

Recuerde?

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Memory is a universal heritage of humanity. Memories make up and provide one with a sense of self. Memories are inert information, they are not “things” that can be seen and they are not located in one specific place in the brain, they are though, a brain wide process occurring continually. According to Discovery Health, “...there is no firm distinction between how you remember and how you think.” And all of peoples’ thoughts are derived from their sensations; thoughts and memories are therefore copies of sensations. As I continued researching memory it became apparent senses were extremely vital to forming and recalling memories. Senses establish understanding of past events allowing one to experience and assimilate the past. Sound specifically became significant to me, both personally and in terms of its effects on memory.

While memory is a strong form of creating ones identify and is often relied on as a source of truth, it is not an accurate, concrete, reliable source. People look at memory as a way of understanding and engaging in the world, its a comfort zone for one to create whatever they want out of a past reality completely out of their hands. Rita Carter says, “Each time a memory is recalled, it is altered slightly to accommodate new information.” That’s exactly what one does when they remember, create a new memory in the light of a new day, making it impossible to verify if the memory is accurate or not. My main focus is to understand the ways and reasons why people remember and reconstruct the past, both consciously and subconsciously.

The dictionary defines memory as; “the mental capacity or faculty of retaining and reviving facts, events, impressions, etc., or of recalling or recognizing previous experiences.” Creating a memory takes a series of processes, beginning with encoding, proceeding with storage and eventually retrieval, all of these when added together create cohesive thought. One is never aware of these separate mental experiences or that they are all coming from different parts of their brain. Often what is thought of as a single memory is really an elaborate construction of multiple memories. Remembering is an accumulative process; one image evokes another, so on and so on.

Encoding, the first process in creating a memory, is a biological phenomenon ingrained in the senses, beginning with perception. One must be paying attention to truly encode a memory. When one comes into contact with the world all one’s separate sensations the body is receiving travel to a part of the brain called the hippocampus, which then integrates ones perceptions assembling them as if they were one experience. It is widely believed that the hippocampus, along with the frontal cortex, is responsible for analyzing various sensory inputs and determining if they are worth remembering or not. It is speculated that the memories processed are done so in order to solve future problems. The emotional arousal following an event influences the strength of the memory of that event, but emotional content doesn't mean some events are remembered more accurately.

Memory is encoded and stored through language of electricity and chemicals. Encoding works by nerve cells connecting with other cells at the synapse (or junction between two nerve cells.) Electric pulses carrying messages, called neurotransmitters, leap across the junctions between the cells. Each brain cell forms thousands of links, giving the average brain approximately 100 trillion synapses. These links between brain cells are never permanent and are constantly changing. As one experiences more of the world, changes occur at the synapses and dendrites, creating more connections in ones brain.

One's senses play a huge role in the act of forming and remembering a memory. Senses are the basis of forming memories. Perception, which is the first part of forming a memory, involves senses and certain parts of ones brain that translates these senses to a potential memory. Momentous events make biochemical impressions in the brain. The entire body is a sensory

organ, when a body senses anything messages are moved through the body. These messages go to the brain where it is then compared to everything else ever experienced, creating a composite image. If the mind continues to contemplate this message for approximately 250 milliseconds it then creates a new set of data, which feeds it back into its data bank to add to its other past experiences. With the proper stimulus (American Pie melody, Chanel No. 9, etc.), the relay trips and fires neurons bringing a stored experience to the consciousness.

Sounds are interpreted from before birth. Sound links all bodies and beings together through vibration. Music functions as a catalyst for the experience of emotion. It's proven, strong emotions create strong memories and music evokes strong emotions, therefore music must be involved in forming strong memories. Due to sounds ubiquity music is an important role in the construction of memories. Hearing sounds from ones past, evoke strong feelings of "knowing." Humans have an amazing capability to recognize songs with different fundamentals (rhythm, melody, etc.) from original song they heard. The concept of nostalgia was first coined in 1688 by a Swiss doctor who described it as "some one being possessed by a mania of longing with amazing capacities for remembering sensations" (i.e. sound.) (Sensorystudies.org.) Sounds are accompaniment to nostalgia and thus remembering. Many scientists believe that music is encoded in the brain by the perceptual memory system; this system also organizes auditory information into melodies and rhythms.

Memories are contextual, the past is continually being contemplated and produced through memory work. Each time one remembers they are actually creating a brand new memory. One might think they are remembering something from years ago but in actuality they are remembering something with their most recent recollection and thus morphing the memory appropriately. Memories integrate the past with the present; moods are the basis of shading recollections. Memories are constantly being twisted for the rememberer's benefit. Because one cannot remember every single detail of a memory during the process of remembering normal gaps and missing features get filled with imprecise lies one soon begins to believe. More than often, people suppress painful experiences and adorn other memories to feel more better about themselves. The more a memory is remembered the more it becomes about the person memorizing it and less accurate it becomes. In effect, the most reliable memory is that of an amnesia patient!

A formidable disrupter of truthful memories is suggestion, which can completely reconstruct, or even form a new memory. It is extremely possible to apply false memories into people. For example when one asks someone what color hair a person they just saw had they would most likely reply, "I don't remember." But if one were to ask did she have blue hair, the reply would most likely be, "Hmm, yeah I think she had blue hair." In cases applying to lawsuits, etc. jurors and lawyers must be extremely careful with their choice of words because all it takes is one suggestion and entire new memory can form. Ultimately, there is no real way to distinguish fact from fiction when it comes to memories; all memories are technically fiction.

So why do people invest so much value and optimism in memories? Why are certain experiences logged immovably in one's memory, while others are thrown away to never be contemplated again? Memory is an evolutionary development; they are records of our experiences. One doesn't just store any old information; they store applicable, usable information that guides one's future behavior. A great deal of research has been done that indicates the connection between one's memory and their ability to imagine the future.

When a person is faced with an emotionally charged situation their body releases stress hormones, adrenaline and cortisol. These hormones signal the amygdala, which is located inside

the brain's medial temporal lobes. The amygdala then responds by releasing norepinephrine. Norepinephrine, which is another hormone, does two important things: firstly; it starts the body's autonomic nervous system into overdrive; secondly, it send signals from the amygdala to the rest of the brain. These signals tell neurons that the memories recorded in the next minutes are strong.

Humans are based on their experiences and memories of those experiences. Oliver Sacks says, "Memory draws one out of the abyss of unbeing." Memories are the basis of intelligent life, without it the unknown would be continual. The key to understanding and knowing about ones memory is to be aware of its temperamental changes. Memory is very much a thing to look upon and find comfort in. What it shouldn't be used for though is a fraud reality, one in which the rememberer is so oblivious to the world around them they can't differentiate their memories from their present. One cannot deny the vital properties memory holds, at the same time they cannot deny the falsehood all memories bear.

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