

# Functional forgetting

## Simon Nørby (2016)

Forgetting is typically associated with troubles in everyday life. However, I propose that forgetting is often beneficial. It may limit access to irrelevant or unwanted memories and help 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 propose that memory inhibition is an important mechanism underlying adaptive forgetting. Memory inhibition is a flexible and graded phenomenon and therefore easily conceived of as functional.

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	Renewing information that is no longer correct	Outdated information	Updating	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

Proposed functions and goals served by different kinds of forgetting, and the positive effects enabled by these kinds of forgetting (see Nørby, 2015).

### Emotion regulation

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

Several lines of research indicate that people frequently 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.

### Knowledge acquisition

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 information may be part of knowledge acquisition (semantic and procedural learning).

Research shows that people often forget episodic details during semantic and procedural learning and this may enable abstraction and automatization. Forgetting may aid knowledge acquisition because it reduces cognitive complexity and improves cognitive economy.

### Context attunement

Mostly contextually relevant and useful 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.

Research shows that people forget distant information and update their memories. Forgetting distant or outdated information may allow people to focus on the now and the next. Thus, forgetting may help the memory system to be in tune with the environment and aid people in their preparation for the future.

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