THE 7 SINS OF MEMORY: How the Mind Forgets & Remembers

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Overview

Memory has 7 notable malfunctions, or "sins":

1. **Transience:** Weakening or loss over time.
2. **Absent-mindedness:** Disaccord between attention and memory, often created by distractions.
3. **Blocking:** Something on the tip of your tongue.
4. **Misattribution:** Assignment to the wrong source.
5. **Suggestibility:** Implantation or alternation of memories due to leading questions or comments.
6. **Bias:** Undue influence from present knowledge and beliefs on past experiences and opinions.
7. **Persistence:** Repeated retrieval of troubling information or events we would prefer to forget.

Yet these "sins" need not be considered inherent weaknesses. Understanding their impact and neuroscientific foundation will help you mitigate their negative effects and improve your memory.

"In this book I explore the nature of memory's imperfections, present a new way to think about them, and consider how we can reduce or avoid their harmful effects."

Chapter 1. **The Sin of Transience**

"Transience operates silently but continually: the past inexorably recedes with the occurrence of new experiences."

The transition from detailed recollections to general descriptions is transience. There are 2 forms of memory:

1. **Episodic:** Particular details about personal experiences, such as a specific time and place.
2. **Semantic:** Retrieval of general knowledge & facts.

The first few seconds after an experience determines whether or not it will become a memory that lasts for years. Working memory retains small amounts of data for short periods of time while people engage in ongoing cognitive activities like reading or listening. During the phonological loop (temporary storage for small bits of linguistic info) transience can occur.

People experience transience more frequently as they age. Conscious effort is necessary to reduce transience and keep your long-term memory resilient over time. You can help yourself form stronger long-term memories and circumvent transience by making a concerted effort to rehearse information by:

- Thinking and talking about the experience.
- Associate a fact with visual imagery mnemonics.
- Come up with a cue like an acronym to encode memory into nonvisual, verbal mnemonics.

For a biological approach, estrogen replacement has helped older women improve their retention of verbal and pictorial information, and a gene known as the NMDA receptor facilitates neural processing called "long-term potentiation." In mice, this gene stayed open for longer at a younger age than at an older age, thus boosting long-term potentiation.

Chapter 2. **The Sin of Absent-Mindedness**

"Lapses of attention that result in failing to remember information that was either never encoded properly… or is available in memory but it is overlooked."

Anyone who regularly drives a car can recall moments when they completely forgot about the road for a few minutes, acting on autopilot. This absent-mindedness pervades our daily lives, a type of "operating on automatic" that allows us to focus on important matters whilst performing routine tasks in the background. When we recall experiences, it's either in the form of:

- **Recollection:** Calling to mind specific details.
- **Familiarity:** A general sense of what happened.

If your attention is divided, your memory will be more familiar and include fewer details. Similarly, retrieving a memory while distracted hinders recollection. The more your attention is divided, the less active the regions of the brain associated with memory become.