

Manipulating the strength of the gaze cue effect through recognition of self



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Introduction

Gaze cueing may involve a process of *mentalization*¹, whereby a person's gaze is imitated by placing oneself into their perspective and interpreting their goals and motives.

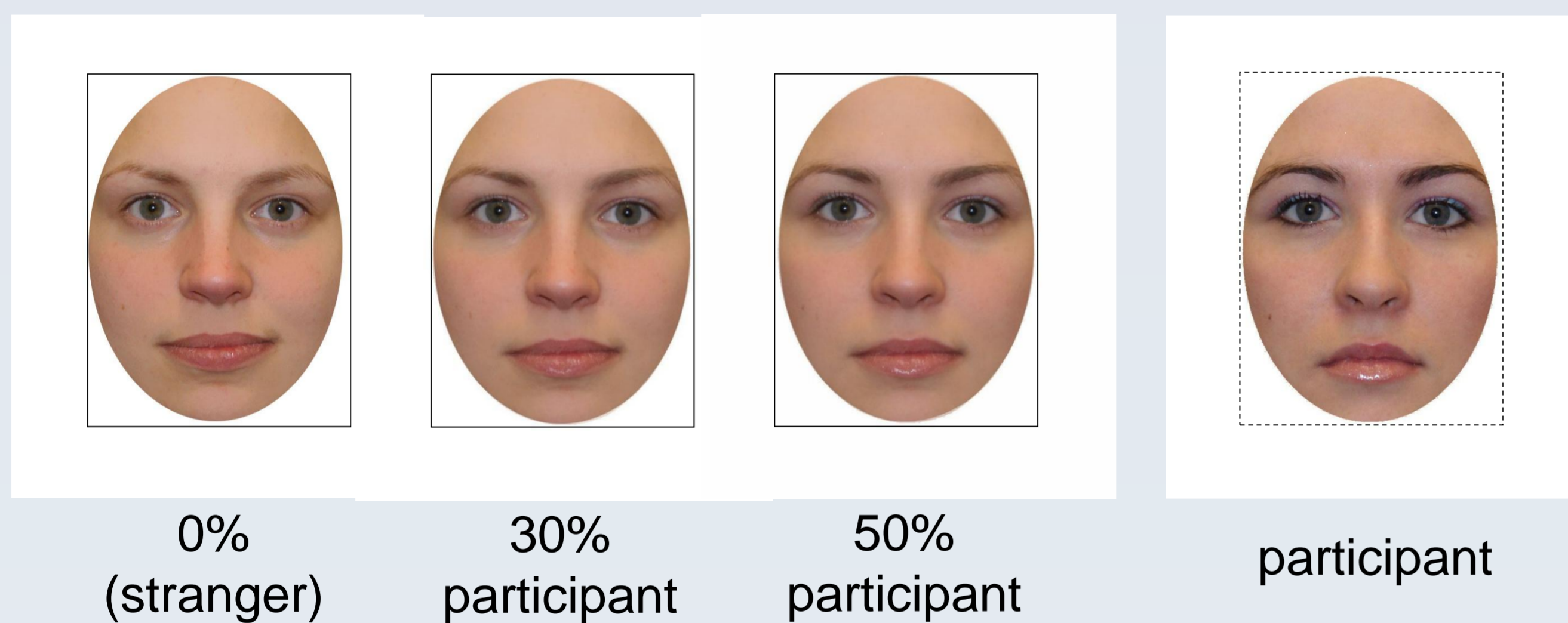
There is evidence that neural systems related to thinking of the self and of others are triggered simultaneously during mentalization, but only when the other person is perceived as similar to one's self². This study examines whether looking at a face that physically resembles one's own increases the gaze cueing effect.

Hypothesis

Manual and saccadic gaze cueing effects will be larger when the cueing face physically resembles the participant's own face.

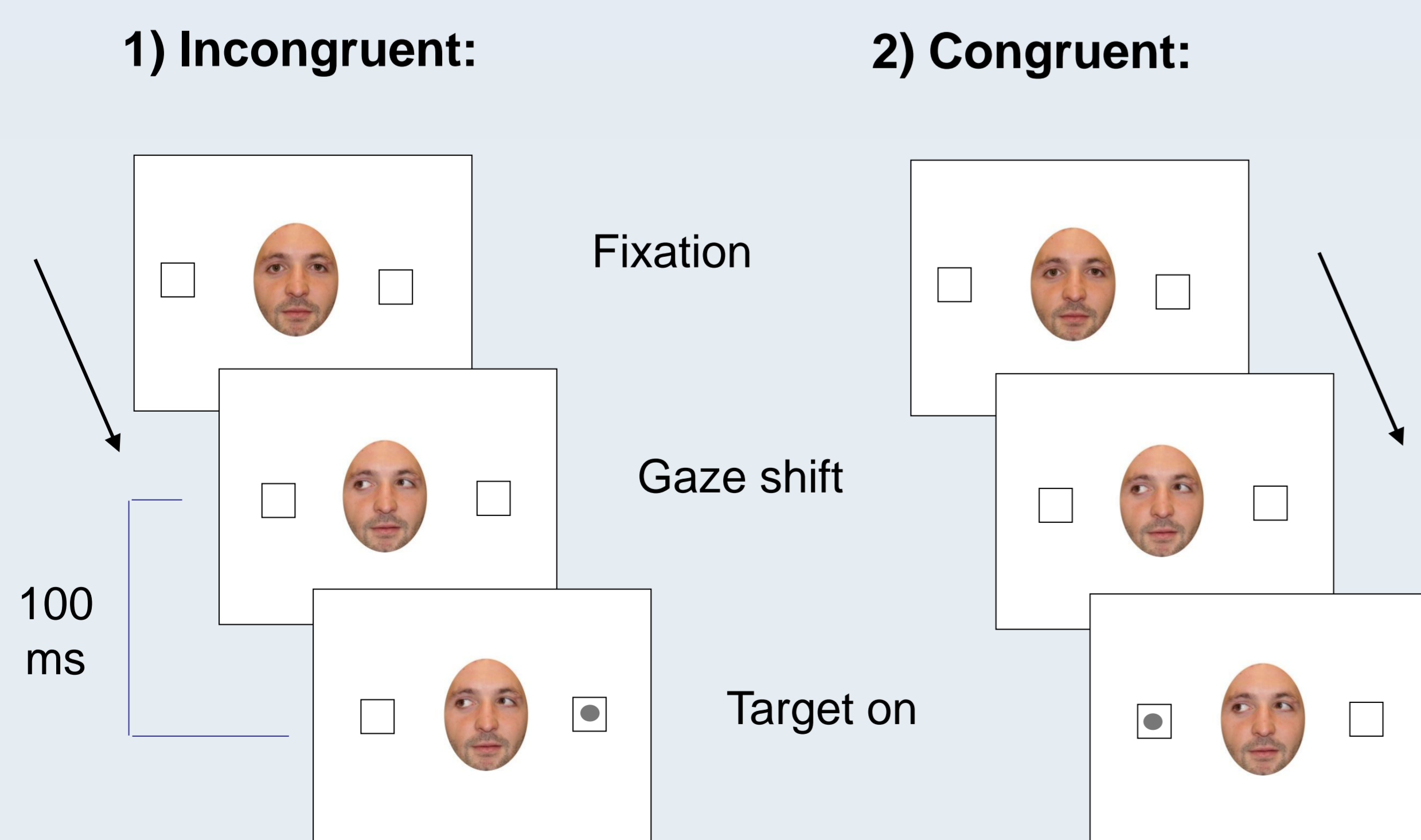
Methods

Example of morphed cueing faces:



- 30 different faces total (10 strangers x 3 morph percents)

Example of trial conditions:

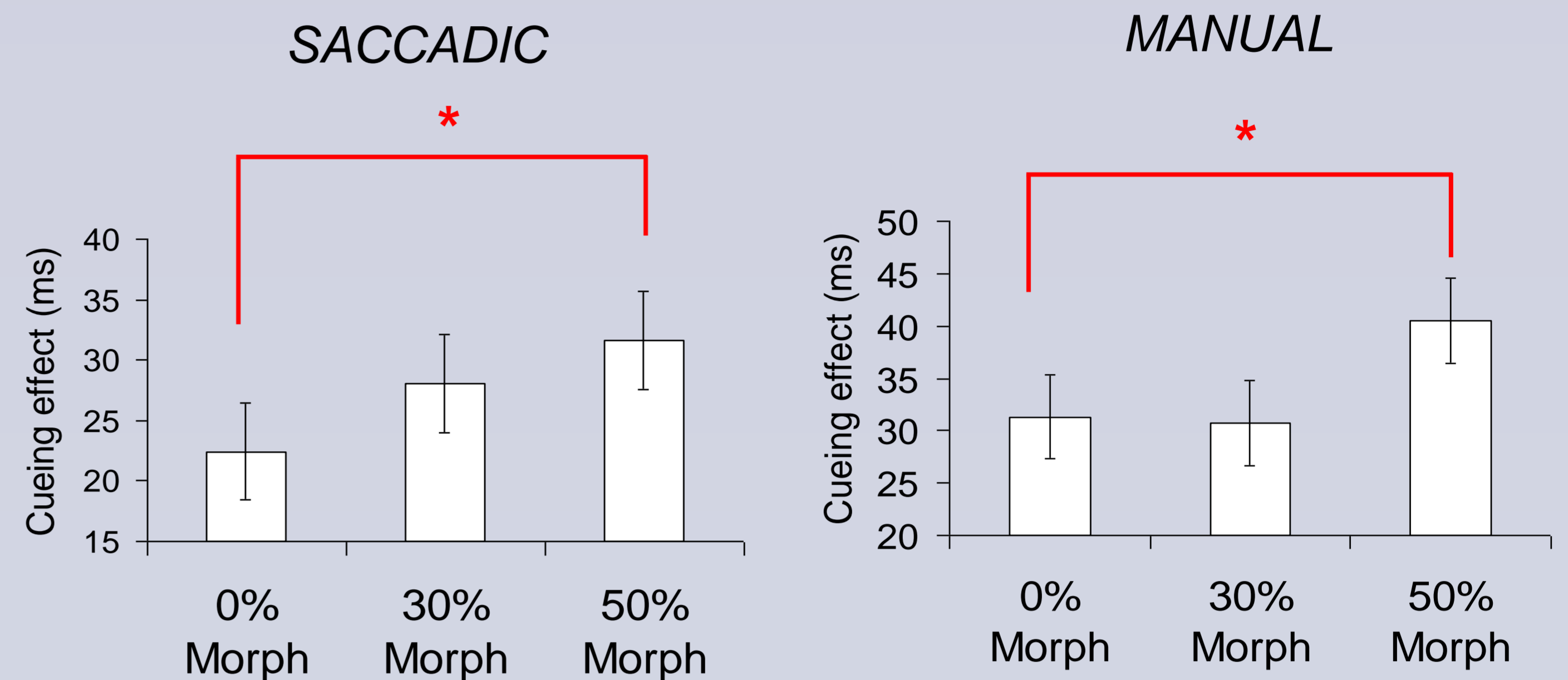


Detect target location via

** L/R button press OR **
L/R eye movement

Results

Cueing Effect (Incongruent – Congruent RT):



- 1) Congruent > Incongruent [$F(1, 11) = 145.8, p < .001$] (CUEING)
- 2) 50% Cueing Effect > 0% [$t(11) = 4.03, p < .001$] (*)

Were responses accurate?



Was the self recognized?



Conclusion

Results support the hypothesis, with stronger gaze cueing observed in response to physically self-resembling faces. Faces that resemble the self seem to increase the degree to which gaze direction is processed and used to allocate attention. Future work will examine the impact of personality similarity to gaze cueing strength.

References

- 1 Keysers & Gazzola, *Trends in Cogn Sci*, 11, 194-196 (2007)
- 2 Turk et al., *Nat Neurosci*, 5, 841-842 (2002)

Acknowledgments

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