Contribution ID: **807** Type: **Poster**

Age-related shifts in retrieval strategies modulated by conceptual interference in long-term visual memory

Saturday, September 13, 2025 2:10 PM (20 minutes)

Long-term visual memory refers to the ability to store and retrieve visual information over extended periods. However, episodic representations may share conceptual similarities, leading to retrieval interference, particularly when multiple distinct episodes must be maintained in memory. Recent work has introduced an index of cumulative conceptual interference, combining capacity demands and semantic similarity, showing that higher interference impairs both target recognition and the correct rejection of unseen objects (lures). However, the impact of this manipulation on ageing—already associated with a decline in the precision of visual long-term memory representations—has not yet been systematically investigated.
Using generalized linear mixed-effects models (GLMER) with cumulative interference as the main predictor, we tested its impact on the recognition performance of previously seen objects (Hits) and unseen objects (Correct Rejections) in 35 younger and 22 older healthy adults. Older adults showed an improvement in recognizing targets as interference increased, suggesting that familiarity-based strategies anchored to gist representations were facilitated by the semantic coherence provided by interference. This conservative approach supports recognition of old items but may limit fine discrimination. In contrast, younger adults, who relied more heavily on recollection, were better at discriminating targets from lures under low interference, but their performance deteriorated as interference increased, reflecting the vulnerability of recollection-based retrieval to semantic overlap.
These findings suggest that long-term visual memory in ageing is not merely affected by decline but rather reflects a complex interaction between retrieval strategies and task characteristics.

If you're submitting a symposium talk, what's the symposium title?

If you're submitting a symposium, or a talk that is part of a symposium, is this a junior symposium?

No

Primary author: TUCCI, Federico (Dipartimento di Neuroscienze Umane dell'Università degli Studi di Roma La Sapienza)

Co-author: COCO, Moreno Ignazio (Università La Sapienza di Roma)

Presenter: TUCCI, Federico (Dipartimento di Neuroscienze Umane dell'Università degli Studi di Roma La Sapienza)

Session Classification: Lunch and poster 3

Track Classification: Memory