# Memory and Cognition

## April 22, 2013

* **Autobiographical Memories**
  + Memories of your life and personal experiences.
  + Memories for adults start for age 4 or later. We’re unable to remember events of the first few years of our lives. Unless it’s traumatic or important you won’t remember it.
  + Referred to Infantile Amnesia
    - Explanations
      * **Psychodynamic View**
        + Froyd suggested that we do not remember those early childhood events due to repression. We fall in love with our moms when you’re a boy and resent your mother.
      * **Cognitive; Schema**
        + Information is encoded and organized by infants in a different manner than adults. It’s not the way we retrieve information. It comes down to encoding specificity, your studying conditions should match your testing conditions. There’s no overlap in the way children store the information and how adults retrieve that information.
      * **Cognitive; Linguistic Development**
        + We use language to help form new memories. Verbal rehearsal, etc. Pre-verbal children can’t use that strategy since they do not have language. If we can’t retrieve it based on them not having language. If this is true then if you develop language later in life, your first memory in life will be later. To test this they need cognitive skills that are normal but language delayed. Specifically deaf individuals.
        + **Groups**

**Hearing Individuals**

**Deaf individuals born to deaf parents**

They learn language at the same rate as hearing children do, but just a different language (ASL).

**Deaf individuals born to hearing parents**

These children are usually language delayed because the parents have to learn ASL.

**Conclusion**

There was no difference between groups. This suggests that language development does not impact memory development.

* + - * **Cognitive; Self**
        + If you don’t have a concept of self yet, how can you have an autobiographical memory?
        + Happens around the age of ~2
        + You can test this:

Ruge test

* + - * Neurological, maturation of the CNS
        + Guinea pigs do not have infantile amnesia. If you teach a rat the avoidance procedure (like shocking a rat when they’re a baby to run to another room) they’ll forget it when they’re an adult.
        + The main difference between them is that a guinea pigs brain goes through very little development after infancy, it’s about as developed, as it will be. A rats brain undergoes development during the first few years.
  + Studies of very LTM (Bahrick)
    - He was interested in naturalistic information.
    - How does memory change over time?
    - Recall
    - Name Recognition
      * Given names of high school classmates, mixed with distractors
    - Picture Recognition
    - If you look at results:
      * Name recognition and picture recognition are easier than recall. There’s very little forgetting, even after a 50 year period.
    - Those that learned algebra and Spanish 30-40 years ago:
      * In order to study memory using a final exam in intro Spanish class. Performance is effected by how much they remember due to where they live (Texas v Minnesota), their job type, etc. Anything that is remembered after 5 years is unlikely to be forgotten over your whole life.
    - Permastore
  + Vivid Memories
    - Self-reference
    - Elaborate rehearsal is why you remember useless details like an embarrassing moment but not what blood type you are.
  + Flash-bulb Memories
    - Distinct memories of where you were during 9/11. People are very confident in their memories. They’re formed the moment you hear the news. Rehearsal led to a more detailed account.
    - Brown & Kulik (1977)
      * “Now Print”
        + Neuropsychological mechanism that preserves all of the details whether they are important or not.
      * Surprise & Consequentiality
        + When these are present they fire your neuropsychological mechanism. This is only true when there is personal importance.
      * Problems with Brown and Kulik
        + Is there really anything that special about these memories?

Many people don’t agree how to operationally define a flash-bulb memory.

Operational Definition – Definition you use in your particular study

It’s not so much about hearing the news, it’s what happens over the next few days. An example of this, comparing peoples memories for JFK assassination and Regan attempted assassination.

These memories should not decay and thus be accurate.

They never assume anything other than that the memories are accurate

* + - Neisser & Harsch (1992) – Challenger Explosion
      * TV Priority
      * Those that were more confident were not more accurate.
    - Hornstein, Brown, & Mulligan (2003) – Princess Diana