Finally rational?

Behaviour exhibited by humans and other organisms is often labelled irrational. However, the origins of this seemingly suboptimal behaviour have remained elusive. Nikola Grujic and Jeroen Brus from the Burdakov and Polania labs at ETH developed a neurocomputational framework to reveal that apparent fallacious and inattentive behaviour often observed in mice and humans is in fact rational. This is demonstrated by the new framework when considering the reward optimization for the corresponding behaviour under real conditions.

These findings establish a neurobehavioral foundation for how organisms should efficiently behave within the constraints imposed by biology, forming a stepping-stone to accelerate the translation from neurobiological mechanisms to formal concepts of rational inattentive behaviour in medical settings and applied economics.

Grujic et al., Rational Inattention In Mice, Sci. Adv. 8, eabj8935 (2022) 4 March 2022