# Memory and Cognition

## February 27, 2013

* **Encoding in LTM**
  + **Organization**
    - Material-induced organization
      * Clustering during input
      * Clustering in recall
    - Subjective organization
      * Organization developed by the subject for organizing or structuring a list of items. Even an unrelated list of words can become organized. Imagine giving you multiple tests of the exact same list. You’re tested on the consistency of which you recall the order of the words. They become more and more consistent. Example you’d recall “dog apple lawyer brush” showing you’re clustering the words.
  + **Distinctiveness**
    - Von Restorff Effect – Any unique feature will aid memory. Sometimes shallow processing can lead to better retention, only if it’s distinctive though.
    - Orthographic Distinction – Abnormal letter or spelling combinations.
    - Faces that are unusual or unique are easier to remember. Some say the primacy effect is due to distinctiveness (the first few words on the list are distinctive).
    - It is better to work on organizational structure and distinctiveness at the same time. List three similarities or differences.
    - Word pairs are better remembered if you focus on differences when they’re the same (beer-wine) and better if you look at the similarities for (beer-dog) word pairs.
  + **Item Specific vs. Relational Processing**
    - Item Specific – Encoding each item individually.
    - Relational Processing - You are focusing on the relationship between items. Organization uses relational processing.
  + **Self-reference effect** – anything relatable to you you’re more likely to remember.
    - Orienting task
      * Shallow - Does “able” rhyme with “table”?
      * Deep – Does “intelligent” mean the same thing as “smart”?
      * Self-reference – Does “immature” describe you?
    - If you compare deep vs. shallow orienting, you’re more likely to remember intelligent than able. The items that describe you are even more likely to be remembered than deep orienting.
    - Shallow < deep < self-reference
    - Try to relate the material to your life.
  + **The Generation Effect**
    - Fast – S\_\_\_ (Generate)
    - Fast-Slow (Read)
    - Results: read < generate
  + **Massed vs. Distributed Practice**
    - Space out your studying.
    - Spacing Effect
    - If you do mass studying you get a false feeling of overconfidence. The more in which you process/think about the material the better your memory will be.
  + Implications for education
    - Cramming might be okay for the test but long term you won’t know it for the final.
    - Overlearning – Continuous rehearsal, even after you’ve mastered the material.
* **Types of Mental Representations (Codes)**
  + Semantics -
  + **Imagery**
    - Advantage to visual info – easier for us to remember images than words.
    - Mental Travel - You form a mental map
    - Geocentric view of the world – Size of an image can effect how we see it.
    - Dual Code Hypothesis (Paivio, 1969)
      * Abstract vs. Concrete Words
        + We know that concrete words are easier to remember than abstract words.
        + Any word has two potential codes, a verbal or visual code. Simply two codes are better than one. The word “cat” can be coded verbally “cat” or visually like a big fat cat. The word knowledge can only be encoded verbally. Concrete words are still easier to words than abstract words.
  + Eidetic Images (Photographic Memory)
    - Eidetic imagery is in a small percentage of children, not adults. These children lose the ability around puberty. There’s only one women who has had this ability. The criteria is very incredibly stringent. Children will say “ the bottle is yellow” instead of “the bottle was yellow” if they have photogenic memory. They tend to see the image externally instead of normal people internally.