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Short-Term Memory

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Short-term memory (STM) refers to memories that last no longer than 30 seconds unless they are rehearsed in that timeframe. The George Miller theory that we could remember seven (plus or minus) two items has been thrown into doubt by modern research which suggests that our short-term memory store depends on a number of factors.

Short-term memory can be defined as the ability to remember an insubstantial amount of information for a short period of time. An example of this is when someone is given a phone number and is forced to memorize it because there is no way to write it down.

The majority of people will find it difficult to remember more than a handful of digits for any length of time unless the number was repeated in their mind over and over again. Short-term memory decays rapidly and usually disappears from a person's mind within 30 seconds.

The banner features the Explorable logo and the text "Quiz Time!". Below this are three quiz cards:

- Quiz: Psychology 101 Part 2 (Image: Red roller skates on a wooden deck)
- Quiz: Psychology 101 Part 2 (Image: A fan of colorful pencils)
- Quiz: Flags in Europe (Image: A Ferris wheel at sunset)

[See all quizzes =>](#)

The Seven Plus or Minus Two Theory

Experiments conducted since the 1950s have shown that the average person has the ability to hold seven (plus or minus two) items in their short-term memory. This is in contrast with long term memory ^[1] which has the ability to hold almost unlimited amounts of information for an entire lifetime.

Separating Short and Long Term Memory

As far back as the 19th century, it was believed that long and short-term memory belonged in two distinct groups. Yet another theory was espoused in the 1960s which claimed that short-term memories were actually converted into a long term store after a short period of time. This 'modal model' theory was virtually quashed as evidence of a separate short-term memory store came from research conducted on patients with anterograde amnesia.

This form of amnesia describes patients who are unable to learn new things after being involved in the accident/occurrence that caused their amnesia. Studies showed that anterograde amnesia [2] sufferers were able to retain information for a few seconds but could not form long term memories. This has been taken as proof that short-term memory is separate from long term.

Memory Span

Though the exact reasons for forgetting information over a short period of time are disputed, the general consensus is that the amount of new facts we can retain over short periods of time are severely restricted by this process of forgetting. Another term for the capacity of short-term memory is 'memory span'. A memory span test consists of the individual conducting the experiment reading out lists of words or digits which increase in length. The longest list a person can remember in the correct order in over half the trials is known as his or her memory span.

George Miller

George Miller was one of the psychologists who believed in the aforementioned seven (plus or minus two) theory in relation to short-term memory. Yet modern research has shown that this is only truly accurate when college students are tested.

When it comes to the general population, this figure varies dramatically as it does depending on the material used to test. For example, it is easier to remember shorter words or ones which are familiar to the person being tested.

Chunking

A method of improving our ability to remember things over a short period of time is called chunking. This is also a word used to describe the organization of things into meaningful sections. Realistically, the average person under normal conditions can expect to remember four items short-term. With chunking, it is possible to remember far more. For example, it is easier to remember nine numbers in three groups of three.

The total capacity of short-term memory is hard to define because it will be different depending on the material used. Generally speaking however, short-term memory can be affected by long term memory, time taken to pronounce words and differences between individuals.

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Links

[1] <https://explorable.com/long-term-memory>

[2] <https://explorable.com/retrospective-memory>