

Supplementary Materials

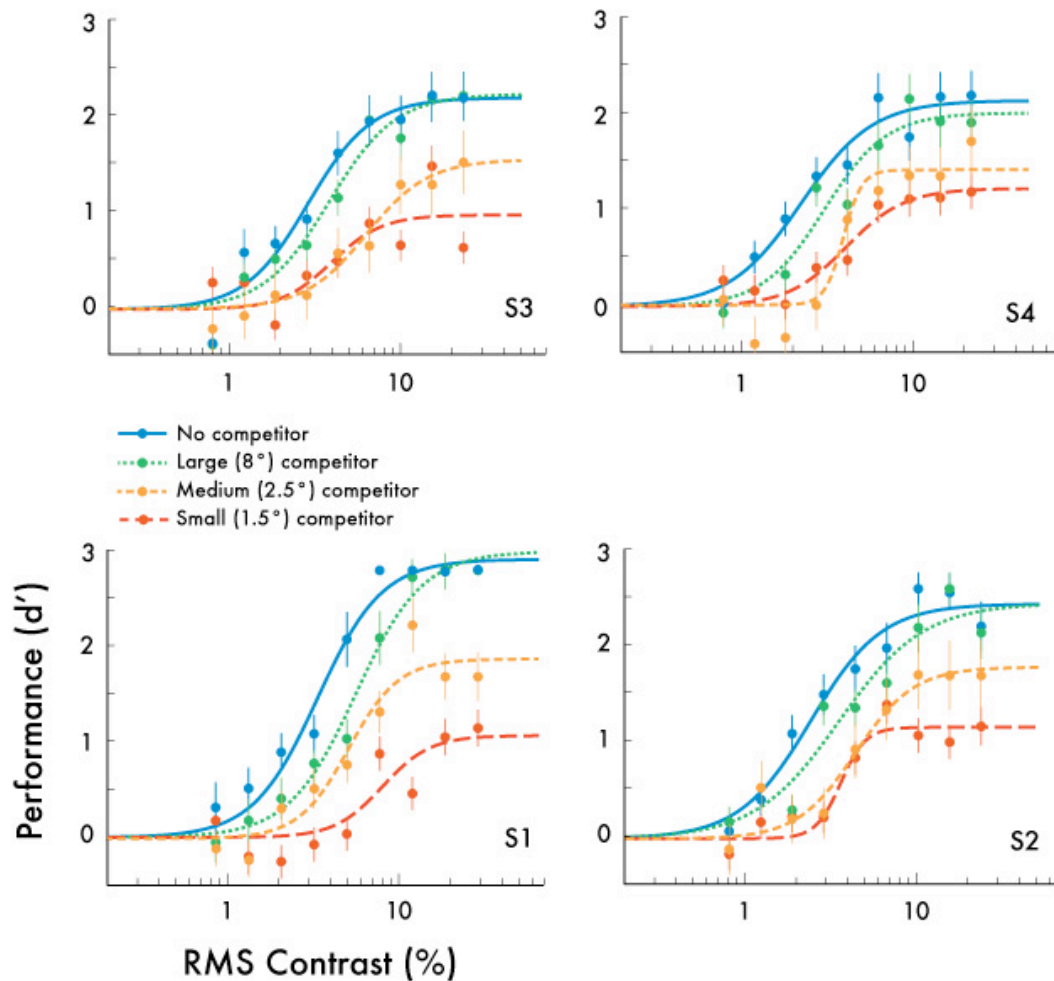


Fig S1. Psychometric function for individual observers. Blue curves corresponds to psychometric functions for the probe stimulus in the absence of suppression (monocular). When the suppressor was the same size as the probe stimulus, there was a reduction in both the contrast gain, as well as the response gain. However, as the suppressor became larger, there was a transition towards strictly a shift in the contrast gain, with little-to-no change in asymptote when the competitor was substantially larger. Error bars are bootstrapped 95% confidence intervals.

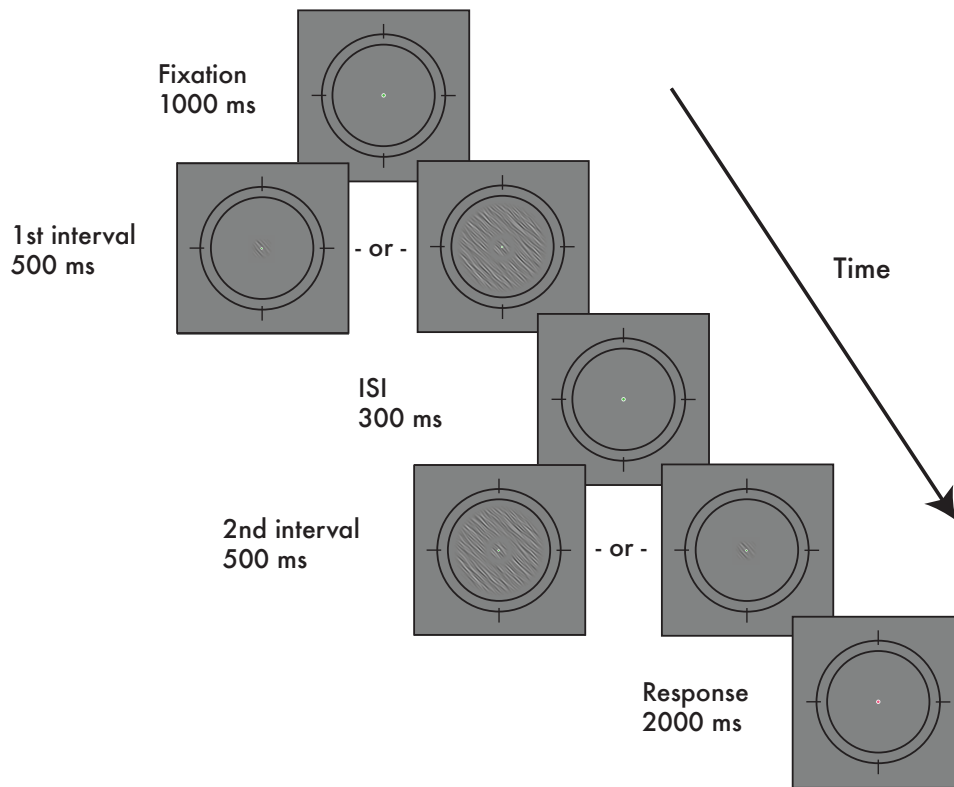


Fig S2. Trial sequence for surround suppression control experiment. Observers viewed two consecutive stimuli: one with a surround stimulus (8 dva), and the other without a surround (Test stimulus). In each trial, they were asked to report which of the two intervals had a center-region stimulus that appeared higher in contrast. A staircase procedure estimated the contrast the Test stimulus needed to be to match the perceived contrast of the stimulus in the presence of a surround

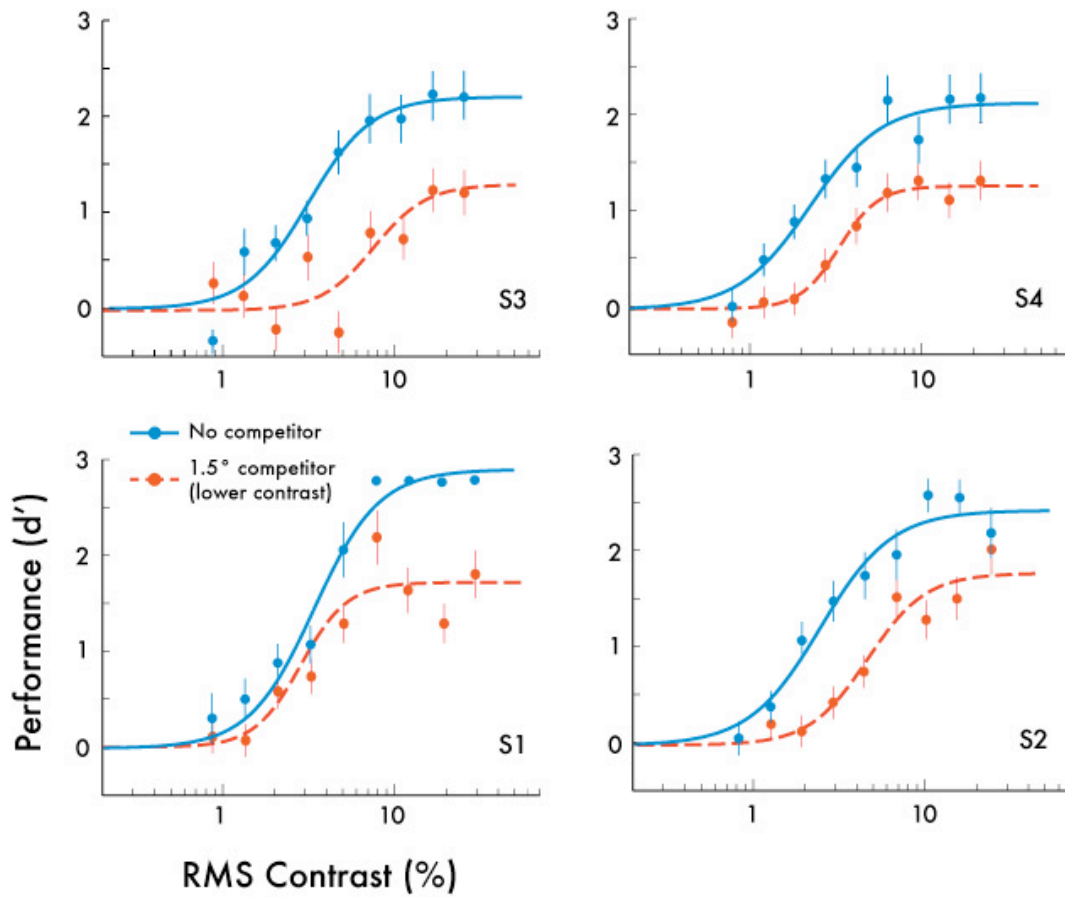


Fig S3. Psychometric functions for probes pitted against small competitors, after contrast has been adjusted for the reduction in perceived contrast with a surround. Data from individual observers. Although the physical contrast of the competitor was lower, we still found a drop in the response gain of the psychometric functions –thus ruling out an alternative, surround suppression-based explanation for our large-suppressor results. Error bars are bootstrapped 95% confidence intervals.

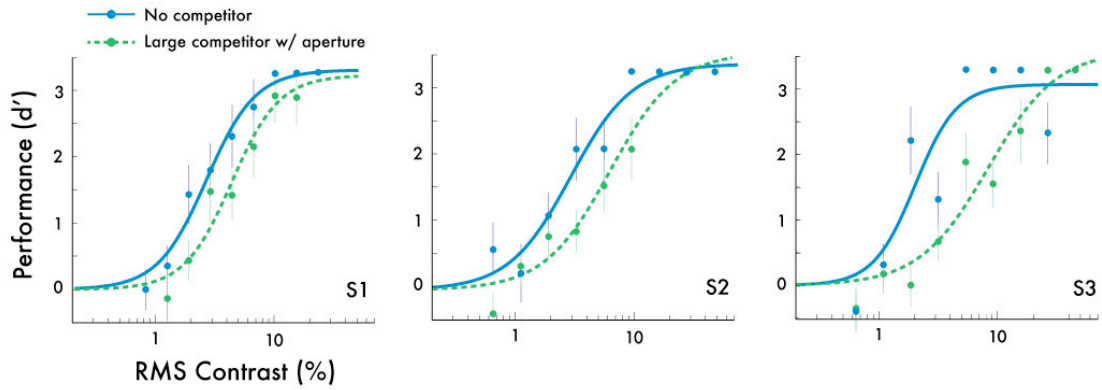
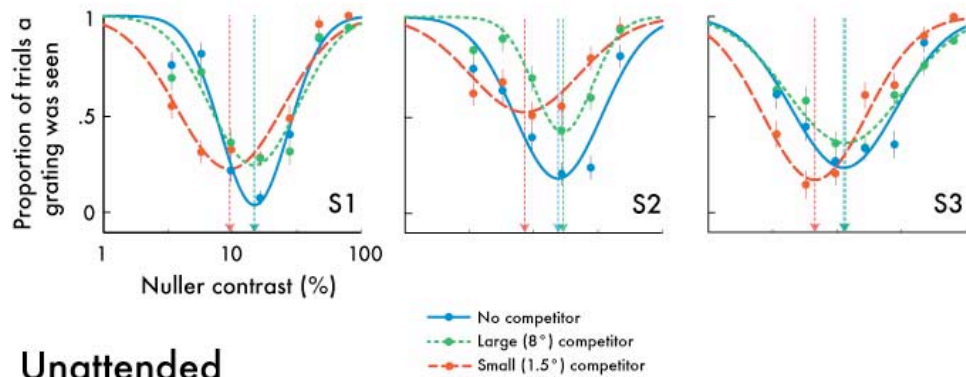


Fig S4. Psychometric functions for large competitors, when the probe region was surrounded with an aperture in both eyes, facilitating binocular fusion. Data from individual observers. Despite the addition of these fusion markers, the largest competitor still only evoked a contrast gain shift in the contrast psychometric function. Error bars are bootstrapped 95% confidence intervals.

a. Attended



b. Unattended

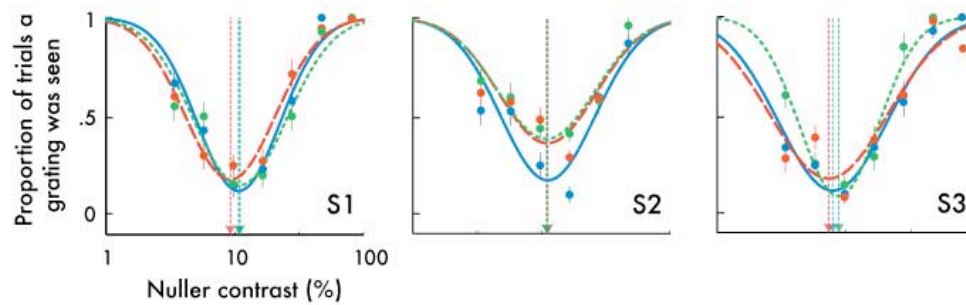


Fig S5 The effect of attention and rivalry on afterimage formation for individual observers. **(a)** When attention was directed toward the visual competition, the troughs of the afterimage functions (dotted arrows), which index afterimage strength, changed depending on stimulus size. There was no difference in afterimage strength between the large competitor and no-competitor conditions, yet when the inducer was pitted against the inducer against the small competitor, the inducer afterimages were weakened. Error bars are bootstrapped 95% confidence intervals.