Does attention prioritize task relevant features in ensemble processing?
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Ensemble processing allows the visual system to condense visual information into useful summary statistics, such as average size. However, researchers are currently debating whether attention is involved in this process.

In order to study the role of attention in ensemble processing, we need an effective way to manipulate attention without altering the perceptual qualities of the ensemble.

We hypothesized that if attention is involved in ensemble perception, the action effect will facilitate the extraction of summary statistics when it is directed towards a task-relevant feature.

**Research Question**

Can we use the action effect to modulate attention in an ensemble task?

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**Conclusions**

- Overall, the task-relevant cues (both size and orientation) that elicited an action facilitated the extraction of summary statistics from the ensemble more than the cues that were passively viewed. Importantly, task-irrelevant cues did not bias the reports of average size.
- The results of this study suggest that while attention is involved in ensemble processing, it only influences the extraction of summary statistics when it is directed towards a task-relevant feature.