

In the online metacognitive control of decisions

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Difficult decisions typically involve mental effort, which scales with the deployment of mental resources engaged in processing decision-relevant information. But how does the brain regulate mental effort? A possibility is that the brain optimizes a resource allocation problem, whereby the amount of invested resources balances its expected cost (i.e. effort) and benefit.



Framing value-based decision making as a resource allocation problem







Confidence in one's choice depends on the moments of the two value distributions.

Invested resources

One must balance the **benefits** and costs of mental resources investment.



Threshold between



- Easier decisions necessitate less resources.
- Less resources are invested in highly confident decisions.
- Choices are more consistent when confidence is higher.
- are consistent with the underlying hidden values.
- For value-consistent (resp. inconsistent) decisions, confidence increases (resp. decreases) when decisions are easier.