

Does Attention Alter Appearance?

- Carrasco, Ling, and Read (2004) used an innovative orientation judgement task that let them infer relative contrast.
- They used shifts in the Point of Subjective Equality to conclude changes in appearance.
- This measure seems indirect. What if we just asked people how contrasted the objects were?
- Comparison tasks raise the issue of response bias.
- If we used only single target tasks we would be able to tell “mistakes” from contrast shifts.

Procedures

- Participants used right hand for making right sided judgements and vice versa.
- Different experiments had participants select the stimulus that was either more contrasted or more rightward tilted.
- For two stimuli experiments the “standard” was of 0.22 contrast and tilted 15° to the right.
- For one stimuli experiments the “more contrasted side” was implicit.
- Timing was: Fixspot 500 ms; Cue on 71 ms; Cue off 59 ms; Stimuli on 47 ms; Trial continues til response.

Contrast Comparisons Do Change with Exogenous Cues

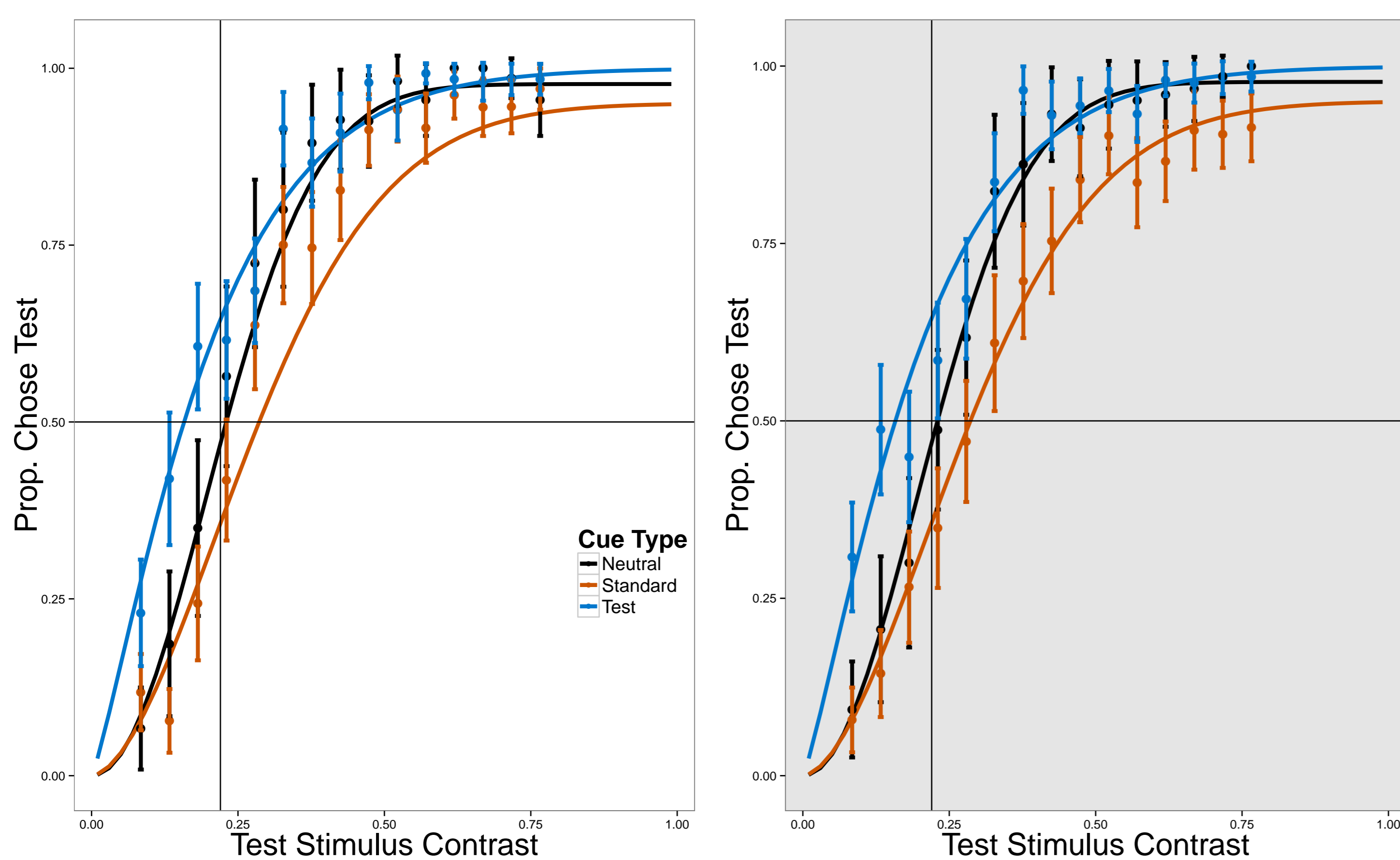


Figure: Two Experiments Showing Exogenous Cues Affect Contrast Comparisons.

False Localizations Depend on What You Are Looking For And Are Biased By Cues

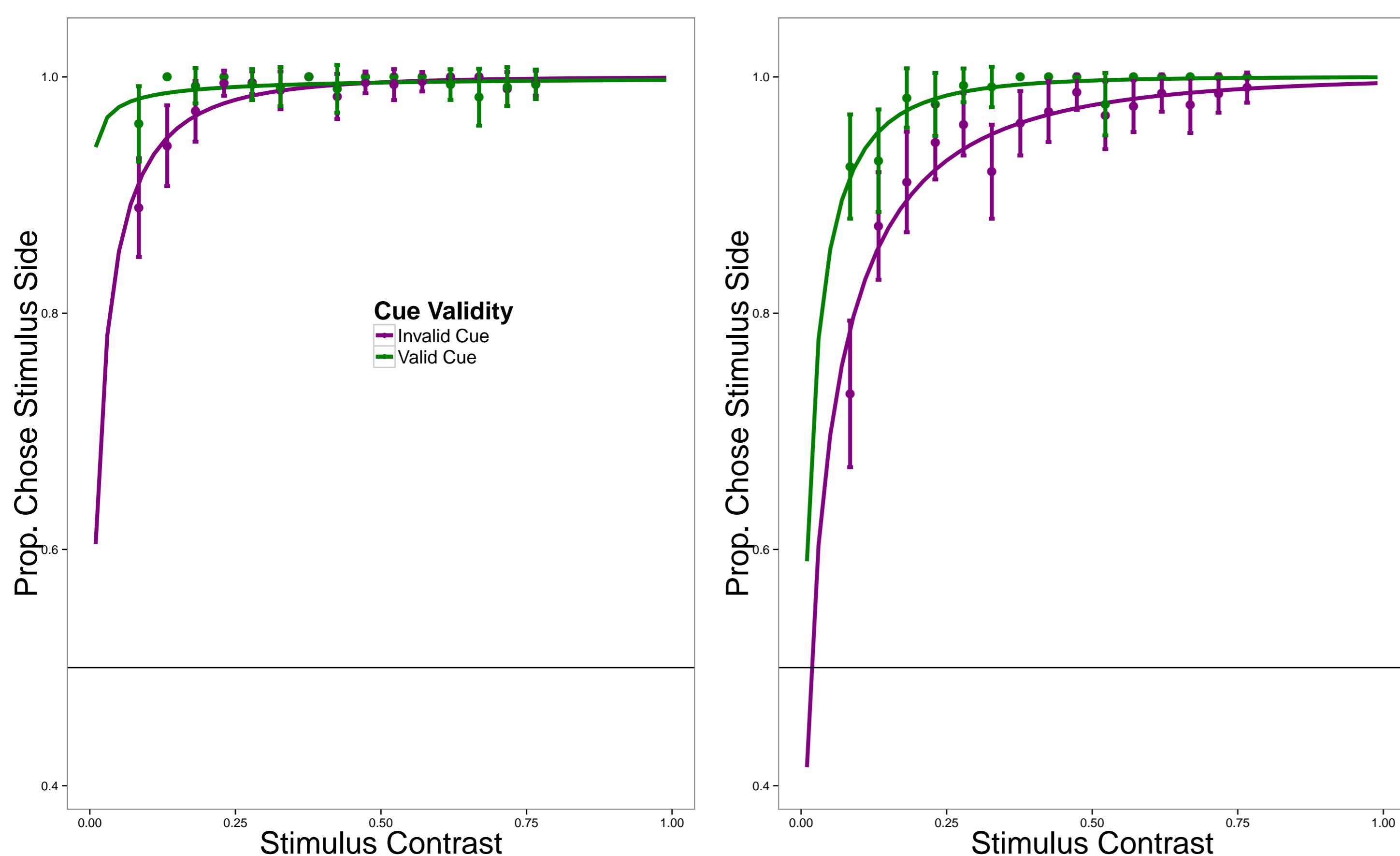
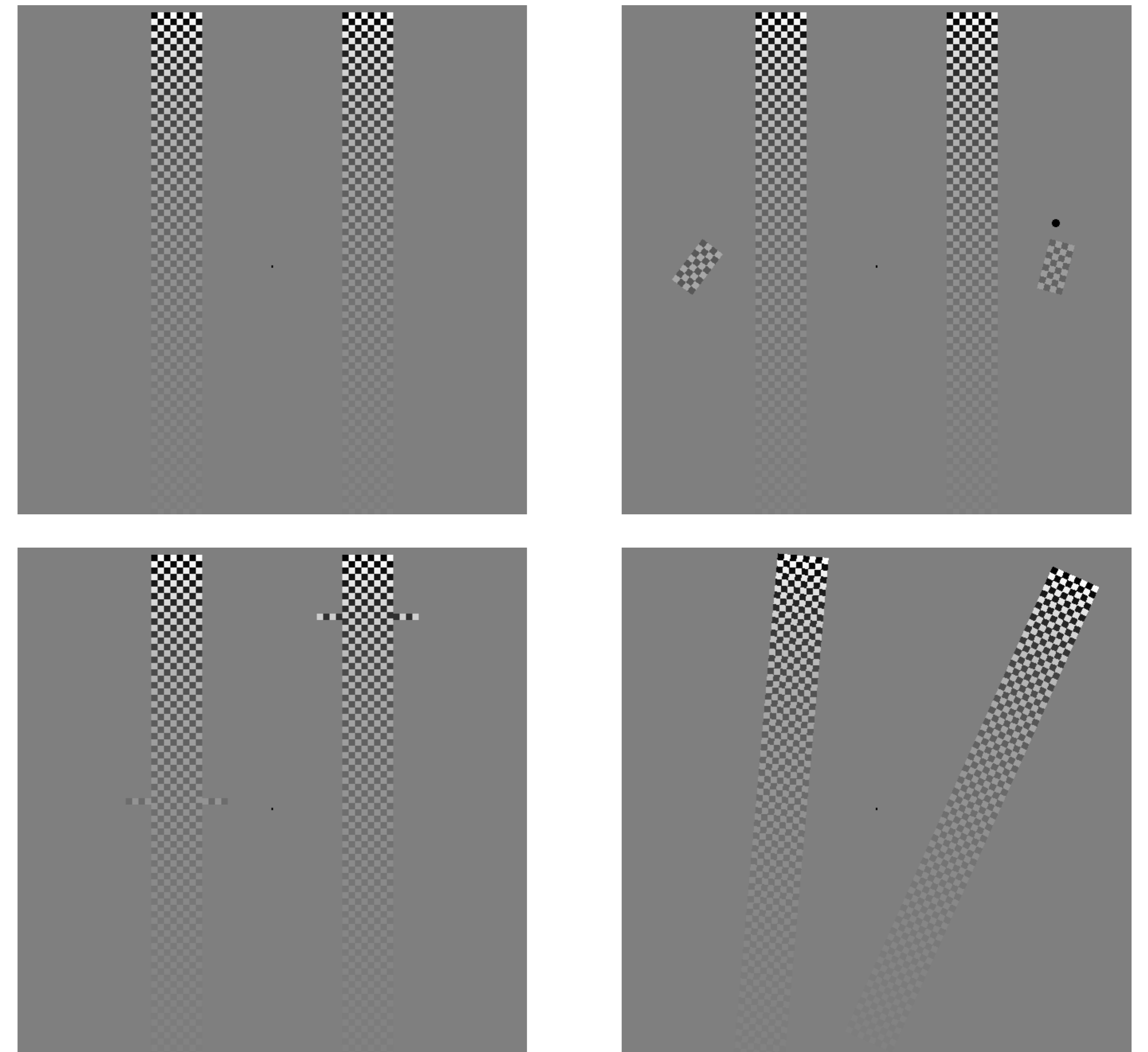


Figure: Single Target Experiments

General methods



Contrast Reports Do Not Change With Exogenous Cues

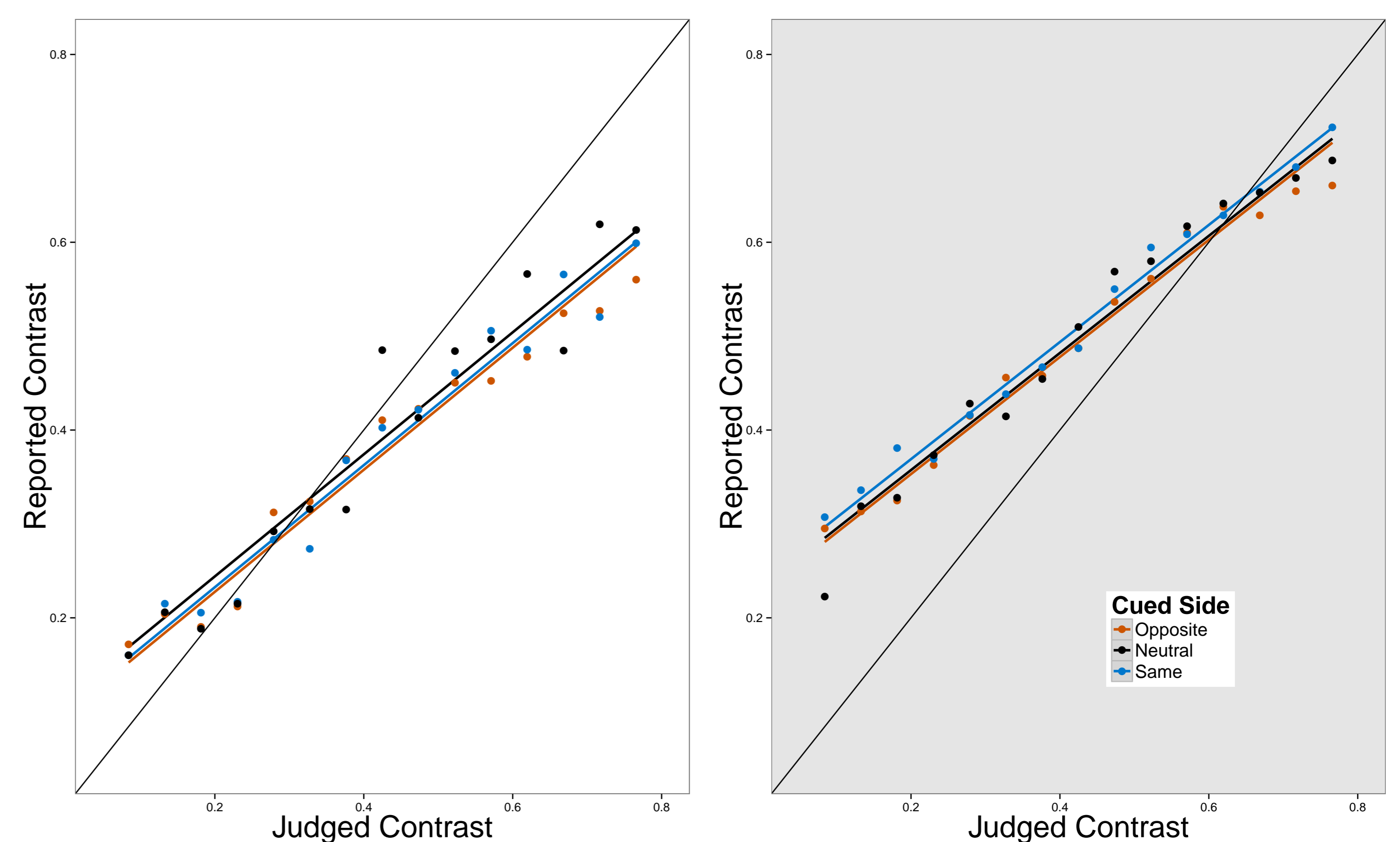


Figure: Contrast Matching Performance As a Function of Cued Side

Conclusions

- Cues do bias responses, and this bias is affected by task instructions.
- Comparison/Detection metrics show that exogenous cues increase perceived contrast.
- Discrimination tasks show that exogenous cues do not increase perceived contrast.
- The paradox can be resolved if we abandon our belief that objects have unitary static representations.
- Objects have appearances. Their perceptual character will depend on the nature of the task used for assessment.