MEMORY, MISINFORMATION, AND THE MANDELA EFFECT

The human brain's ability to process information and retain it is a function we know as memory. In fact, memory is complex and made up of three distinct stages: encoding, storage, and retrieval. **Encoding** involves paying attention to the information, connecting it to existing knowledge, and creating a mental representation. **Storage** is how information is held in memory. It, in turn, is organized into Short-Term Memory (STM) and Long-Term Memory (LTM). STM holds a limited amount of information for a brief period, typically 15-30 seconds, and can be transferred to LTM through rehearsal or meaningful connections. LTM stores information for extended periods and can be further divided into explicit memory (facts and events) and implicit memory (skills and habits). **Retrieval** is how information is accessed when it is needed. This can be facilitated by cues, context, and the ability to create self-generated cues.

Those who study memory, from the fields of medicine and education, have come to identify a list of factors that influence the encoding, storage, and retrieval of information. These include

- Attention and Interest: Paying attention and being genuinely interested in the material to be learned enhances encoding and retention.
- Emotional Connection: Presenting emotionally charged information aids memory. This can be explored through stories and examples.
- Context and Cues: Providing context, using visual aids, and creating connections to prior knowledge can aid in retrieving information.
- Spaced Practice: Reviewing material at spaced intervals, rather than cramming, helps retention of information.
- Testing Effects: Regular testing of the material to be learned enhances memory. This can be done through quizzes, practice questions, or self-testing.

Researchers have been interested in not only what enhances memory but also what can create false memories. A **false memory** is a recollection that feels real but is either entirely fabricated or significantly distorted from the actual event. These memories can range from minor details like misremembering the color of a car to more substantial recollections of events that never happened. Research psychologists have identified one feature of false memory referred to as the **reconstructive memory hypothesis**. In 1974, experiments by Elizabeth Loftus and John Palmer revealed that after watching a car crash film, participants recalled seeing broken glass even though it was not a part of the video at all. Loftus and Palmer concluded that after the viewing, questioners mentioned the windshield shattering, viewers reconstructed their memories to include shattered glass. Their research provided some of the first clues to misremembering, how the brain can inadvertently add and subtract details.

One form of misremembering has been labeled the **Mandela Effect**. The term was first coined in 2009 by Fiona Broome when she created a website to detail her observance of the phenomenon. According to the Cleveland Clinic, the Mandela Effect is one "in which participants collectively misremember the specific details of a person, place, situation or event as if it were a reality, when in fact it was not." Neuropsychologists, like Aaron Bonner Jackson, Ph.D., believe that it is related to how our brains process memory; or, more specifically, "our brains' ability to create and store false memories."

For example, people may have false memories of products, films, and famous events. The name of this form of misremembering surrounds one specific famous event—the imprisonment of black South African Nelson Mandela. The "effect" was named by Fiona Broome based on the discovery that many individuals online reported recalling Nelson Mandela having passed away in prison during the 1980s. Mandela did not die in prison, but after being released from prison very much alive, went on to become the President of South Africa in 1994.

Some psychologists believe the Mandela Effect is a form of **confabulation**, a kind of honest lying in which people create a false memory without trying to deceive others, but rather to help fill in the gaps in their own memories. Interestingly, the Mandela Effect is often explained via pseudoscience as a distinct effect in which such occurrences result from movement(s) between parallel universes, proof, these speculators believe, that alternative universes exist. The scientific and medical communities, however, use it as an illustration of how imperfect memory can be sometimes.

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