



UNIT-II MEMORY (cc-5)

STUDY MATERIAL FOR M.A (IInd semester)

**NAMRATA
ASSISTANT PROFESSOR
MAGADH MAHILA COLLEGE
PATNA UNIVERSITY**

FORGETTING

Forgetting can be due to a problem with encoding, storage and retrieval or the combination of both

- **Forgetting** refers to failure to either recall or recognise information into present consciousness. All experiences leave traces or after-effects (images) in memory parts of the brain. Failure to retain these traces from the parts of memory is called Forgetting.
- **Failure at any time to recall an experience when attempting to do so or perform an action previously learned -DREVER**

Problems can occur at any stage of the process, leading to anything from forgetfulness to amnesia. Distraction can prevent us from encoding information initially; information

might not be stored properly, or might not move from short-term to long-term storage; and/or we might not be able to retrieve the information once it's stored.

THEORIES OF FORGETTING:

1. DECAY THEORY OR DISUSE THEORY- propounded by Ebbinghaus
 - During learning some physiological changes take place called memory trace.
 - With passage of time if not rehearsed gets decay.
2. PERSEVERATION AND CONSOLIDATION THEORY- Muller & Pilzecker
3. INTERFERENCE THEORY-McGeoch
4. TWO –FACTOR THEORY- Melton & Irwin
5. THEORY OF MOTIVATED FORGETTING-Freud
6. STIMULUS –ENCODING THEORY(Melton)

- Forgetting could be two types -

1. Incidental- forgetting which occurs with lapse of time in normal way without any intention
2. Motivated- forgetting with intention

FORGETTING CURVE

- given by German psychologist **Hermann Ebbinghaus**
- created non sense syllabus
- memory loss is rapid and huge within the first few days of learning material. But, the rate of memory loss decreases and the rate of much forgetting are much slower from then after
- found that remembered 100 percent of the information at the time of acquisition. After that, he started forgetting information very quickly. ***In a mere 20 minutes, 42 percent of what he'd learned was lost.*** Within 1 hour, 64 percent was gone, after 2 days 72 % lost. Finally, after 30 days 76% lost. Later, he only remembered 24 percent of what he'd originally memorized.

➤ He also given this in logarithm form



- **CAUSE OF FORGETTING**
- **Encoding failure or failure to store:** If perceived information is not successfully encoded by working memory for entry in long term memory, the information may be lost. This can be due to
 - Insufficient time of encode
 - Inattention
 - Lack of rehearsal
 - Distraction
 - Interruption

Retrieval Failure

- inability to retrieve a memory is one of the most common causes of forgetting.
 - So why are we often unable to retrieve information from memory? One possible explanation of retrieval failure is known as
 -
- **Interference theory**
 - It was assumed that memory can be disrupted or interfered with by what we have previously learned or by what we will learn in the future. This idea suggests that information in long term memory may become confused or combined with other information during encoding thus distorting or disrupting memories.
 - There are two ways in which interference can cause forgetting:
 - 1. **Proactive interference** (pro=forward) occurs when you cannot learn a new task because of an old task that had been learnt. When what we already know interferes with what we are currently learning – where old memories disrupt new memories.

- **2. Retroactive interference** (retro=backward) occurs when you forget a previously learnt task due to the learning of a new task. In other words, later learning interferes with earlier learning - where new memories disrupt old memories.
- Proactive and retroactive Interference is thought to be more likely to occur where the memories are similar, for example: confusing old and new telephone numbers.
- In the short term memory interference can occur in the form of distractions so that we don't get the chance to process the information properly in the first place.
- **Decay and Disuse theory**
 - Decay theory. According to this theory, a memory trace is created every time a new theory is formed. Decay theory suggests that over time, these memory traces begin to fade and disappear. If the information is not retrieved and rehearsed, it will eventually be lost.
 - Lost linkage:memory is still in the storage but cue to find it is lost
- **MOTIVATED FORGETTING**
 - Sometimes we tried to actively work to forget memories, especially those of traumatic or disturbing event or experiences. Painful memories can be upsetting and anxiety-provoking, so there are times we may desire to eliminate them. The two basic forms of motivated forgetting are suppression, which is a conscious form of forgetting, and repression, an unconscious form of forgetting.
 - However, the concept of repressed memories is not universally accepted by all psychologists. One of the problems with repressed memories is that it is difficult, if not impossible, to scientifically study whether or not a memory has been repressed.
 - Also note that mental activities such as rehearsal and remembering are important ways of strengthening memory, and memories of painful or traumatic life events are far less likely to be remembered, discussed, or rehearsed.
 - PROPOUNDED BY FREUD
 - THE CAUSE OF FORGETTING IS DISPLEASURE
 - We forget because we wish to forget
 - These repressed feelings are expressed by some behavioural symptoms like slip of tongue
 - It is also expressed through dream, hypnosis ,free association

Displacement

Forgetting occurs in the STM because old items have been replaced by new pieces of information and therefore the original items are lost. **Waugh and Norman (1965)** tested if original information (such as digits) can be recalled immediately after learning but are then later forgotten as they have been replaced/displaced or interfered with by other information. They used a probe digit experiment where lists of 16 single digits were used with the last digit in every list acting as the probe. These lists were recorded on tape and presented at either one or four digits per second. The probe digit was also accompanied by a high frequency tone that helped the participant detect that it was the probe. Their task was to write down the digit that followed the probe and rehearsal was controlled as they were told to think only of this last digit. It was found that if the probe was presented near the end of the 16-digit list, then the following digit was remembered far better than if it had been presented at the start of the list. Results therefore showed that material which is not rehearsed is forgotten, despite presentation rate, and that STM has a limited capacity store where new items very quickly displace old ones so that original information is forgotten, which supports the theory because it shows that the later digits were remembered as they had simply replaced the earlier ones.

THANKYOU