

Mental Processes and Decision Making

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ABSTRACT

Consider an agent who is unsure of the state of the world and faces computational bounds on mental processing. The agent receives a sequence of signals imperfectly correlated with the true state that he will use to take a single decision. The agent is assumed to have a finite number of "mental states" that quantify his beliefs about the relative likelihood of the states, and uses the signals he receives to move from one state to another. At a random stopping time, the agent will be called upon to make a decision based solely on his mental state at that time. We show that under quite general conditions it is optimal that the agent ignore signals that are not very informative, that is, signals for which the likelihood of the states is nearly equal. We suggest this model as an explanation of systematic inference mistakes people sometimes make.