

ELECTROPHYSIOLOGICAL ACTIVITY GENERATED DURING THE IMPLICIT ASSOCIATION TEST: A STUDY USING EVENT-RELATED POTENTIALS

Catriona O'Toole and Dermot Barnes-Holmes

National University of Ireland, Maynooth

The Implicit Association Test (IAT) examines the differential association of 2 target concepts with 2 attribute concepts. Responding is predicted to be faster on consistent trials, when concepts that are associated in memory share a response key, than on inconsistent trials, when less associated items share a key. In the current study, event-related potentials (ERPs) were recorded while participants were engaged in an IAT task. Two positively valenced stimuli (baby and romance) and two negatively valenced stimuli (spider and snake) were employed as category labels. Results showed shorter response latencies on consistent relative to inconsistent trials. Differential EEG activity was also observed.. Consistent trials tended to generate more positive waveforms in the central and parietal areas relative to inconsistent trials during the 300- to 400-ms interval following stimulus onset. During the 400- to 600-ms interval, inconsistent trials were significantly more positive than consistent trials at the two prefrontal sites and significantly more negative at the two central sites. Comparisons between the EEG activity generated in the current IAT study and that generated by semantic priming are discussed.