# Transformation of event representations along middle temporal gyrus Anna Leshinskaya\* & Sharon L. Thompson-Schill University of Pennsylvania

## online materials https://osf.io/3mj4v/

# How does the brain represent predictive relations, visual similarity, and relational categories?

Stable preditive relations are an important part of long-term memory, but pose two challenges for neural representation.



1. Predictive relations often hold between visually dissimilar events. How does the brain represent both predictive relations and visual similarity for the same events?

2. Relations are generalizable: objects which are not themselves associated, but which have similar relations, can be seen as similar. How are representations of individual relations cortically related to relational generalization?





# Session 1 : Subjects learn predictive relations





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# fMRI while recalling predictive relations







**Divergence in neural space between predictive memory and visual** feature representations Middle temporal gyrus may handle transition between visual feature & associative knowledge, including generalized relational categories



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## Visual similarity & predictive memory

