

## The *Probabilistic Turn* and Human Rationality

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A famous view is that human higher cognition exhibits surprising and systematic irrationality. This view is suggested by the *heuristics and biases* programme, which argues that our mental software leads us to depart from elementary probability theory, and by *deduction paradigm* psychology of reasoning, which catalogues errors in basic logical reasoning. However, the *probabilistic turn*, a recent trend in cognitive science that takes probability theory as an abstract model for thought, suggests that our cognition exhibits a remarkable degree of rationality. *Does the probabilistic turn really vindicate us of the charge of irrationality?*

Most attempts to address this question in the literature focus on whether the algorithmic substrate of the relevant systems are rationally approximating computationally intractable Bayesian models of cognition (*cf.* recent work by Richard Samuels, Sean Nichols and also Josh Tenenbaum). However, even if these systems are “algorithmically rational”, the *probabilistic turn*, I argue, is *over-optimistic* about human rationality. This is due, I claim, to a basic conceptual conflation that’s often made by psychologists in that literature, which is bound up with *probabilistic turn* methodology. I also suggest that the *probabilistic turn* and *heuristics and biases* traditions have more common purpose than first meets the eye, and that acknowledging this points to an intermediate assessment of human rationality—somewhere in between the optimism and pessimism that is typically associated with each, respectively.