Memory

Main Focus

I. Memory as a process

II. Memory improvement

III. Problems with memory

Memory:

the process by which information is

- acquired,
- stored, &
- retrieved

3 systems/stages of memory

I. Sensory Memory

II. Short -Term Memory

III. Long-Term Memory

(capacity & duration)

I. Sensory Memory:

initial storage of information

that is received by our senses.

I. Sensory Memory

1. Iconic (1/20 sec)
2. Echoic: blends together auditory info (3-4 sec)
3. Tactile: integrates series of touch sensations (1-2 sec)

II. Short -Term Memory

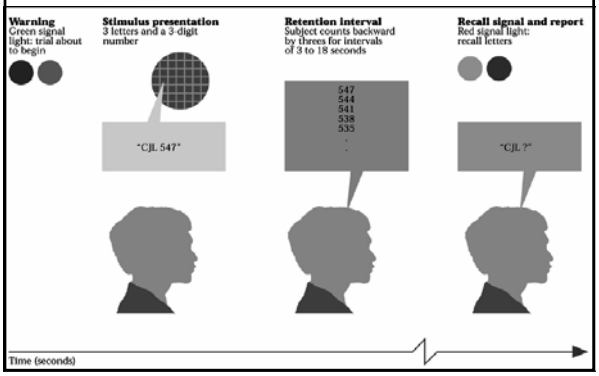
Info proceeds to STM because:

- attention

- meaning

Chunk is a unit of meaningful information

ST memory: Duration (Peterson & Peterson, 1959)



Duration of ST memory

If we don't process the information further it will be gone in

20 sec

Long-Term Memory

Duration:
Relatively permanent storage

Capacity:
Enormous/unlimited

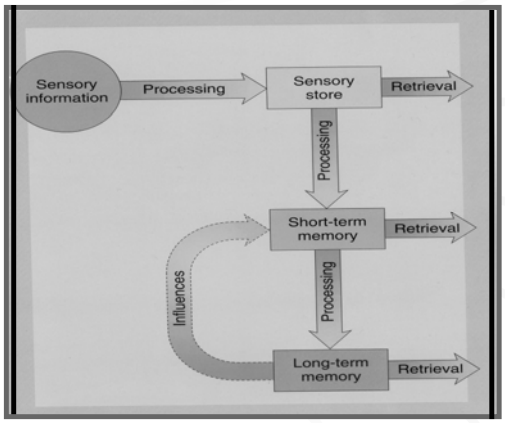
Quality:
Most meaningful information

Types of LT Memory

1. Implicit (procedural) - skills
2. Explicit (declarative) - facts

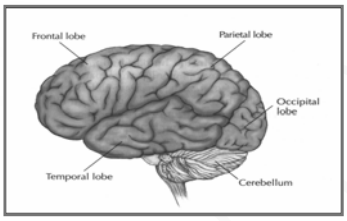
a) semantic: general knowledge

b) episodic: specific life events



Where are the memories stored?

There is no specific center, they are distributed in various arias of the brain.



Memory Improvement

Memory Improvement

1. Emotional arousal
   - stimulate synapses
   - increase blood glucose level

   epinephrine (adrenaline)

- Flashbulb memories

2. Attention

   spaced vs massed practice

3. Self-reference effect

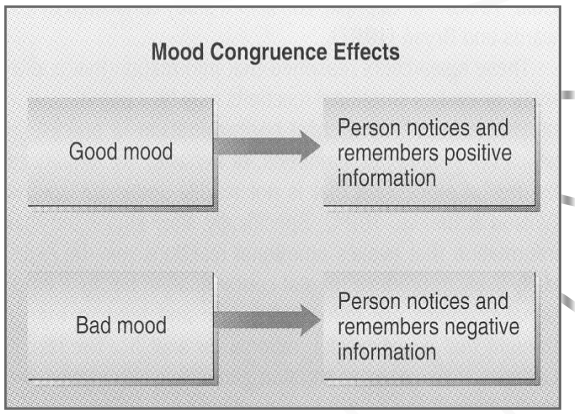
4. Form bizarre, unusual, exaggerated images

   carta = “letter”

Exaggerated mental images can link two words or ideas in ways that aid memory. Here, the keyword method is used to link the English word *letter* with the Spanish word *carta*.

Context/State - dependent memory

memory can be improved if ones body is in the same condition during recall as it was during original learning



III. Problems with Memory

- Brain damage (amnesia)
- Childhood amnesia
- Eyewitness Identifications

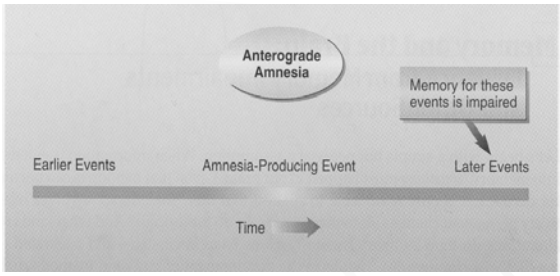
Brain Damage

<u>Amnesia:</u>

severe loss or deterioration of memory

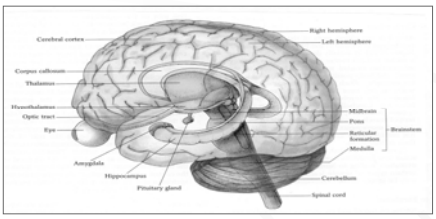
a) Anterograde Amnesia

inability to store new LT memories



a) Anterograde Amnesia

- damage to hippocampus
- retain/acquire *procedural* memory (problem with *episodic* memory)



b) Retrograde amnesia :

inability to retrieve memory acquired prior to brain damage