

# Psychology

## Topic of the Month

### YOUR MEMORY

It was Atkinson and Shiffrin, in 1968, that proposed a stage model of memory in order to explain its basic function and structure. This model outlines 3 separate stages of memory: Sensory, Short-term and Long-term memory.

#### Sensory Memory

Sensory memory is the earliest stage of memory. During this stage, sensory information from the environment is stored for a very brief period of time, generally less than 1/2 a second for vision and about 3 seconds for auditory information. The body has special sensory receptor cells that transduce (change from one form of energy to another) this external energy to something the brain can understand. In the process of transduction, a memory is created. We attend to only certain aspects of this sensory memory, allowing some of this information to pass into the next stage - short-term memory.

#### Short-term Memory

Short-term memory, also known as working memory, is the information we are currently aware of or thinking about. Most of the information stored in working memory will be stored for about 20 to 30 seconds. The frontal lobes of the cerebral cortex is the structure associated with working memory. For example, you are processing the words you read on the screen in your frontal lobes. However, if I ask, "What is your telephone

number?" your brain immediately calls that from long-term memory and replaces what was previously there. While many of our short-term memories are quickly forgotten, attending to this information allows it to continue on the next stage - long-term memory.

#### Long-term Memory

Long-term memory refers to the continuing storage of information. Also called the preconscious and unconscious in Freudian terms. This information is largely outside of our awareness, but can be called into working memory to be used when needed. Some of this information is easy to recall, while other memories are more difficult.

#### The Organization Memory

The ability to access and retrieve information from long-term memory allows us to actually use these memories to make decisions, interact with others, and solve problems. But how is information organized in memory? The specific way information is organized in long-term memory is not well understood, but researchers do know that these memories are arranged in groups.

Clustering is used to organize related information into groups. Information that is categorized becomes easier to remember and recall.

For example, consider the following group of words: **Desk, apple, bookshelf, red, plum, table, green, pineapple, purple, chair, peach, yellow**

Spend a few seconds reading them, then look away and try to recall and list these words.

How did you group the words when you listed them? Most people will list using 3 different categories: color, furniture and fruit.

One way of thinking about memory organization is known as the **Semantic Network Model**. This model suggests that certain triggers activate associated memories. A memory of a specific place might activate memories about related things that have occurred in that place. For example, thinking about a certain campus building might trigger memories of attending classes, studying and socializing with peers.

#### Reference:

Atkinson, R., & Shiffrin, R. (1968). Human memory: A proposed system and its control processes. In K Spence & J Spence (Eds.). *The psychology of learning and motivation: Advances in research and theory* (Vol. 2). New York: Academic Press.

**BRAIN TRAINING:** You can exercise your memory in different ways. The following website provides great exercise:  
[www.lumosity.com](http://www.lumosity.com)

For any queries email  
[info@choiceslebanon.com](mailto:info@choiceslebanon.com)

or visit: [www.choiceslebanon.com](http://www.choiceslebanon.com)