

The Relation of Dreaming to Memory Consolidation During Sleep

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ABSTRACT

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There is considerable research on how REM sleep and Slow Wave Sleep are related to memory consolidation. These consolidation processes prioritize emotional and salient memories. Dreaming also incorporates emotional memories from waking life, and so it has been proposed that dreaming reflects functional neural processes during sleep. Arguments in favor, and against this possibility will be explored. That dreams refer to waking life experiences in an associative or metaphorical manner has been seen to be a result of processes of linking new memories to established memories, guided by emotions common to each. That we are embodied in the dream, in a simulation of the waking world, may be required for full processing of emotions, or may have another, practice-based virtual reality function. Separate from the debate on dream function is the debate on whether the consideration of dreams by the dreamer when awake, can elicit insight. This possibility is supported by the finding that dreams preferentially incorporate emotional experiences, and refer to them metaphorically. Designs for testing this against the null hypothesis, that dreams do not tell us anything new, will be discussed, and will include recent studies on whether the sharing and discussion of dreams can increase empathy towards the dream sharer.

