Color-form Interactions in the Boynton Illusion
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Results
• The results of the detection task were consistent with prior research: the visual system is more sensitive to larger stimuli (Ricco’s Law).
• The results of two observers in the S+ condition in discrimination task showed the expected effect, that adding a contour makes it harder to discriminate the smaller colored rectangle from the larger one.
• However, the other two observers in the S+ condition, and all observers in S- condition, did not show the expected effect.

Methods
• A detection task was conducted to find thresholds for all stimuli, so that stimuli could be kept in their threshold ratio.
• A discrimination task was conducted to determine whether the appearance of the small and large rectangles were similar (due to filling-in).
• On each trial, The observer had to pick the interval containing the smaller colored rectangle.

Observers
• Four observers participated in this study.
• All the observers have normal color vision.
• Trial lenses were used to correct THE dominant eye; THE other eye was patched.

Approach

Observers

Impact

Conclusions
• We were not able to obtain this effect using this rigorous psychophysical method.
• The reason that there is no filling-in effect found in the current study might be that the size of the empty filling-in area was too large. Future experiments will try reducing this area.
• If successful, these future studies will allow us to quantitatively characterize the filling-in process for S-cone isolating stimuli.