

# Theories as to why we forget information



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To understand why we forget information we must define the distinction between availability and accessibility. Availability in terms of what's been stored and accessibility in terms of being able to retrieve what's just been stored. Availability would mainly concern STM and the transfer of information from STM into LTM. Accessibility has to do mainly with LTM. One way of looking at why we may forget information is to ask what prevents information to be stored in the STM long enough to be transferred to the LTM. Some researchers would suggest that decay and interference may have a lot to do with it. Other suggestions on why we may forget (in what's already stored in the LTM) is by interference also, cue-dependent forgetting and motivated forgetting also known as repression in which I would go more in depth with.

Atkinson and Shiffrin (1968) described STM/LTM with their basic architecture of the memory system (known as the multi-store model). The three types of memory stores were, sensory stores, each of which holds information briefly and is modality-specific. The second is a short term store of very limited capacity and thirdly a long term memory store of essentially unlimited capacity which can hold information over extremely long periods of time.

Baddeley and Hitch (1974) proposed their tripartite working memory model as an alternative to Atkinson and Shiffrin's multi store model. According to Baddeley the Working Memory is a STM system that allows us to retain and process information concurrently. He regarded that STM as having three components which allowed us to store temporarily verbal material and visuospatial material and to co-ordinate the storage of this material. Craik and Lockhart (1972) pointed out that rehearsal may keep information in STM

but does not result in transferring the information in the LTM. They suggested that Maintenance rehearsal and Elaborate rehearsal will help to transfer the STM information into the LTM, this is also known as the Levels of Processing. I will go in depths with the theories of forgetting and illustrate it with reference to theories of memory.

Forgetting can often be caused by decay (or trace decay). Decay is when loss information is made during the passage time of been stored to the short term memory. The supporting evidence for this consists of findings from early studies that were employed by the Brown and Peterson technique. According to the decay theory, metabolic processes occur over times which cause the information to breakdown, unless it's maintained by repetition and rehearsal. This result in the memory contained becoming unavailable (Hebb 1949). This type of active trace corresponds roughly for the STM models such as the Multi Store and Working Memory model. Although Hebb didn't apply the idea of decay theory to the LTM, other researchers have argued that it can be explained that LTM forgetting occurs through disuse. This is when the decay-through-disuse theory comes. Loftus noted this by quoting that if certain skills or knowledge aren't practiced enough or in long period of time, the information will decay away (Loftus & Loftus 1980).

Forgetting in the decay view may be seen as a little insufficient. Nairne (1996) quoted " As time passes we gradually tend to forget". This was his main critique of the decay account of forgetting; he then gave an example of why the decay theory is not much applicable. The example given was that the fact that iron rusts over time does not mean that the rust was caused by time's passage. It's caused by something that happens over the time

interval- namely oxidation. In the same term researchers believe that a better account of STM forgetting must involve the specification of events that happen during the retention interval. Some researchers would suggest interference.

According to interference in forgetting memory, this is when lost information from STM is being processed negatively by the presentation of other information. Interference can occur in two basic conditions. One would be when earlier information interferes with the ability to retain information that comes later. This can also be known as proactive interference Goldstein (2008). An illustration of proactive interference in modern memory would be the difficulty of a driver who learnt how to drive an automatic car to drive a standard car the driver may find it difficult to drive the standard car due to its earlier access of information for automatic instructions. The driver may forget to use the stick when changing gears. The second type of interference is termed retroactive interference. This is when a person has difficulty recalling old information because of newly learned information. For example someone may have difficulty learning Spanish when they've just learnt Italian. Since both languages are very similar it can easily get confusing. The two main terms of interference can be distinguished by considering the temporal relationship between the to-be remembered information and the interfering information. This can often happen during the Levels of Processing (from the STM to the LTM) whether the maintenance or elaborative method was used.

Numerous researchers would say that decay does not have much effect on forgetting in STM unless interference is involved. Supporters such as Keppel

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and Underwood (1962) used the Brown and Peterson task to assess forgetting and found that there was no forgetting on the first trials of Brown and Peterson. They've also repeated such tasks with more delay interval and even with more delays there were almost no forgetting found with the participants during the trials. There seemed to be little or no effect of longer retention intervals until trials started to accumulate. This was until the researchers added a little interference (in this case proactive) to occur. Roediger (2006) Added that this is hence interference implicated as the more important cause of forgetting.

The other reason on why we may forget information is because of motivated forgetting also known as repression. Repression is mainly suitable with LTM traumatic effects. The notion of repression stems from Freud's psychoanalytic approach to personality and psychotherapy. Repression was seen as a contention that traumatic memories are submerged in the unconscious, this can sometimes happen during the process of the working memory, when the central executive refuses to retrieve such traumatic information. Although these repressed memories are unavailable to consciousness in many direct ways, they do manifest themselves, most notably through problems in adjustment and behaviour. Repression has become one of the main approaches in psychotherapy McNally (2004). However Lindsay (1998) criticised Freud's theory for not having scientific evidence and criticised motivated forgetting for been a personal choice and therefore may not relate to many theories of memory. Most researchers are sceptical about the special mechanism view, and for a good reason. Roediger

and Bergman (1998) noted that most researchers tended to have a different view on what motivated forgetting could be.

Most theories of memory account for forgetting poorly. The multistore model, working memory model and Level of processing tend to evaluate that forgetting often happens through the lack or time of practice or through destruction. This also includes the Displacement theory supported by Waugh & Norman (1965), the Retrieval failure theory and Cue-dependent forgetting theory, both supported by Brown & McNeill (1966). However most big memory theories tend to ignore environmental aspects such as. Flashbulb memory (Brown & Kulik 1977). Some people may retrieve forgotten information due to an environmental event that happened, even if the information was only rehearsed once. Although an individual may forget information, however it may be forgotten, a simple environmental factor can trigger the information back. In order to know why we may forget information, we have to remember that it can sometimes vary and can be a combination of more than one theory of forgetting since the theories of memory can be poor.

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