

Public Abstract

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Title:Estimating Working Memory Capacity for Lists of Nonverbal sounds

Working memory (WM) capacity limit has been extensively studied in the domains of visual and verbal stimuli. The previous studies have suggested a constant WM capacity of typically about 3 or 4 items, based on the number of items in working memory reaching a plateau after several items as the set size increases. We designed a series of experiments to investigate nonverbal auditory WM capacity. Experiment 1 and 2 used simple tones and revealed the capacity limit of up to 2 tones following a 6-s retention interval. In Experiment 3 we added timbre information to the simple tones, and the capacity estimate improved to about 2.5 sounds, still somewhat lower than found previously for items in known categories. This study supports a critical role of categorical information for high WM performance.