Building Memories
Remembering and Forgetting Verbal Experiences as Predicted by Brain Activity

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Introduction
Purpose
To investigate how prefrontal and medial temporal activation is affected when verbal experiences are remembered or forgotten

Encoding Task
13 Subjects
- normal right-handed
- 18 - 35 years of age

Task
- 480 noun words (2 sec each)
- 3 Tesla fMRI
- 240 abstract nouns
- 240 concrete nouns
- Control: 240 “+”

Results
- Positive correlation between encoding RT and verbal memory
  RT = 1000 ms “high confidence” hits
  RT = 966 ms “low confidence”hits
  RT = 936 ms “forgotten” misses
- Higher activation in Left Prefrontal & Medial Temporal Cortex when subsequently remembered words were encountered than when subsequently forgotten words were encountered
Discussion

• Greater activation in Left Prefrontal and Medial Temporal regions when processing words subsequently remembered than forgotten

• How well verbal experiences are remembered depends on the extent to which the Left Prefrontal & Medial Temporal regions are engaged during encoding

My Opinion

Comments

• fMRI suited for experiment
• High spatial resolution images
• Control “+”
• Language proficiency

Improvements

• More subjects
• Left-handed
• Age

Questions