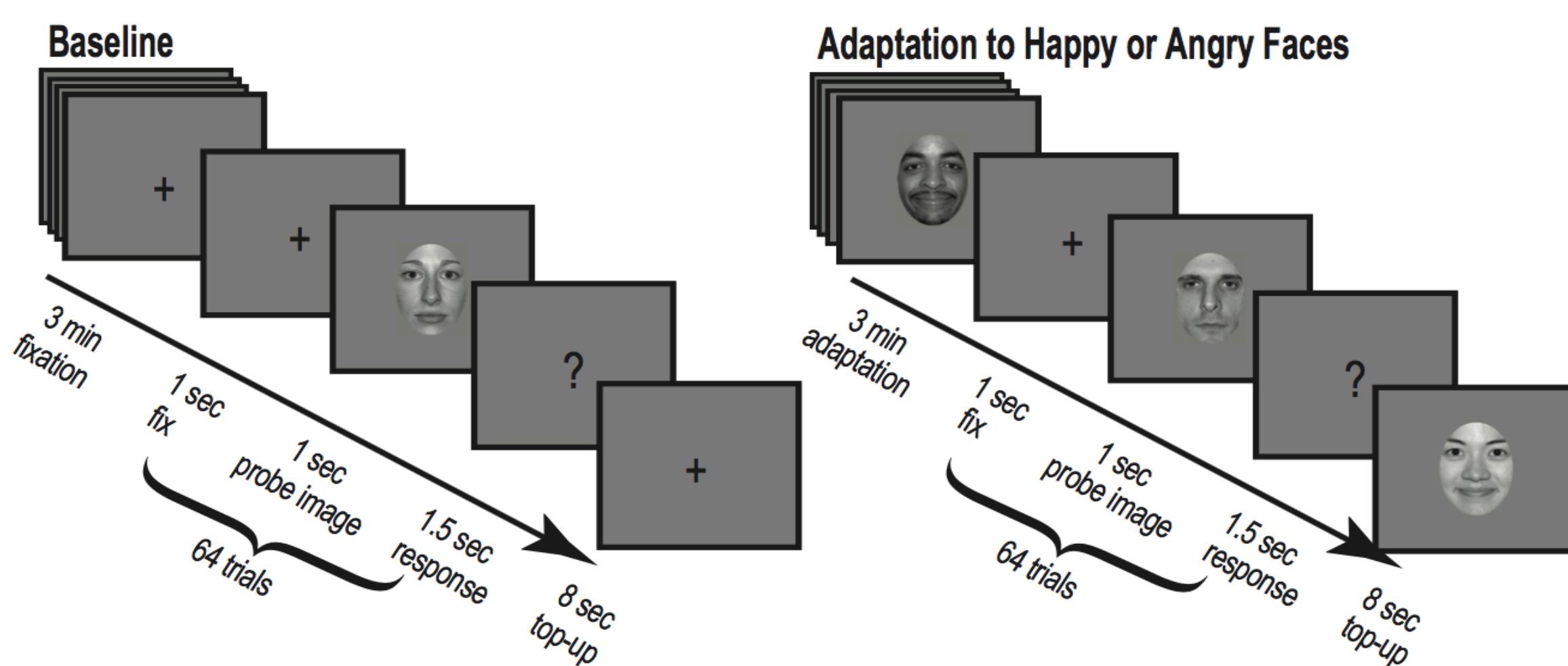


INTRODUCTION

Our ability to interpret other's emotional state is critical for social interaction. However, how do other factors, such as one's own race and the race of the face being observed, affect perception of emotional state? We hypothesized that participants would judge faces of their same race as less threatening than faces of a different race² and would show greater adaptation to same-race compared to different-race faces, given that adaptation is weaker for threatening information¹.

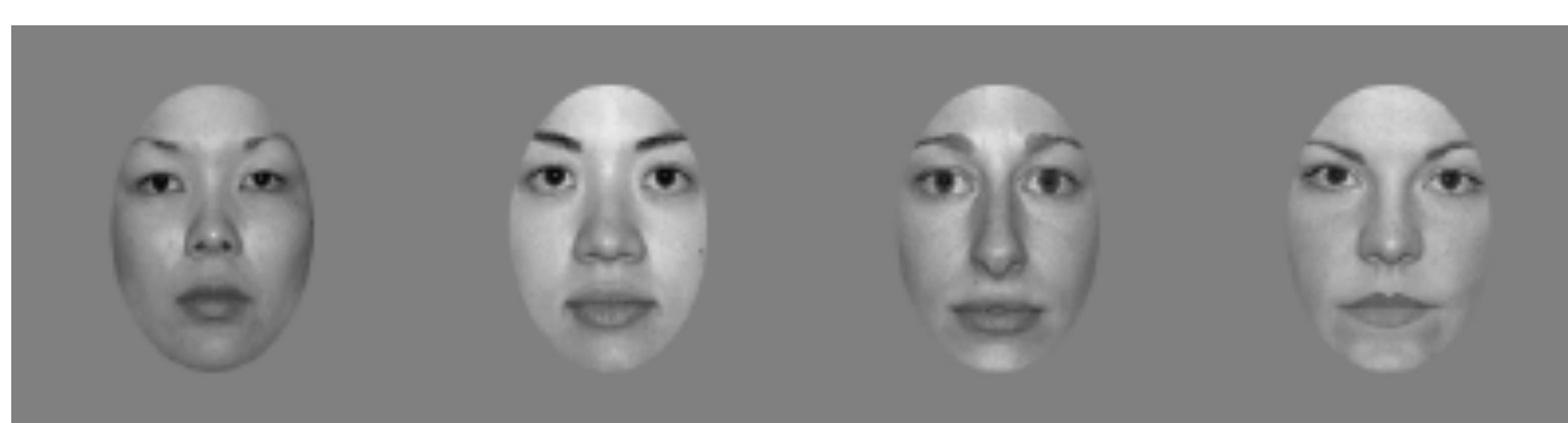
METHODS:FACE ADAPTATION

EXPERIMENTAL PARADIGM: In a two alternative forced choice task, participants judged a series of faces as happy or angry before and after adaptation to happy or angry emotional information. We quantified how often neutral faces were judged happy for same-race (Asian or White) compared to different-race faces (White and Asian) in Asian and White participants respectively: Post-Pre Adapt biases to happy angry emotions.



STIMULI

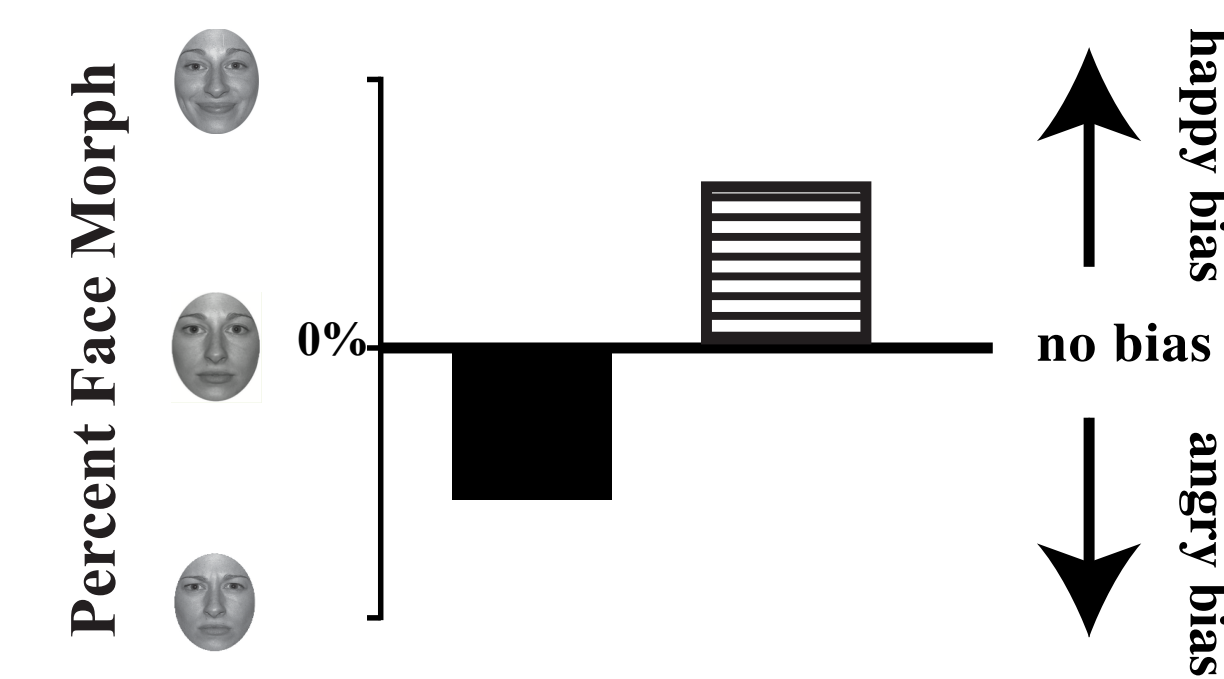
Visual Stimuli: Faces were selected from the NimStim database. Adaptation included 30 unique faces (15 male, 15 female). Probe images included a subset of 8 unique faces, including 2 White & 2 Asian female faces.



Auditory Stimuli: Sounds were presented with visual stimuli during adaptation and had the same (congruent) or opposite (incongruent) emotional valence. Sounds included 30 (15 positive, 15 negative) unique non-linguistic sounds of crowds.

THEORETICAL PREDICTIONS

Opposite After-Effect

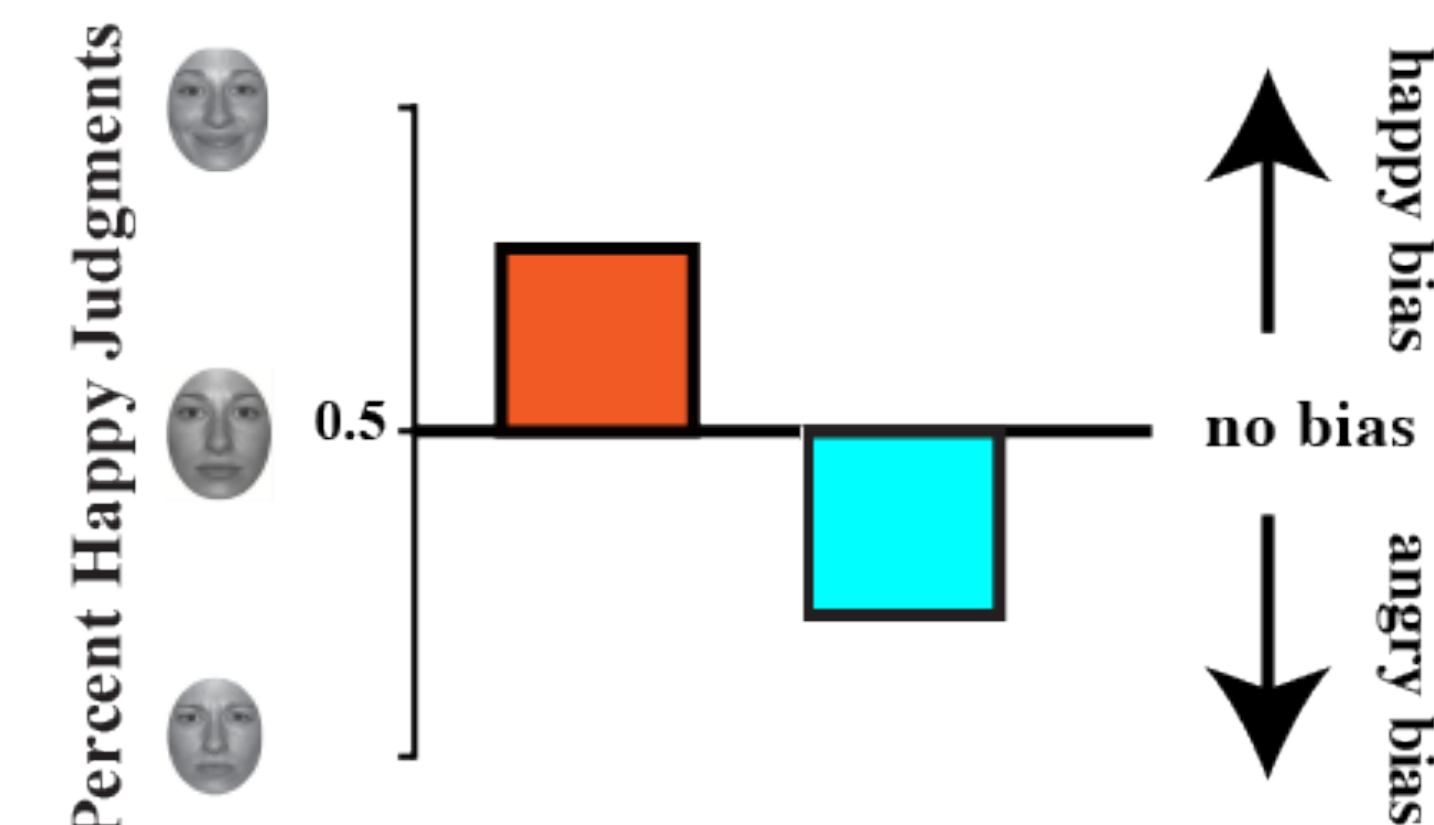


■ adapt happy
▨ adapt angry

We expected adaptation to a given emotion would bias judgments of neutral faces toward the opposite emotion⁴.

How does race bias our perception of faces?

Baseline Prediction

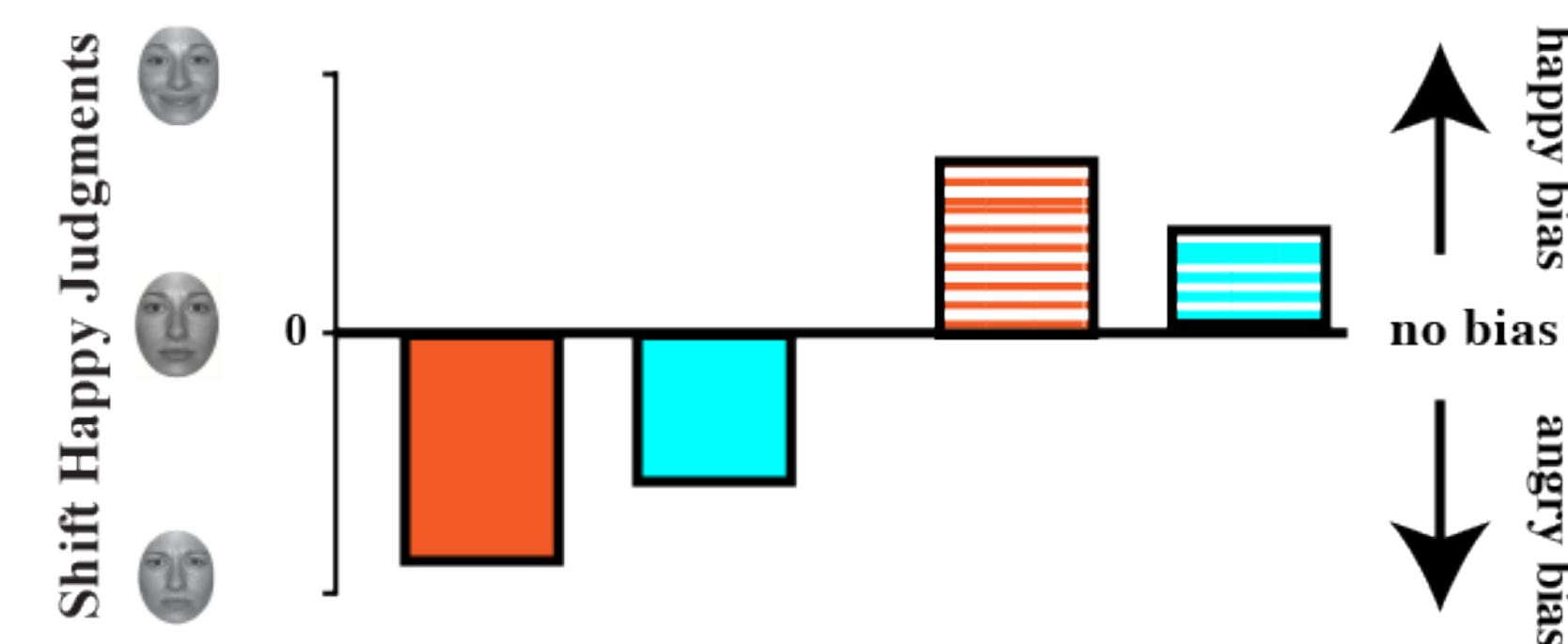


■ same-race
■ different-race

We expected faces of the same race as the participant to be judged less threatening (more happy) than faces of a different race.

How does race affect adaptation?

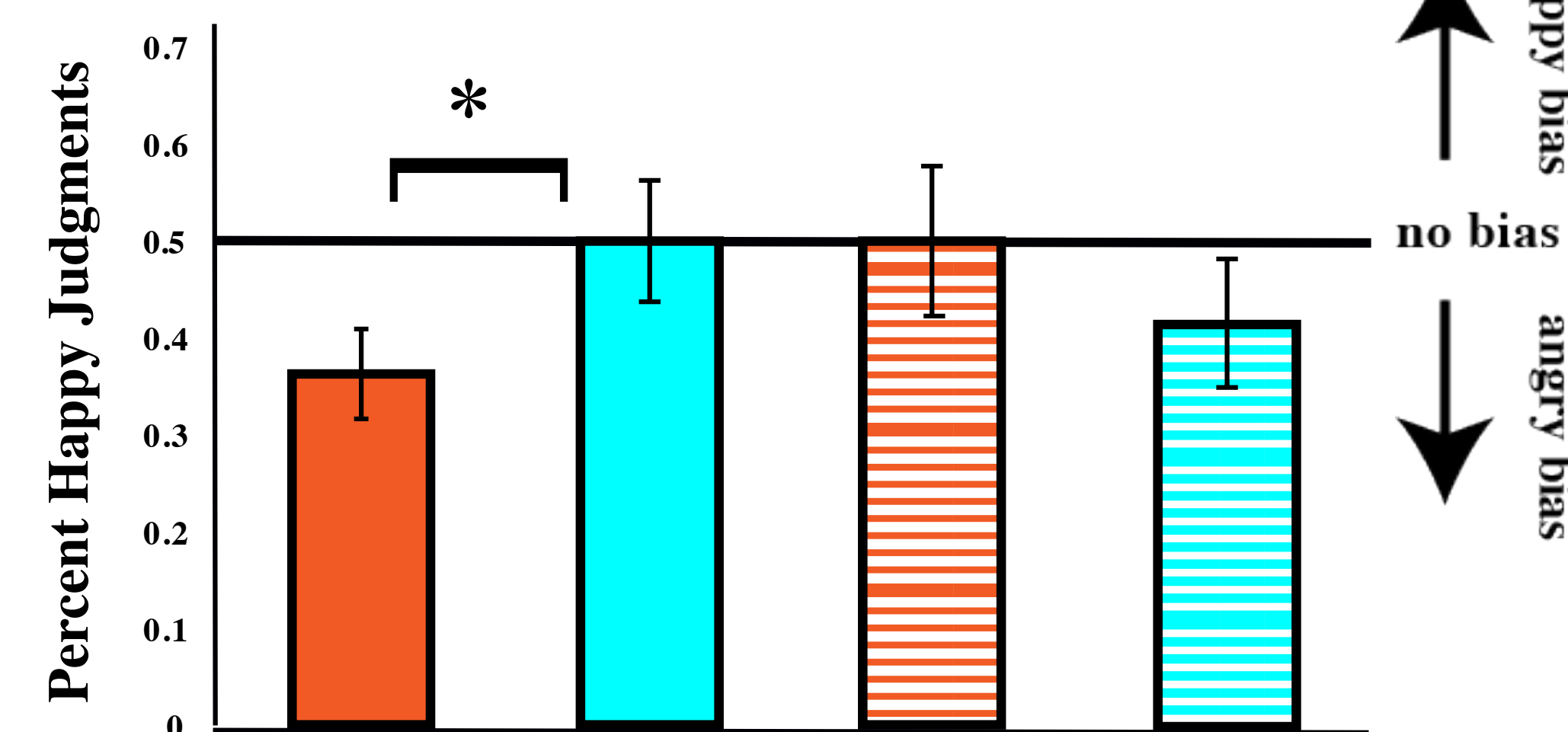
Adaptation Predictions



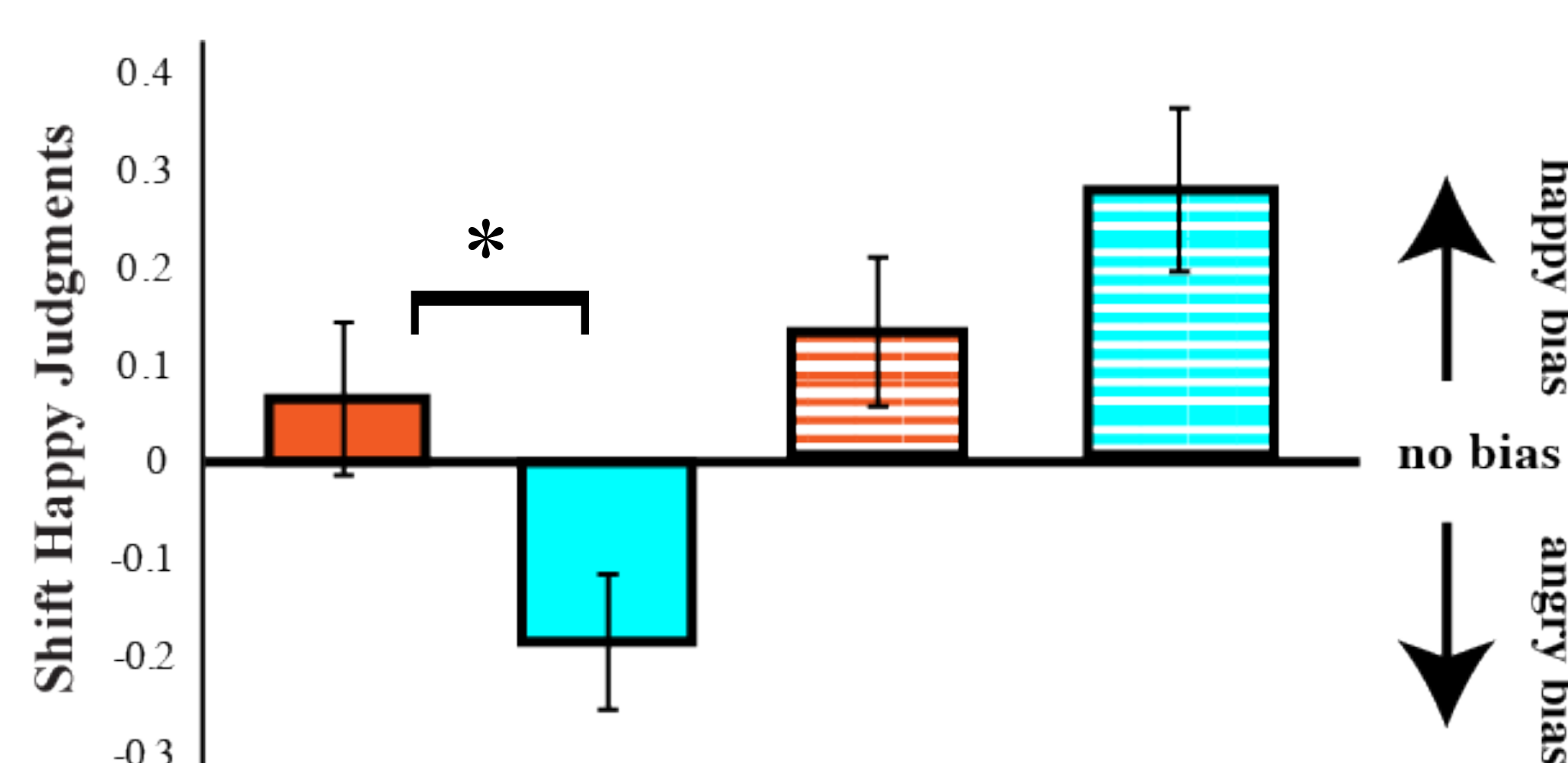
We expected greater adaptation to same-race than different-race faces.

RESULTS

Judgements at Baseline (Pre-Adapt)



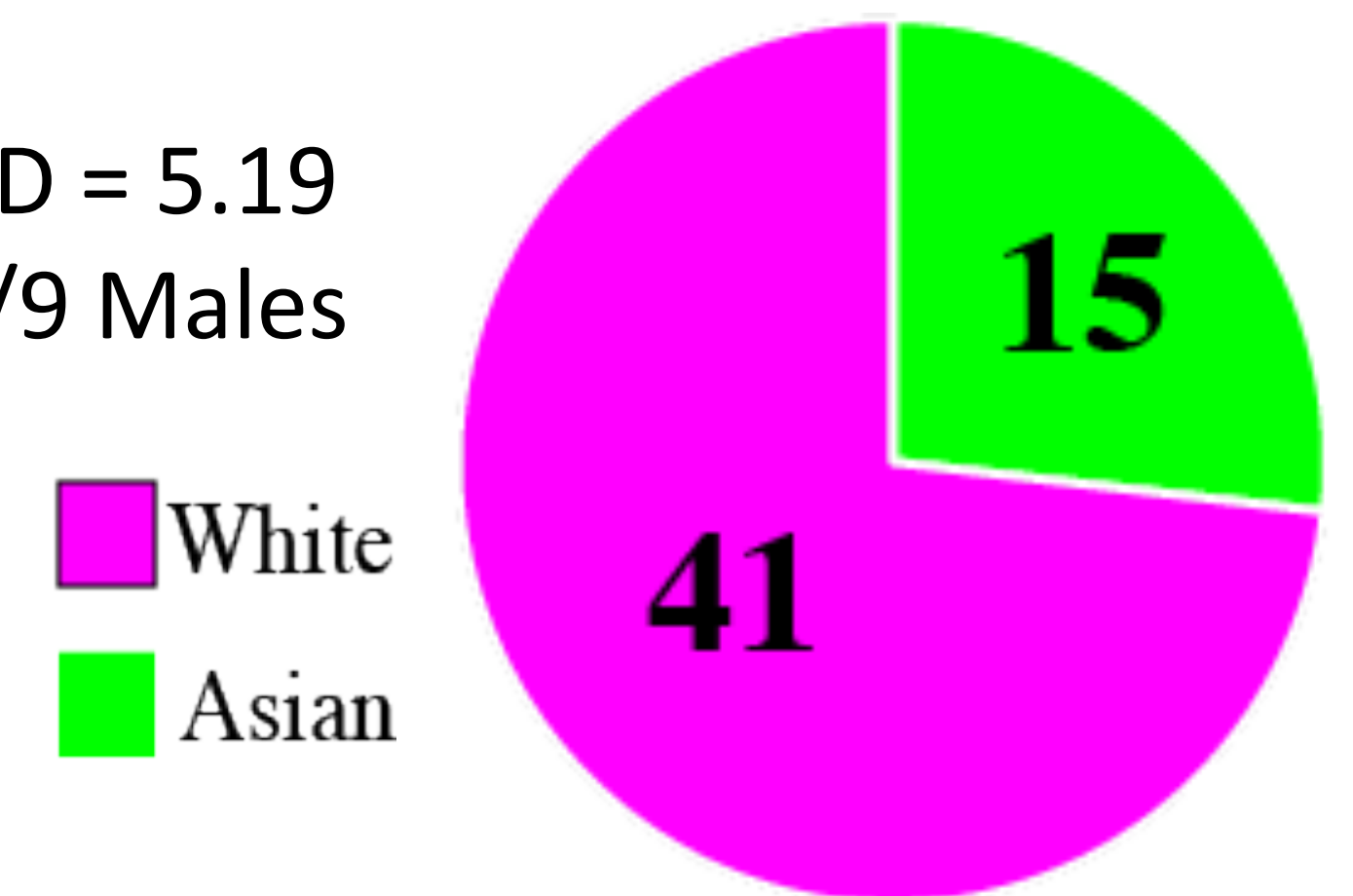
Judgements Post-Adapt – Pre-Adapt



PARTICIPANTS

Participants were recruited from the UMASS Boston community. All participants provided informed consent.

Age: mean = 23.0; SD = 5.19
Gender: 47 Females/9 Males



CONCLUSIONS

BASELINE

We found that for adapt happy, same-race faces were judged less happy than different-race faces. There were no significant differences for adapt angry participants.

POST-ADAPT – PRE-ADAPT

Happy Adaptation:

Contrary to our prediction, we found greater adaptation effects to faces of a different race than those of the same race. We found a greater angry bias for judgments of different-race faces compared to the no bias seen for judgments of same-race faces.

Angry Adaptation:

As expected, we observed trends in adaptation in accord with the opposite aftereffect hypothesis. We also found trends for greater adaptation for different-race compared to same-race faces.

References

- Gerlicher, A. M., Loon, A. M., Scholte, H. S., Lamme, V. A., & Leij, A. R. (2013). Emotional facial expressions reduce neural adaptation to face identity. *Social Cognitive and Affective Neuroscience*, 9(5), 610-614.
- Hutchings PB, Haddock G (2008) Look Black in anger: The role of implicit prejudice in the categorization and perceived emotional intensity of racially ambiguous faces. *Journal of Experimental and Social Psychology* 44: 1418–1420.
- Mather, G., Pavan, A., Campana, G., & Casco, C. (2008). The motion aftereffect reloaded. *Trends in Cognitive Sciences*, 12(12), 481-487.
- Juricevic, I., and Webster, M. A. (2012). Selectivity of face aftereffects for expressions and anti-expressions. *Frontiers in Psychology* 3:4.