Probing the unconscious mind with instrumental hypnosis

ABSTRACT:

Our research project aimed to critically evaluate the widely held assumption that hypnotic phenomena involve privileged access to the unconscious mind. Despite the prevalent belief among clinicians that hypnosis can influence mental processes beyond consciousness, limited empirical evidence supports this viewpoint. Thus, our primary objective was to rigorously examine the validity of this assumption using a reliable experimental approach from the field of cognitive psychology. Our findings revealed scant evidence supporting the notion that hypnosis can impact unconscious mental processes. This outcome is consistent with the idea that hypnosis operate at the conscious level. Our secondary objective was to investigate the underlying mechanisms of hypnotic phenomena and identify the cognitive components that enable individuals to translate hypnotic suggestions into successful hypnotic responses. Our work has made significant progress in unraveling these components, including the central role of proactive cognitive control and visual imagery. Lastly, we aimed to investigate the neural dynamics of hypnosis and hypnotisability based on resting-state electroencephalography. We found that hypnotisability relates to differences of the periodic and aperiodic components of the EEG, while the induction procedure alters brain network topologies in the range of delta and theta waves. This research project provides valuable insights into the effects of hypnosis on unconscious processes, word processing, visual imagery, and brain dynamics. The findings contribute to our understanding of the mechanisms underlying hypnotic phenomena and shed light on the limits and potential applications of hypnosis.

Keywords

Hypnosis, Cognitive control, Electroencephalography (EEG), Multivariate statistics, Machine learning

Published Work:

Landry, M., Stendel, M., Landry, M., & Raz, A. (2018). Hypnosis in palliative care: From clinical insights to the science of self-regulation. *Annals of Palliative Medicine, 7*(1), 125-135. doi: 10.21037/apm.2017.12.05

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