

Forgetting in psychology flashcard



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In 1885 a man named Hermann Ebbinghaus created a concept known as the Forgetting Curve. This curve is a graph which shows the speed of which information is lost, or forgotten, over time. Ebbinghaus used this graph to show that human's quickly forget information unless is reinforced, or repeated. This is because we are constantly bombarded with information from our senses, and we have no chance at containing all gathered information. However, Ebbinghaus also showed that reinforcement means that this information is once again remembered, thus this information is more easily stored in the long term memory system.

Ebbinghaus is recognised as the first person to do any sort of scientific study of forgetting, and he is known for using himself as a test subject.

By testing his ability to remember information with the use of various memory games, lists and methods, Ebbinghaus created the Forgetting Curve. In his studies, Ebbinghaus found that around 2 hours after learning information he had already forgotten most of what he had learnt. He realised later that this scenario is rare, and usually information can be recalled without repetition for a longer amount of time than a few hours. It became apparent that each individual has a rate of forgetting, which is influenced by each person's ability to retain information, known as retention. Retention is the amount of information an individual can remember, which in short is the opposite action of forgetting.

In the provided stimulus, the performances of students on a foreign language reading comprehension test are shown. The blue line shows the progress made by students who initially scored an "A" in the test, while the red line

follows the progress of the students who initially scored a “ C” mark. The horizontal axis shows the years which have passed since the initial testing, while the vertical axis shows the score achieved by each student. As shown, the gradient of each curve is nearly exactly the same as the trend continues. Thus, Ebbinghaus’ theory of the forgetting curve is shown successfully here. Regardless of their ability at the given subject, each student forgets the information at the same rate.

The rate of forgetting can be influenced by the importance of the information. For example, information which is more meaningful is less easily forgotten, thus the rate of forgetting is slower compared to other information being forgotten. The strength of the original learning of the information also influences the rate of forgetting. However, fast or slow learners do not have a different rate of forgetting. “ Slow learners and fast learners both forget at about the same rate, and easily learned material does not appear to be retained longer than difficult material” (Grivas, Down & Carter, 1999)

Another important trend shown in the stimulus graph is a decline in information remembered once it has been approximately 40-50 years since the test. This is due to the age of the students, as they would be around the age of 60-70. As the students reach this age, certain causes of forgetting become more influential on the students, such as Anterograde and Retrograde Amnesia, Korsakoff’s syndrome, and the commonly seen and discussed Alzheimer’s disease. The students have also received a large amount of information throughout their lives at this age, and so the amount of this information which is forgotten depends on the importance of it compared to other information gathered by the student over the 50 years.

Interference The interference theory states that “ people forget information because of interference from other learned information” (SparkNotes, 1984).

There are two types of interference, Retroactive and Proactive:

Retroactive Interference: Retroactive interference occurs when recently learned information overwrites older information, causing the old information to be forgotten.

For example, a soccer player will have difficulty recalling information from a match which happened over a month ago, but they will easily be able to remember the details of a match which occur in the past week.

Proactive Interference: Proactive interference is where information learned previously interferes with the remembering of newly learned information. This occurs because the old information is regarded as more important by the brain.

An example of proactive interference is trying to learn a skill, such as a language, in a different method than previously learnt. Most people will find this situation difficult, as the new information is contradictory to the previously learnt information.

In reference to the stimulus, the only possible type of interference which could apply to the students is retroactive interference. Depending on whether or not the students have any involvement with the language during the next 50 years of their lives, the students may or may not experience some sort of information loss. The new information learnt may influence the

information about the foreign language which is already stored in the student's memory.

Causes of forgetting

Motivated forgetting theory

Sigmund Freud, who many believe is the father of study behind psychology, proposed people forget certain information because they pushed unpleasant feelings and thoughts as deep as possible into their unconscious. Freud named this repression.

Freud also proposed that the ability to remember and recall information or memories could be influenced by feelings, or by a distorted perception. Emotions related to memories play a key role in the retrieval of these memories from the long term memory.

Freud stated, “ Forgetting in all cases is founded on a motive of displeasure. We forget, because we like to forget. Repression is the key mechanism underlying forgetting.”

Retrieval of the information which is repressed is near impossible; however special circumstances and techniques can sometimes lead to success in retrieval. Some techniques known to be used to retrieve repressed memories are hypnosis, dream-analysis and free association.

In repression there is no loss of retention, however information which has been repressed is difficult to recall, which results in retrieval failure. It is because of these emotions and feelings attached to each repressed memory

that it is often difficult to recall the necessary information. Thus, motivated forgetting has many links to retrieval failure.

Decay Theory

The decay theory states that certain memories and information fades over time. The decay theory explains the loss of information from short-term and sensory memory. However, it is believed that the amount of information lost from a person's long-term memory is not correlated with the amount of time since the information was learnt. An example of this occurring is when a person may remember what they did on their first day of school, but not what they learnt a couple of days ago.

The decay theory states that when some new information is learnt, a “memory trace” is created within the brain. Over time, this memory trace disintegrates unless it is used on the occasion. Thus, the decay theory suggests memories are not permanent.

Donald Hebb, a psychologist who published his works in and around 1960, describes the process of the decay theory as a process where “incoming information creates a pattern of neurons to create a neurological memory trace in the brain which would fade with time.”

One issue with the decay theory is that it cannot be defined whether the inability to remember an amount of information is due to the decay theory or retrieval theory. However, there is also some evidence that supports the decay theory. It has been proved that as people grow older, the neurons in their brain begin to die off. This is particularly the case in people affected by

brain injuries, neurological diseases or lifestyle factors such as drug habits. It has been suggested that memories are lost when these neurons die off, as the pathways between the different parts of the brain are no longer active.

In relation to the stimulus, a possible case of the decay theory can be seen towards the end of the chart. The students who scored As and the students who scored Cs both have a surge in the rate of information forgotten as they reach the ages around 60-70 years old. This increase in the rate of information forgotten is often shown in the modern society, as older generations are recognised by younger people to be unable to recall certain information such as people, events or memories which they may have learnt 50 years ago. Retrieval Failure

Another theory of forgetting is called the Retrieval Failure theory. Retrieval Failure is recognised as the process where information is stored in the long term memory, but cannot be accessed for some reason or another. This available but inaccessible information cannot be accessed because the necessary retrieval cues are not present. An example of retrieval failure may be when a person cannot remember the name of a friend until they go to their house, work or another sort of cue. These retrieval cues are stored alongside the memories, and so when a situation occurs which has occurred before the cues assist the person to remember the information.

There are two types of retrieval cues: Context Dependent Cues- Also known as external cues, context cues are recognised as cues which depend on the environment. These cues may be based on location, smell, or other similar

environments. An example of the use of context dependant cues is when a person may not remember the name of a type of food until they can smell it.

Another example used in the workplace is when police take eyewitnesses, who may not remember anything about a certain crime, is taken back to the location of the crime. The witness is then more likely to remember information due to context dependant cues.

State dependant cues- State dependant cues, also known as internal cues, are related to the feelings and state that a person experiences during a certain time. It has been found that when a person is in the same state as they were when something was lost, or an event occurred, more information can be recalled. However, when the person is not in this state, then the information is much harder to recall. An example of state dependant cues is shown below.

In relation to the stimulus, Retrieval Failure could be a possibility for a reason as to why both the A and C students gradually lose the information previously learnt. To try and establish stronger connections between memories, context dependent cues could be used. If a student is taken back to the initial classroom, converses with the teacher of the class, some more information may be recalled. There is little connection with state dependant results which would affect the ability to recall the information. Conclusion

Forgetting is a key part of our society. As Wade and Tavris (1990) said, “ A certain degree of forgetting contributes to our survival and our sanity”. I believe this quote summarises the need to forget information, however it is often frustrating when trying to remember information but certain causes of

forgetting do not allow for this information to be recalled. Causes such as motivated forgetting, decay and retrieval failure all contribute to this frustration felt by many people. These causes are most likely involved with the stimulus graph and information. The gradual loss of information from the time of learning could quite possibly be a combination of all of these theories, or even some which are not mentioned in the assignment.

Ebbinghaus forgetting curve is another theory which is very likely to play a role in the loss of information. The curve shows the rate of which information is lost, and emphasises an important point. Information is lost at a constant and consistent rate. This is regardless of IQ level, education level or any other aspect which most people may think would influence the rate of forgetting. Thus, relating to the stimulus, the students who scored As in the initial test forget information at the same rate as those who initially scored Cs.

Finally, the Interference Theory states that people forget information because of interference from other learned information. There are two types of interference, retroactive interference, which occurs when recently learned information overwrites older information, and proactive interference, which is where information learned previously interferes with the remembering of newly learned information. In relation to the stimulus, the only type of interference which could have occurred is retroactive.

In summary, forgetting is a natural process which there are many different explanations and theories for. This paper has only discussed a few of these theories, and then related these to the given stimulus information and graph.

Regardless of the theories involved with forgetting, it is a necessary, and often frustrating, process which affects the whole of society.

References

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