Public Abstract
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Title: Maintaining Cross-domain Objects and Features in Working Memory: Implications for Storage in Models of Working Memory

Human working memory seems to comprise several mechanisms that work together to store and process information. A great deal of evidence, both from behavioral studies and from neuroimaging, suggests the need for a general store in models of working memory capable of maintaining information from any sensory domain. Baddeley included such a store in an updated version of the influential multiple-component model (2000), but it is still unknown how this new component interacts with other, better-known working memory components. Using letters scattered around a computer screen for memoranda, the following experiments aimed to learn whether domain-specific and domain-general stores can be used concurrently, and in doing so to better understand how components of a working memory system interact. A critical finding shows that speaking aloud during this memory task impairs memory for letter-location pairings, but does not impair memory for spatial locations alone. This evidence is taken as support for a domain-general store capable of holding different representations for spatial materials, depending on how they are encoded, and capable of interfacing with verbal rehearsal mechanisms.