

Human confidence report with multiple alternatives

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Presentation Abstract Summary Confidence is often conceptualized as (monotonically related to) the posterior probability that one's decision is correct. However, confidence could alternatively be based on the difference between the highest and the next-highest value of the posterior distribution, or on the posterior entropy. Most studies on confidence reports have used decision tasks with two choices (e.g. upward versus downward motion) and could therefore not distinguish between these possibilities. In this study, we investigated the computation of confidence in a decision task with three choices. Observers categorized a target stimulus into one of three classes and report their confidence in the decision. The distributions of the three classes were explicitly provided. We found that the model in which confidence is based on the difference of the two highest posterior probabilities best explained the data. This result contradicts the widely held belief that confidence is derived from the maximum of the posterior.

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