

The Bayesian Brain and the Free Energy Principle

Scientific evidence supports the idea that the brains are predictive machines, and they work that way to conserve energy. The Free Energy Principle (FEP) is claimed as a unified brain theory that solves different cognitive functions under the same formalism. The FEP is increasingly influential in many areas with special emphasis on neurobiology, computational neuroscience and philosophy of mind. While the FEP has strong associations with the *Bayesian brain hypothesis* and predictive coding models in neuroscience at the basis of prediction error minimization and predictive processing theories in philosophy of mind, it is not implied by them. What is it that makes the FEP relevant to the Bayesian brain accounts of cognition? In this course students will learn in detail about the FEP and its relations to the Bayesian brain in order to critically assess its value as a theory of the mind and brain. Does the FEP have the potential to solve old debates in philosophy of mind, such as representational wars, computationalism vs dynamicism, or the internalism vs externalism debate? Does the FEP have genuine virtue in philosophy of mind to inform the measurement of psychological activity? How does the FEP perform under the philosophy of science scrutiny of realism, reductionism, and explanation debates?

Lecturer

Dr Inês Hipólito

Consultation by appointment: ines.hipolito@hu-berlin.de