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Creative Foraging: Examining Relations Between Foraging Styles, Semantic Memory Structure, and Creative Thinking

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Abstract

Creativity has been separately related to differences in foraging search styles and semantic memory structure. Here, we converge computational methods to examine the relation of creative foraging styles, semantic memory structure, and creative thinking. A large sample of participants was divided into groups based on their exploration and exploitation strategies in a novel creative foraging game. Their semantic memory networks were estimated and compared, based on an animal category semantic fluency task. We find differential relations between the properties of semantic memory structure and foraging styles and link such differences to performance in a standard creative thinking task. Our results highlight the interaction of semantic memory structure and foraging strategies in creativity.