

Self Portrait

Acute



2 weeks

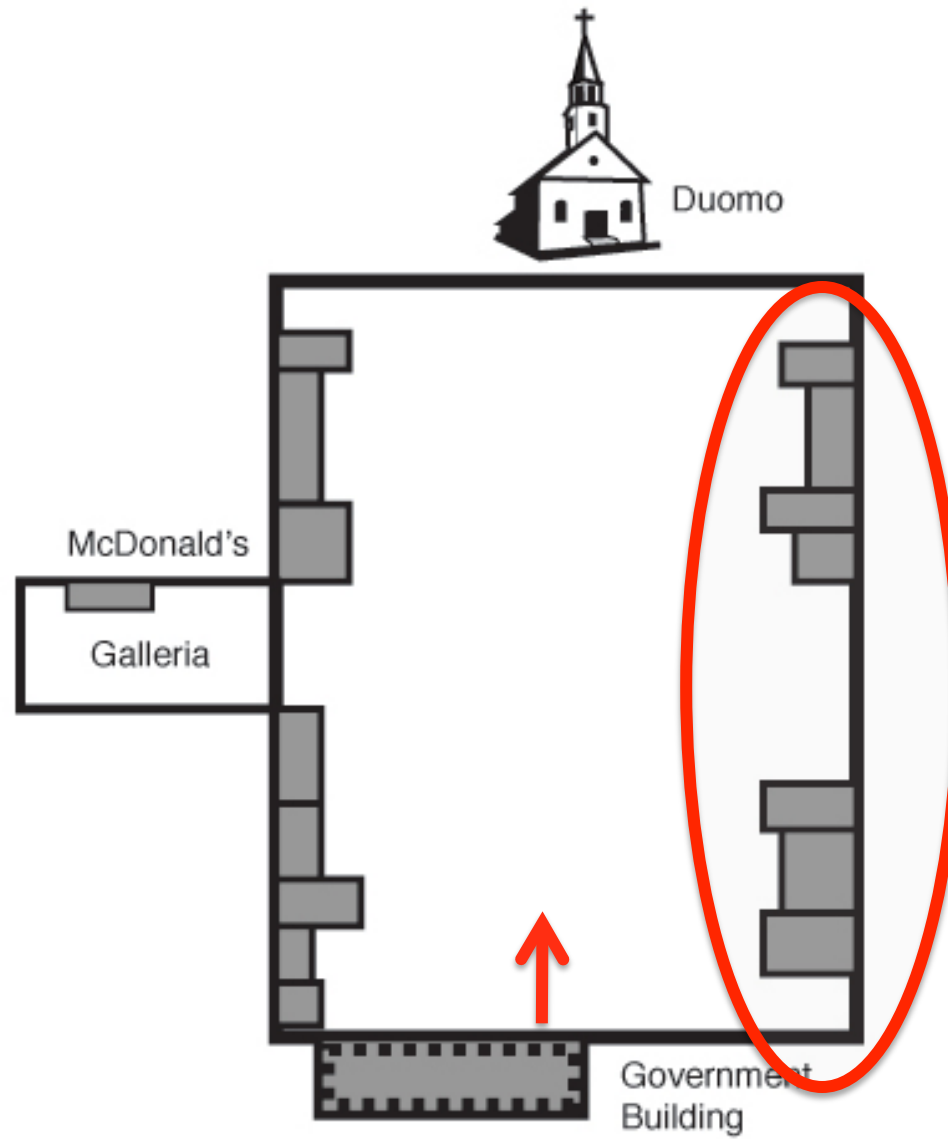


6 months

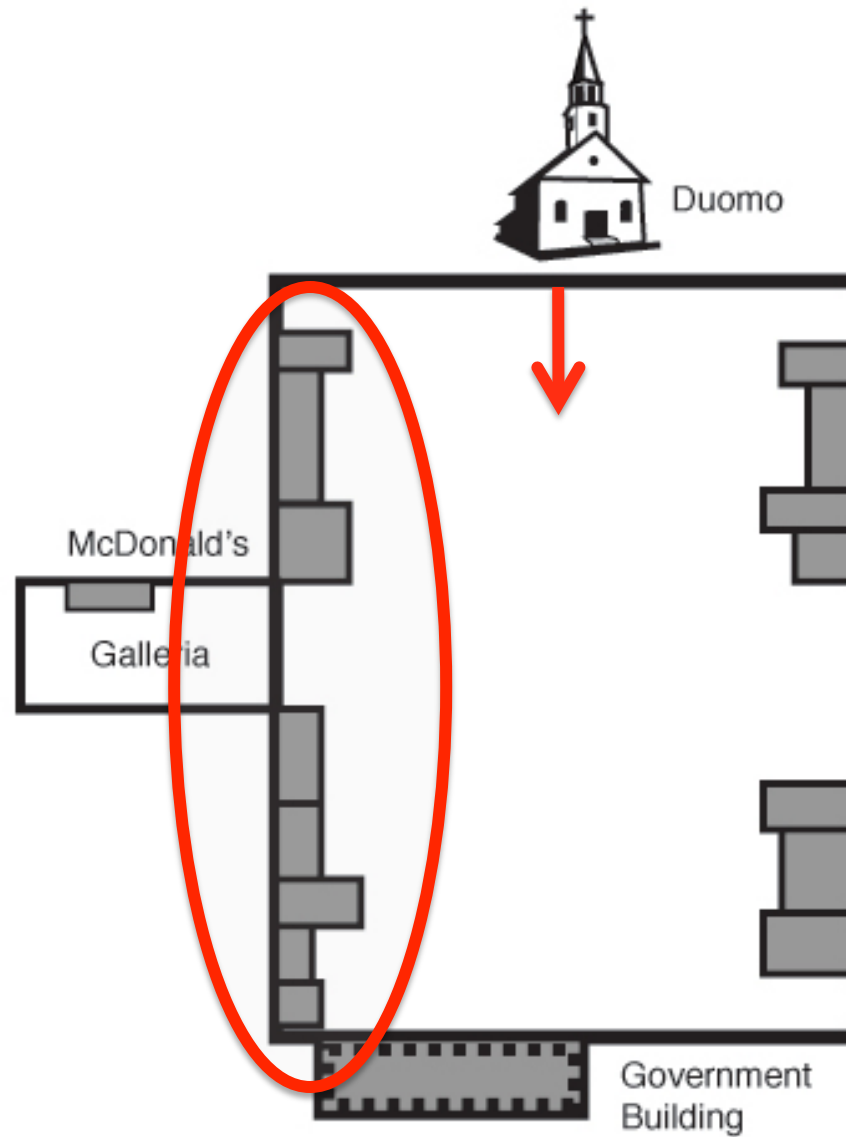


Piazza del Duomo in Milan





**Piazza del Duomo
Milano**



**Piazza del Duomo
Milano**

Any Difference in the Two Houses ?

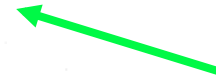


NO



Which house would you like to live in?



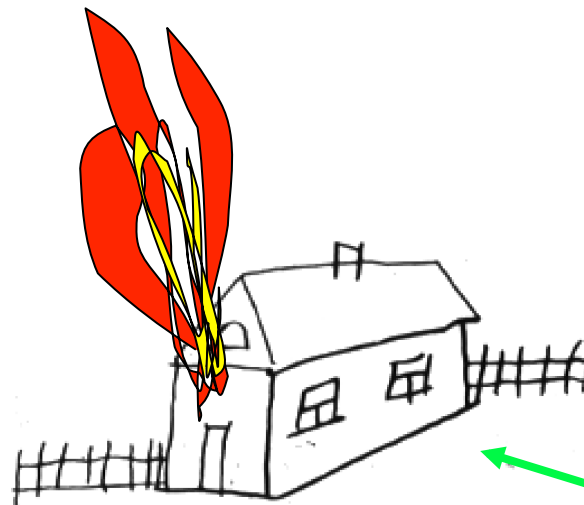


This one



Which House is Dangerous?



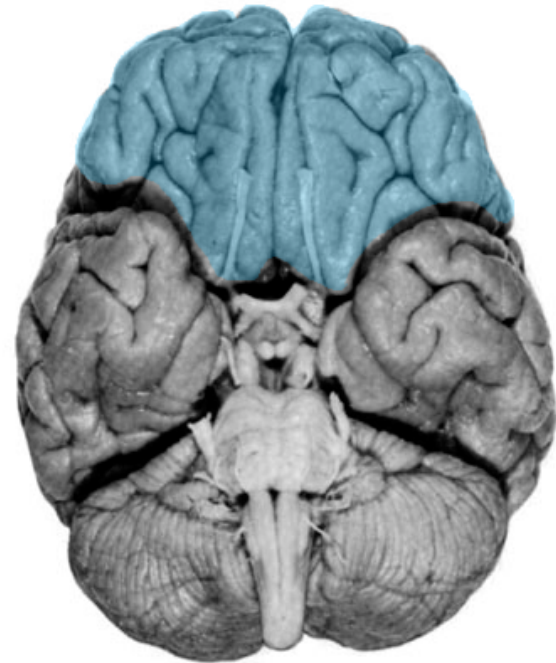


This one

HUMAN FRONTAL LOBE

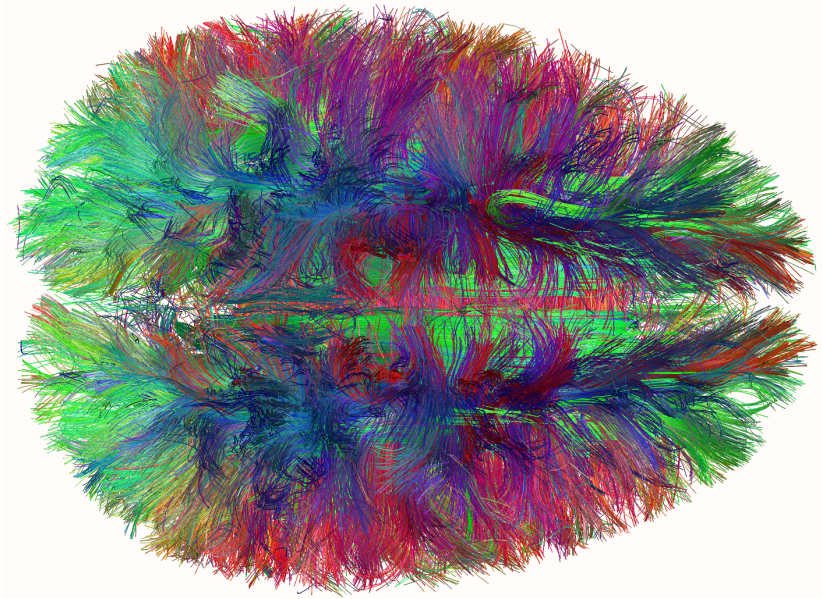
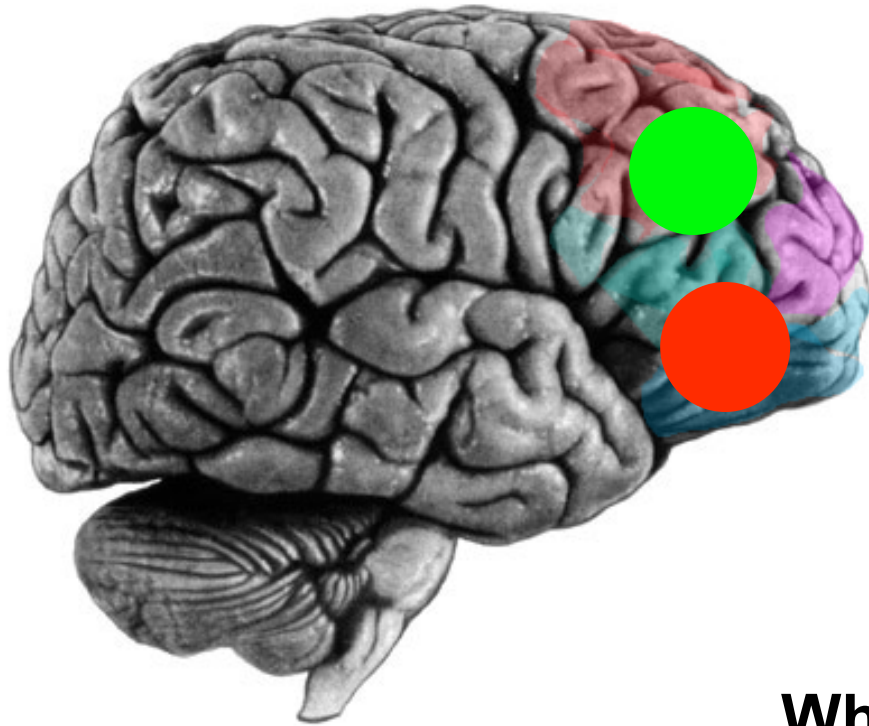


COGNITION



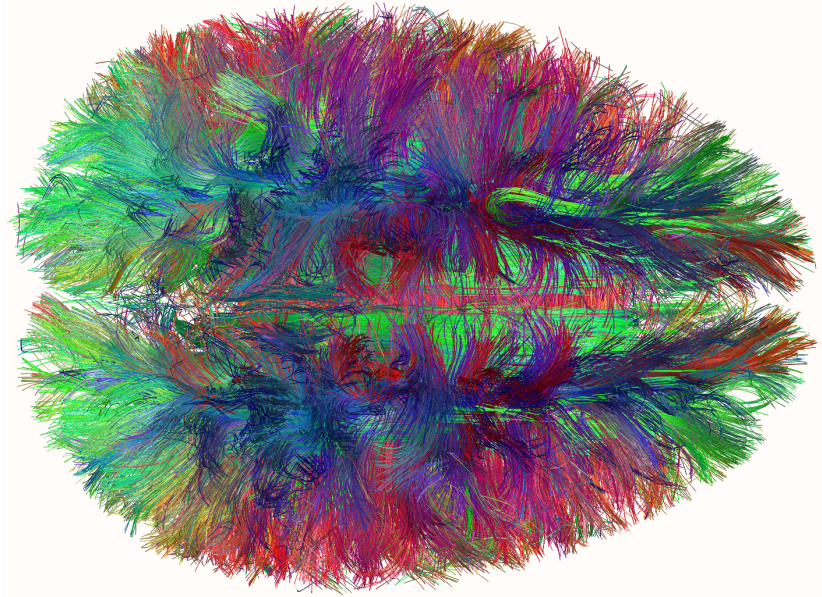
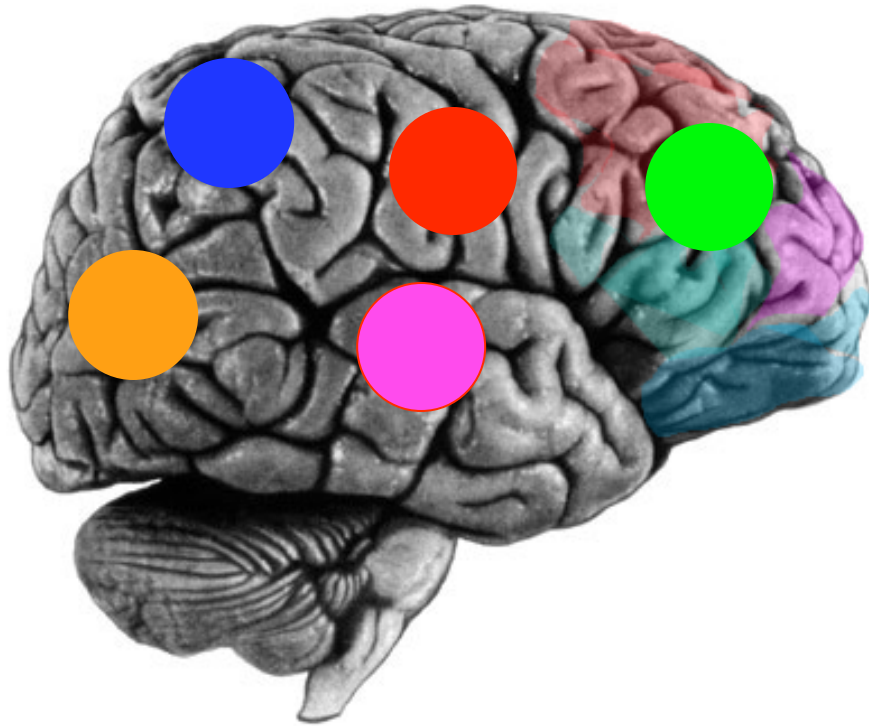
SOCIAL-EMOTIONAL

Frontal Cortex = Executive Control of **Cognition and **Emotion****



White Matter = Brain Connectivity

THE BRAIN OPERATES AS A NETWORK



Frontal Cortex: decision making, working memory, context, novelty

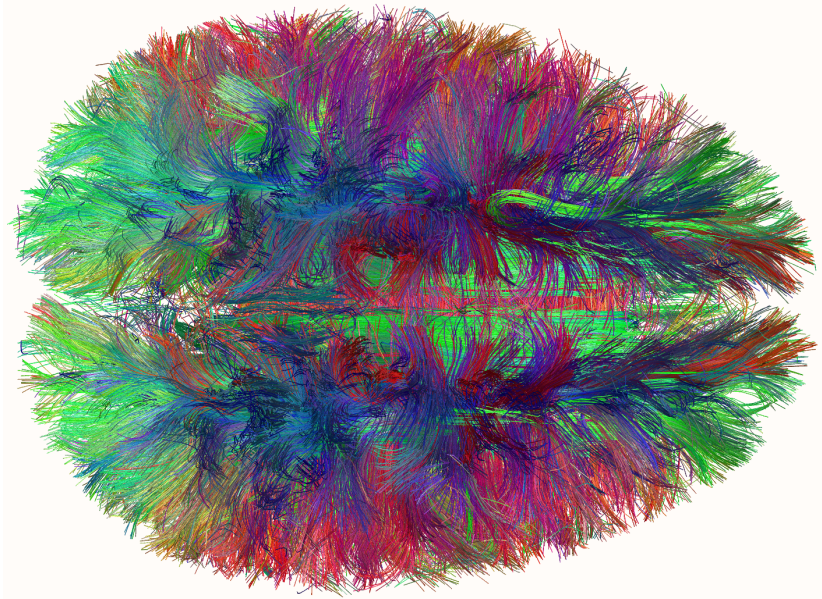
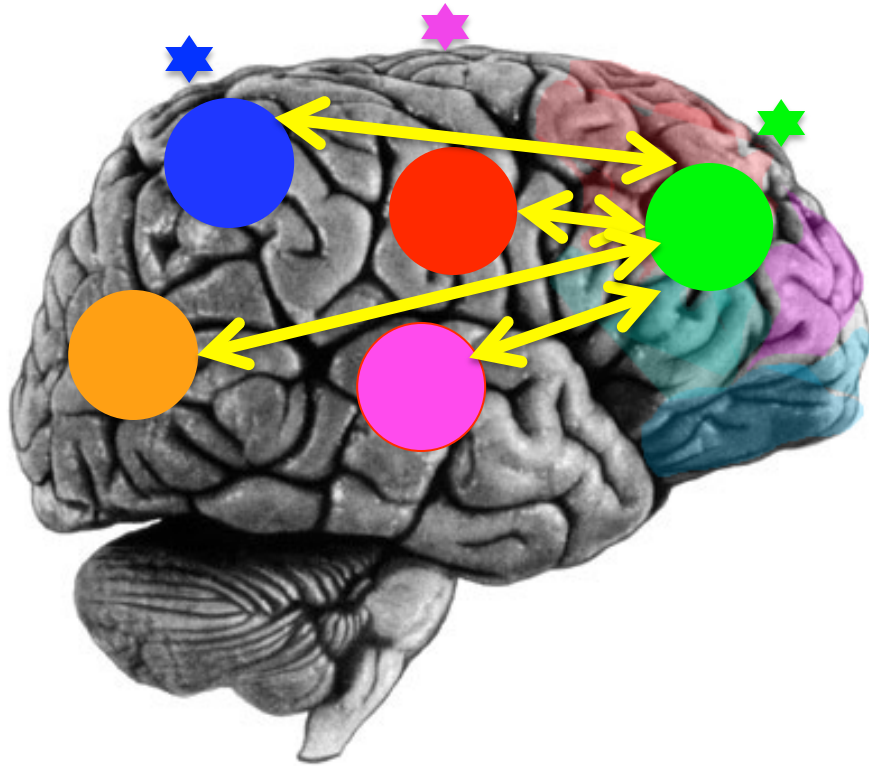
Parietal Cortex: attention, spatial relations, implicit priming

Sensori-Motor Cortex: touch, motor, mirror neurons

Occipital Cortex: Vision

Auditory Cortex: Audition

THE BRAIN OPERATES AS A NETWORK



Frontal Cortex: decision making, working memory, context, novelty

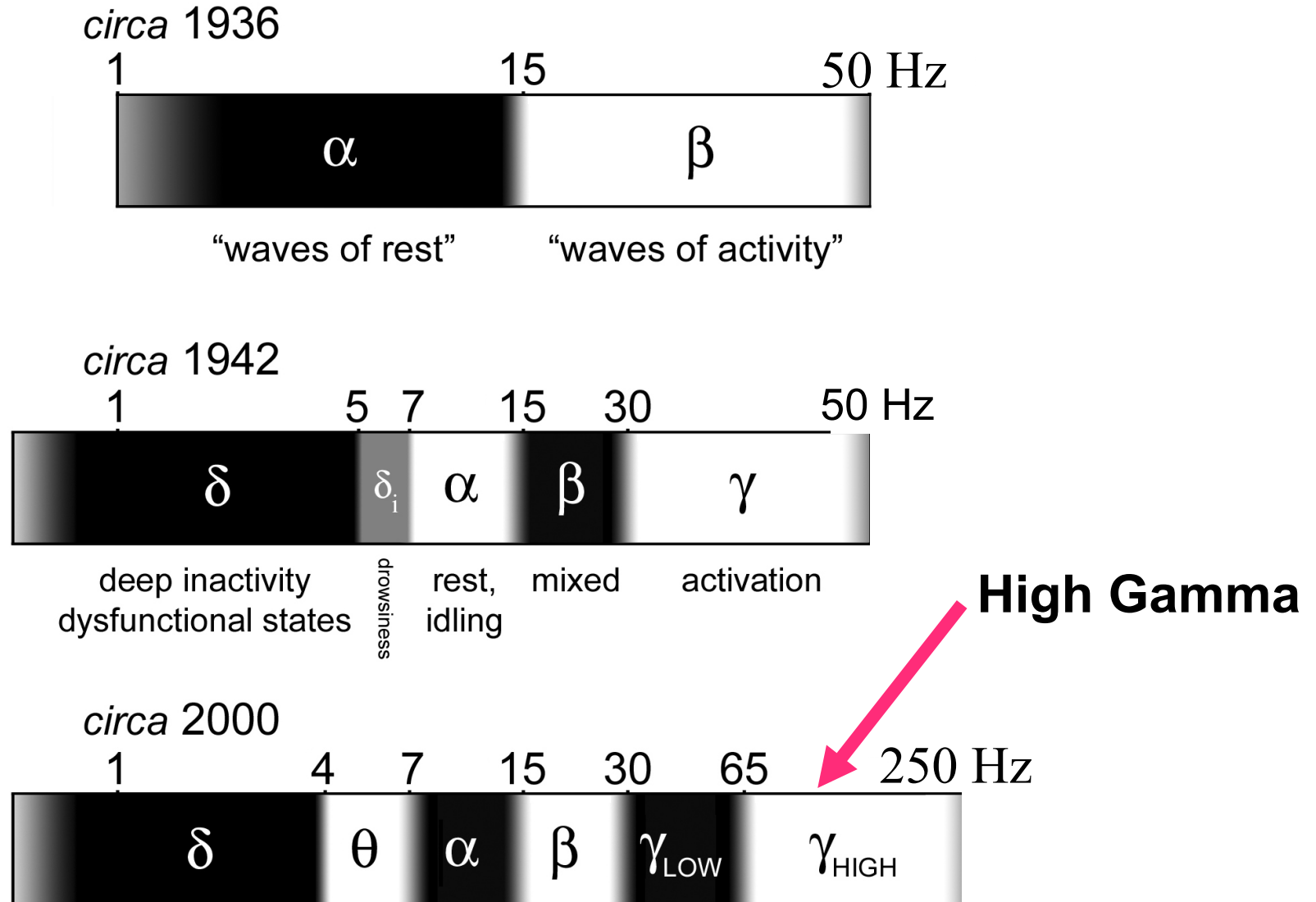
Parietal Cortex: attention, spatial relations, implicit priming

Sensori-Motor Cortex: touch, motor, mirror neurons

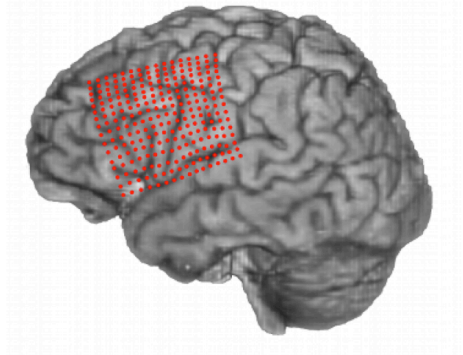
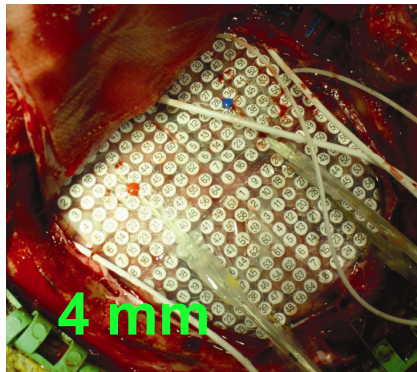
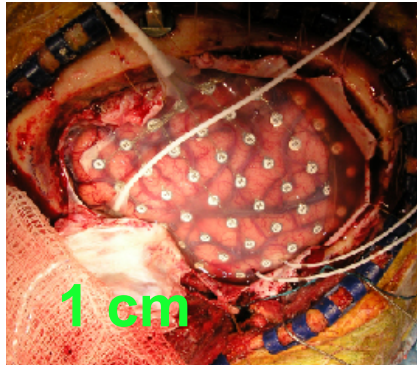
Occipital Cortex: Vision

Auditory Cortex: Audition

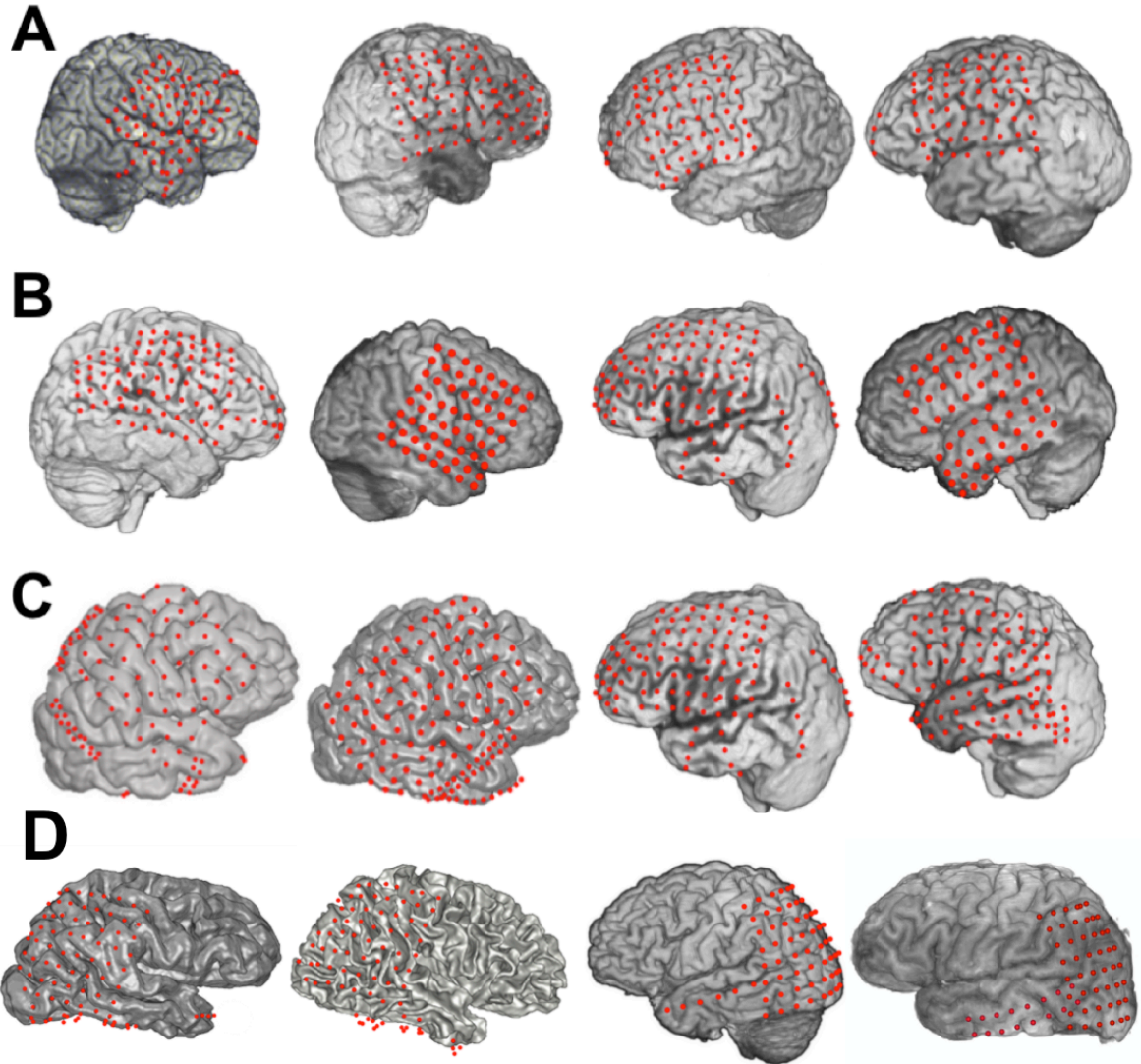
HUMAN EEG 2013



ELECTROCORTICOGRAPHY



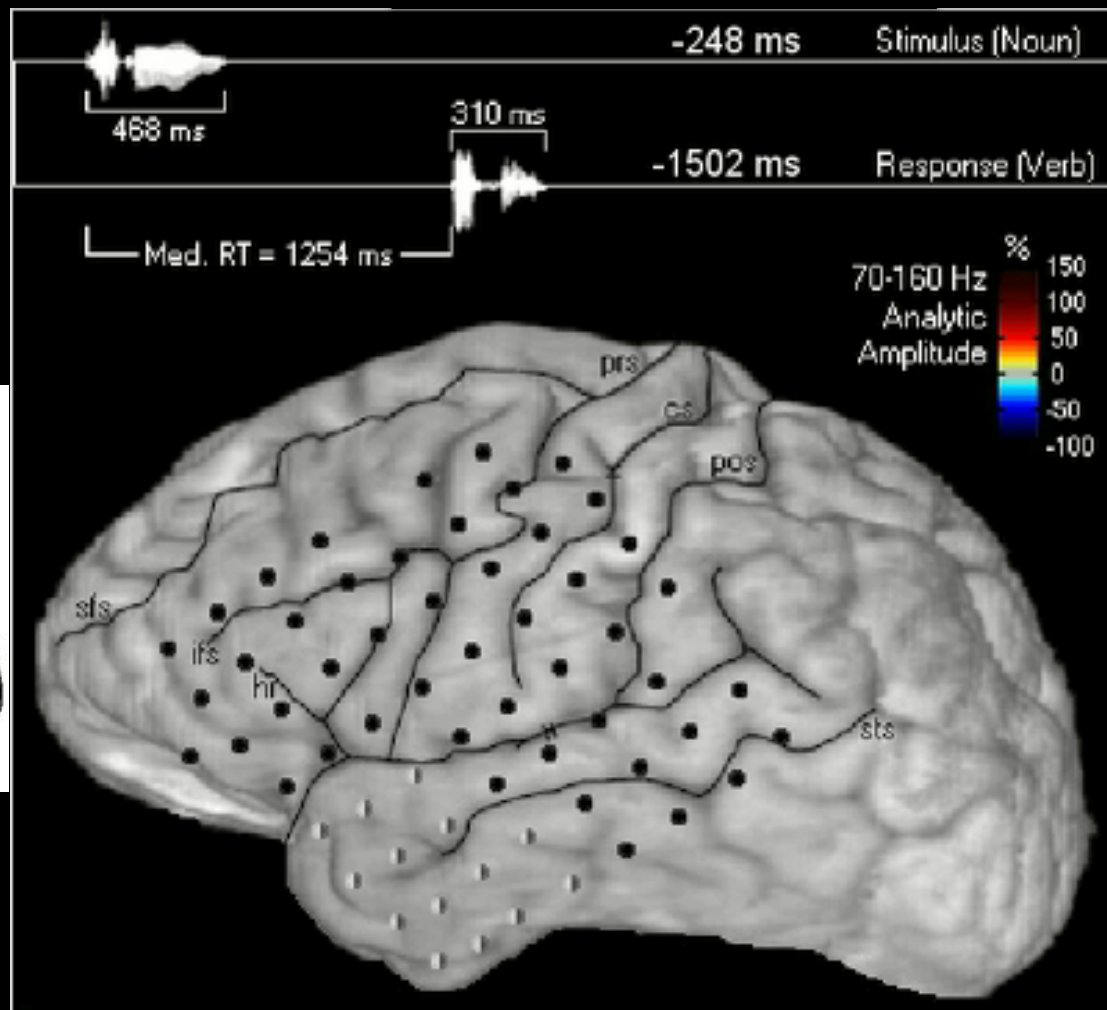
256 channels



VERB GENERATION

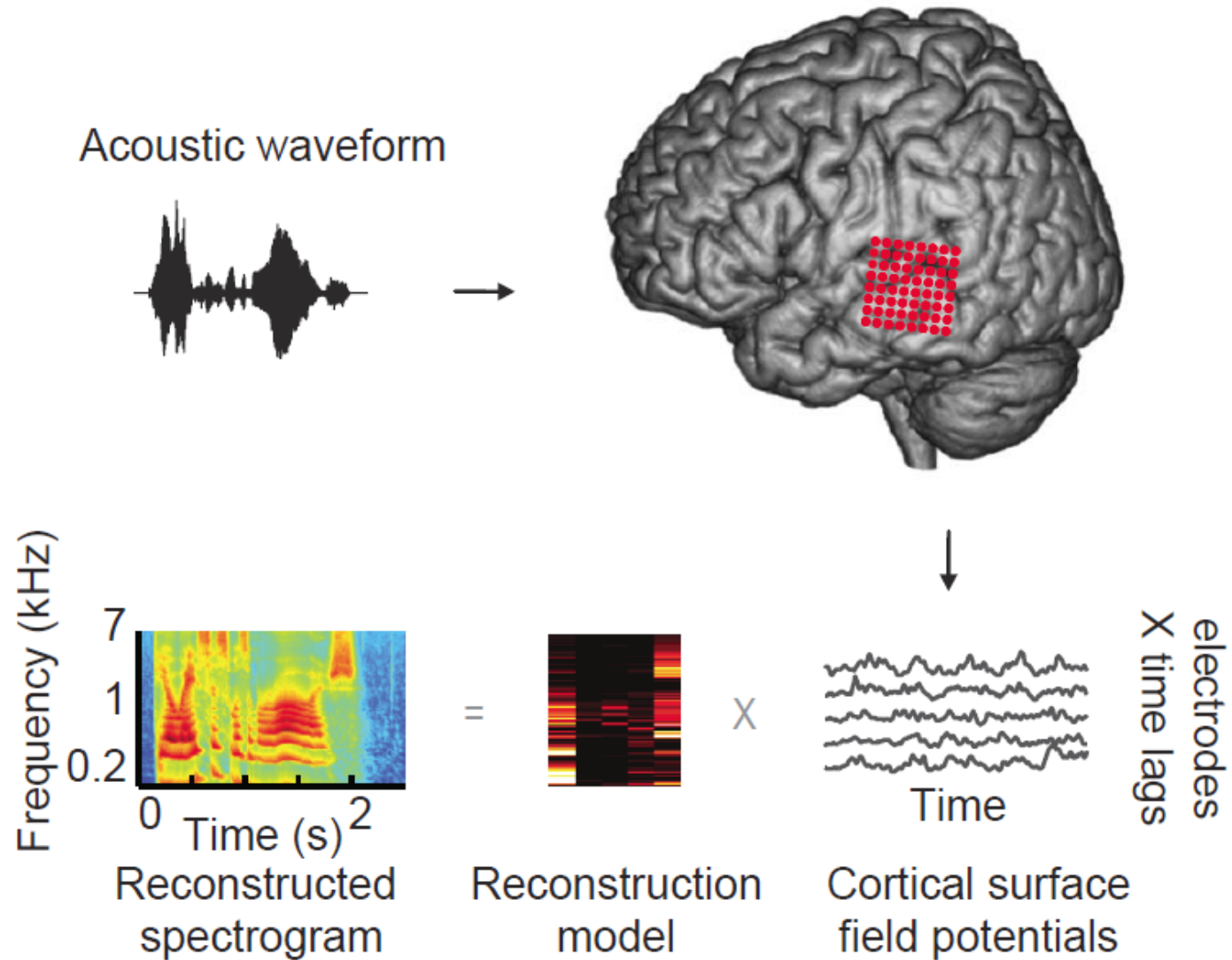


fMRI



Edwards et al. NeuroImage, 2010

SPEECH RECONSTRUCTION



Pasley et al. Plos Biology, 2012

High Gamma (60-200 Hz)

Speech Reconstruction from ECoG

