

Psychology - memory

[Experience](#)



Memory In psychology, memory is an organism's ability to store, retain, and recall information and experiences. Traditional studies of memory began in the fields of philosophy, including techniques of artificially enhancing memory. During the late nineteenth and early twentieth century, scientists have put memory within the example of cognitive psychology. In recent decades, it has become one of the principal pillars of a branch of science called cognitive neuroscience, an interdisciplinary link between cognitive psychology and neuroscience.

Processes From information processing perspective there are three main stages and 3 types of memories in the formation and retrieval of memory:

- i,· Encoding or registration (receiving, processing and combining of received information)
- ii,· Storage (creation of a permanent record of the encoded information)
- iii,· Retrieval, recall or recollection (calling back the stored information in response to some cue for use in a process or activity).

A. Sensory memory * The ability to look at an item, and remember what it looked like with just a second of observation, or memorization, is an example of sensory memory. * The capacity of sensory memory was approximately 12 items, but that it degraded very quickly (within a few hundred milliseconds). * This type of memory cannot be delayed via rehearsal. * Iconic memory is a type of sensory memory that briefly stores an image which has been perceived for a small duration. * Echoic memory is another type of sensory memory that briefly stores sounds which has been perceived for a small duration.

B. Short-term memory * This memory allows recall for a period of several seconds to a minute without rehearsal. * Its capacity is also very limited. * Memory capacity can be increased through a process called chunking. For example, in recalling a ten-digit telephone number. * Short-term memory is believed to

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rely mostly on an acoustic code for storing information, and to a lesser extent a visual code.

C. Long-term memory

- * The storage in sensory memory and short-term memory generally have a strictly limited capacity and duration, which means that information is not retained for an indefinite period.
- * Long-term memory can store much larger quantities of information for potentially unlimited duration (sometimes a whole life span).
- * Its capacity is greatly large. For example, given a random seven-digit number we may remember it for only a few seconds before forgetting.
- * While short-term memory encodes information acoustically, long-term memory encodes it semantically.
- * Long-term memories, on the other hand, are maintained by more stable and permanent changes in neural connections widely increase throughout the brain.

D. Theories

- * Two-stage theory
- * The two-stage theory states that the process of recall begins with a search and retrieval process, and then a decision or recognition process where the correct information is chosen from what has been retrieved.
- * In this theory, recognition only involves the latter of these two stages, or processes, and this is thought to account for the superiority of the recognition process over recall.
- * Recognition only involves one process in which error or failure.

Encoding specificity

- * The theory of encoding specificity finds similarities between the process of recognition and that of recall.
- * The encoding specificity principle states that memory utilizes information from the memory trace, or the situation in which it was learned, and from the environment in which it is retrieved.
- * Encoding specificity helps to take into account context cues because of its focus on the retrieval environment, and it also accounts for the fact recognition may not always be superior to recall.