Bayesian Analysis of the Vertical Saliency Bias for Objects and Scenes
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Introduction
Past research demonstrated a top saliency bias in object identification, with random shapes appearing more similar when they share the same top versus the same bottom.

This is consistent with tops of natural objects and lifeforms tending to be more informative locations of intentionality and functionality, leading observers to favor attending to tops.

This bias may also reflect a generic downward vantage tendency, with more informative interactive aspects of scenes typically lying below the horizon.

We predict that when viewing the environment, observers will favor attending to the informative interactive aspects more and will therefore, exhibit a bottom-saliency bias.

Methods
Participants made similarity judgments between comparisons that shared either the same top (left) or same bottom (right) as the test stimuli (center).

Information-Balanced Stimuli

Ecological Stimuli

Results

**Overall**, there was a significant Top Saliency Bias ($M = 56.56\%, \ SE = 1.86\%$), $t(159) = 3.53$, $p < .001$, $d = .279$, $\text{Log}(BF_{10}) = 3.48$

**IB Shapes**, Not significantly different than generic Top Saliency ($M = 53.19\%, \ SE = 4.68\%$), $t(39) = 4.31$, $p < .001$, $d = .682$, $\text{Log}(BF_{10}) = 5.43$

**IB Scenes**, Significantly different than generic Top Saliency Bias ($M = 62.05\%, \ SE = 1.35\%$), $t(39) = 8.94$, $p < .001$, $d = 1.41$, $\text{Log}(BF_{10}) = 19.01$

**Ecological Objects**, significantly larger Top Saliency bias ($M = 79.13\%, \ SE = 3.37\%$), $t(39) = 8.655$, $p < .001$, $d = 1.37$, $\text{Log}(BF_{10}) = 18.19$

**Ecological Scenes**, significantly smaller TS bias ($M = 31.90\%, \ SE = 3.60\%$), $t(39) = -5.02$, $p < .001$, $d = -.795$, $\text{Log}(BF_{10}) = 7.47$

Summary – Take Home Message
Overall, the findings support the theory that vertical saliency bias results from the coupling of the perceptual system to the natural regularities of information distribution within the environment and favoring of a generic downward vantage.