

Yes, memory displacement is a recognized psychological phenomenon where new information replaces or disrupts existing memories in short-term memory due to its limited capacity. This theory explains why, for example, people often forget information in the middle of a long list, as the new information "knocks out" older memories.

How Memory Displacement Works

- **Limited Capacity:** Short-term memory (STM) is thought to have a limited capacity, often cited as holding around 7 ± 2 items of information.
- **New Information Replaces Old:** When new information is presented, it enters the short-term memory buffer and pushes out older, already-stored information to make room.
- **Forgetting in the Middle:** This process is often illustrated by the primacy and recency effects in lists: items at the beginning are remembered (due to rehearsal and potential transfer to long-term memory), and items at the end are remembered (because they are still in the STM loop), while the middle items are forgotten because they have been displaced by newer information.

Examples

- **Word Lists:** A classic example involves participants in studies who are asked to recall a long list of words. They tend to forget the words in the middle because they are displaced by the later words in the list.
- **Visual Search:** Research has shown that performing a visual search task while trying to hold other information in visual working memory can lead to the displacement of one object's worth of information from memory, even without a specific reason for the disruption, according to a study published in the National Institutes of Health (NIH).

Key Differences from Similar Concepts

- **Displacement vs. Interference:** While similar to interference, displacement specifically refers to new information replacing old information in a limited-capacity store.
- **Displacement vs. Decay:** Decay suggests that memories fade over time without rehearsal, whereas displacement implies that new inputs are actively pushing out old ones.

In Summary

Memory displacement is a mechanism of forgetting, particularly in short-term memory, where the limited capacity of the memory system leads to new information replacing or displacing older memories, resulting in their loss.