

The Influence of Retrieval Practice on Real-Life Event Memory

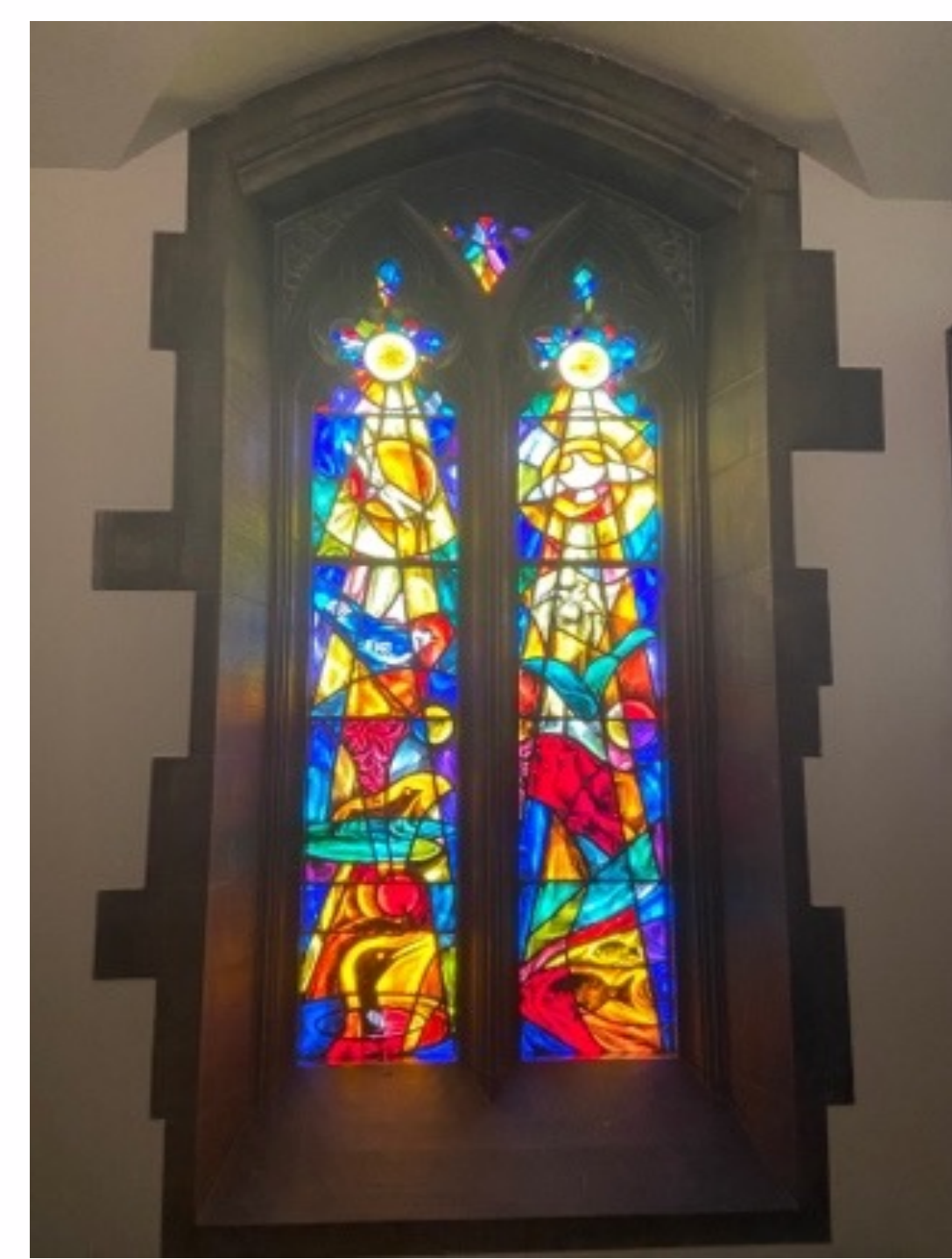
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- Retrieving information from memory (**retrieval practice**) enhances memory for retrieved information (**the testing effect**), even when no feedback is given and when compared to reviewing (**restudying**) the same material¹
- Benefits of retrieval practice can extend to unretrieved—albeit related—information (**retrieval-induced facilitation**)²
- Retrieval practice may act as a **rapid consolidation mechanism** and may promote **memory integration** and **differentiation**^{3,4}

How does **retrieval practice** versus **restudy** influence memory for a naturalistic staged event?

1 Staged Event: The Hart House Tour



A verifiable researcher- and audio-guided experience filled with **social interaction, sensory-rich activities, and tour content**

Sample Tour Stops



2 Tour Review Sessions

Retrieve Group (n = 20)

Retrieved tour details without feedback

Sample Questions:

What did the researcher forget near the stained-glass tour stop?

Researcher action

If you are facing the stained-glass window, where was the wall fixture stop in reference to you?

Spatial location

What scene did the stained-glass window depict?

Tour audio content

How many large panels were on the stained-glass window?

Perceptual detail

Restudy Group (n = 22)

Reviewed, but did not retrieve, exact same tour details

Sample Questions:

What did the researcher forget near the stained-glass tour stop?
Answer: their bag

If you are facing the stained-glass window, where was the wall fixture stop in reference to you?
Answer: behind-to the right

What scene did the stained-glass window depict?
Answer: wildlife

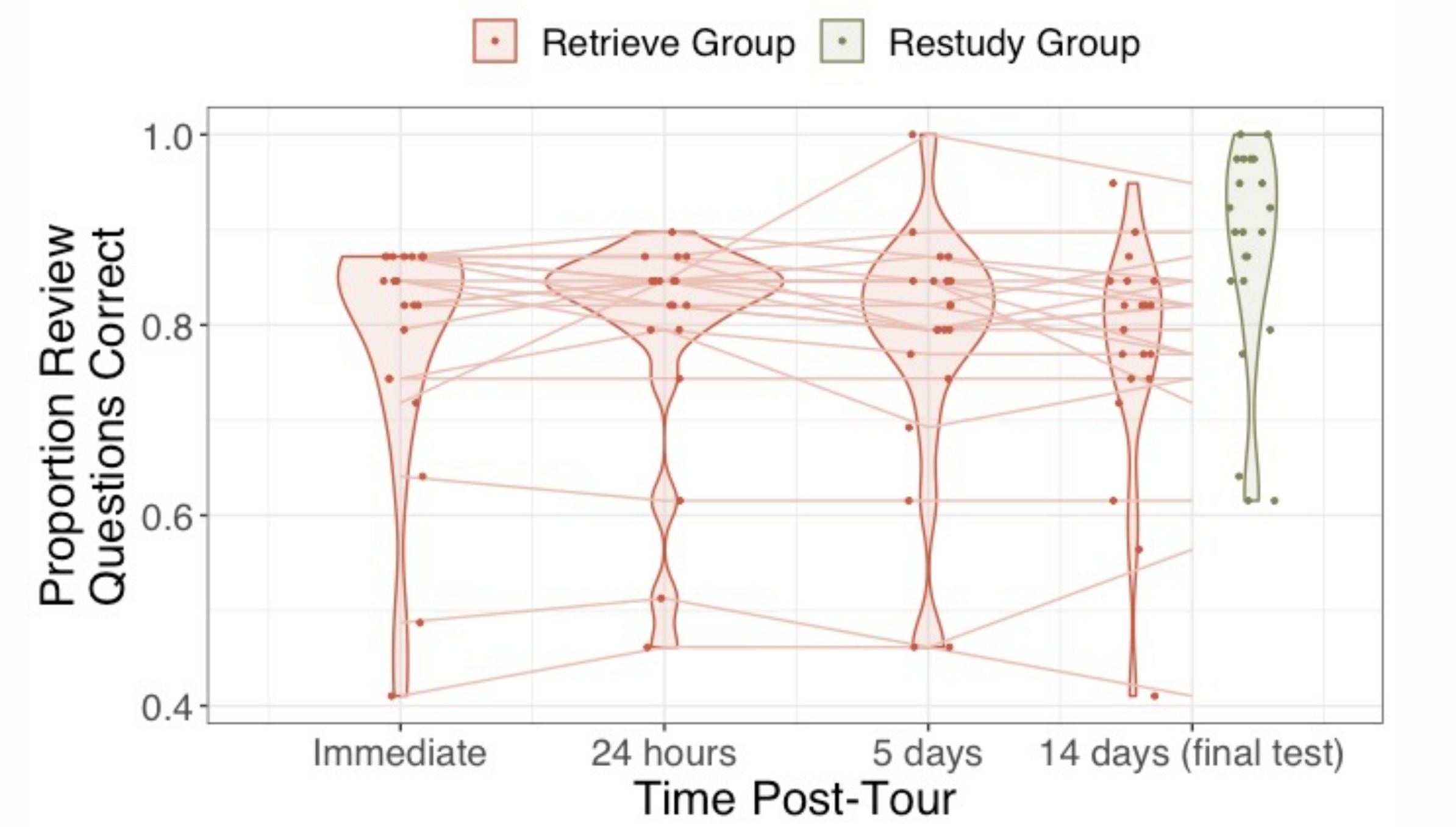
How many large panels were on the stained-glass window?
Answer: 2

Review sessions occurred three times: immediately, 24 hours, and 5 days post-tour

3 Final Memory Assessment Two Weeks Post-Tour (Preliminary Results)

- Reinstated review session questions probing the testing effect
- Free recall narratives probing comprehensive event memory
- Related, never-before-seen, questions probing retrieval-induced facilitation
- Tour stop sequencing task probing temporal organization

No testing effect:
Retrieve < Restudy for performance on reinstated review session questions

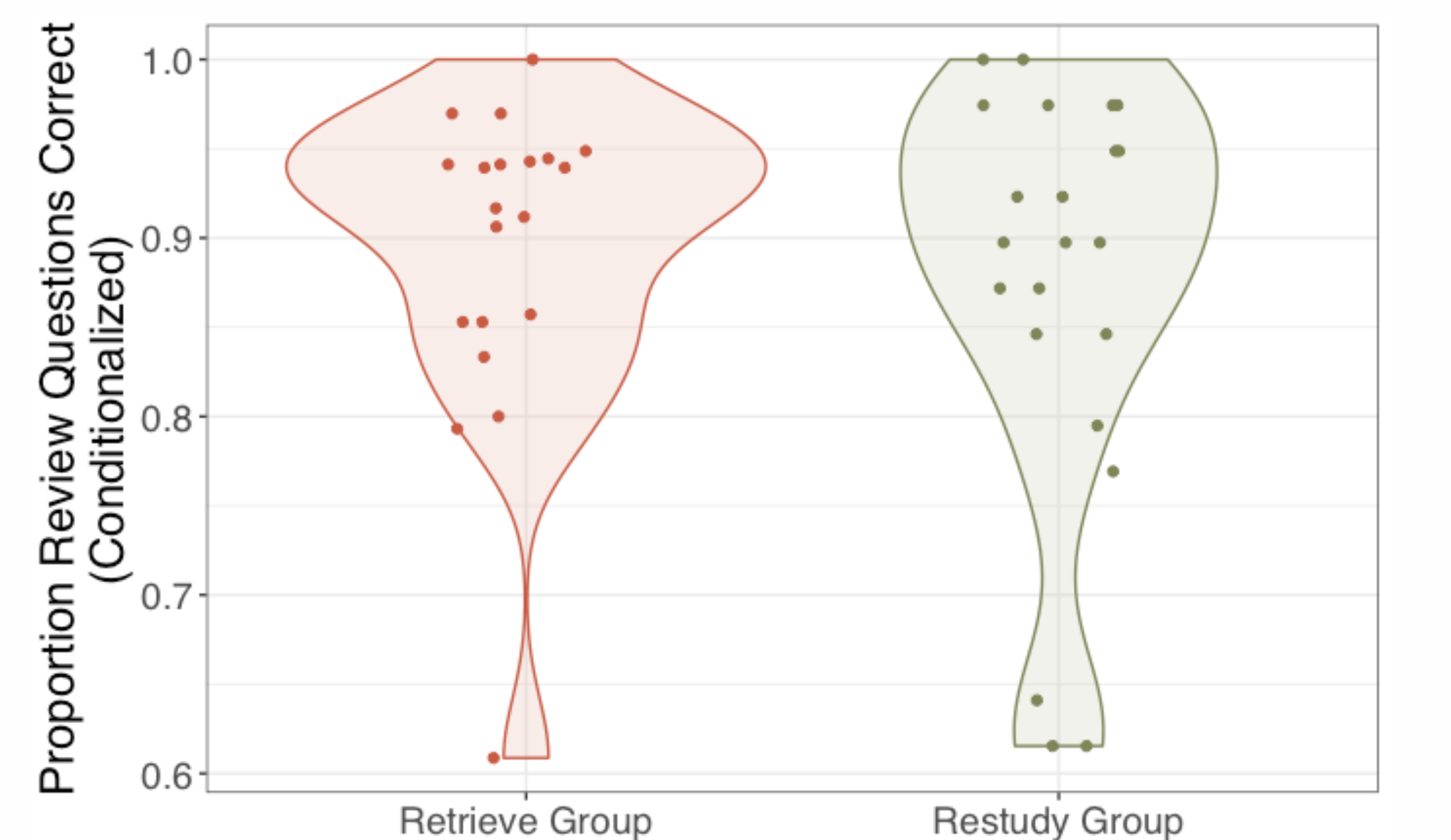


Lines connect participants (in the retrieve group) across review sessions (and the final)

No retrieval-induced facilitation:
Retrieve = Restudy for performance on never-before-seen questions

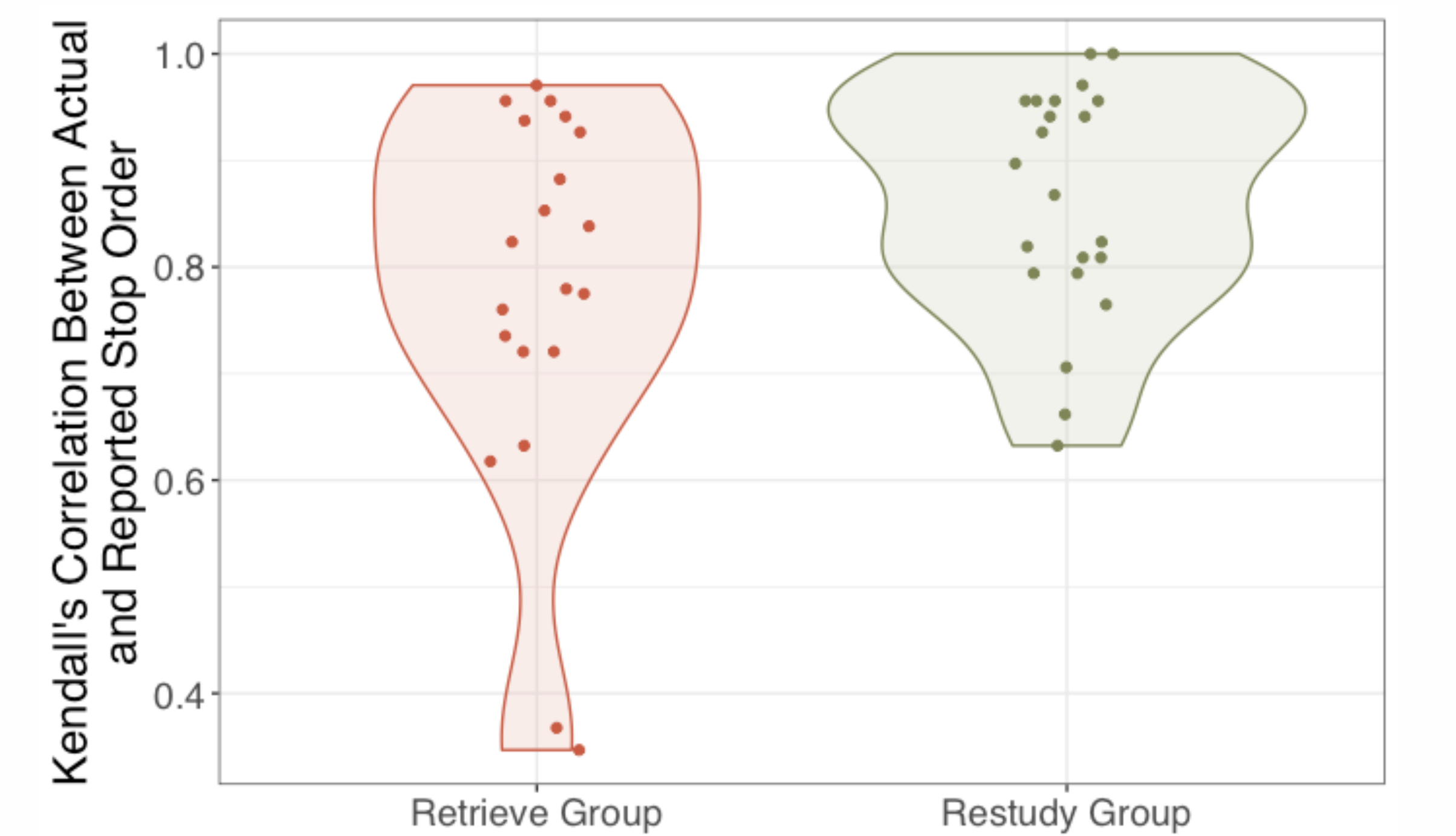


No testing effect even when retrieve group performance was conditionalized on review session retrieval success: Retrieve = Restudy



Questions only included if participants responded correctly in at least one review session

Worse temporal organization after retrieval:
Retrieve < Restudy for performance on tour stop sequencing task



Preliminary findings suggest that:

- Using traditional metrics from the retrieval practice literature, **retrieval practice did not facilitate memory** for event details that did or did not undergo retrieval practice
- **Temporal disorganization after retrieval practice** could reflect **integration** of event components in memory

Next steps:

- Scoring **free recall narratives** for **detail types, accuracy, and spontaneous temporal retrieval dynamics**
- Finishing data collection ($N_{\text{final}} = 48$)

References: ¹Roediger & Karpicke, *Psychological Science*, 2006; ²Chan, McDermott, & Roediger, *JEP: General*, 2006; ³Antony et al., *TICS*, 2017; ⁴Ritvo et al., *TICS*, 2019

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