Background

- We extract commonalities from specific experiences to form generalized knowledge applicable to novel situations.
- Reciprocally, generalized knowledge – such as schemas or concepts – affect perception and memory for new specific experiences.
- Hippocampus interacts with ventromedial prefrontal cortex (VMPFC) to organize related memories into schemas in support of generalization.

Methods

- Face-blend stimuli were 50/50 blends of one face relevant and one face irrelevant for category (family) membership.
- Behavioral data was collected from 69 subjects and exclusions were made due to poor performance:
  - 3 from the category training
  - 4 from the specificity training
- Pilot fMRI data was collected from 9 subjects and MVPA analyses were conducted.

Task Design

- Category training decreases overall perceived similarity of faces.

Perceptual Similarity Results

- Category membership affects perceived similarity regardless of goals.
- Specificity training decreases overall perceived similarity of faces.

Generalization Results

- Generalized knowledge is still acquired even when goals at encoding target specificity.

Changes in item representations following category learning

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References


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