

Retrospective Memory ^[1]

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Retrospective memory involves memories of almost everything we have done or achieved in the past. Every other type of memory such as declarative ^[3] and semantic ^[4] are involved in the process and can also be explicit ^[5] or implicit ^[6].

Its counterpart, prospective memory ^[7], involves the recollection of something after an initial delay such as remembering to mow the lawn after you are finished watching television. Prospective memory is linked to retrospective memory however because aspects of the former are required for the latter.

Mental Time Travel

Simply put, events we recall from our life are retrospective memories and can be divided into distinct episodic and semantic memory ^[4] subcategories. We have the ability to go back in time and remember certain episodes from our life in what is known as Mental Time Travel (MTT).

MTT not only involves us remembering the incident, it also entails us being actively aware that we are doing so. Despite this, research has shown that MTT can also happen unconsciously. This occurs when a certain taste or scent acts as a trigger and allows us to remember a certain episode in our life.

Experiments

Alzheimer patients have been used as subjects for study when it comes to retrospective episodic memory. A recent study by Livner and others looked at the damage caused to retrospective and prospective memory by Alzheimer's. The patients' ability to remember instructions given to them and their episodic memory ^[8] were tested. The test subjects were given a series of nouns to be divided into four categories with results based on the ratio of nouns remembered to those forgotten.

Retrograde Amnesia

Retrospective semantic memories relate to skills and knowledge we have acquired over the course of time. Retrograde amnesia ^[9] refers to the loss of memory someone undergoes after being involved in a traumatic event such as a severe car crash or sexual assault. The victim

forgets things that happened prior to the event. Usually, this form of amnesia is not permanent with memories returning slowly. The earliest memories the victim has are usually the first to return.

There are dozens of events that can trigger retrograde amnesia such as a brain injury or infection, Alzheimer's disease or even a stroke. When someone suffers memory loss after a particularly traumatic and life-threatening event it is known as psychogenic amnesia. Retrograde amnesia can affect semantic and episodic memories. Semantic retrograde amnesia could result in the person forgetting knowledge they have accumulated over a lifetime.

Age

Retrospective memory can be affected by a number of factors though age is possibly the most significant after traumatic events. A large number of studies have shown that infants have the ability to remember and learn but as we suffer from infantile amnesia, (an inability to remember our first years) we are unable to remember what we learned or how we did it.

Studies conducted on adults with an average age of 21 and an average age of 74 found that younger people could remember specific events better than older men and women but there was no significant difference in the recollection of less specific things. It seems that retrieving memories places a demand on certain resources in the brain that older adults do not have. We also lose neurons in the hippocampus as we grow older and that plays a major part in memory retrieval.

Source URL: <https://staging.explorable.com/en/retrospective-memory>

Links

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