



THE MULTI-STORE MODEL OF MEMORY

Atkinson and Shiffrin (1968)

One of the key assumptions of the cognitive approach is *information processing*, and part of this assumption is that processing of information is *linear*. One example of a model which is based on this idea is the **multi-store model** of memory. The multi-store model was proposed by **Atkinson and Shiffrin** (1968).

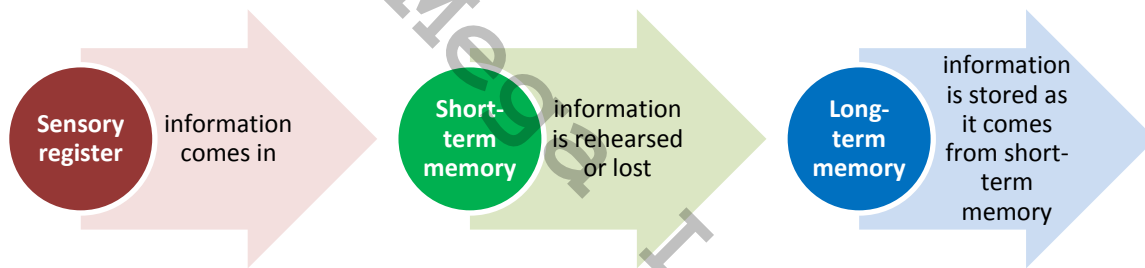
Researchers for the model looked into three areas:

- **capacity** – the size of the store
- **duration** – how long information remains in the store
- **mode of representation** – the form in which information is stored

The researchers chose to investigate:

- **encoding** – how memories are encoded (which means how they are registered as memories)
- **storage** – how memories are stored (which means how they remain memories after being registered)
- **retrieval** – how we retrieve memories when the output is needed

The model is shown below:



Sensory register: this can last up to around 2 seconds. Information is taken in (*input*) by our senses. If the information is not attended to, it will be permanently lost

Short-term memory: (e.g. looking up a phone number and remembering it for the short time it takes to dial it) this lasts only temporarily, and it is common to **rehearse** the information. For example, if you are looking up a phone number, you will say to yourself “01294...” to yourself several times as you walk to the phone to dial it. This type of memory is mainly auditory and has a limited capacity

Long-term memory: this can last for years and supposedly has an unlimited storage timeframe. It is mainly encoded in terms of *meaning* (**semantically-encoded memory**). **Procedural long-term memory** is often the most difficult to fathom. It is associated with highly-automated processes, such as tying a shoe lace

Procedural Long-Term Memory - the memory used to remember highly-automated tasks which are done procedurally rather than thoughtfully, such as walking or tying a shoe lace

EVALUATION

Strengths:

- ✓ There have been many lab experiments which support the model, such as Glanzer and Cunitz (see right) because the primacy and recency effects are explained by it
- ✓ Case studies, such as that of Clive Wearing, who noted an area of the brain (the hippocampus) which, when damaged, prevents new memories from being laid down – this provides physiological support

Glanzer and Cunitz (1966)

Glanzer and Cunitz carried out a scientifically-based study using word lists. They found that the first words in a list were remembered well, as were the last, but the words in the middle of the list weren't remembered quite so well. They said that the first words were well-rehearsed, and in the long-term memory (**primary effect**); the last words were still in the consciousness of the memory (**recency effect**), whereas the middle words were in neither

[youtube.com/c/MegaLecture/](https://www.youtube.com/c/MegaLecture/)

+92 336 7801123
aspsychology101.wordpress.com

Weaknesses:

- ✗ Even though case studies like Clive Wearing have suggested an area of the brain for short-term memory, another case study (Shallice and Warrington, 1970) showed that a victim of a motorbike accident was able to add long-term memories even though his short-term was damaged. This goes against the multi-store model
- ✗ The experiments that give evidence for the model use artificial tasks, which means that the results might not be valid
- ✗ Craik and Lockhart (1972) proposed their levels-of-processing framework, which they said better explained primary and recency effects, as their model was designed as an improvement of the multi-store model

Mega Lecture