# Memory and Cognition

## April 3, 2013

* **Schemas**
  + Schemas are organized mental frameworks (general knowledge base) that we use to interpret and filter new information.
  + Office Schema
    - Good memory for objects in office schema, and in this office
    - Poor memory for objects not in office schema, but in this office
    - False memory of objects in office schema, but not in this office
  + Schemas for People
    - Stereotypes for people.
    - “Carol Harris was a problem child from birth. She was a wild, stubborn, and violent. By the time Carol turned eight, she was still unmanageable. Her parents were very concerned about her mental health. There was no good institution for her problem in their state. Her parents finally started to take some action. They hired a private teacher for Harris.”
      * “She was deaf and blind” but you might say yes if the name is changed to hellen keller. Preexisting knowledge effects your memory of that passage.
* **Scripts**
  + Subjects tend to falsely remember likely inferences.
  + Restaurant Script
    - “John was feeling very hungry as he entered the restaurant. He settled himself at a table and noticed that the waiter was nearby. Suddenly, however, he realized that he had forgotten his reading glasses. He ordered a hamburger.”
      * When asked to identify information from this passage, they mistakenly believe they read about a menu.
* **Reconstructive Memory**
  + “George Washington being the first president” & “The Eiffel Tower being in Paris.”
  + You can’t change the above, but it can be somewhat slightly modified.
  + How do people watch movies with still an uncertainty about what will happen, why do you still enjoy it?
  + Generic Memories
    - No-Suspense
      * George Washington was a famous figure after the revolutionary war. He was a popular choice to lead the new country. The success of the war was attributed largely to Washington. His friends worked to convince him to go on serving his country. Washington agreed that he had abundant experience as a leader.
    - Suspense
      * George Washington was a famous figure after the revolutionary war. He was a popular choice to lead the new country. He, however, wanted to retire after the war. The long years as general left him tired and frail. Washington wrote that he would be unable to accept the nomination. Attention then turned to John Adams as the next most qualified candidate.
    - Given a semantic memory test. Not worried about accuracy but rather the length in time to respond. We are somehow able to ignore the information if it would ruin the suspense.
  + False Memories
    - Roediger & McDermott (1995)
    - Deese-Roediger-McDermott Paradigm (DRM)
      * People will incorporate false words. Using spread activation model.
      * A PET scan can tell the difference between a real memory and a false memory. When they recalled a real word their hippocampus was activated. When they recall a false word their hippocampus
      * Hippocampus is responsible for forming new memory.
  + False Memories (Elizabeth Loftus)
    - Lost in mall study
      * They convinced a younger sibling that he was lost in the mall among other events. The events were all true except being lost in the mall, within 2 days of hearing this stories of how he felt, within 2 weeks then it was an elaborate story.
      * “I was with you guys for a second, and I think I went over to look at the toy store, the Kay-Bee toy and uh, we got lost and I was looking around and I thought, “uh-oh. I’m in trouble now.” You know. And then… I thought I was never going to see my family again. I was really scared you know. And this this old man, I think he was wearing a blue flannel, came up to me… he was kind of old. He was kind of bald on top… he had like a ring of gray hair… and he had glasses.”
  + Memory Distortion
    - Grades
      * The grades we received in high school, it shows your distortion of your memory. College seniors are asked to recall high school grades, accuracy drops from A from C’s and D’s. You tended to forget the lower grades. When an error was made it was always in the upper direction, you almost always errored to a higher grade.
    - Food Preferences
      * You can implant false memories that you got sick after eating a certain type of food. You can implant false memories of liking certain foods. It seemed to only work for foods that aren’t a universal favorite.
    - Personality
      * We tend to remember ourselves different than we were. We distort memories of our past. To demonstrate this, ask them at 20 their personality then at 45 ask what they were like at 20. Subjects thought they had changed when in reality they had not. Specifically they thought that suggested poorer adjustment than they really were at 20. They thought they were worse off at age 20 then they really were. We assume we are more psychologically adjusted today. It makes us feel better to think that we are happier today than we were at age 20.
    - Parenting Styles