Review of Week 7

COGS1 - Winter 2016
Remember - Week 8 → Midterm 2

- Come prepared with questions:
- TA review session:

  Monday, February 22
  7-8pm
  Pepper Canyon 109
Singh - Mirror Neurons - Schizophrenia

- Mirror neurons?
  - What is their evolutionary function?
  - What is their role in social cognition?
  - Where are they located?
  - When do they fire?
  - How are they multi-modal?
  - What are the differences between primates and humans?

- Differentiate:
  - “action recognition”
  - “coding for purpose of action”
  - “intentionality”

- What is the difference between alpha and mu waves?

- What is oxytocin? When is it released? Why is it relevant to schizophrenia?
- What were the results of oxytocin’s effects on alpha/mu suppression?
- What is a biomarker? How is alpha/mu suppression used as a biomarker?
- What are the positive and negative symptoms of schizophrenia?
- Why is schizophrenia so difficult to treat? Why would having access to alpha/mu suppression biomarker be important in a clinical setting?
- What were the results associated with FE (first episode) subjects and alpha/mu suppression (under which conditions was there a difference?)
- How do the mirror neuron system and oxytocin fit in as potential treatments for schizophrenia?
How long does neural architecture continue to remodel? When are the periods of rapid change in the brain? How do we know (what evidence was presented during lecture and in the reading)?

What is the relationship of brain structure to genetics? How does it compare with a face? Twin studies?

What is interesting when one compares brain image of a 5 y/o with that of an adult brain?

What is white matter? What is gray matter?

How does the brain change with age? What are the changes in cortical thickness? How do the fiber tracts change with age? Experience?

What is DTI? What does it show?

What is the “flanker task” and “stop signal task”? What structural changes in the brain correlated with improvement in these task performances?

How can one characterize variability in brain structure? (eg. low vs high phase variability)

What did the juggling and dyslexia studies demonstrate in terms of experience and brain structure?