

The use of perceptual fluency in patients with Alzheimer disease: the role of expectation

We investigated whether the use of perceptual fluency as recognition cue by patients with Alzheimer disease (AD) depends on whether fluency is perceived as relevant to the recognition decision. In normal subjects, enhanced perceptual fluency increased positive recognition responses when study and test stimuli were presented in the same sensory modality but not when stimuli were presented in different modalities (Westerman et al., *J. of Mem. & Lang.*, 47, 2002). These results suggest that the use of perceptual fluency as a heuristic in recognition memory depends on the correspondence between study and test modalities and thus on the perceived usefulness of fluency. We investigated this change of sensory modality between study and test phases in 16 AD patients and 16 matched normal controls by using a verbal recognition task. The perceptual fluency of recognition test items was enhanced by briefly presenting a prime that matched the subsequent test item. We observed that changes in modality attenuated the contribution of fluency to the recognition decision in both subjects groups. In addition, we noted a positive correlation between fluency use and metamemory self-evaluation. These results suggest that the fluency heuristic is subject to metacognitive control in AD patients, exactly in the same way as normal subject, since patients' attributions of perceptual fluency depend on expectations about relevance of fluency as memory cue.