

Psychology Reading for February 11th

Pages 240-266

- Hyperthymestic Syndrome- A memory that is too good.

How Memory Operates: The Memory Assembly Line

- Memory- The retention of information over time.
- Paradox of Memory- Our memories are surprisingly good in some situations and surprisingly poor in others.
 - The same memory mechanisms that serve us well in most circumstances can sometimes cause us problems in others.
 - Memory Illusion- A false but subjectively compelling memory.
- The Reconstructive Nature of Memory
 - Actively Reconstruct- When we try to recall an event.
 - Observer Memory- A memory in which we see ourselves as an outside observer would.
 - Field Memory- Seeing the world through your visual field.
- The Three Systems of Memory
 - These systems serve different purposes and vary along at least two important dimensions
 - Span- How much information each system can hold
 - Duration- Over how long a period of time that system can hold information
 - Three systems:
 - Sensory Memory- Tied closely to the raw materials of our experiences, our perceptions of the world.
 - Iconic Memory- The type of sensory memory that applies to vision.
 - Eidetic Imagery- Photographic memories
 - Echoic Memory- Hearing memory.
 - Short – Term Memory – Works actively with the information handed to it, transforming it into more meaningful material before passing some of it on to the third system.
 - Working Memory- Our ability to hold on to information we're currently thinking about.
 - Decay- Memories fade away over time.
 - Interference- Our memories get in the way of each other.
 - Retroactive Interference- Occurs when something new hampers earlier learning.
 - Proactive Interference- Occurs when earlier learning gets in the way of new learning.
 - Magic Number- Seven plus or minus two piece of information; universal limit of short-term memory.

- Chunking- Organizing material into meaningful groupings.
- Rehearsal – Repeating the information mentally, or even out loud. Two types:
 - Maintenance Rehearsal- Repeating the stimuli in their original form.
 - Elaborative Rehearsal- Elaborate on the stimuli we need to remember by linking them in some meaningful way.
- Levels-of-processing – The more deeply we process information, the better we tend to remember it. Three levels:
 - Visual
 - Phonological
 - Semantic (meaning-related)
- Long-Term Memory- Permits us to retain important information for minutes, days, weeks, months, or even years.
 - Permastore – Long term memory, which remains “frozen” over time.
 - Semantic- Long term memories based on the information received.
 - Acoustic – Based on the sound of the information we’ve received.
 - Primacy Effect- The tendency to remember stimuli early on a list.
 - Recency Effect- The tendency to remember stimuli later in a list.
 - Serial Position Curve- Graph depicting both primacy and recency effects on people’s ability to recall items on a list.
 - Semantic Memory- Our knowledge of facts about the world.
 - Episodic Memory- Our recollection of events in our lives.
 - Explicit Memory- The process of recalling information intentionally.
 - Implicit Memory- The process of recalling information we don’t remember deliberately.
 - Procedural Memory- Memory for motor skills and habits.
 - Priming- Our ability to identify a stimulus more easily or more quickly when we’ve previously encountered similar stimuli.

The Three Processes of Memory

- Three major processes of memory
 - Encoding- The process of getting information into our memory banks.
 - Mnemonic- A learning aid, strategy, or device that enhances recall.
 - Pegword Method- Associate each number in a list with a word that rhymes with each number.
 - Method of Loci- Relies on imagery of places.
 - Keyword Method- Depends on your ability to think of an English word that reminds you of the word you're trying to remember.
 - Storage – The process of keeping information in memory
 - Schema- An organized knowledge structure or mental model that we've stored in memory.
 - Retrieval – To remember something, we need to fetch it from our long-term memory banks.
 - Retrieval Cues- Hints that make it easier for us to recall information
 - Scientists measure people's memories in three major ways:
 - Recall – Generating previously remembered information on our own
 - Recognition- Selecting previously remembered information from an array of options.
 - Relearning- How much more quickly we learn information when we study something we've already studied relative to when we studied it the first time.
 - Distributed Versus Massed Practice – Tells us that we tend to remember things better in the long run when we spread our learning over long intervals than when we pack it into short intervals.
- Tip-of-the-Tongue Phenomenon- We're sure we know the answer to a question, but can't come up with it.
- Encoding Specificity- We're more likely to remember something when the conditions present at the time we encoded it are also present at retrieval.
- Context-Dependent Learning- Superior retrieval when the external context of the original memories matches the retrieval context.
- State-Dependent Learning- Superior retrieval of memories when the organism is in the same physiological or psychological state as it was during encoding.

The Biology of Memory

- Memories of different features of experiences are almost certainly stored in different brain regions.
- Long-Term Potentiation- A gradual strengthening of connections among neurons by repetitive stimulation over time.
- The hippocampus is critical to memory
- The two most common types of amnesia: