

Limited Memory Capacity

Intuition alone is not sufficient for making complex, crucial decisions. The human brain is limited, in both short-term memory capacity and discrimination ability, to about seven things - plus or minus two. Decision-making for every complex, crucial decision takes place under constraints of human information-processing limitations.

Working memory, or “short-term” memory, is a cognitive system with limited capacity that is responsible for temporarily holding information available for processing. Working memory is important for reasoning and guidance in decision making. Cognitive tasks can be completed only with sufficient ability to hold information as it is processed. Working memory is necessary for mental tasks, such as language comprehension (for example, retaining ideas from early in a sentence to be combined with ideas later in a sentence), problem solving (in arithmetic, carrying a digit from the ones to the tens column while remembering the numbers), and planning.

Next: [Framing bias](#)

¹ "The Magical Mystery Four: How is Working Memory Capacity Limited, and Why?" Nelson Cowan, University of Missouri; *Curr Dir Psychol Sci.* 2010 Feb 1; 19(1): 51–57.

²Gyslain Giguère and Bradley C. Loveb. "Limits in decision making arise from limits in memory retrieval." Edited by John R. Anderson, Carnegie Mellon University, Pittsburgh, PA, and approved March 21, 2013 (received for review November 17, 2012).