The depersonalized brain:
Psychophysiologival correlates of cortical hyperexcitability
associated with signs of depersonalization, derealization and
dissociation, in non-clinical samples

ABSTRACT:

Background
This study explored the role of cortical hyperexcitability underlying the aberrant perceptions reported by those predisposed to sub-clinical levels of dissociative, depersonalization/derealization experiences. The anomalous perceptions experienced in these conditions range for perceptual distortions in relation to one’s own body, to an altered experience of ones surroundings - though their neurocognitive underpinnings remain unclear.

Method
Participants were all screened on a variety of questionnaire measures that sought to quantify predisposition to anomalous perceptions. A revised version of the pattern-glare task was devised to examine the degree of visual distortions experienced from viewing irritable gratings. Interactions between perceptual (associated visual distortions) and emotional (facial EMG reactions) factors were explored to provide an objective psychophysiological index of both perceptual and emotional suppression as concomitants of dissociative states in the non-clinical population.

Results
Those showing a predisposition to anomalous dissociative experiences reported significantly more perceptual distortions from viewing the gratings. There were no effects from psychophysiological recordings from emotional facial regions.

Conclusion
Cortical hyperexcitability may be one factor contributing to the anomalous perceptions reported by some experiencing dissociative conscious experiences. These effects may be more 'perceptual' than 'emotional'.

Keywords
Dissociation, Hallucination, Aberrant perceptions, Depersonalization, Cortical hyperexcitability
**Published Work:**


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