# Memory & Cognition

## April 29, 2013

* **Organic Disorders**
  + **Amnesia**
    - Korsakoff’s Disease
      * The physical destruction of brain cells due to alcoholism. They experience anterograde and retrograde amnesia.
      * When confronted about their poor memory they blame the situation, because they’re not aware they can’t use compensatory information. They have no idea the severity of their memory loss.
      * Confabulation
        + They’ll make up stories to cover the gaps in their memory.
        + Constructing memories that have not occurred (“honest lying”)
      * Theoretical Accounts of Amnesia
        + Role of hippocampus – Thanks to H.M.
        + Distinction between STM and LTM –
        + Distinction between procedural and declarative memory - H.M. couldn’t remember learning tower of Hanoi, etc.
        + Distinction between implicit and explicit memory
        + Retrieval Problems

They simply cannot retrieve new information. Anterograde Amnesia. Maybe they can store but just not retrieve the information.

They perform fine on implicit tests, such as ban\_\_\_\_. They’ll be just as likely as a normal person to remember banana.

**Famous Faces Test**

Using this technique we can determine the time period which amnesia started because celebrities are known only for time periods.

H.M. was given this test he could recognize people up until the early 50s (1953 was when he had the operation) but he was unable to recognize anyone who was famous after his surgery (anterograde amnesia).

When normal control subjects were given retrieval cues they did well across all the decades, H.M. did just as well as the control subjects. He was able to recognize people who became famous after his surgery. This shows that for some amnesiacs that the information may be in LTM in a degraded form.

* + - Transient Global Amnesia
      * Reversible, short-term period of amnesia. Usually anterograde but sometimes retrograde. Sudden onset, resolution is gradual.
      * They’ll ask the same question repeatedly about time, place, etc.
      * Any abrupt change in emotion, sexual intercourse, or any intense physical activity.
  + Split Brain Research
    - Severing corpus callosum eliminates communication between the hemispheres.
    - The Corpus Callosum is cut to prevent grand mall seizures. The two hemispheres then can’t communicate to each other.
    - If you flash a picture to the left eye, it’ll go to the right hemisphere (which controls language) and then they can’t tell you what they saw but they CAN draw it with the left hand.
  + Aphasias and Agnosias
    - Aphasias – Any sort of language impairment. (Left Brain)
    - Agnosias – Overall problem with spatial disorientation or object recognition (Right Brain)
    - **Visual Object Agnosia** – Inability to recognize a familiar object by sight.
    - **Simultanagnosia** – Cannot pay attention to one objects at a time.
    - **Prosopagnosia** – Can’t recognize faces. They may say that the features are blurred. They may say their wife is a hat and doesn’t have a face. E.g. If you give them a glove they won’t realize it’s a glove until they put it on. They would not be able to recognize themselves in a photograph. They can compensate with this by hearing the other party speak.
    - Spatial Agnosia –
    - Tactile Agnosia -
    - Sensory Amusia -