



The importance of memory loss for emotion, cognition, and behavior

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I suggest that forgetting functions as a sorting mechanism that limits access to irrelevant or unwanted memories, and helps effective functioning in the domains of emotion, cognition, and behavior. Specifically, forgetting may be part of emotion regulation, knowledge acquisition, and context attunement. Moreover, I suggest that memory inhibition is an important mechanism underlying adaptive forgetting. Memory inhibition is a flexible and graded phenomenon and therefore easily viewed as functional.

Function	Goal	Forgetting	Enabling	Research
Emotion regulation	Remembering more positive than negative experiences	Negative declarative memories	Positivity	<ul style="list-style-type: none"> Expressive suppression (e.g., Richards & Gross, 2000) Mnemonic neglect (e.g., Sedikides & Green, 2009) Memory suppression (e.g., Depue & Banich, 2006)
	Not feeling bad about negative experiences	Negative emotions	Painlessness	<ul style="list-style-type: none"> Fear extinction (e.g., Kindt et al., 2009) The fading affect bias (e.g., Walker & Skowronski, 2009)
Knowledge acquisition	Learning facts and general knowledge	Redundant and false information	Abstraction	<ul style="list-style-type: none"> The remember-to-know shift (e.g., Conway et al., 1997) Concept- and schema induction (e.g., Kornell & Bjork, 2008)
	Learning how to efficiently carry out actions	Conscious knowledge and unnecessary steps	Automatization	<ul style="list-style-type: none"> Loss of conscious knowledge (e.g., Logan & Crump, 2009) Composition (e.g., McKendree & Anderson, 1987)
Context attunement	Relating to the present and the future	Distant and inappropriate information	Timeliness	<ul style="list-style-type: none"> Ecologically optimized retrieval (e.g., Anderson & Milson, 1989) Retrieval induced forgetting (Anderson, Bjork & Bjork, 1994) Cue-dependent forgetting (e.g., Tulving, 1974)
	Renewal of information that is no longer correct	Outdated information	Updating	<ul style="list-style-type: none"> List-wise directed forgetting (e.g., Bjork, Bjork & McLeod, 2006) Reconsolidation (e.g., Chan & LaPaglia, 2013)

Proposed functions and goals served by the different sorts of forgetting, and the positive effects enabled by these sorts of forgetting

Emotion regulation

Knowledge acquisition

Context attunement

Overall, people remember twice as many positive than negative events. Also, they learn to live with the negative memories they do remember. One reason may be that they selectively forget negative declarative and non-declarative memories. Selective forgetting of negative memories may be part of emotion regulation.

Only a limited amount of long-term knowledge is activated and processed at any given time. One reason may be that people forget episodic memories (e.g., redundant information). Forgetting of useless (episodic) memories may be part of knowledge acquisition (semantic and procedural learning).

Mostly useful and contextually relevant memories are activated at any given time. This may in part be due to forgetting of distant and/or outdated information. Forgetting may be part of context attunement and help people orient towards the present and the future.

Several lines of research indicate that people selectively forget low- to moderate intensity negative memories. Selective forgetting of negative memories may enable positivity and painlessness and form a mnemonic basis for a slightly optimistic and hopeful worldview.

Results show that people often forget of episodic detail during semantic and procedural learning. Forgetting of episodic detail may enable abstraction and automatization. Forgetting might be helpful for knowledge acquisition because it reduces cognitive complexity and helps cognitive economy.

Research shows that people forget distant information and update their memories. Forgetting of distant or outdated information may allow people to focus on the now and the next. Forgetting seems beneficial when it helps memory be in tune with the environment and prepare for the future.

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