This Research Paper Is Composed of Data About the Human Memory

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Abstract

This research paper unveils truths known and unknown about the human memory. The memory isn't located in just one place in the brain, but its' location is a brain-wide process in which many areas of the brain performs in conjunction with each other. For example, the act of riding a bike is reconstructed by the brain from many different areas: the memory of how to operate the bike comes from one area, the memory of how to get from here to the end of the block comes from another, the memory of biking safety rules from another, and that nervous feeling that derives from a car veering dangerously close comes from another. In order for us to remember events, facts or processes, we have to store them to memory. The process of forming a memory involves encoding, storing, retaining, and recalling information.

Cognitive psychologist Margaret W. Matlin described memory as the "process of retaining information over time." Various memory types such as: sensory, long-term, and short-term memory are revealed within this research paper. When asked to define memory, one may think of studying for a test or recalling where the car keys are. However, memory is essential in our daily lives, therefore, we wouldn't be able to function in the present or move forward without relying on our memory.

What is the Memory

Memory is the area of the mind by which information is encoded, stored, and retrieves past experiences in the human brain. It's also thought of in general terms as the use of past experience to affect or influence current behavior.

Memory is the sum total of what we remember, and gives us the ability to learn and adapt from prior experiences and to build relationships. It's the store of things learned and retained from our activity or experience, as evidenced by modification of structure or behavior, or by recall and recognition.

Baddely, 2007 says "memory is understood as an informational processing system with explicit and implicit functioning that is made up of a sensory processor, short-term (or working) memory, and long-term memory. Working memory serves as an encoding and retrieval processor. Information in the form of stimuli is encoded in accordance with explicit or implicit functions by the working memory processor. The working memory also retrieves information from previously stored material. Finally, the function of long-term memory is to store data through various categorical models or systems (Baddely, 2007)

Memory Types & their Functions

Long-term Memory. Storage of information over a long period of time, regardless of our daily forgetting, it likely that long-term memory decays very little over time, and can store an unlimited amount of information almost indefinitely. Yes, there are some debate as to whether we actually ever “forget” anything at all, or whether it just becomes increasingly difficult to access or retrieve certain items from memory.

Short-term Memory. In comparison to a scratch-pad for temporary recall of the information that is being processed at any point in time, and has been referred to as "the brain's Post-it note". It contains a small amount of information (typically around 7 items or even less) in mind in an active, readily-available state for a short period of time (typically from 10 to 15 seconds, or sometimes up to a minute).

Sensory Memory. The shortest-term element of memory, it's able to retain impressions of sensory information after the original stimuli have depleted. It acts as a buffer for stimuli received through the five senses of sight, hearing, smell, taste and touch, which are retained correctly. (For example, the ability to look at something and remember what it looked like with just a second of observation is an example of sensory memory).

Procedural Memory. This is related to the long-term memory, which is responsible for knowing how to do things. Procedural memory stores information on how to perform normal routines, such as walking, talking and riding a bike. Procedural memory is a subset of implicit memory, at times referred to as unconscious memory or automatic memory. Implicit memory uses past experiences to recall memory of things without thinking about them.

How We form Memories

The process of encoding a memory begins when we are born and occurs continuously. For something to become a memory, it is first picked up by one or more of our senses. A memory starts off in short-term storage, then we learn how to tie our shoe, for example. When we have the process memorized, it goes into our long-term memory and we can do it without consciously thinking about the process involved.

References

http://www.human-memory.net/types_long.html

https://www.livescience.com/43713-memory.html

https://en.wikipedia.org/wiki/Memory

Memory (Wikipedia): http://en.wikipedia.org/wiki/Memory (plus other links from there)

How Human Memory Works (HowStuffWorks): http://science.howstuffworks.com/environmental/life/human-biology/human-memory.htm

How Amnesia Works (HowStuffWorks): http://science.howstuffworks.com/environmental/life/human-biology/amnesia.htm

Memory (Skeptic's Dictionary): http://www.skepdic.com/memory.html

The Brain from Top to Bottom (McGill University): http://thebrain.mcgill.ca/

How Does Your Memory Work (BBC TV): http://www.youtube.com/watch?v=pxVb6M8UPTQ

Memory - Structures and Functions (State University): http://education.stateuniversity.com/pages/2222/Memory-STRUCTURES-FUNCTIONS.html

Figures

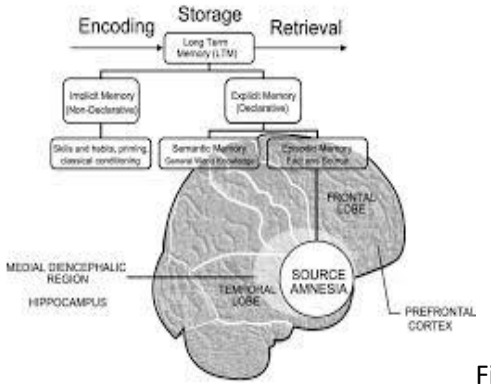

Figure .1

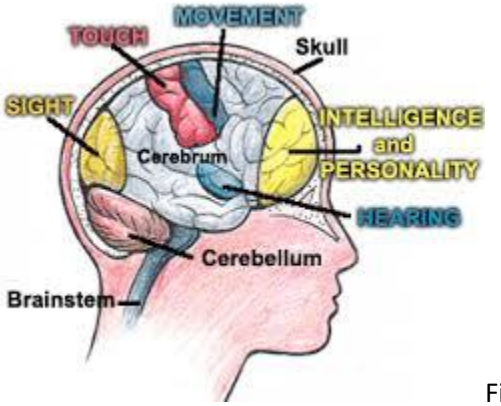

Figure .2