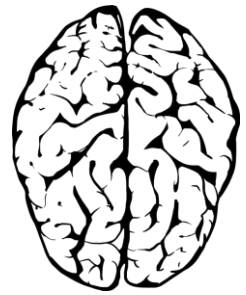


Manipulating Memories



Before you read the article, use vocabulary.com to find the definition and part of speech for each word listed below.

Malleable

Antsy

Implication

Repercussion

Faulty

Prevailing

Notion

Distort

Hinder

Ethical

Respond to the following prompts in complete sentences. Consider what you know about yourself + others as well as what you've learned in the past.

1. How can a memory help or hurt us?
2. How could age or perspective alter a memory?

3. How could memories shape who we are?

4. Have you ever changed your mind about a memory? In other words, has a memory of yours been changed or have you thought differently about it after to speaking to someone else about the same incident?

5. Elie Wiesel, a Holocaust survivor, once said, "Without memory, there is no culture. Without memory there would be no civilization, no society, no future." Explain the meaning of this quote and how it is applicable to your own life.

Making and Re-making Memories

1

Did you know that our memories are not concrete, unchanging fixtures of our minds? Actually, memories are more like a Google Doc that can be edited by not just the original creator, but also others. Over the years, science has continually proved that memories are quite malleable and even evolve over time. When we consider the fact that memories often shapewho



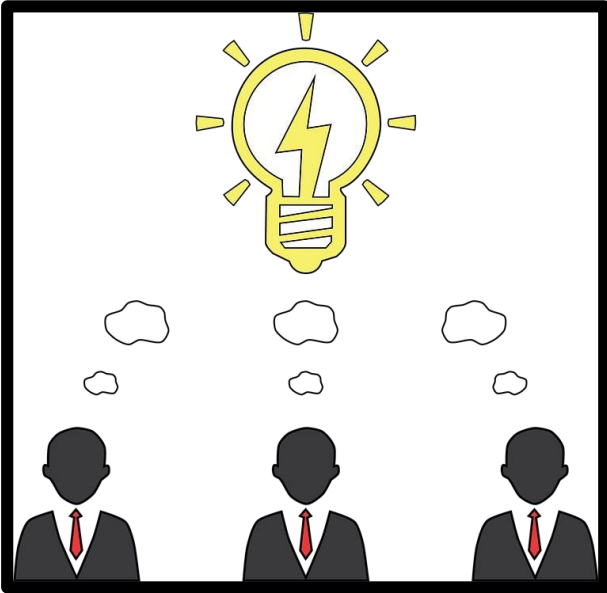
we are and how we react to situations in our lives, it can be somewhat overwhelming to think that we are constantly changing memories that we think are timeless and recorded permanently. If memories are so easily shaped and changed, who is to say that our minds couldn't be purposefully manipulated by those who do not have our **best interest at heart**? Furthermore, if memories are continuing to change and unfold, what implications might this have on science, our personal lives, and the world at large?

2

"False memories" have often been brought up in court cases. Stemming back to over a **hundred years ago**, people have wondered how closely our memories can be evaluated and used to determine someone's guilt. **Because our worldviews, attitudes, and opinions change as we grow older, our memories often change as well.** People can be particularly susceptible to the "power of suggestion" and even recall things **that never even happened.** In one particular case, a man named **Steve Titus was out driving with his soon to be wife.** He was pulled over by a deputy because his car looked like that of a person who had raped a female hitchhiker earlier in the evening. Steve Titus' car looked like the rapist's and he looked similar to the man, as well. **When put into a photo lineup, the rape victim named Titus as looking most like the rapist.** Eventually, Steve Titus was put on trial for rape and the victim stated that she was **100% positive** that he was the man who raped her. He even went to jail for this crime that he did not commit. When a journalist took interest in the case, and even found the man who was the real rapist, the court system released Steve Titus. The rapist confessed to the crime and was found to be the same man who had raped over **50 women in the same area.** A researcher named Elizabeth Loftis became intrigued by, not the fact that Titus was wrongly incarcerated, but by the idea that the rape victim went from "he looks like the rapist" to being "100% sure he is the **1** rapist".

Later, Loftis dedicated the majority of her research to studying faulty

3 **memories.** believe almost any kind of memory that isn't actually true. She's documented that many of her research participants can be **She tried showing them led to videos of a car running a stop sign, then asked leading questions that would make them think it was actually a yield sign.** Almost all of the participants "remembered" that they saw a yield sign instead of a stop sign. She even took it a step further and directly implanted memories into the minds of participants of things they had never experienced. She simply told them that one of their relatives informed her about a time in which the participant was lost in the mall as a child. It can be quite frightening to realize all of the things you can make people think they remember! Manipulating memories is obviously not that hard to do, but how could scientist use this notion to help or hinder our society?



4 Recently, scientists were able to literally transplant a memory from one being to another. By utilizing creatures with simple nervous systems, neurobiologists at UCLA transplanted a memory from one snail into another snail. In order to accomplish this amazing feat, one researcher used an electric shock device to train one snail. This very simple type of memory is known as sensitization. One of the researchers explained that a shock to a snail would be like a human experiencing a physically jarring moment like an earthquake.

We would probably be agitated or antsy for a while after the quake. The same is true for the snail - after the shocks to the tail, the snail was jumpy and demonstrated signs of enhanced reflexes. When the snails were really anxious and tense, the neurobiologist extracted RNA from their nervous systems. This RNA was then injected into a snail that was not "zapped" by the series of shocks. A short time later, the scientists tested the reflexes of the non-shocked snails. Remarkably, these snails actually demonstrated the same reflexes of the snails that HAD been shocked. One of the lead researchers, David L. Glanzman commented on the repercussions of this experiment on human growth and understanding. He stated, "We were able to transfer the memory using RNA, so if you think about human disorders of memory like dementia, Alzheimer's and PTSD, if we can identify some of the RNA that produces learning like alterations, it is possible we could use that knowledge to create new and more effective treatments." This experiment is enthralling, but we're still left wondering about the possibility of humans being used like lab rats.

All of these issues combined lead us to examine our own lives and memories more

5 closely. It is possible that we are being controlled by a prevailing memory, memories

that that some things may have never even happened at all we believe just because everyone else appears to remember it the same way, or . What we do know about our 2 minds and memories is that they are not simply recorded and "played back". Actually, they are continually changing, refocusing, and

pushing us to distort our present realities. The ethical implications of memory studies can be somewhat murky. Can we use “mind technology” as a means to help others, or will some people be too tempted to morph memory transplants into a way to impose discriminatory control over a specific population?

Reading Comprehension



Questions

1. What is implied by the statement, “The ethical implications of memory studies can be somewhat murky” in the final paragraph?
 - A. Some doctors might be confused by unclear findings from the memory experiments. In turn, this could negatively impact their patients.
 - B. The researchers are implying that memories should be manipulated in order to maintain a type of social control.
 - C. Immoral decisions or actions could be made because of memory distortion.
 - D. Clarity and consistency among research findings is needed in order for memory studies to be conducted on humans.
2. How does the author structure the text?
 - A. Introduction of topic, personal anecdote, historical timeline, ideas for further reflection
 - B. Chronological details, cause and effect relationship, negative scenario, additional topic for additional depth
 - C. Personal Anecdote, positive scenario, negative scenario, research study
 - D. Introduction to topic, negative scenario, positive scenario, ideas for further reflection
3. How does the repetition of the word “manipulate” enhance the author’s purpose?
 - A. It shows that the way we remember things can be easily influenced by others.
 - B. It shows that the way we remember things isn’t always the best resource for dealing with current struggles.
 - C. It shows that the way we view our past could help us in the future.
 - D. It shows that the way we view our past could influence the ways in which we treat others around us.
4. What is the effect of the simile in the 4th paragraph?
 - A. It emphasizes the author’s claim that memory research might have negative repercussions for humans.
 - B. It highlights the author’s opinion that memory research is necessary for the continuation of human evolution.
 - C. It reveals the undertow of excitement that the author feels about the outcome of the snail experiment.
 - D. It shows how the author expects great strides to be made in the field of memory research in the next decade.
5. How does the author support her claim throughout the selection?
 - A. By including examples of how memory research can possibly alleviate the pain of those struggling with memory disorders.
 - B. By using rhetorical devices to show how we need to be careful when “playing” with memories.

- C. By giving real examples of the ways in which transporting memories has given doctors new insight into the brain
 - D. By showing the readers how doctors aren't always thinking about the well-being of their patient.
6. What is the author's primary tone in this selection?
- A. Destructive
 - B. Delusional
 - C. Entertaining
 - D. Enlightening
7. Which line from the text most accurately supports the author's claim that memories are not concrete and steady?
- A. "This very simple type of memory is known as *sensitization*."
 - B. "Stemming back to over a hundred years ago, people have wondered how closely our memories can be evaluated and used to determine someone's guilt."
 - C. "Actually, memories are more like a Google Doc that can be edited by not just the original creator, but also by others."
 - D. "This RNA was then injected into a snail that was not "zapped" by the series of shocks."
8. Why did the author conclude the piece with a rhetorical question?
- A. To imply that the author is a supporter of memory research
 - B. To reveal an additional layer to the argument for memory transplantation
 - C. To make the audience think about how technology is slowly replacing human interaction
 - D. To introduce additional depth to the controversial molding of memories
9. What is the most likely explanation for the scientists using snails for memory experimentation? A. A snail does not feel pain like a human might experience.
- B. Information is needed from a simple subject before it can be implemented on a complex subject.
 - C. DNA from snails would create the complexity needed in order to use the research findings on humans.
 - D. The scientists were under time constraints and needed a subject that was not able to understand the ethical implications of the study.
10. What effect does the anecdote about the falsely imprisoned man have on the topic of manipulating memories as a whole?
- A. It shows the reader that we can be victims of false memories or use our own memories to turn others into victims.
 - B. It shows the reader the extreme measures a person will take in order to put a face on those who have wronged them.
 - C. It shows how those who are inexperienced with manipulating memories can have a disastrous effect on society.
 - D. It shows the culminating effect of using memories in court cases.

Constructed Response:

How does the author achieve her purpose? Use at least 2 examples from the text to support your claim.