

Comic Overview

Panel One: Original memory

Panel Two: One day after memory consolidation, the outfits of the two people have been misremembered.

Panel Three: One week after memory consolidation, the birds present in the sky have been misremembered.

Panel Four: One month after memory consolidation, the seashells on the beach have been misremembered.

Panel Five: Six months after consolidation, the partner/man is absent, which has been misremembered.

Panel Six: One year after consolidation, the time of day has been misremembered.

Glossary

Cones (5.5): retinal cells that respond to higher levels of light and result in color. Cones are what allows the woman to see the different colors of the sky and ocean at sunset when she initially experiences and makes that memory.

Consolidation (7.1): the neural process by which encoded information becomes stored in memory. Consolidation would occur once the woman had processed the look of the beach at sunset, thereby transferring that stored image into memory.

Episodic Memory (7.10): memory of one's personal experiences. Sitting on the beach at sunset with her partner is a personal experience belonging to the woman. This memory would be stored in her episodic memory.

Long-Term Memory (7.6): the relatively permanent storage of memory. The memory of sitting on the beach at sunset with her partner would be stored in the woman's long-term memory, as it is a significant event that would have been recalled to relive it or for story-telling purposes many times, thus strengthening the memory and transferring it to long-term memory.

Memory Bias (7.14): the changing of memories over time so that they become consistent with current beliefs or attitudes. The entire comic panel shows the inherent bias present within memory processes. For example, in panel five, the woman remembers sitting alone on the beach. This false memory could be a product of memory bias if she broke up with her partner and is currently single; her memory has changed to match her current status of not being in a relationship.

Reconsolidation (7.1): neural process involved when memories are recalled and stored again for retrieval. When memories are called to our conscious awareness, we

frequently mold that memory and alter it from how we perceived and stored it the first time. Reconsolidation then stores that molded and altered memory back in our knowledge base and we are unaware that anything was changed.

Retina (5.5): the thin inner surface of the back of the eyeball; it contains the sensory receptors that transduce light into neural signals. The retina is important because it allows the sensory information from the woman's eyes to be sent to the brain as electrical signals. This transduction allows the brain to understand what is happening in the external environment and thus allows a memory to be created.

Retrieval (7.1): the act of recalling or remembering stored information when it is needed. Throughout the panels, the woman has been retrieving and recalling her original memory. Retrieval, however, can lead to errors in memory, as memory is malleable; when we bring a memory back into our conscious thought, we have the ability to add or take away from that memory and store the false memory back into our knowledge base.

Sensation (5.1): the detection of external stimuli and the transmission of this information to the brain. In order to create the original memory, the woman had to experience sensation as an external experience.

Source Misattribution (7.15): memory distortion that occurs when people misremember the time, place, person, or circumstances involved with a memory. This can be seen in panels five and six. In panel five, it is possible that the woman misattributed her memory of the beach at sunset to encompass just her, leaving out her partner, the person she was with. In panel six, the woman has incorrectly remembered the time of day she was sitting on the beach, misattributing the time of the memory.

Transduction (5.1): the process by which sensory stimuli are converted to signals the brain can interpret. Transduction is a vital part of creating the initial memory. Once the sensory information is transduced into electrical signals, the brain can perceive and understand the sight of the beach at sunset, which allows it to create a storable memory.

References

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