

Why are Some People More Creative Than Others?

An Electrophysiological Approach

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Associative Processing

- In 1962 Mednick⁶ proposed an idea of how creative ideas are formed and why creative individuals are better at producing original ideas. This theory assumed that reaching and merging uncommon associates helps form creative ideas. Building on this, he assumed that creative people have more remote information stored within semantic memory. This unique spread of information allows them to easily think outwardly and originally when solving a creative problem.
- Previous studies have found that creative individuals produce more uncommon responses on word association tasks,^{1,7} and can make more connections between remote concepts.^{2,10} However, other studies suggest that these results are inconsistent. For example uncommon responses may be a product of increased response fluency resulting in uncommon responses to happen later on.³

Event-Related Potentials

- Larger N400 amplitude may be interpreted as greater effort to establish connections between distantly related concepts stored within semantic memory.⁵
- According to Rutter et al. (2012) sustained negativity following the N400 marks the ongoing difficulty of integrating information between remote concepts.¹¹
- Previous research on conceptual expansion has suggested that less sustained negativity occurs after successfully establishing a new association between remote concepts. The N400 however, may only be sensitive to the unusualness of the stimuli and not integrating new information.^{8,11}