Does Eidetic memory and photographic memory exist: An in-depth investigation of Eidetic memory

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Abstract

Imagine being able to flick a screenshot of what someone is looking at. It sounds like photographic memory, a superhuman skill. The concept of storing everything someone has ever seen, filing it away like a file in a cabinet, and remembering it with all the needed details. The ability to perceive an object shortly after looking away is known as eidetic memory. The vision lasts for a few seconds or even less than one second for most people. Accordingly, in 1964, a study was made to conduct the relationship between eidetic memory and age. In their experiments, children were able to obtain the best results when asked to describe the components of a certain image after seeing it for 30 seconds. However, some people still have the ability to memorize books, images, and all types of texts in a feature known as photographic memory.

I. Background

Eidetic memory refers to a person's ability to recall a huge number of pictures, sounds, and objects in an apparently infinite volume [1]. Eidetic means "very precise and vivid recollection of visual pictures," as the name implies [2]. What is known about this type of memory is that it is also known as photographic memory or enhanced memory. People with this exceptional ability can recall and visualize a whole city's skyline after only one brief helicopter ride, for example. Eidetic memory, as previously said, allows a person to retain numbers, sentences, and sights, but it is frequently noticed that the individual does not have remarkable memory in other areas. What is unknown about this talent is that it may be developed in a variety of ways to remain not only by childhood but also after maturity. This is a significant topic since it symbolizes a considerable talent, perhaps even a superhuman ability. This is associated with its significance to individuals and how it might improve their lives.

The mechanism of this ability will be studied in this research, along with examples of persons who possess it. The information presented below depends on a variety of reliable sources and research articles.

II. Mechanism

The brain is widely considered to be the organ in charge of the body's whole range of activities. The posterior parietal cortex is where eidetic memory takes place. The parietal cortex is responsible for integrating data from many senses to create a cohesive picture of the environment. It combines information from both the visual and dorsal pathways. This skill helps us to respond to items in the environment by coordinating our motions. The parietal lobe is also in charge of human bodily sensations including touch, temperature, pressure, and pain. As a result, this area of the brain is extremely critical to the human body. Furthermore, this area of the brain is responsible for a variety of memory functions, including eidetic memory [3]. Any damage in the posterior parietal cortex can

lead to a neurological order named Hemi spatial neglect. Individuals suffering from this condition are unable to pay attention to people or objects on the side opposite the affected region. Those patients may only eat from one side of their dish or dress one side of their bodies. Even in their imaginations, this visual neglect existed [4].

Several studies have shown that the parietal cortex is important in short-term memory, such as Eidetic memory. In the brain, it is responsible for the generation of visual pictures. A little is known about long-term memory, and it varies from one individual to the next. During neuroimaging, the parietal cortices are commonly active. According to research, when correctly recognizing old items or photographs rather than fresh ones, the posterior parietal cortex showed a lot of activity. This helps to demonstrate that the brain has the ability to recall a previously stored image [5].

This great activity in the posterior parietal cortex also demonstrates that neuroimaging is not restricted to a certain age group. This means that adults may recall texts and images based on their superpowers rather than their age. Mnemonics and other approaches have proved to improve memory to recall images and texts better can be used to enhance this talent and be able to behave better at memorizing things [6].

According to research published by the National Academy of Sciences, children up to the age of 12 can store and retain pictures and sentences in a visual form in their brain, as well as the ability to interpret this information again. Adults cannot perform this talent, although it is still possible for certain people to recall visuals in their brains. This may be linked back to their minds and the posterior parietal lobe's ability to retain images. Although this talent is extremely rare in adults, it does come in the form of Photographic memories. It's worth mentioning that eidetic memory only lasts a short time; but, with training or redundancy of pictures and visuals, they may be kept permanently and retrieved at any moment, resulting in photographic memory [7].

There are undoubtedly certain cases that stand out when compared to the regular circumstances in which this phenomenon occurs. Some people, for example, still retain the ability to conjure up a whole mental image that may remain for a long period. Those individuals may even be able to draw the text or image based on their own visions. Stephen Wiltshire is as near to a human camera as you can get [8]. In other cases, some people can have the ability to remember everything in their life including all details that occurred, even if the event is from a long time ago. HSAM, or Highly Superior Autobiographical Memory, is the term given to this condition [9].

III. Conclusion

Finally, despite the disagreement among scientists over the existence of photographic memory and eidetic memory, all of the mentioned cases and information are nothing more than proof that humans can have the ability to retain their knowledge in the form of visuals. According to research, exercising four hours after any event might help people remember things better. Finally, although memories are fairly real, although maybe not living, trust in them makes them more tangible. As Said by Steven Wright: "everyone can have a photographic memory, some just do not have the film".

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