# Memory and Cognition

## March 4, 2013

Influence w/o awareness in attention outline will be on the exam

3-5 short answer fill in the blanks, 35-40 MC

* **Retrieval From LTM**
  + **Availability** – The information represented in memory
  + **Accessibility** – The information that is available *and* can be retrieved at a specific time/place.
  + **Overlearning** increases the chances of being able to retrieve the information when needed. When you forget something you are *not* losing it, rather just losing where it’s at in LTM. Inability to retrieve information,
* **Retrieval Cues**
  + **Importance of Retrieval Cues**
    - Procedure -> Given 48 words from 12 categories
    - Free recall -> 40%
    - Cued Recall -> 62% (Animal, sport, furniture, etc)
  + There is far more information than you can retrieve at any given time.
  + Photos are retrieval cues for your own memories.
* **What makes a cue effective?**
  + **Associate strength**
    - According to associate strength, a cue is effective, if it frequently occurs with that item in the past.
    - Study
      * Strong Cue (Dog-Collar) vs. Weak Cue (Black-Collar)
    - There are sometimes where a weaker cue is much better, but it depends on what happens during the study.
  + Thomson and Tulving (1970)

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|  | * + - No Cue (Free Recall) | * + - Weak cue (Black-\_\_\_) | * + - Strong Cue (Whistle-\_\_\_) |
| * + - No Cue (TRAIN) | * + - 49% | * + - 43% | * + - **68%** |
| * + - Weak Cue (Black-Train) | * + - 30% | * + - **82%** | * + - 23% |

* + The effectiveness of the cue depends wholly on the cues present in the study.
  + A cue will be considered “Effective” if presented when you first learned the material. If the same cue is presented in study and test it will be enhanced.
* Encoding Specificity
  + Tulving and Thompson (1973)
    - Paired Associate Learning
      * Glue-CHAIR
      * Bath-NEED
      * They were told to specifically focus on the second word because they knew their memory of the second word would be tested.
    - Free Association
      * Table – Dinner, desk, study, lamp
      * Want – Food, desire, now, money
    - Recognition Task
      * Circle words produced in step 2 that were presented from step 1 (chair or need)
      * 24% found they had said the same word and recognized that.
    - Cued Recall of Step 1
      * Glue - \_\_\_\_
      * Bath - \_\_\_\_
* **Content Dependent Memory**
  + **Scuba Divers (Godden & Baddeley, 1975)**
    - We will remember more if we can return the same context in which you learned something.
  + **Rooms**
    - Subjects were presented with 80 words, in a distinctive basement room. The very next day the subjects were given a surprise test. One group was in the same room, the other was in a different room. Those who were in the same room remembered more than the other. Only a limited amount of study is done in one room, but you hopefully are studying at home or the library. They were told to try and reinstate their memory of the room, all of the attributes of the original room.
  + **Odors**
    - They pumped in the smell of chocolate. When the smell was present when they learned something and tested it improved retrieval. The more distinctive the odor the stronger the effect.
  + **Music**
    - They retrieved more when the music matched. You cannot have music during the test so you’re better off not studying to music.
* **State of Mind**
  + **Alcohol**
    - Learned a list of items when sober or drunk. Half of the subjects who learned the list of items sober, or drunk.
    - Sober and sober was best but drunk/drunk was second best, not sober/drunk or drunk/sober. If you learned something intoxicated you’re better at remembering it intoxicated.
  + **Marijuana**
    - If you learn something under the influence of marijuana you’ll remember it better when influenced under marijuana than not at all.
  + **Mood**
    - If you are happy and take the test happy you’ll do better than if you were sad and then tested happy.
  + All of these are stronger for free recall
* Mood and Memory
  + Mood Congruent Memory
    - We do not manipulate at study, come in as is.
    - Study – Participants in neutral mood.
    - What they manipulate are the items themselves. Half of the words are negative and half are positive.
  + Test: participants made to be either happy or sad.
  + Results: Happy participants remembered more positive words. Sad participants remembered more negative words.
  + Clinical depression can be such a cyclical disease, because they’re sad so they think about sad things, which makes you sad, and now you’ll think of sad things, and that cycle goes on.
* Retrieval Inhibition
  + According to retrieval inhibition, the act of recalling part of the information makes it harder for you to remember everything else.
  + Repeated Practice
    - If you only practice some of the material, then it makes it harder to remember everything else. It causes impeding memories to be inhibited.
    - Study: Banana, Orange, Scotch, Gin
    - Intermediate Test: Fruits-or-\_\_\_\_ (starts with OR)
    - By practicing orange in the intermediate test you’re more likely to recall this in the free recall test. By making orange more acceptable you’re actually making banana less accessible.
  + Part-Set Cuing
    - Study
      * List of 40 words (10 categories, 4 words from each)
    - Test
      * A: Free Recall
      * B: 1 Category
      * C: 2 Categories
      * D: 4 Categories
      * E: 7 Categories
    - Everybody, no matter which group you’re in, your job is to remember as many of the 40 words you can. The main question is interest is how likely are you to remember the words from the non-cued categories? They’re not looking at the number of words overall, how likely are they to remember items from the non-cued categories?
    - The more categories they’re given, the less likely they are to remember the non-cued categories.
    - If a police person only asks you parts of the crime scene, it makes it less likely you’ll remember other details.