

BRIEF SUMMARY

Makovski, T., Watson, L. M., Koutstaal, W., & Jiang, Y. V. (2010). Method matters: Systematic effects of testing procedure on visual working memory sensitivity. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 36, 1466–1479.

Visual working memory (WM) is traditionally considered a robust form of visual representation that survives changes in object motion, observer's position, and other visual transients. This article presents data that are inconsistent with the traditional view. We show that memory sensitivity is dramatically influenced by small variations in the testing procedure, supporting the idea that representations in visual WM are susceptible to interference from testing. In the study, participants were shown an array of colors to remember. After a short retention interval, memory for one of the items was tested with either a same-different task or a 2-alternative-forced choice (2AFC) task. Memory sensitivity was much lower in the 2AFC task than in the same-different task. This difference was found regardless of encoding similarity or of whether visual WM required a fine or coarse memory resolution. The 2AFC disadvantage was reduced when participants were informed shortly before testing which item would be probed. The 2AFC disadvantage diminished in perceptual tasks and was not found in tasks probing visual long-term memory. These results support memory models that acknowledge the labile nature of visual WM and have implications for the format of visual WM and its assessment.

KEYWORDS: visual working memory, change detection, 2-alternative-forced choice, same-different, visual long-term memory
