

**ROLE OF CONTEXT IN EPISODIC MEMORY: EVIDENCE OF SELECTIVE
FACILITATION IN CONGRUENT ENVIRONMENTAL CONTEXTS IN
HUMANS**

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The contribution of contextual factors (the location, time, prevailing conditions and converging multisensory stimuli) on learning and memory has been well established (Godden & Baddeley, 1975), and it has been repeatedly shown that returning a participant to the context in which information was learned results in a facilitation for the recall of that information, while changing context can impair recall (Ransdell et al., 1996; Madigan et al., 1994). The hippocampal formation (HF) of the medial temporal lobes (MTL) receives input from cortical areas specialised for processing sensory information in all modalities, thereby making HF a likely candidate for a role in the instantiation of context; this has been demonstrated previously in animal studies (Frohardt et al, 2000). Here we report two experiments investigating aspects of contextual facilitation under differing conditions and on various forms of memory. In Experiment 1, participants (n=40) were administered a battery of memory tests in either of two environments containing impoverished contextual features and re-tested 24 hours later in a congruent or incongruent setting. Despite the presence of minimal contextual factors in each condition, results revealed evidence of facilitation of retrieval in congruent recall conditions. In Experiment 2, we increased the discrepancy between testing contexts, using an elaborate array of multisensory contextual features in one setting, thereby maximising the distinctiveness of each. Participants (n=40) completed the test battery in either the elaborate or sparse settings and were re-tested 6 hours later in a congruent or incongruent context. Taken together, the findings of these two experiments suggest that measures of hippocampal-based memory may be particularly susceptible to facilitation following reinstatement of context. Future directions will explore the impact of stress on memory performance, and whether the deleterious consequences of stress can be ameliorated by restoration of original context. Electrophysiological measures of these effects will also be investigated.