How do we navigate our semantic memory when searching for creative ideas ?
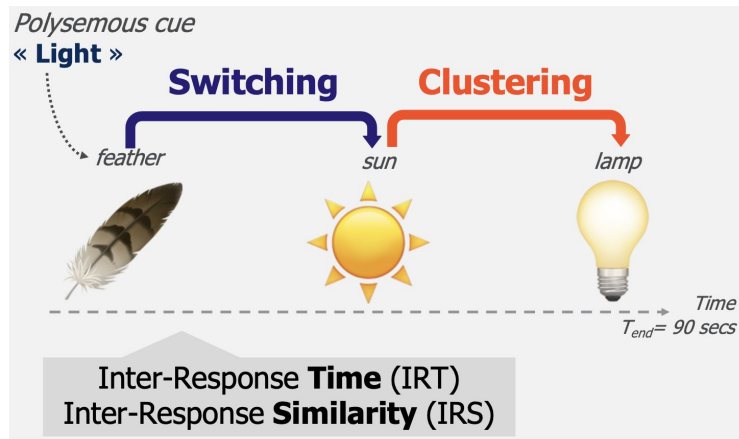
Lucie Vigreux
Supervisor: Emmanuelle Volle

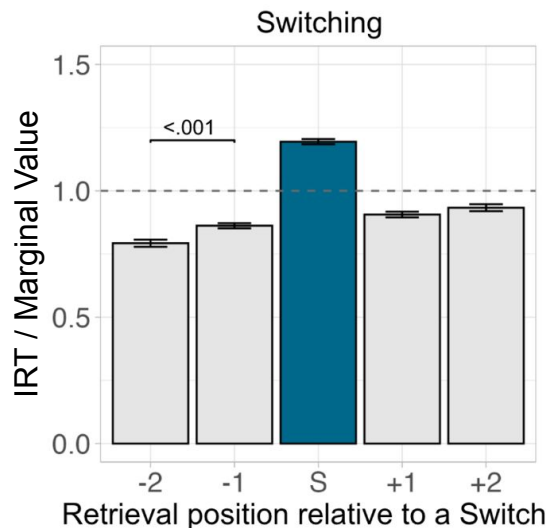# How do we <u>navigate our semantic memory when searching</u> for creative ideas ?

Ovando-Tellez et al., 2022
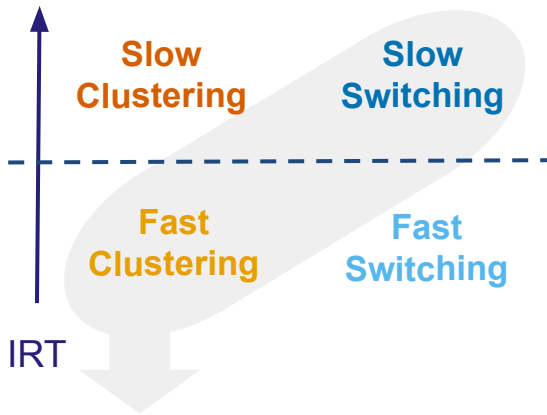Ovando-Tellez, Vigreux, et al.,
under review

Polysemous cue
« **Light** »

Switching   **Clustering**

feather → sun → lamp

Time
T_{end}= 90 secs

Inter-Response **Time** (IRT)
Inter-Response **Similarity** (IRS)

Marginal Value Theorem (MVT)
of the **Optimal Foraging Theory** :

1. Default behavior is **Clustering**
2. Inter Responses Time (IRT) increases as patch resources are depleted
3. **Switching** occurs when IRT reaches **Marginal Value**

Switching

<.001

IRT / Marginal Value

Retrieval position relative to a Switch
-2   -1   S   +1   +2

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How do we <u>navigate our semantic memory when searching</u> for creative ideas ?

Slow Clustering / Slow Switching / Fast Clustering / Fast Switching — IRT

Behaviors consistent with
Marginal Value Theorem of the **Optimal Foraging Theory** :

1. Default behavior is **Fast Clustering**

2. IRT increases as patch resources are depleted

3. **Slow Switching** occurs when IRT reaches Marginal Value
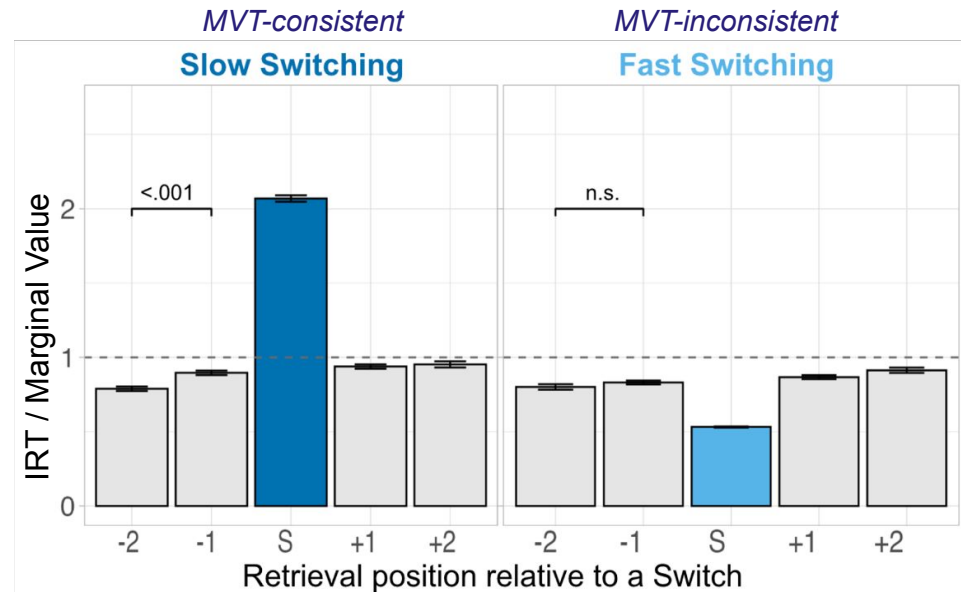
Slow Switching but not Fast Switching follows predictions from the MVT

Ongoing Work …

How do we navigate our semantic memory <u>when searching for creative ideas</u> ?

- Effect of "be fluent" versus "be creative" instruction on components of semantic memory search

…and Futur Directions

<u>How</u> do we navigate our semantic memory when searching for creative ideas ?

- Cognitive processes underlying Controlled Clustering & Switching
- Brain correlates

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