Theories of Forgetting

Forgetting is the flipside of memory where information cannot be recalled. This could be due to the fact that, the information was never stored, it isn’t accessible, interference has occurred or actions occur through habit and not through recall.

Reasons for Forgetting in STM

Forgetting in STM is often due to:

1. Trace Decay
2. Displacement
3. Interference
4. Diversion of Attention

Trace Decay

Information that is forgotten due to the passage of time. Idea that memory has a physical trace that fades over time.

Peterson and Peterson (1959)

Aim - To test how long STM lasts when rehearsal is prevented.

Procedure - Participants were shown consonant trigrams (i.e. WRY, NGV, CPW)

Participants were asked to count backwards in 3’s from a specified number

After intervals of 3, 6, 9, 12, 15 or 18 seconds participants were asked to recall the trigram

Findings - Participants were able to recall 80% of the trigrams after 3 seconds but this dropped to less than 10% after 18 seconds

Conclusions - If rehearsal is prevented then information in our STM vanishes rapidly

Therefore decay is the mechanism for forgetting in STM

Evaluation - Trigrams are artificial things to remember and don’t reflect everyday life

Interference from the counting may have been the reason why they forgot, not decay

Trace Decay presumes that STM has a fixed and limited duration.
Displacement

Only a limited number of slots in STM - if new information is taken in then some old information must be "knocked out"

STM has a limited capacity - as more items are introduced it is inevitable that some older items will "drop out"

Interference

Here memories may be interfered with by either old memories or information that has not yet been received

Forgetting increases in time due to interference - this occurs between all the memories that we collect over our lifetime

Diversion of Attention

If attention is not focused on the information to be retained and it is diverted towards something else then it is more likely to be forgotten

Reasons for Forgetting in LTM

Forgetting in LTM is often down to;

1. Trace Decay - availability factor
2. Interference - availability factor
3. Cue-dependent forgetting - retrieval factor
4. Brain Damage - Clive Wearing

Trace Decay

Trace Decay - reduction in memory due to the passage in time

In LTM this is difficult to test as both the capacity and duration of the LTM are unlimited, making it even more difficult to gain a clear understanding.

Interference

The existing memory is distorted in some way, either by something learned in the past (proactive interference) or something learned in the future (retroactive interference)

1. Retroactive Interference

   - This is where new info interferes with the ability to recall old information. The new information causes the previously stored old info to be lost