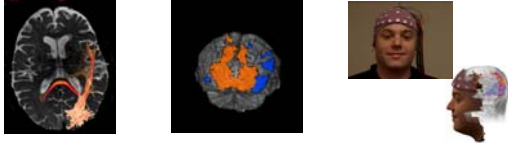


ROI Analysis

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- Anatomical based ROI analysis
 - Functional based ROI analysis
- } Test specific hypotheses

Henderson JM, Larson CL, Zhu DC. Cortical activation to indoor versus outdoor scenes: an fMRI study. *Exp Brain Res.* 2007;179:75-84.

160 unique faces



160 unique indoor pictures



160 unique outdoor pictures



Anatomical based ROI

Retrosplinal Cortex = Brodmann Areas 29 + 30

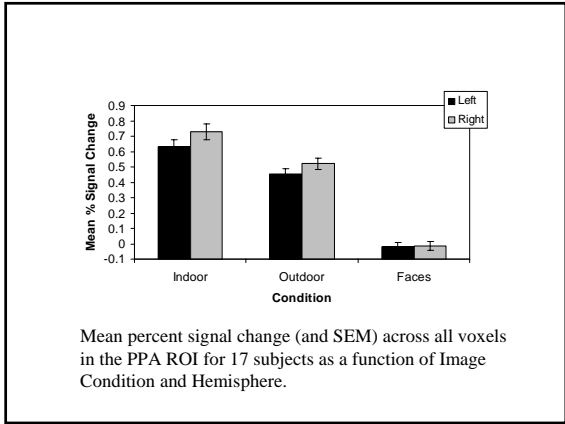
Functional ROI

PPA ROI = (Indoor + Outdoor - 2 x Face)
in the parahippocampus area.

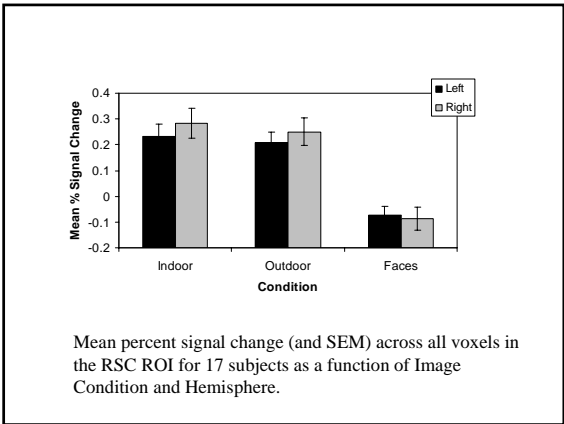
General steps to extract data using AFNI for ROI analysis:

1. Convert to % signal change for each condition.
2. Draw ROI:
 - (a) by hand.
 - (b) using Talairach coordinate system.
 - (c) based on functional results.
3. Get the mean % signal change at the ROI.

Demonstration



Mean percent signal change (and SEM) across all voxels in the PPA ROI for 17 subjects as a function of Image Condition and Hemisphere.



Mean percent signal change (and SEM) across all voxels in the RSC ROI for 17 subjects as a function of Image Condition and Hemisphere.