Title: Deja vu in temporal lobe epilepsy as a window into understanding metamemory

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Abstract: 2.14

Déjà vu is characterized by feelings of familiarity and concurrent awareness that this familiarity is wrong. In this way, it constitutes a type of meta-cognitive experience that it is sometimes also referred to as an epistemic feeling. Previous research has linked déjà vu in the seizure profile of individuals with unilateral temporal-lobe epilepsy (uTLE) to abnormalities in rhinal cortex, and to memory deficits that selectively affect familiarity assessment. Here, we examined whether bilateral TLE patients with déjà vu (bTLE) show a similar pattern of performance. Using two experimental tasks, we found that bTLE patients exhibit recognition-memory deficits not only for familiarity but also for recollection. Relative to uTLE patients, this broader impairment also involved hippocampal abnormalities. Our findings confirm rhinal cortex contributions to the generation of false familiarity in déjà vu that parallel its contributions to familiarity impairments on recognition-memory tasks. However, they weigh against the notion that recollection plays a necessary role in the generation of déjà vu experiences. Our findings highlight the unique value of experimental neuropsychological research in the study of déjà vu, and provide new insights regarding meta-cognitive experiences.