

Exploring the limits of human perception: the psychological and physiological detection of normal and remote staring

Results:

This project represents the first piece of research to examine the possibility of the electrocortical processing of remote staring detection. This was achieved by conducting two experiments using different measures of electrocortical activity (ERP, EEG, etc), skin conductance, and questionnaire data. Participants were isolated, and an automated, double-blind, randomised and counterbalanced protocol was employed. Experiment one involved a 2 x 2 design, where 20 participants were exposed to 48 repetitions of the following stimuli: viewing a blank screen, a blank screen plus a remote stare, viewing a face on the screen, and a face plus a remote stare. This experiment found that the addition of a remote stare had no effect on the processing of a blank screen, but significantly reduced the amplitude of the global processing of faces. There was no correlation between these measures and questionnaire measures of private self-consciousness, social anxiety and paranoia. Experiment two replicated the overall 2 x 2 design of experiment one, but replaced the blank screen conditions with pictures of objects, resulting in 60 repetitions of the following: viewing an object on the screen, an object plus a remote stare, viewing a face on the screen, and a face plus a remote stare. This experiment found that the addition of a remote stare significantly increased the amplitude of the global processing of faces and objects. There was no effect on skin conductance and no correlation with the questionnaire measures. To summarise, this project suggests that remote staring detection has a significant impact on the global processing of other stimuli, but further experimentation is needed in order to understand the nature of this effect.

Published work:

Baker, I. S. & Stevens, P. (2008). An investigation into the cortical electrophysiology of remote staring detection. In S. Sherwood & B. Carr (Eds.), *Proceedings of the Parapsychological Association 51st & the Society for Psychical Research 32nd Annual Convention* (pp. 8-23). The Parapsychological Association, Inc.

Baker, I. S., & Stevens, P. (2013). An anomaly of an anomaly: Investigating the cortical electrophysiology of remote staring detection. *Journal of Parapsychology*, 77(1), 107-122.

Conference presentations:

- Getting the most from Event-Related Potential (ERP) studies of Human Cognition", a workshop held in the Department of Psychology at the University of Stirling, sponsored by the Royal Society of Edinburgh – August, 2005. The Electrophysiology of Remote Staring Detection.

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- 34th Annual Scientific Meeting of the British Association of Cognitive Neuroscience – September, 2006. Exploring the limits of human perception: The psychological and physiological detection of normal and remote staring. (Poster Presentation)

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