

Distinguish between two categories of prediction made by neurons

A. Detailed predictions about the identity of the upcoming stimulus

**B. Adaptation
Deviation from the expected stimulus ensemble**

**Analysis #1:
Compare the response to the mismatch stimulus across conditions for sensorimotor mismatch (session 2)**

closed-loop versus open loop
type of mismatch

**Analysis #2:
Decoding accuracy for individual mismatch stimuli vs. for novelty per se.**

linear decoder (support vector machine)
mutual information

**Analysis #3:
Emergence of Prediction Signals in Single Neurons**

Do individual neurons show changes in their response to the same oddball stimuli?
Do neurons exhibit activity that depends on what the upcoming stimulus is?

**Analysis #4:
Emergence of Prediction Signals at the Population level**

Do neurons populations of neurons exhibit activity during stimulus omission that depends systematically on the preceding stimulus?
Do identified latent variables exhibit systematic changes over trials?