

Department of Economics – Neuroeconomics Seminar

March 25, 2021 - 17:00 - 18:00

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Complementary roles of dopamine and noradrenaline in decision-making

Catecholaminergic neuromodulators, namely dopamine and noradrenaline, play a key role in numerous aspects of behavior, including decision-making. But since many of their functional features overlap, and since they are both involved in major clinical disorders such as Parkinson's disease or depression), identifying their specific contribution to motivation and decision making remains challenging. Here, I will present a series of neurophysiological and pharmacological data in behaving monkeys to support the idea that they support distinct functions: noradrenaline seems to play a strong role in effort processing, complementing the well known role of dopamine in reward and incentive motivation. Besides its implication for cognitive and clinical neuroscience, this work underlines the different levels at which neuromodulatory systems should be studied to understand their function.