## Posthypnotic Amnesia

John F. Kihlstrom

University of California, Berkeley

Email: jfkihlstrom@berkeley.edu

URL: https://www.ocf.berkeley.edu/~jfkihlstrom/

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Posthypnotic amnesia (PHA) refers to subjects' failure to remember events and experiences that transpired while they were hypnotized. First observed by the Marquis de Puységur in his experiments on artificial somnambulism (Gauld, 1992; Laurence & Perry, 1988), PHA helped give hypnosis its name, by analogy to the amnesia commonly experienced for events that occur while we are asleep. The analogy is imperfect, however, because PHA does not occur spontaneously. By the time of the First Golden Age of hypnosis, it was generally understood that PHA is a product of suggestion.

Along with hypnotic analgesia, PHA is the most thoroughly studied of all the phenomena of hypnosis (Coe, 1978; Cooper, 1979; Kihlstrom, 2020; Kihlstrom & Barnhardt, 1993; Mazzoni, Laurence, & Heap, 2014; Spanos, 1986).

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Much of this research has been conducted in the context of the standardized scales of hypnotizability (Hilgard, 1965), which provide a natural environment for PHA to be experienced and observed. Response to suggestions for PHA, normally tested by free recall, is highly correlated with overall hypnotizability. In the absence of suggestion, posthypnotic recall is uncorrelated with hypnotizability. Suggested amnesia, but not spontaneous amnesia, belongs in the domain of hypnosis, and the latter is more properly classified as pseudoamnesia.

Subjects showing initial amnesia show improved memory after the suggestion has been cancelled, indicating that PHA is a phenomenon of retrieval, rather than encoding or storage. Reversibility occurs without the re-induction of hypnosis, so PHA is not a form of state-dependent memory. Even when hypnotizable subjects fail the standard criterion for PHA, they often produce only vague recollections, and fail to follow the actual temporal sequence of events in organizing their recall (other forms of organization are not necessarily disrupted). They also show significant reversibility after the amnesia suggestion has been canceled, strengthening the inference that they are experiencing a partial response to the amnesia suggestion.

Amnesia can also be suggested for wordlists studied during hypnosis, allowing researchers to capitalize on the "verbal learning" paradigms employed in the study of episodic memory. For example, cued recall and recognition testing improves memory during PHA, as would be expected in any disorder of memory retrieval; however, they do not abolish the amnesia entirely. Subjects instructed to simulate posthypnotic amnesia show no such improvement. PHA suggestions primarily affect explicit (conscious) memory; it spares various expressions of implicit (unconscious) memory,

including savings in relearning, practice effects, retroactive interference, and both repetition and semantic priming effects. Reliance on a priming-based feeling of familiarity enhances amnesic subjects' performance on recognition tests, but this is not the same as conscious recollection.

The dissociation between explicit and implicit memory links PHA to other memory disorders, including the amnesias observed in the dissociative disorders. Source amnesia, prominent in the neuropsychological literature on the amnesic syndrome, was initially observed in research on PHA. PHA is sometimes likened to the directed forgetting paradigm used to study the self-regulation of memory, but in fact the two paradigms are quite different in terms of both procedure and outcome.

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