# Memory and Cognition

## March 27, 2013

* Implicit Attitude Test (Implicit Association Test)
  + We might alter our responses so we may be more politically correct.
  + Explicitly people may claim they harbor no prejudice, however they may show it on this implicit test.
  + With age prejudice is faster, when young/pleasant share a key.
  + The interpretation here is that we think young is good, old is bad.
  + Prejudice Reduction
    - Always been viewed as a conscious process.
* **Semantic Memory (reason, solve problems, decision making, etc)**
  + **What is the function of knowledge?**
    - When you are interpreting new information, what you know ahead of time is important. We use previous knowledge in LTM. Having this knowledge gives you a framework for organizing new material. The more you know about the topic the easier it is for you to learn new concepts. The more psychology classes you take, the easier it is to learn new concepts.
  + **Context**
    - Context helps you interpret ambiguous information. Words often times have more than one meaning, in normal situations, most of the time we are not aware of the ambiguity. We must be choosing the most appropriate meaning without even being conscious about the ambiguity.
* **Theories of Semantic Memory (Hypothetical Theories)**
  + **Associative Network Models – Concepts are connected through associations**
    - Semantic Network Model
      * Hierarchical organization in which related concepts are connected by associations.
      * Cognitive economy
        + Each property is only stored one time at the highest node, prevents overload. Ie if you had to store each bird has wings for each bird that would be overload.
      * In this theory, it is assumed that we store information about concepts in two ways:
        + Directly associated property (canaries can sing)
        + Inheritance (can inherit properties from the subordinate – have wings, can fly, and have feathers)
      * If this theory is correct it makes predictions on how quickly information can be retrieved from LTM. The closer the property is, the faster you should be able to identify it. A canary can sing is going to be retrieved faster than it has wings.
      * **Evidence for…**
        + Semantic Verification Test

You’re given a series of statements; you have to decide as quickly as possible if those statements are true or false.

* + - * **Shortcomings of this model..**
        + Some inherited properties may be stored directly with the concept, if the property is frequently encountered.
        + Can’t account for typicality effects.

All you have to do is look at the concepts and see if there is a link between canary and an ostrich to bird. Your response time should be the same regardless if you’re being asked about a canary or ostrich, but they’re not.

We can respond quickly to a false statement, according to the model you’d have to follow canary -> bird -> animal even if simply asked “is a canary a fish?”

* + - **Spreading Activation Model**
      * Lengths of associations represent the strength of the relationship between concepts. Nodes can become activated in 2 ways.
        + Perceptual (bottom-up) input
        + Spreading activation from associated nodes (top-down)
      * Semantic priming
      * Expertise
        + More knowledge facilitates getting knowledge throughout the network of nodes.
      * This model will differ for every person. Someone who is a doctor will have more knowledge that’s complex and organized.