ACCURACY AND NEURAL CORRELATES OF BLINDED MEDIUMSHIP COMPARED TO CONTROLS ON IMAGE CLASSIFICATION TASK

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Background: Anomalous psychological phenomena, in which individuals claim to have access to information not available through conventional means, have been reported since antiquity. Despite tremendous popular interest, few studies have tested these claims rigorously.

Aims: The current study aimed to fill this gap. We asked volunteers to look at facial photographs of deceased people and guess one of three choices for the cause of death, while simultaneously collecting electroencephalogram (EEG) data.

Methods: The volunteers were 13 professional “psychic mediums” and 13 controls who claimed no special ability. There were three possible choices for cause of death: “heart attack”, “death by firearm”, or “car accident.” The facial photographs were a balanced pool of 201 black and white photographs, where the cause of death was known in each case. The participants did not see any of these photographs before the experiment.

Results: Pooled data from all participants showed accurate guesses for the cause of death (partial η^2=0.13; p=0.003). Control subjects were primarily responsible for this effect (partial η^2=0.15; p=0.001). EEG activity differences were found between talented participants and controls in event related potentials (ERP) following the presentation of the photographs. The controls had larger amplitude ERP components than the talented participants between 80 and 110 ms and between 200 and 350 ms, which could be interpreted as reflecting greater attention and less response inhibition by controls as compared to the mediums.

Conclusions: To conclude, we found EEG differences in EEG between mediums and controls in regards to how face photographs are processed. We also found that as a whole, participants were capable of categorizing the type of death above chance expectation. We recommend that others try to investigate these effects in other participant pools. The images and presentation scripts used in our study are available upon request. To help minimize performance anxiety, we also recommend that future studies investigate mediums under conditions that more closely match what they do as part of their professional work.

Keywords: Intuition, Mediumship, Electroencephalography, Behavior, Machine-learning

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