ESTIMATING WORKING MEMORY CAPACITY
FOR LISTS OF NONVERBAL SOUNDS

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ABSTRACT

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.