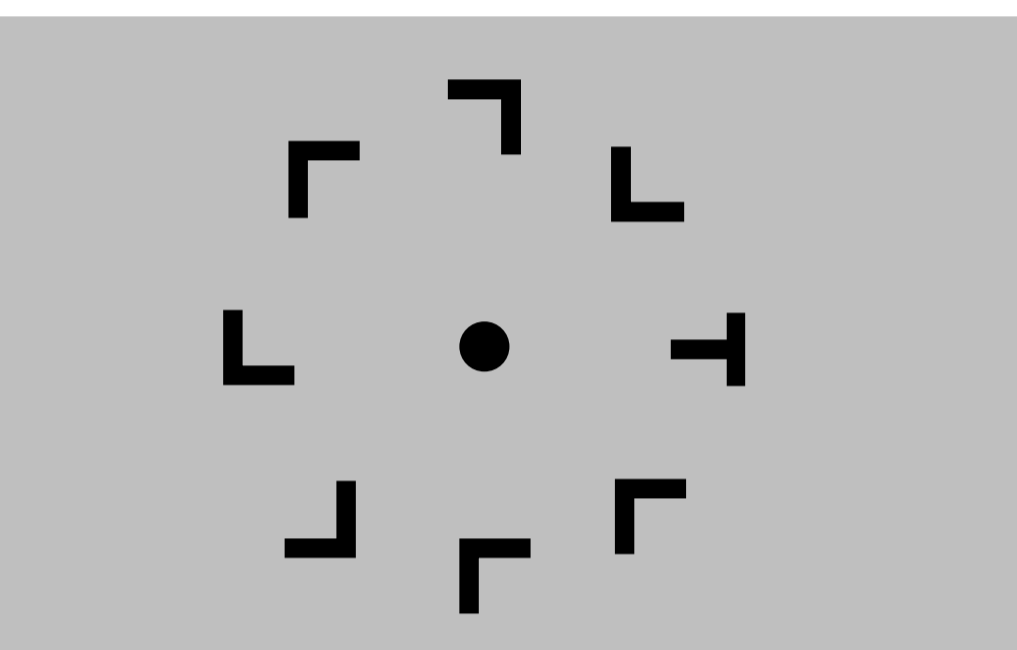
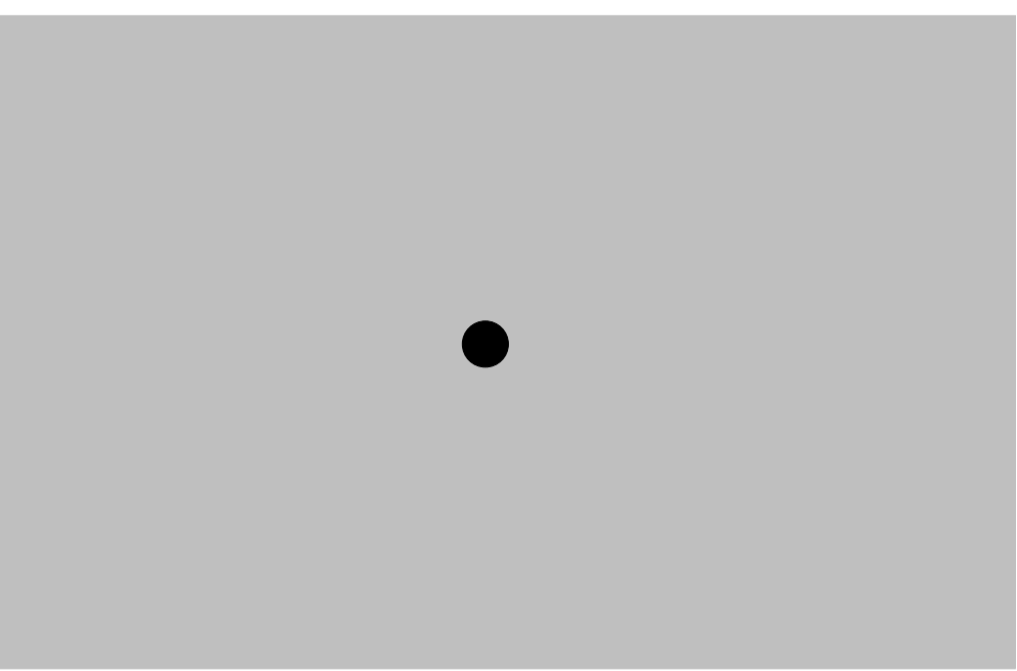
+ bonus payment awarded for more evenly distributed error rates

Search Array
150 ms
+
Mask 150 ms

T-Orientation
4AFC:
T → ↓ ↑ ←

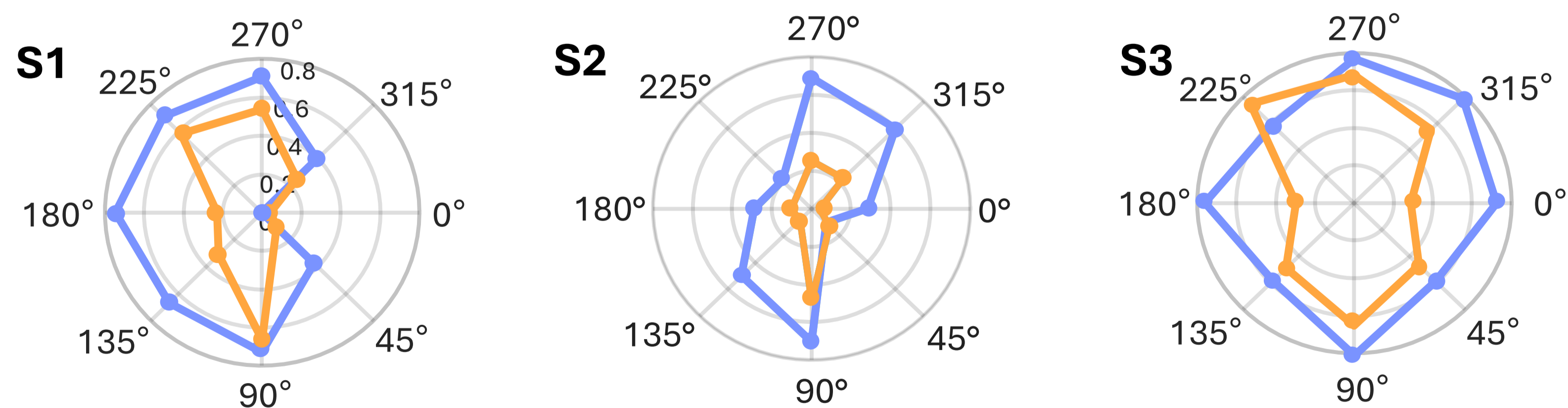
Confidence rating (1-3)

End of task ranking (Both Conditions):

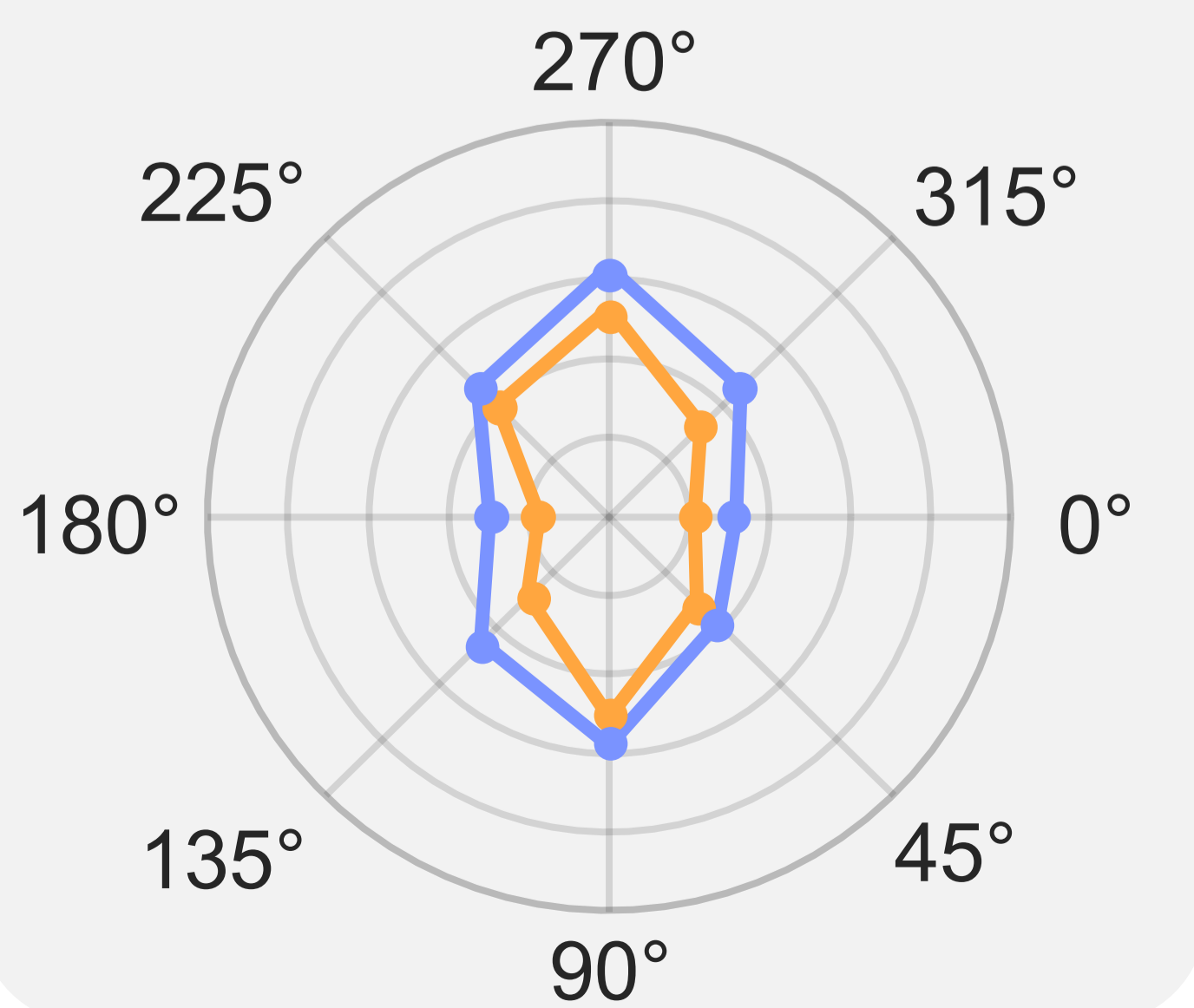


Do participants show asymmetries in their error rates?

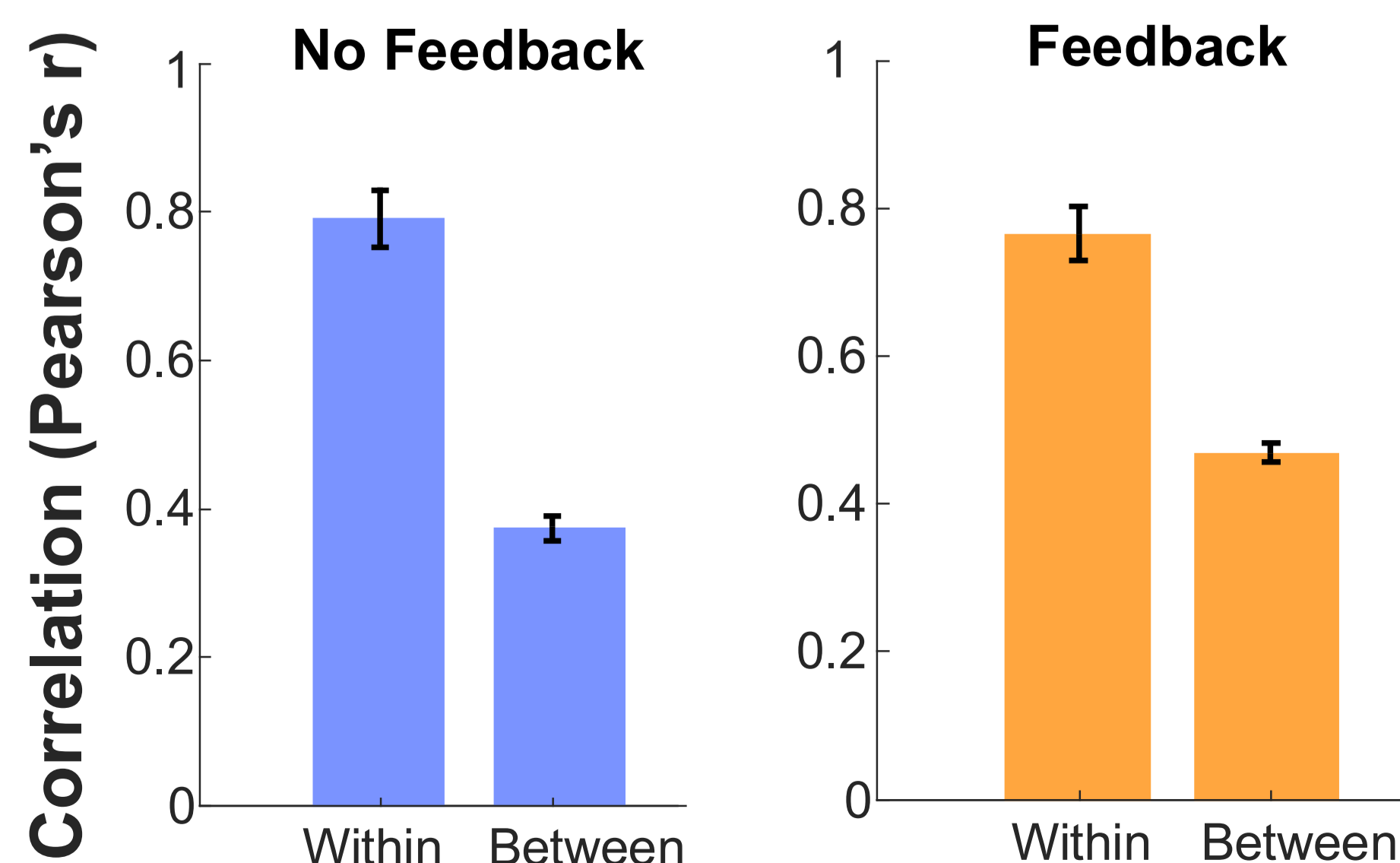
— No feedback — Feedback



Average Error Rates

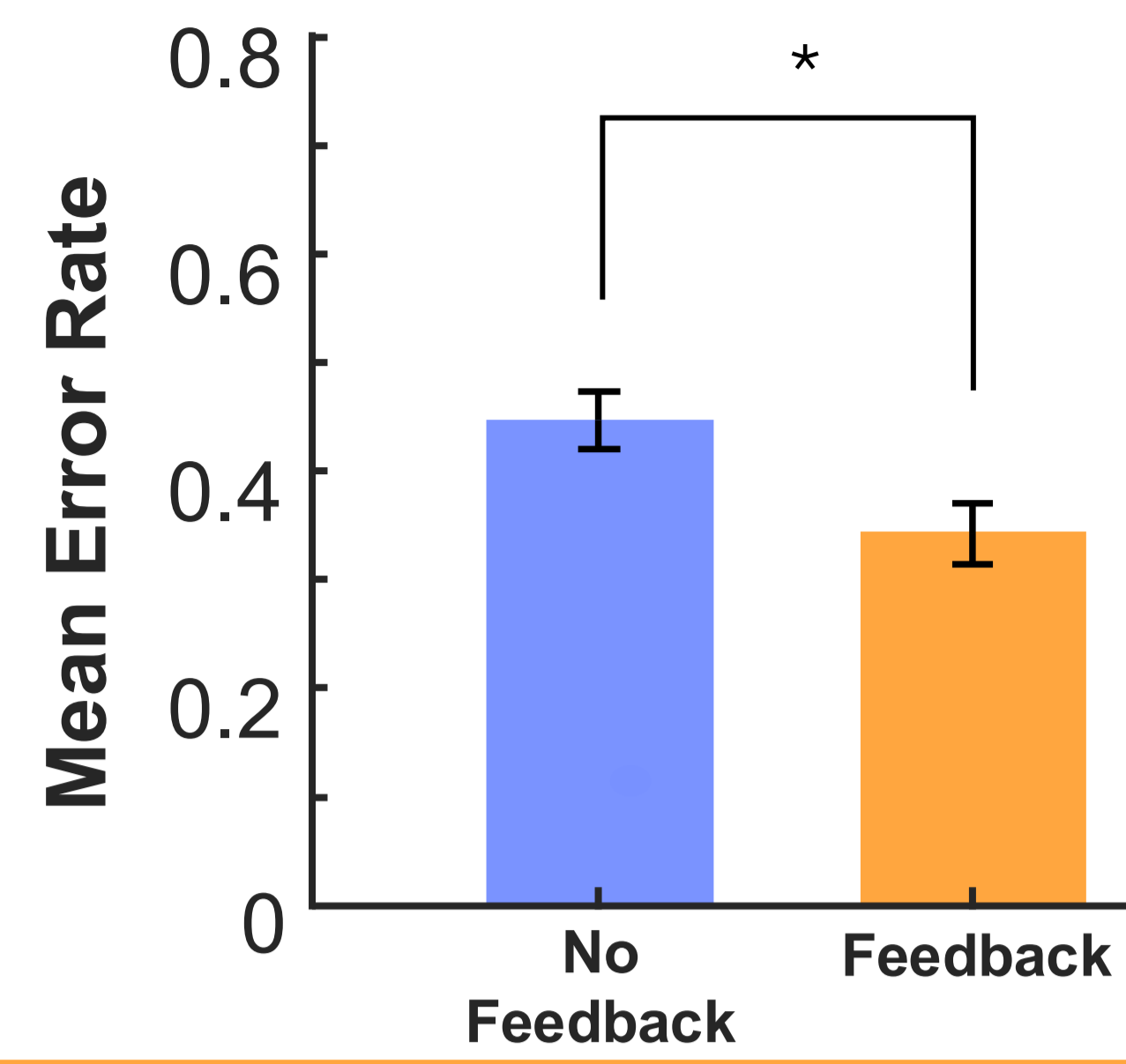


Are asymmetries idiosyncratic?



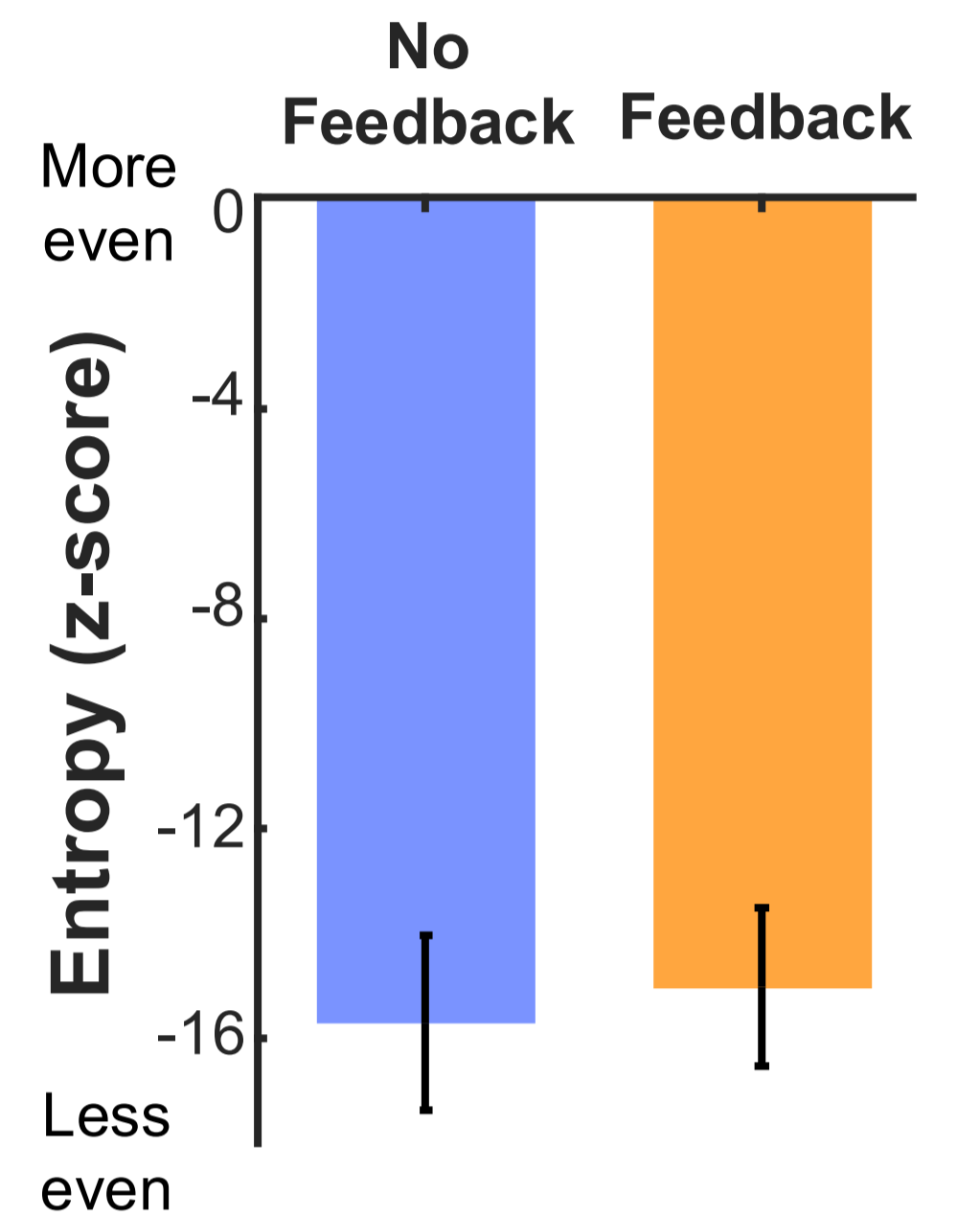
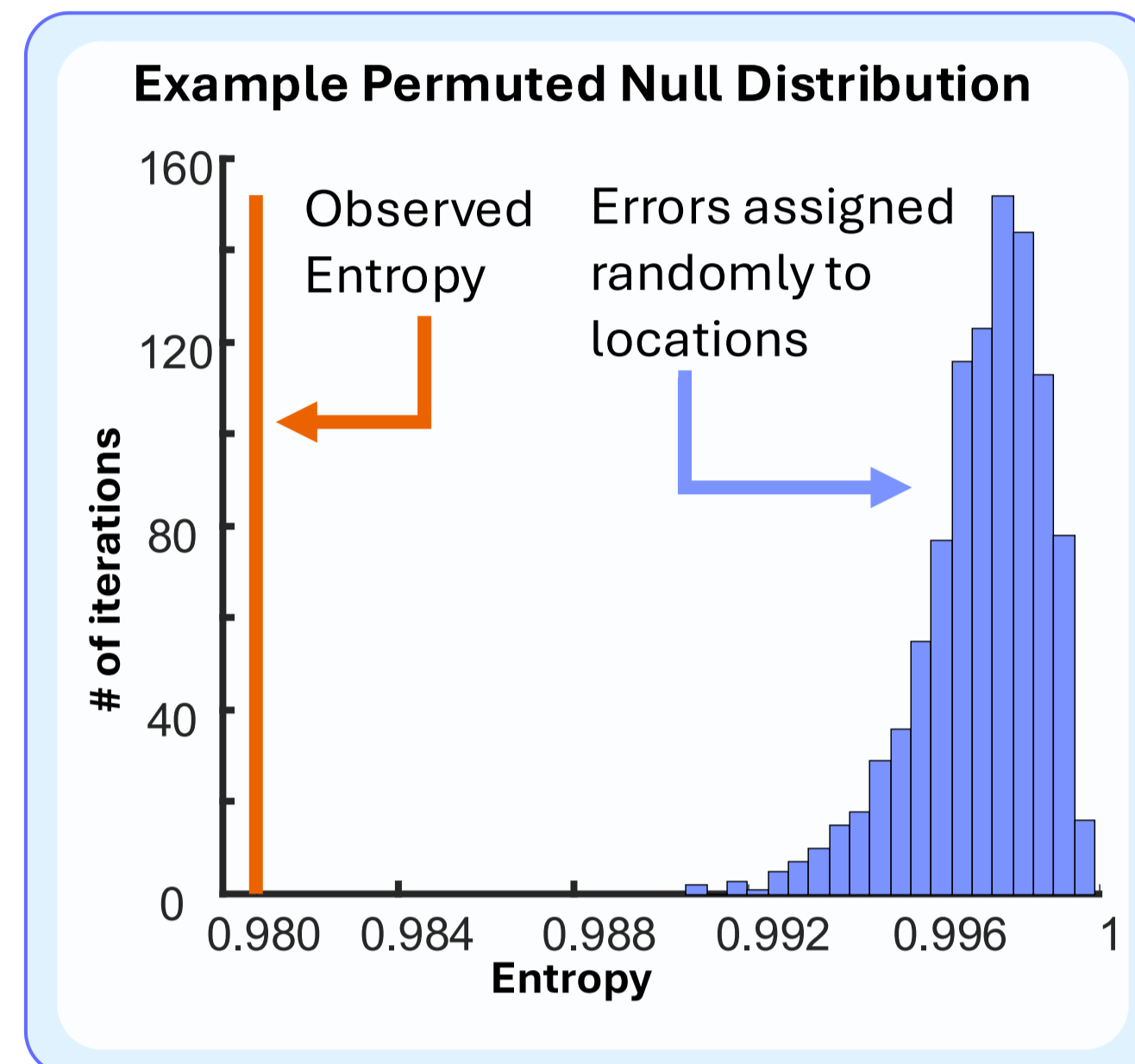
Error rates are not uniform around the visual field, and are more strongly correlated *within* than between observers

How does feedback impact error rates?



Participants' error rates decreased with feedback.

Do error rates become more uniform?

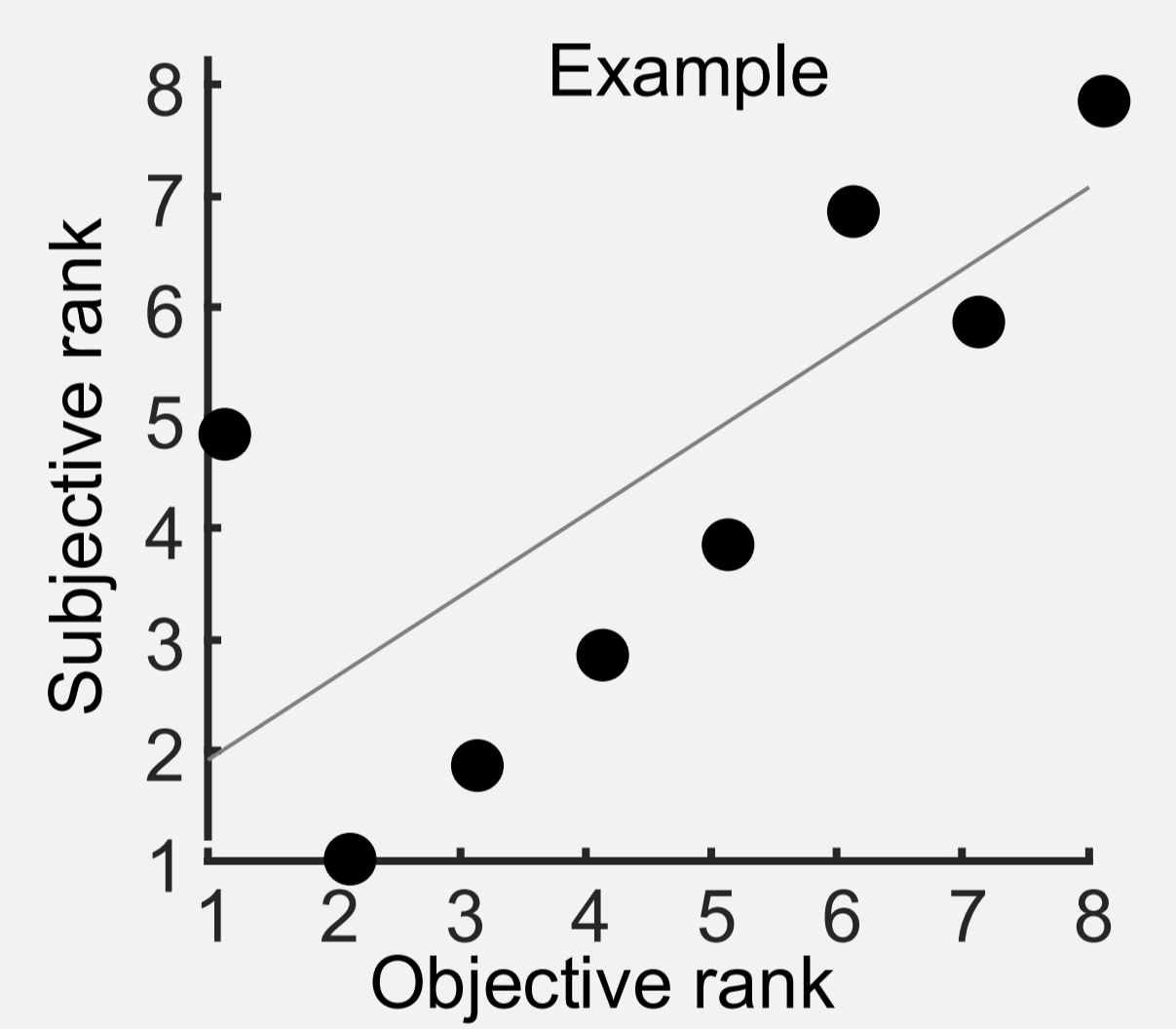
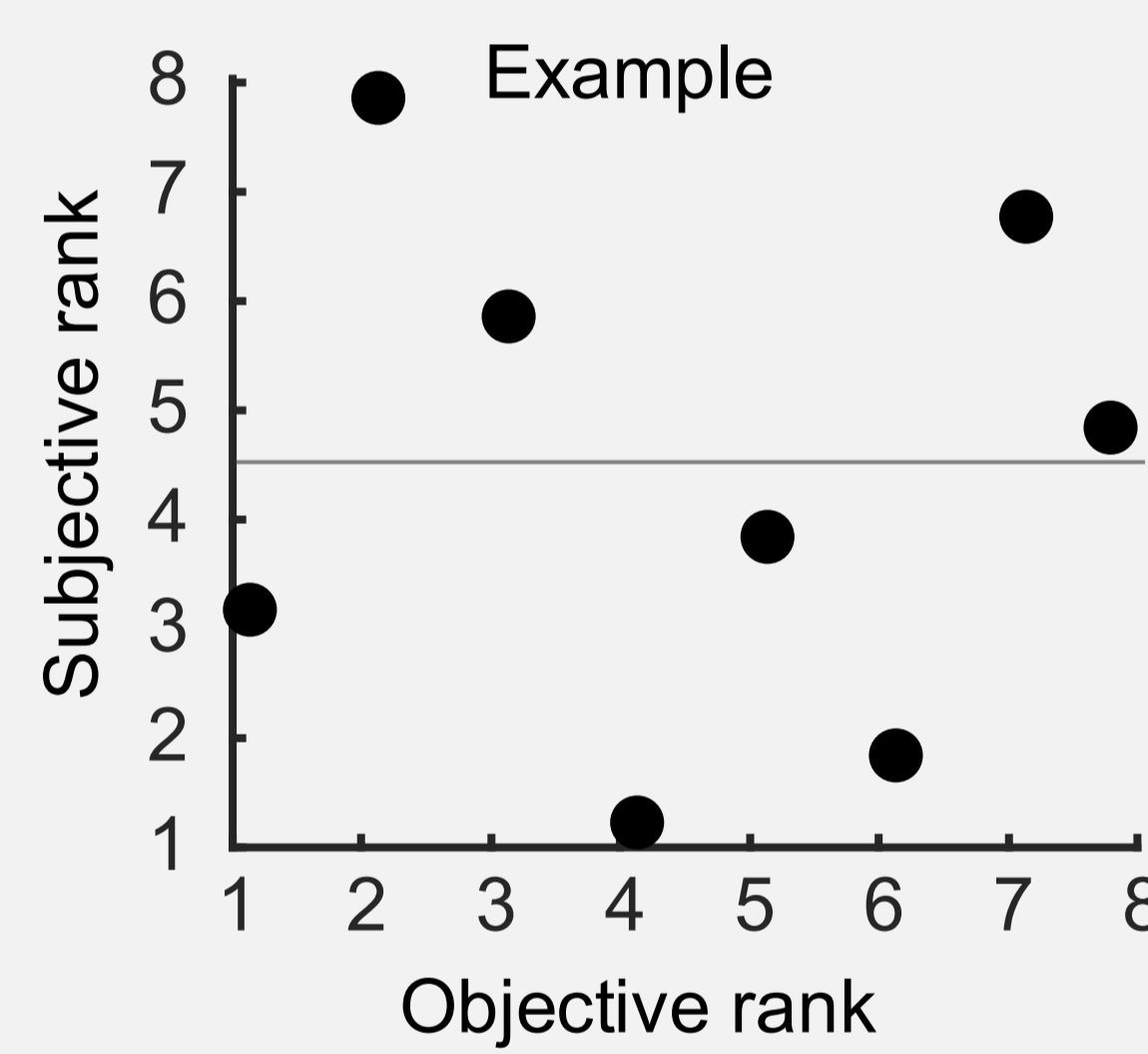


Feedback did not produce more even error distributions

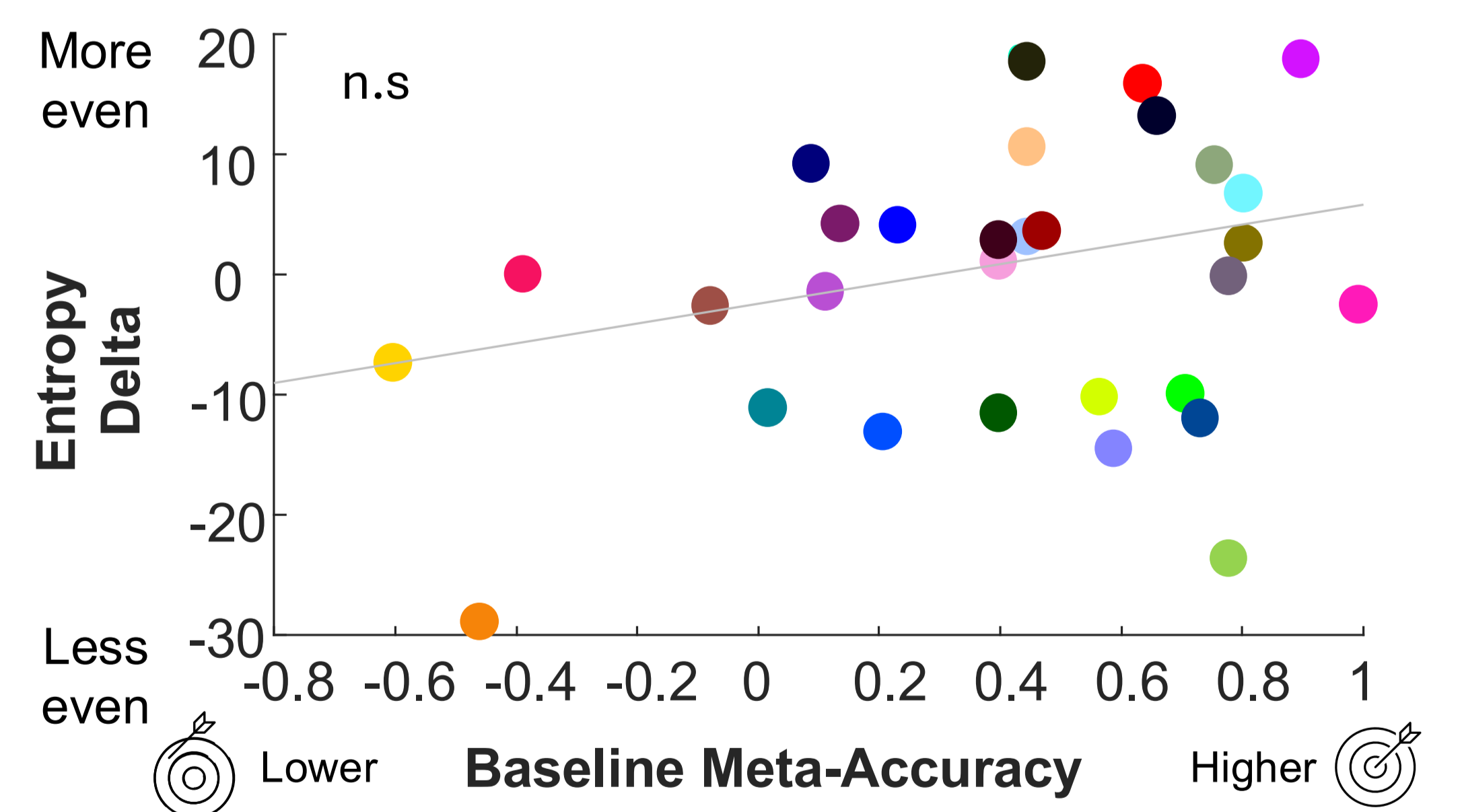
Does metacognitive accuracy predict changes in asymmetries?

No Feedback (Baseline) Meta-accuracy

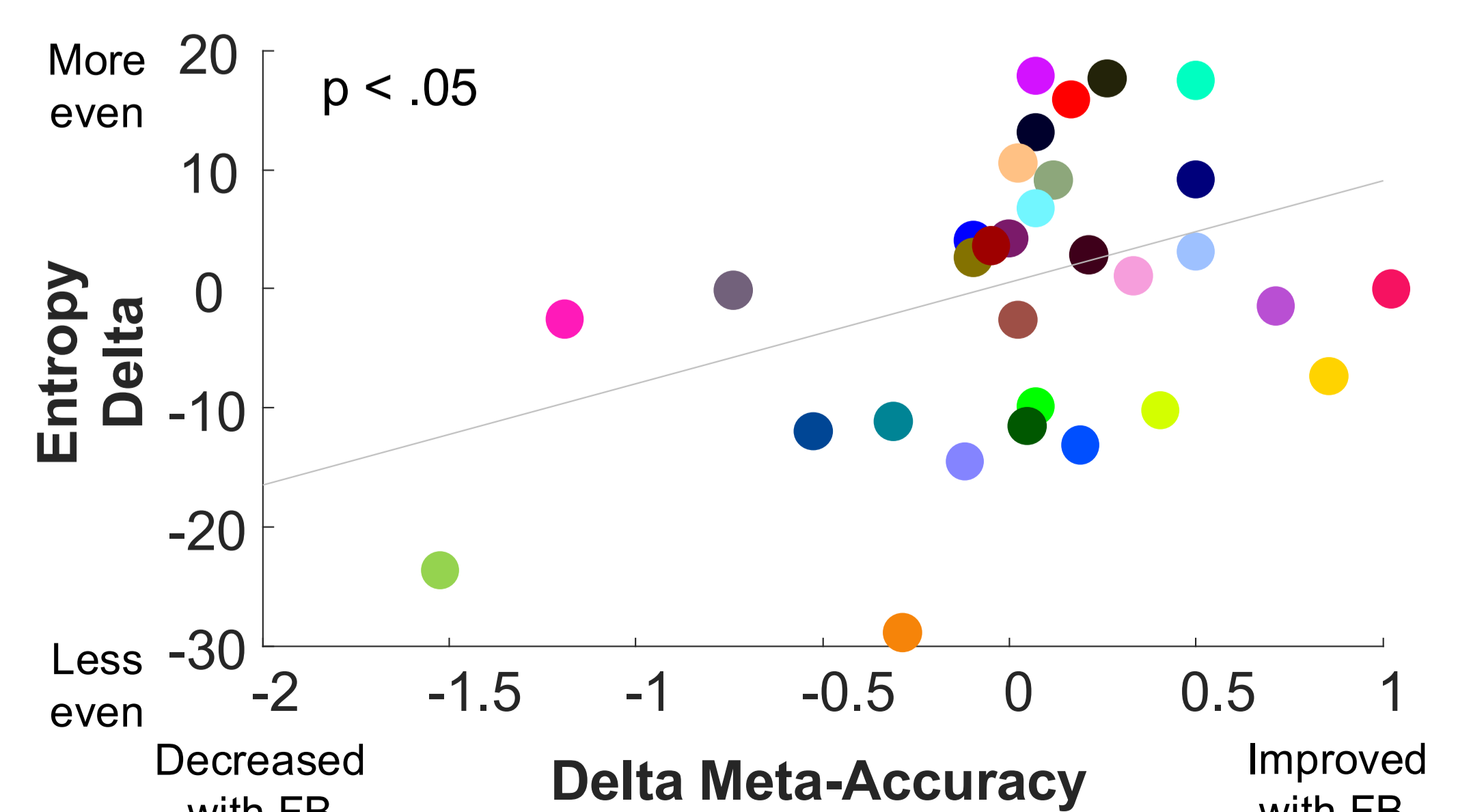
Feedback Meta-accuracy



Metacognitive accuracy prior to feedback did not predict improvements in error evenness



But improvements in metacognitive accuracy did!



Those who more accurately updated their knowledge of their own error distributions evened out their errors