Review of Week 3

COGS1 – Winter 2016
DO THE FOLLOWING READINGS/Podcast:

- Read Chapter 4 of Brain Basics “Learning, Memory and Language” – there will be questions on the quiz about this reading.
- Use the neuroanatomy websites associated with Dr. Elman’s lecture for “as needed review.”
- Listen to RadioLab “Words” Link is posted on Readings Page.

Midterm 1 review session information will be posted soon!
What are the language regions of the brain?

Who was “Tan”? What is Broca’s Aphasia?
- Describe a Broca’s aphasic’s language production and comprehension.
- What is the superior longitudinal fasciculus?

What are some differences between human and animal language?
- How does human language differ from animal communication systems?

What is the FOXp2 gene? How/why does it affect language? Do we have a gene for language?

What is the McGurk effect? Why is it so compelling?

What is some evidence for and against the modularity of language?
Localize and discuss the functions of the following brain regions: Wernicke’s Area, Broca’s Area, Primary Motor Cortex, Primary Visual Cortex, Superior Temporal Sulcus.

What is Mentalese? What is embodied simulation (see reading).

How does metaphorical language use embodied simulation to extract meaning?

How (and what) do honey bees and other animals communicate with each other? Does their language have flexibility? Is their means of communication hard-wired?

What is the relationship of the motor cortex (and other “non-language” areas) to language comprehension? How does that relate to the idea of “embodiment”? Does Siri have embodied simulation capabilities?

How does the pattern of brain activity spread during different sorts of language comprehension? (written vs. spoken language and/or listening to vs. petting a cat)

How do we measure “good” and “bad” driving in the driving simulator?

What is meant by “cognitive load”?

Compare the cognitive load of talking on a “hands-free” phone vs. holding the phone? How does the cognitive load of talking on a phone while driving compare to DUI levels?
What effect does having language change your ability to think? Use the following in your answer:

- What do words “do for us”? Can we have thoughts without language?
- What happens to our cognitive abilities with symbolic representation?
- Deaf children in Nicaragua in 1970’s - before and after learning how to sign.
- Visual echolalia
- Stroke of Insight – Dr. Jill Bolte Taylor – what happened to the “chatter in her head”?
- Connecting ideas: rats and children (re. “white room/blue wall”) discussion.
- How did Shakespeare act like a “chemist” of “words”? What effect would that have on our ability to think and express ourselves?