

Collective minds, individual brains: EEG evidence from organizational decision-making

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Organizational decision-making (DM) is a multifaceted process influenced by both cognitive and social variables. Among these, the construction of Self-Relevance (SR) –the subjective significance attributed to a decision by an individual –has received limited attention in neuroscience, particularly in applied workplace settings. This study aimed to explore the behavioural and neurophysiological correlates of three distinct SR-based DM approaches: egocentric (E), shared (S), and impersonal (I). A sample of 20 professionals engaged in an ecologically valid decision-making task simulating real-world scenarios, with corresponding electroencephalography (EEG) recordings capturing neural responses. Response tendencies, response times, and power variations in EEG frequency bands (e.g. delta, theta, alpha, beta, gamma) were analyzed. Results indicated a marked behavioural preference for the (S) approach, supported by increased beta and gamma activity in frontal regions –frequencies implicated in motivational and reward-related processing. Moreover, correlations between self-report DM styles and behavioural data highlighted individual differences in preference patterns. Specifically, intuitive and dependent styles predicted a greater inclination toward (S) and (I) choices, whereas difficulty in decision-making was inversely related to (E) decisions. These findings underscore the cognitive and affective mechanisms underlying SR in professional contexts and suggest that shared decision-making may hold intrinsic reward value. The integration of EEG data with behavioural and psychometric measures advances our understanding of organizational DM, offering a neurocognitive basis for tailoring interventions to support more effective and collaborative practices.

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No

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