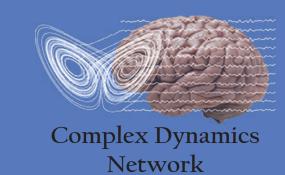


Looking at faces is differentially modulated by context and novelty





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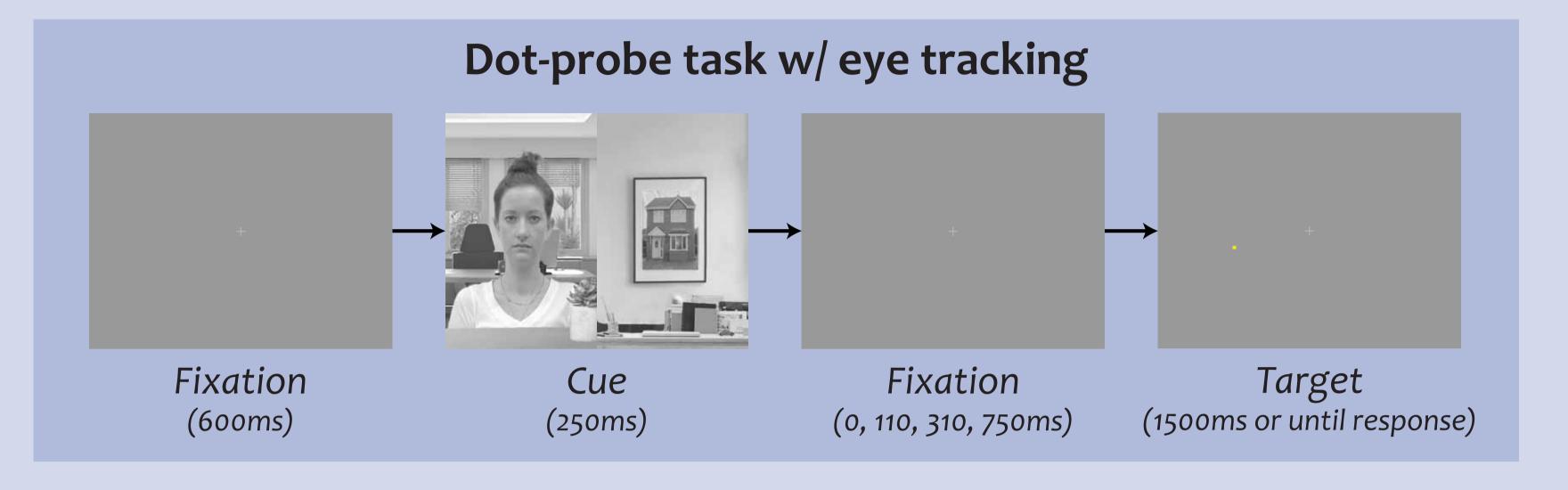
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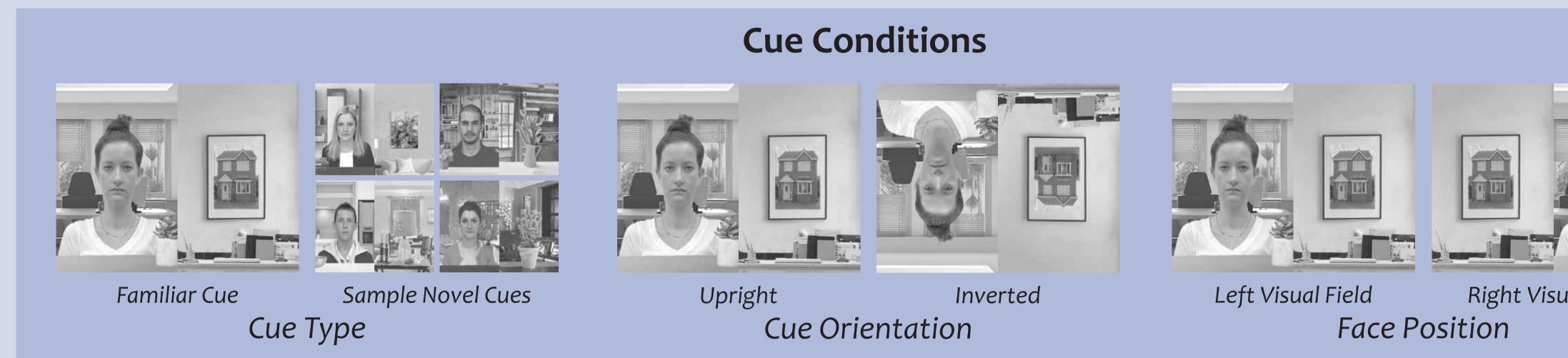
Effie J. Pereira¹, Elina Birmingham², & Jelena Ristic¹

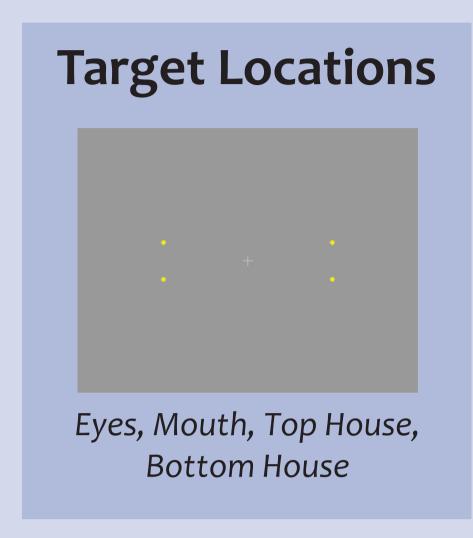
¹Department of Psychology, McGill University; ²Faculty of Education, Simon Fraser University

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Past studies show that humans preferentially and spontaneously attend to social cues like faces and eyes (Birmingham et al., 2008; Laidlaw et al., 2012). However, when controlling for low-level stimulus content factors, preferential social attentional biasing can be abolished across covert measures (i.e., reaction time), while still occurring infrequently across overt measures (i.e., oculomotor breakaways; Pereira, Birmingham, & Ristic, 2016). Across two experiments, we controlled for stimulus content factors and further investigated the role of visual context and face novelty in the social attentional biasing effect.

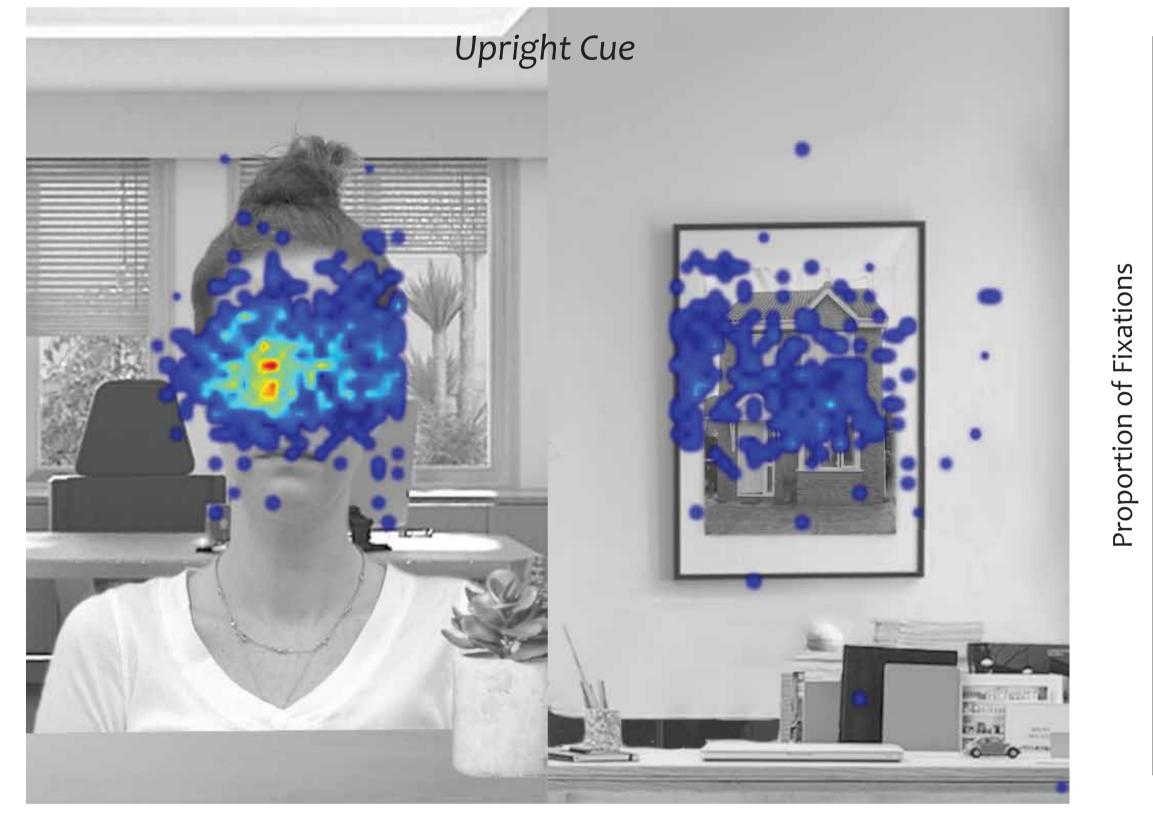






Experiment 1: Familiar Cues (n = 30)

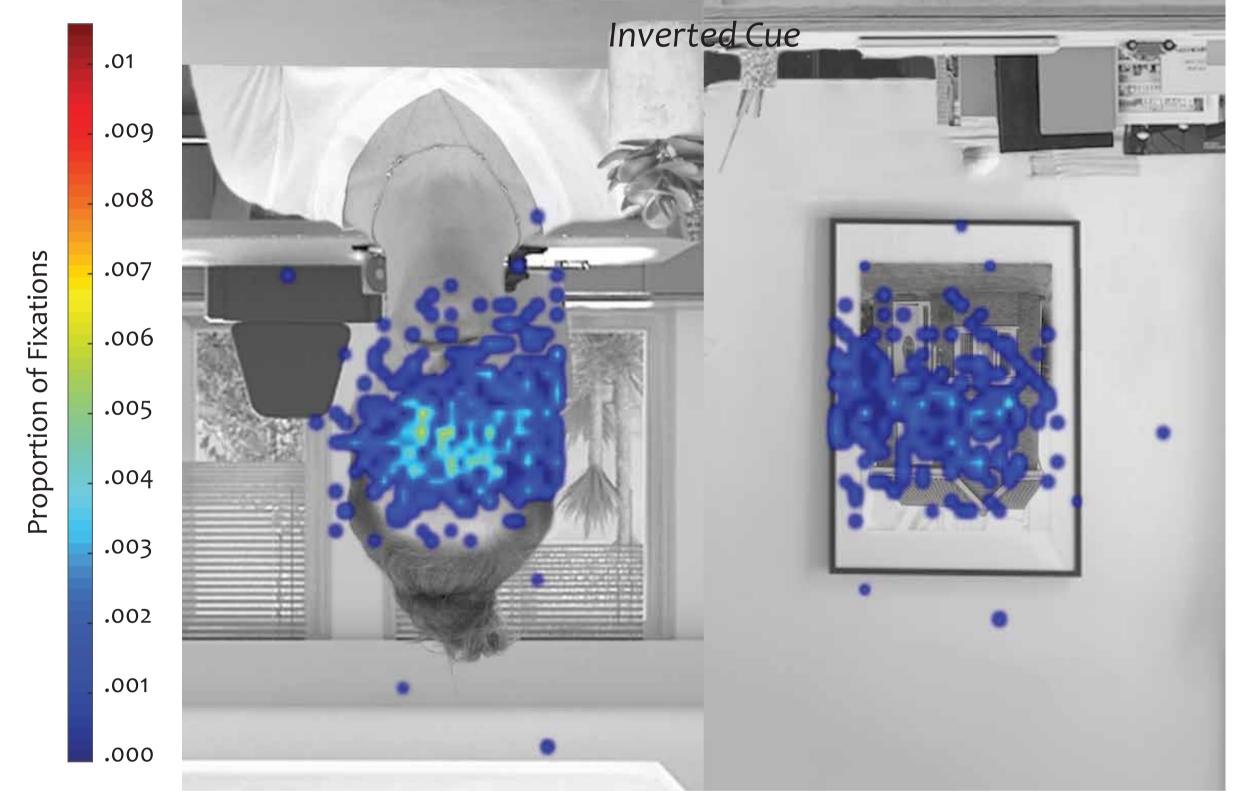
Fixation Heatmaps during the Cue Period



Oculomotor Breakaways towards Cues

Inverted Cues

Upright Cues

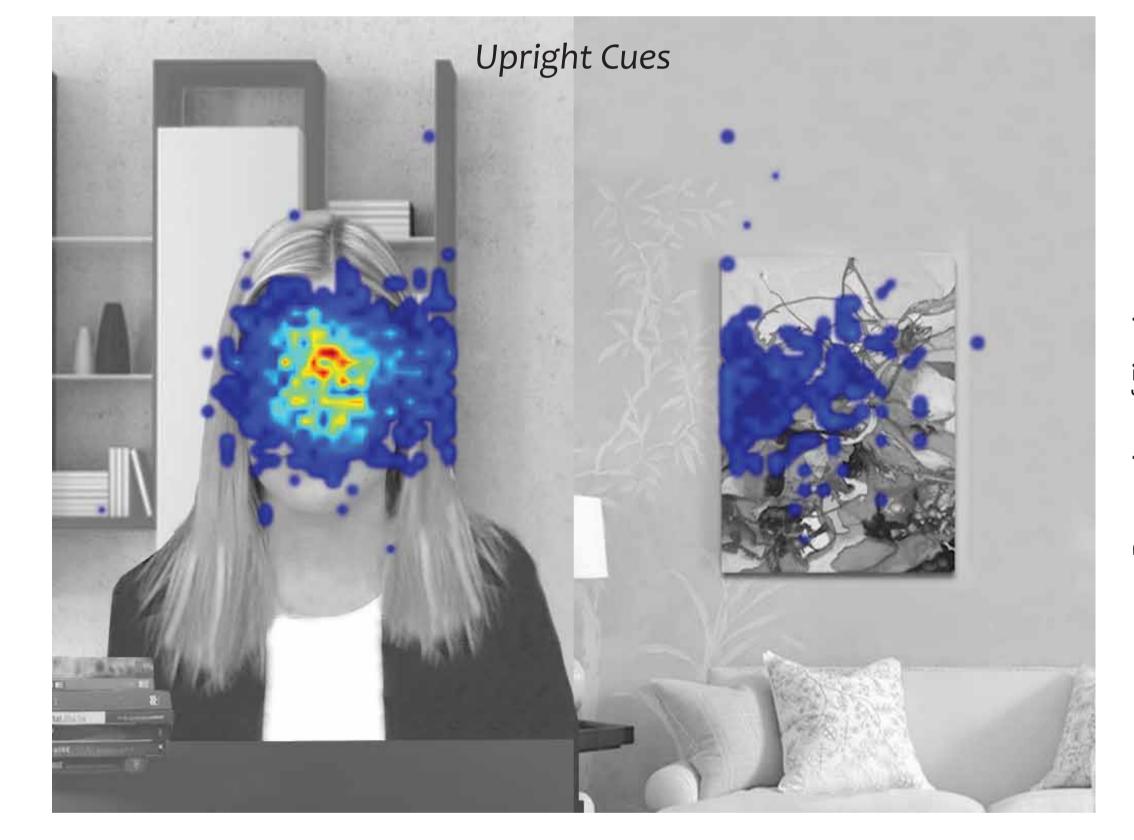


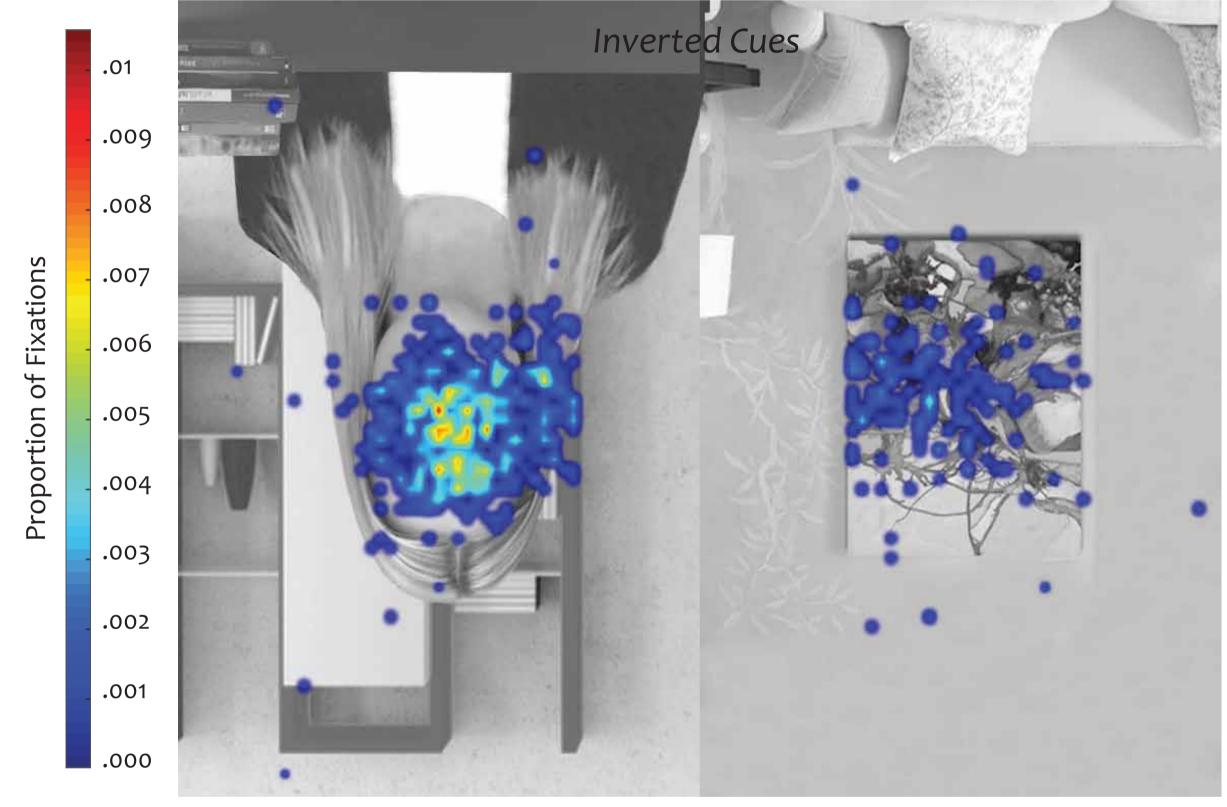
Reaction Time to Targets Upright Cues Inverted Cues Solve Eyes Mouth Top Bottom House House Reaction Time to Targets Inverted Cues Figure 1. Top Bottom House House

When presenting a single face-house cue pair, a higher proportion of saccades were directed towards the eyes versus the house (5% vs. 2% of all trials, respectively), with larger effects when the face was upright and when presented in the left visual field. No differences were found in reaction times to the target.

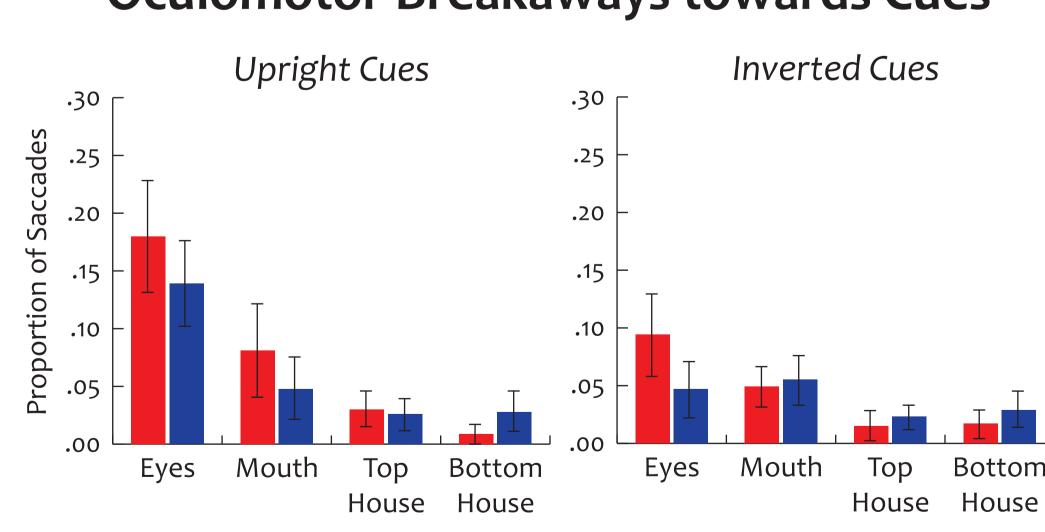
Experiment 2: Novel Cues (n = 30)

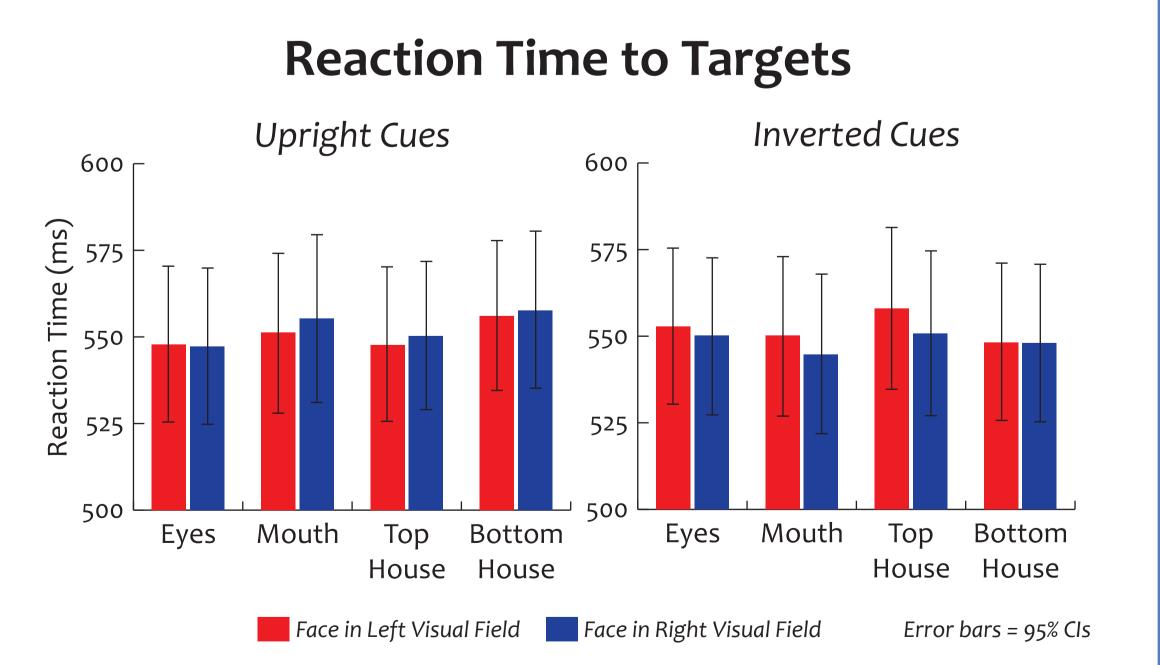
Fixation Heatmaps during the Cue Period





Oculomotor Breakaways towards Cues





When presenting multiple face-house cue pairs, a higher proportion of saccades were directed towards the entire face (eyes and mouth) versus the house (6% and 3% vs. 1% of all trials, respectively), with larger effects for faces when upright and in the left visual field. No differences were found in reaction times to the target.