Information Acquisition: Stopping Rules For Varying Levels of Probabilities and Consequences

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Abstract: We performed an exploratory experiment aiming to assess the use of stopping rules in information acquisition. Participants were requested to make a decision or procrastinate on 24 economic/financial scenarios after buying information pieces. Behavioral and EEG data were recorded for analysis. Results showed that participants decided according to Bayesian calculations to stop information acquisition and decide. Moreover, information acquisition strategies seemed consistent with prospect theory, with participants weighing information pieces differently and seeking more or less information given different manipulations in scenario probability, consequence valence and intensity. EEG data suggests a lateralization at frontal electrode sites. With probabilities stated, low negative consequence scenarios showed a positive peak at F3 around 200 ms before a decision was made. When probabilities were not stated, high positive consequences scenarios evoked a negative deflection at F4 around 400 ms before a decision.