False Recognition in the DRM-Paradigm reflects False Encoding

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Abstract: A thorny question is whether the high rate of false memories in the Deese/Roediger-McDermott (DRM) paradigm is due to encoding or retrieval processes. Previous work suggests a locus at encoding using the free recall task. Here we use a recognition task in which false memories have typically been associated with intrusions due to high levels of featural overlap between the test probe and the stored memories. We used the REM model to assess the expectations from a retrieval account and from an encoding account of false memories. These simulations show that (probabilistic) false encoding leads to exceptionally large standard deviations in memory strength that are shown in ROC curves. We tested and verified these predictions in an experiment using a divided attention paradigm. These findings suggest that high false alarm rate in a DRM-paradigm might not be as useful as a proxy for everyday false memories as previously supposed.