

# Methodology

This section presents the core methodological contribution: a ( $2 \times 2$ ) matrix framework for understanding Active Inference as a meta-pragmatic and meta-epistemic methodology. The framework structures cognitive processing along two dimensions: Data/Meta-Data and Cognitive/Meta-Cognitive, revealing four distinct quadrants of cognitive operation.

## The ( $2 \times 2$ ) Matrix Framework

Active Inference's meta-level operation becomes apparent when analyzed through a framework that distinguishes between data processing and meta-data processing, as well as cognitive and meta-cognitive levels of operation (Figure 1).

## Framework Dimensions

**Data vs Meta-Data (X-axis):** - **Data:** Raw sensory inputs and immediate cognitive processing - **Meta-Data:** Information about data processing (confidence scores, timestamps, reliability metrics, processing provenance)

**Cognitive vs Meta-Cognitive (Y-axis):** - **Cognitive:** Direct