**Title:**

True or false memory? *Evidence that naïve observers struggle to identify rich false memories of emotional and criminal events, particularly for audio-only accounts.*

**Abstract (100)**

Two studies examined whether naïve observers could differentiate between accounts by individuals describing rich true and false memories of emotional and criminal events. To test the potential role of cognitive load on accuracy, observers were either provided regular videos, muted videos, or audio-only accounts. In all video conditions participants only scored minimally different from the level of chance at identifying false memories. In the audio-only condition, accuracy was significantly impaired. Comparative evaluations were overall less accurate than absolute judgments, and self-reported cues used to make evaluations proved uninformative. Implications for memory researchers and legal scholars are discussed.

Summary (500)

**Background:** The existence of richly detailed false memories of personal life experiences in both healthy and memory-disordered individuals points to fundamental issues in how memory is formed, stored, and retrieved. This memory malleability has been substantiated in diverse contexts. In socio-cognitive psychology, experiments have demonstrated the potential for even highly aversive events to be generated by suggestion, guided imagery, and group influence. In legal contexts, researchers have shown that individuals can generate false memories of perpetrating and witnessing crime. A central tenet underlying much of this research is the idea that these generated false memories feel real to the rememberer. This means that these memories may become part of a perceived personal past, which can have tremendous personal and legal implications. Research on understanding and identifying false memories thus becomes essential. However, if these memories indeed feel real, differences between true and false memories may not be very pronounced. The present studies examined whether observers could accurately distinguish between videos of true and false memories of highly emotional personal events. Because expansive literature indicates that task performance for veracity judgments can be enhanced if cognitive load is diminished, study two focuses on whether decreasing cognitive load can improve evaluation accuracy for these rich false memories.

**Method:** Two studies examined whether naïve observers could differentiate between true and false memories. In study one, participants (N=137) were randomly assigned to watch a set of videos involving one of eight rememberers. Each set of videos included an individual recalling an event that actually occurred, and the same individual recalling a rich false memory that was generated in a lab-based context in a previous study (Shaw & Porter, 2015). False memory accounts included experiencing complex emotional and criminal events occurring during adolescence. To test the potential role of cognitive load on observer accuracy in study two, observers (N=96) were given only the audio or muted video of the accounts.

**Results:** In all video conditions observers only scored minimally different from the level of chance in identifying false memories. Comparative evaluations, which involved telling the participants that one of the videos was false and the other was true, were overall less accurate than absolute judgments that were made immediately after viewing each video. Participants in study two, who were assigned to a muted video condition designed to diminish cognitive load, did not perform at a significantly different level from those in the regular condition. Participants who were only provided audio accounts performed significantly worse than those in all other conditions. In all conditions, across both experiments observers’ self-reported cues used to make the veracity evaluations showed no informative patterns.

**Implications:** These two studies present a novel contribution to the literature by indicating that false memories may be very hard to reliably differentiate from true memories without independent corroborating evidence, regardless of cognitive load. This research also indicates a potential for additional impairment in false memory detection when only an audio account of an event is available.