

# DISENTANGLING NEURAL CORRELATES AND CONSEQUENCES OF VISUAL AWARENESS THROUGH ICONIC MEMORY: AN EEG STUDY

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A widespread problem in studying the neural correlates of visual consciousness is the difficulty in disentangling the actual correlates of the visual experience from the neural consequences of such percepts. This study aims to elucidate the electrophysiological dynamics underlying visual experiences' consequences. To do so, a partial report paradigm was used to separate activity related to the conscious experience from that correlating with reporting.

Preliminary data has been collected from 5 participants. Stimuli consisted of six letters lasting 100 ms, circularly spread around a fixation cross, three on the left and three on the right. A specific acoustic tone immediately following the stimulus indicated if participants had to report the left or right letters. Participants had to report the correct side of the stimulus while the EEG was being recorded.

Preliminary results show that early ERP sensory components have similar amplitude across the two conditions (Report Right vs. Report Left). This is also true for the N200 component, often considered a visual awareness marker. P300, on the other hand, reaches a higher amplitude on the electrodes ipsilateral to the letters to report –i.e., left parietal electrodes show a more ample P300 in the Report Left condition.

The EEG components elicited by our partial report paradigm are comparable until the N200 across the two conditions, meaning that all the presented letters are available to consciousness. P300 differs between the two conditions, with a higher amplitude possibly reflecting an inhibitory mechanism for non-target letters, thus reflecting post-consciousness processes.

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No

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