GL/PSYC 3640  
Psychological Studies of Language  

Review for Final Exam  

Lecture 6  
- sound, meaning and language  
- meaning as mental structures  
- types of meaning  
- neural network of meaning and the role of experience  
- studying language → studying of mental world  
- building mental model from language  

Lecture 7  
- Geshwind-Wernicke’s model of language processes (and its limitation, e.g., Dronkers et al., 2007 & Hickok & Poppel, 2007)  
- Common principles between neural network and connectionist models  
- Ability of a network  
- How network resembles internal representation  
- Shortcomings of connectionist models  

Lecture 8  
- Deficits in spoken and written languages  
- Deficits in understanding spoken and written languages  
- Subtypes of Aphasia and the brain  
- Neurological etiology of dyslexia  

Lecture 9  
- End products of bilingual subtypes  
- Nature of bilingualism  
- Linguistic and cognitive consequences of bilingualism  
- Characteristics of sign language  
- Similarities and differences between sign and speech languages  
- Characteristics of the Nicaraguan language project  

Lecture 10  
- Formal theories  
- Functional theories  
- Evidence for language and evolution: aphasia and basic functions of subcortical areas of the brain, comorbidity of linguistic and cognitive deficits stems from lesion in subcortical areas.
**Essay Questions:**
After three months into studying language, you should have realized how complex language processing is. The following problems are designed to allow connections to be made between lectures (limited to those after the midterm).

1) Language is a tool that bridges together sound and meaning. When an individual fails to use language, we can attribute this failure to have a neurological etiology. Two aphasic disorders, namely Broca’s and Wernicke’s, are common and disturb an individual’s ability to use language. Describe how these two disorders interrupt the sound → meaning and meaning → sound relationships in a neuropsychological perspective.

*Hint 1:* Isolate encoding and decoding processes and their associations with the two disorders. 
*Hint 2:* In each disorder, what kind of behaviour is intact and what is not? 
*Hint 3:* Language processing involves neural networks, not a single area. What is the implication?

2) Based on course material (brain, disorders, alternative language processing, and theoretical standpoints), what is your speculation between language and other cognitive domains, such as abstract reasoning, nonverbal intelligence, working memory, and attention? Do you think:
   a) Language is part of cognition?
   b) Language is isolated from other cognitive domains?
   c) Language overlaps with cognition, but also has its uniqueness in the human mind?

*Hint 1:* Reflect on the materials we covered in class, especially the “applied” lectures (lectures 7-9). Evaluate the research findings presented in class and in Altmann’s book. 
*Hint 2:* Make a decision on which position you take (easier to just take one, don’t be greedy and try to answer more than one). 
*Hint 3:* List your argument accordingly.