

## **Individual Differences in Memory Search Debriefing Form**

### **What are we trying to learn in this research?**

The goal of this research is to understand how individuals search through and organize information in their memory. Specifically, we aim to discover how much a person's individual experiences can influence the way different concepts are organized in their mind. To explore this, we asked participants to complete two tasks: A verbal fluency task(VFT) and a spatial arrangement method(SpAM) task.

In the verbal fluency task, the items generated allow us to discover what concepts a person can access from memory. In the spatial arrangement task, the position of items demonstrates the relationship that a person perceives between them. When combined, these tests provide us with an idea of what concepts a person can retrieve and how those concepts are organized in relation to each other.

### **Why is this important to scientists or the general public?**

This experiment has both theoretical and practical implications. Theoretically, it will help scientists better understand the ways an individual's experiences affect how they organize and retrieve concepts. Practically, it will help us understand how psychopathology impacts fundamental cognitive processes. Our findings may help to improve learning strategies, enhance cultural understanding, and create more effective therapeutic practices. Advancements to each of these fields can greatly improve scientific understanding and the lives of the general public.

### **Where can I learn more?**

Hills, T. T., Jones, M. N., & Todd, P. M. (2012). Optimal foraging in semantic memory. *Psychological Review*, 119(2), 431.

Richie R, White B, Bhatia S, Hout MC. The spatial arrangement method of measuring similarity can capture high-dimensional semantic structures. *Behav Res Methods*. 2020 Oct;52(5):1906-1928. doi: 10.3758/s13428-020-01362-y. PMID: 32077079.

Johns BT. Determining the Relativity of Word Meanings Through the Construction of Individualized Models of Semantic Memory. *Cogn Sci*. 2024 Feb;48(2):e13413. doi: 10.1111/cogs.13413. PMID: 38402448.

Kumar AA, Steyvers M, Balota DA. A Critical Review of Network-Based and Distributional Approaches to Semantic Memory Structure and Processes. *Top Cogn Sci*. 2022 Jan;14(1):54-77. doi: 10.1111/tops.12548. Epub 2021 Jun 6. PMID: 34092042.

### **What if I have questions?**

If you have any questions about the research study, please contact Abhilasha Kumar at:  
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Thank you for participating!