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Identifying Individual Differences in Sensemaking and Information Foraging

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Abstract

Prior research has distinguished between acquiring new/related knowledge (information foraging) and restructuring collected data (sensemaking), demonstrating that both substantially contribute to the comprehension of unknown information. These behaviors are critical cognitive abilities that can lead to scientific success and to innovation. Yet, little is known about whether there are individual differences in these behaviors. We provide a paradigm to study how these cognitive abilities are utilized as participants attempt to understand the causal structure of a fictitious islands ecosystem (e.g., What is making the animals sick?). Some causal structures are directly posed by the environment, and can be discovered by information foraging, whereas others can only be derived by sensemaking by merging or splitting the causes and/or effects of already acquired information. We expect to see individual differences in information foraging and in sensemaking as reflected by the type of structures reported and time spent collecting or assessing the data.