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A4

To know or not to know:
emotional, motivational and personal-related factors of seeking or avoiding information

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Motivation

- Understanding the relationship between the various factors that drive information seeking and avoidance, including content-, context- and person-related factors[1].
- Contrary to the assumption of a fundamental human drive to seek knowledge, there is evidence for avoiding (potentially) unpleasant and self-related information[2].

Preliminary work:

- Prioritized processing of emotional information in different domains[3-4], similar to stimuli associated with motivational incentives[5-6].
- Effects of emotion/motivation are modulated by personal relevance (Fig. 1)[7].

80-120 ms

High Relevance   Low Relevance   High Relevance - Low Relevance
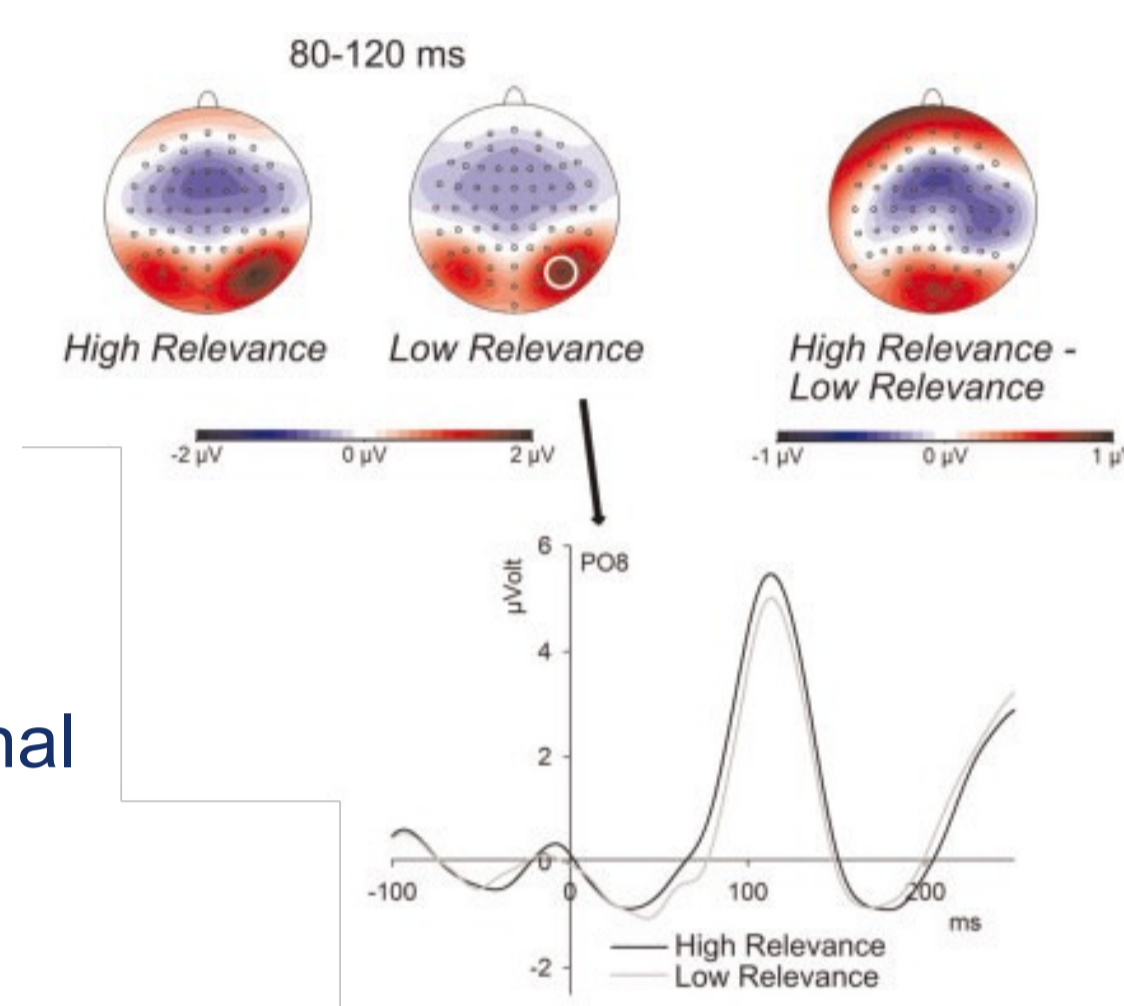
Fig. 1: The embedding of emotional words in self-relevant contexts enhances their early sensory processing.

Objectives

- Systematic study of the interplay of emotional valence and personal relevance and their impacts on seeking or avoiding information
- Identification of person-related factors that contribute to variations in curiosity

➤ With the study of contextual factors that determine information seeking and avoidance, this project asks **When we are curious?**

➤ Examining the personal factors that contribute to variation in curious behaviour also contributes to answering the question **Why are we curious?**

?

What individual, contextual, and content-specific factors determine whether adults seek or avoid information?

Methods

- Experimental approaches: Self-paced reading studies, judgment and visual search tasks
- Stimuli: vignettes and pictures, varying in their emotional valences
- Assessment of person-related factors via established questionnaires
- Psychophysiological parameters: ERPs/EEG, eye movements, facial muscle activity, pupil size, heart rate
- Further development of complex data modeling[8] for integration of the multiscale data and prediction of information seeking or avoidance behaviour

Hypotheses:

- Individual preferences to seek or avoid information depend on the interplay of information content (e.g., pleasantness, self-relevance) and person-related socio-emotional capabilities.
- These preferences will lead to differences in overt behaviour and in emotion-related physiological parameters.

Fig. 2: Exemplary experimental setup with EEG and eye-tracking recording.

Cross-project collaborations

- Focusing on **individual differences** in curious behaviour, this project links directly to **A3** and **B2**.
- The project will benefit from the cutting-edge approaches to **data integration and** analysis that are being developed in Area **C**, project **C1** in particular.
- The study of mechanisms underlying the information seeking and avoidance links the project to **B1** and **C1** and **C4**.
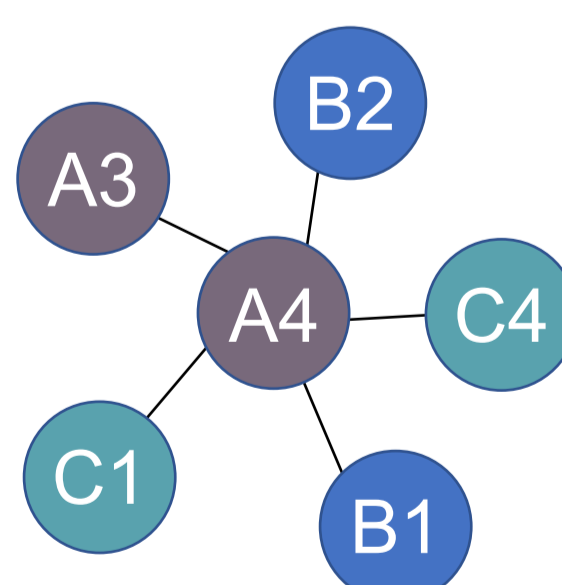

Fig. 3: Key collaboration partners of doctoral researcher working on Project A4

Potential PhD projects

1. Understanding valence preferences across different domains and content of information
2. How do person-related factors modulate curiosity towards positive and negative content?
3. Examining the interplay of emotional content and source credibility

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