Chapter 7
MEMORY

Process by which we recollect past experiences and information

Section 1: Three Kinds of Memory
Section 2: Three Processes of Memory
Section 3: Three Stages of Memory
Section 4: Forgetting and Memory Improvement
Question: What are the three kinds of memory?

Memory of a specific event or experience (ex. - school day, conversation, party)

Flashbulb memory
Remembering when you learned the Presidents

Generic or general knowledge
(ABC’s, planets, the Presidents)

Skills or procedures one has learned (riding a bike, throwing a ball, using a computer, listing the Presidents)

End Section 1. HW – p. 155, #1,2
Question: What are the three processes of memory?

THREE PROCESSES OF MEMORY

- **Encoding** – translating information into a form in which it can be stored (30 SECONDS)
  
  OT T F F S S E N T
  
  Visual codes – see in mind as a picture
  
  Acoustic codes – read/repeat over and over
  
  Semantic codes – give meaning to what you want to remember (relate to meaning)
  
  Only Tiny Tots Feel Friendly….
  
  OTTher FFlowerS SENT
Question: What are the three processes of memory?

THREE PROCESSES OF MEMORY

- **Storage** – second process of memory. Maintaining encoded information over a period of time. Maintenance rehearsal – repeating information over and over. Ex.: phone # (poor method – no meaning)
- Elaborative rehearsal – (more effective) relate to known information. Ex.: Use vocab. words in sentence
- Organizational Systems – brain files information
- Filing errors – memory mistakes
Question: What are the three processes of memory?

THREE PROCESSES OF MEMORY (continued)

- **Retrieval** – third process of memory. Locating stored information and returning it to conscious thought. Context-dependent: based on situation in which memory was encoded (place).
  - Police take witnesses to “scene of the crime”
  - Childhood memories in places you grew up
  - Study lists in water or not in water.
Context-dependent memories are dependent on the place where they were encoded and stored. This teenager may be remembering childhood friends and the games they played here years ago.

Computers use electronic circuits to process information; humans use their brains. Both use similar processes of encoding, storing, and retrieving information.
Question: What are the three processes of memory?

THREE PROCESSES OF MEMORY (continued)

- Retrieval:… continued.
  
  State-dependent: retrieve memory better if in same mood as when encoded. Feel sad – sad memories On the tip of the tongue: feeling of knowing something, but can’t retrieve it.

End Section 2. HW – p. 160, # 1,2
Question: How are the three stages of memory related to each other?

- Sensory memory: immediate, initial recording of information; lasts a fraction of a second
  - Iconic (mental picture) – brief
  - Eidetic - (photographic) memory
  - Echoic - sounds last longer (repeat to remember)
Question: How are the three stages of memory related to each other?

Sensory memories transfer to:

- Short-term memory (10-12 secs.) if you pay attention to them.

Primacy effect – tend to remember 1st few items in a series
Recency effect – remember last few items in a series
Chunking – (clustering) break information into manageable units. Ex.: marking multiple choice tests
Interference – new information replaces old
Question: How are the three stages of memory related to each other?

Information that is repeated in short-term memory can be transferred to:

- Long-term memory:
  - Maintenance rehearsal - mechanical repetition (Times tables)
  - Elaborative rehearsal – relating new information to information you already know (water cycle)
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Section 3: Three Stages of Memory

Question: How are the three stages of memory related to each other?

- Capacity of memory – limited by attention
- Reconstructing memory – from bits and pieces
  2 people at the same event may have different memories
  We remember in accordance with our beliefs and needs
- Decay – memory fades over time
- Schemas – mental representations we use to organize information (can distort memory - “hit” vs. “smashed”)

QuickTime Movie (5 min.) – “London Taxi Drivers”

End Section 3. HW – p. 166, # 1,2
Basic memory tasks

Old learning can interfere with new learning – Learning French after learning Spanish

- **Recognition** – identifying things that have been encountered before. Ex.: multiple choice / matching questions easy

- **Recall** – bring back to mind. Ex.: essay, short answer, completion

- **Relearning** – (forgotten information) easier the second time. Ex.: reviewing information for a test.
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Section 4: Forgetting and Memory Improvement

KINDS OF FORGETTING

- **Interference and Decay**

- **Repression** – Removing unpleasant thoughts or memories from our consciousness

- **Amnesia** – severe memory loss due to brain injury, shock, fatigue, illness, or repression
  
  Infantile - can’t remember birth and youth (p. 170)
  
  Anterograde - can’t form new memories (usually caused by trauma)
  
  Retrograde - forget period before traumatic event (a car accident)
Question: In what ways can memory be improved?

**IMPROVING MEMORY**

- **Drill and Practice** – doing something over and over again (repetition) Ex.: times tables, write spelling words 5x each, flash cards

- **Relating to Things One Already Knows** – elaborative rehearsal (kids – lion is like a cat, only bigger and more dangerous)
Question: In what ways can memory be improved?

**IMPROVING MEMORY (continued)**

- **Forming Unusual Associations** – making an unusual or humorous association with something else to help you recall the information
  
  Sn = tin
  
  Snake in a tin can
Question: In what ways can memory be improved?

IMPROVING MEMORY (continued)

- **Constructing Links** – constructing a meaningful link between items. Peso = money. You shouldn’t “peso” much for that shirt.

- **Using Mnemonic Devices** – systems for remembering information (HOMES, MIMAL, Roy G. Biv, Dromedary - Bactrian)

End Section 4 and Chapter 7. HW – p. 173, #2,3 and p. 174, I.P.I., U.M.I., #2-4 and T.C., #2-4