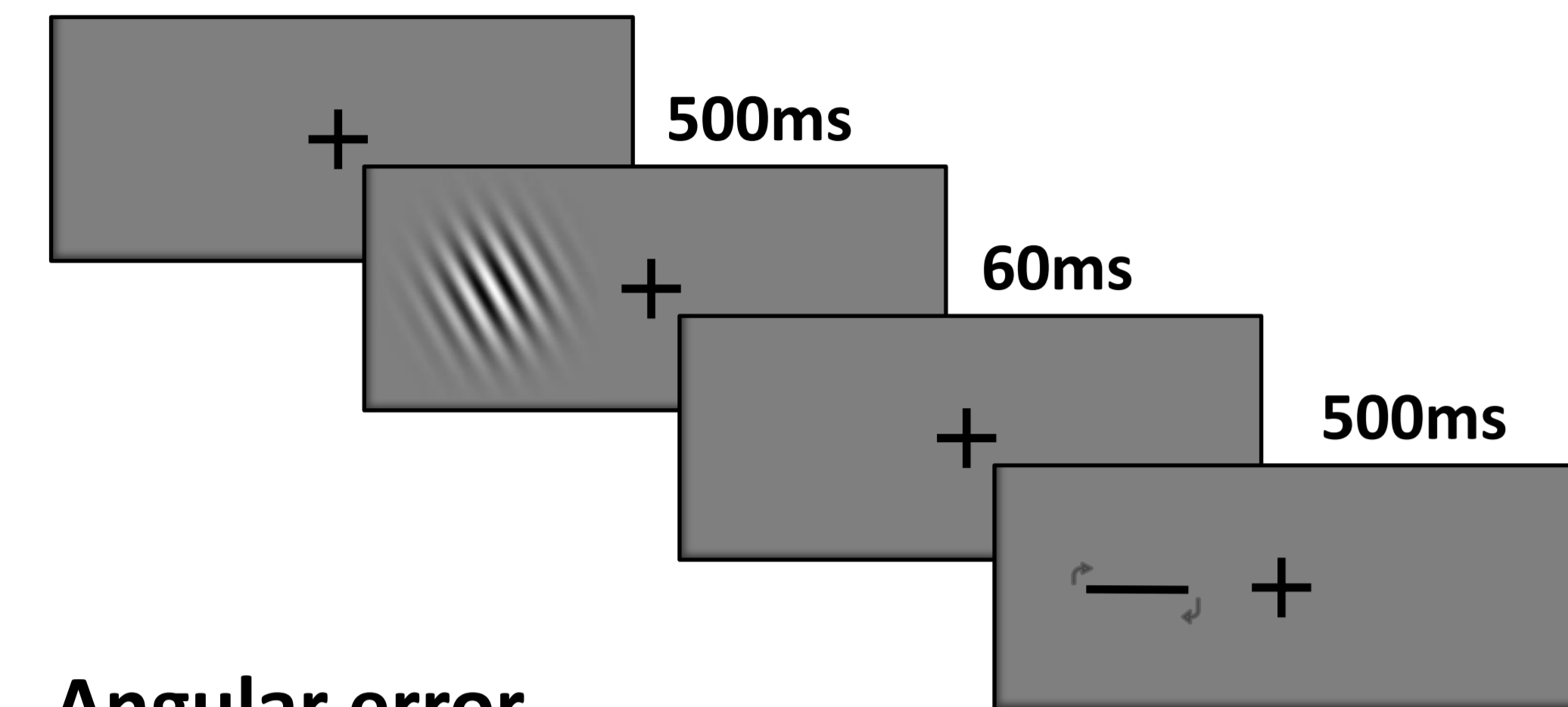


How do probability cues affect perceptual estimations?

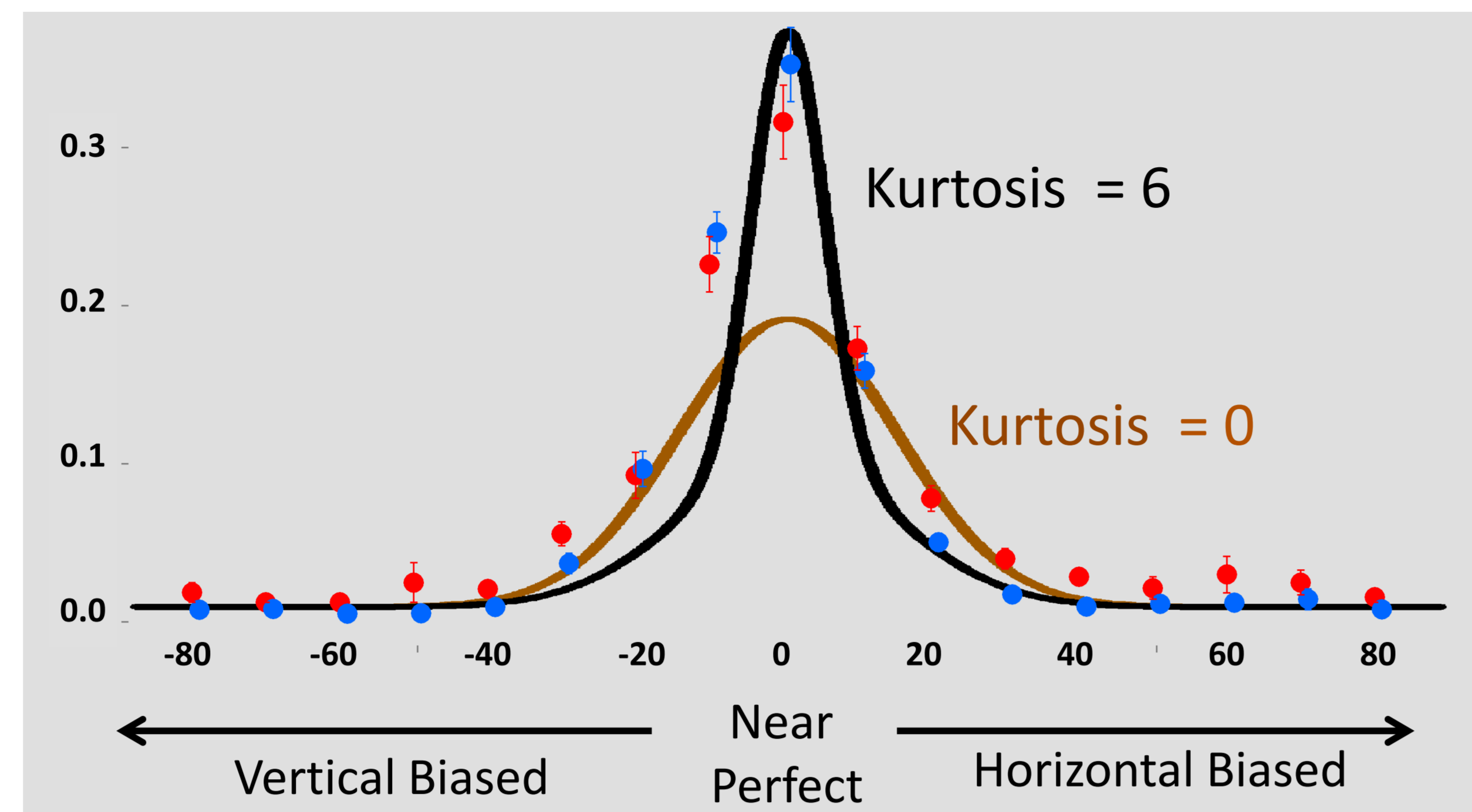
Orientation Judgment task



Angular error

- Angular deviance of estimated orientation from presented stimulus orientation

Proportion of angular errors from true stimulus orientations

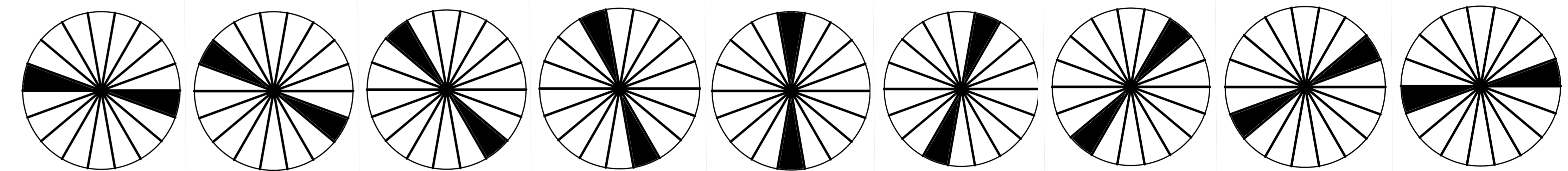


Kurtosis

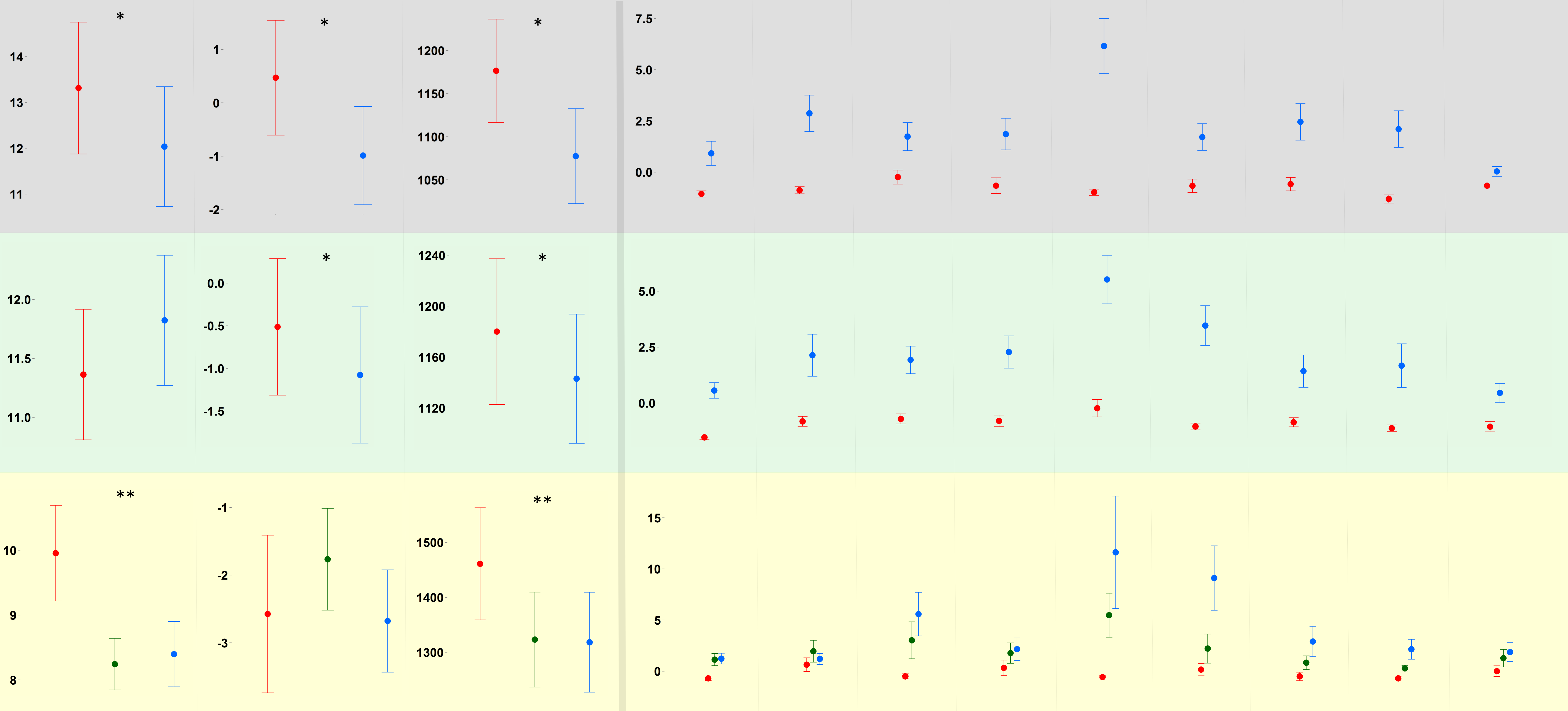
- Measures of the shape of a distribution
- Higher kurtosis :
 - Greater proportion of more precise estimations
 - Less errors that are exaggerated

- Stimulus orientation** and **probability** both affect the error distribution of perceptual estimates
- Vertical, high-probability orientations are estimated most precisely

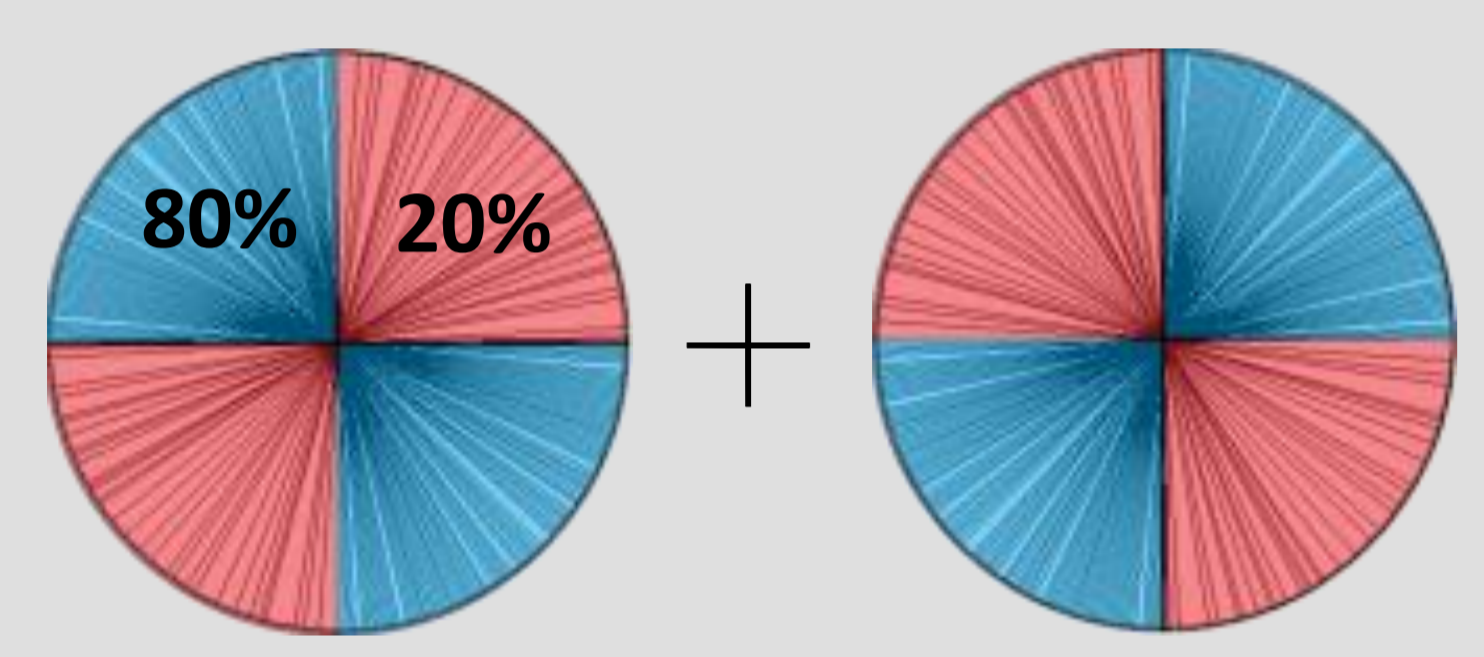
Kurtosis of angular errors across stimulus orientations[^]



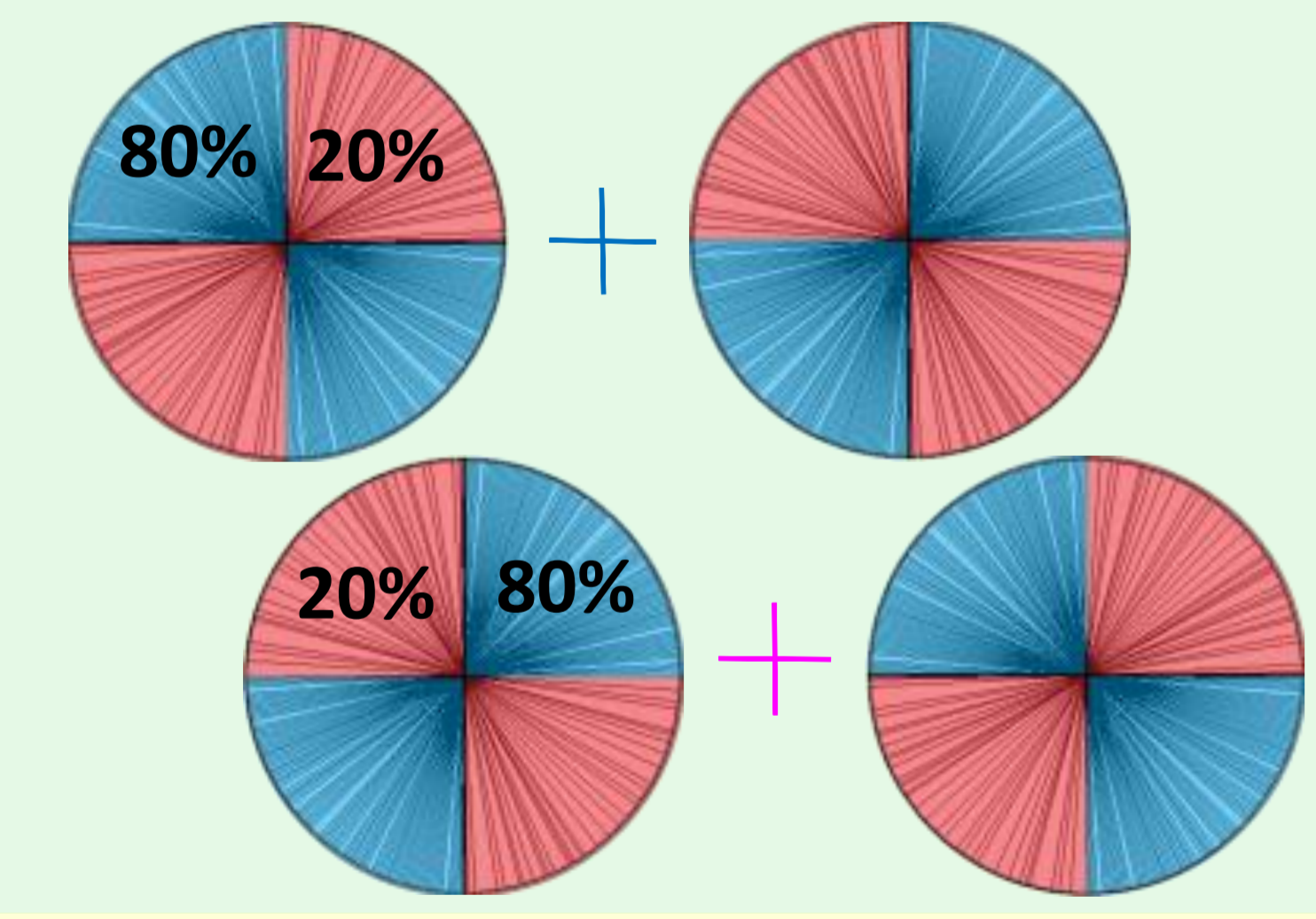
Angular Error Bias[#] Reaction Time



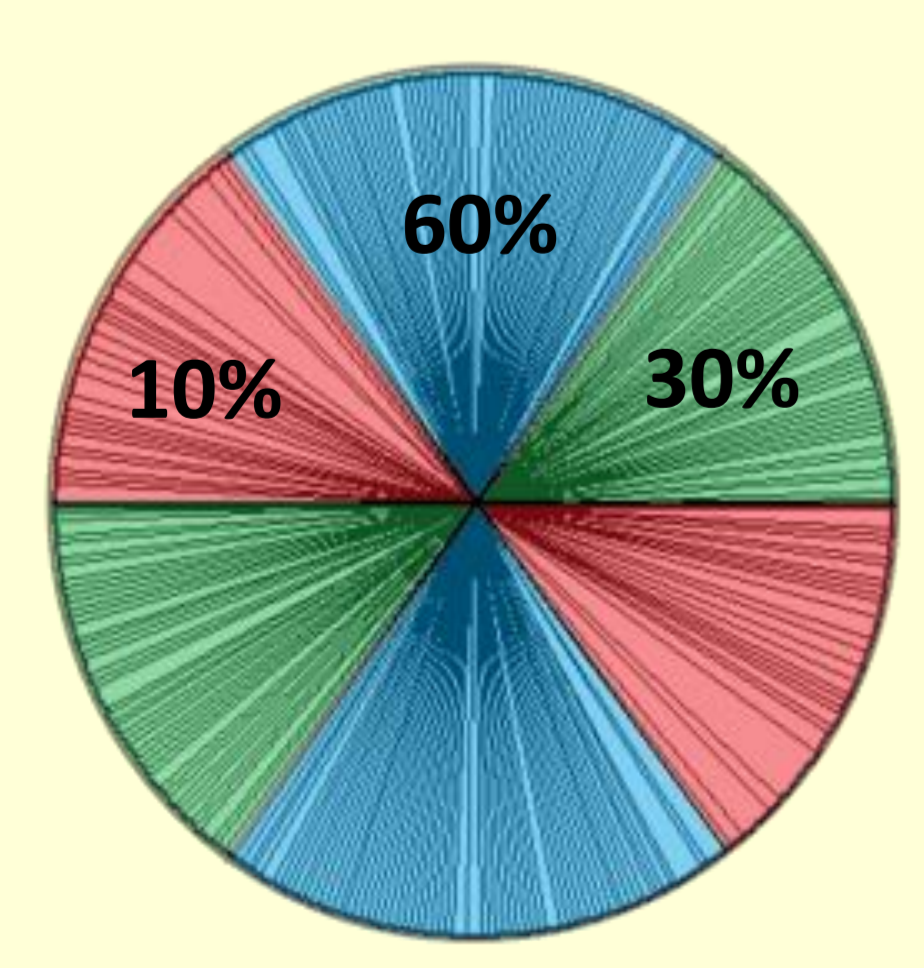
Expt 1a: Probability Cuing



Expt 1b: Conditional Probability Cuing



Expt 2: Graded Probability Cuing



* $p < .05$
 ** $p < .05$ omnibus ANOVA, pairwise comparisons suggests due to 10% vs. 30% and 10% vs. 60%
 # Negative bias: Errors in estimation are towards the vertical meridian. In no condition is there a significant positive (horizontal) bias.
 ^ Significant main effect of Probability, significant main effect of Stimulus Orientation, and significant interaction effect, for all three experiments

