

Investigating the effects of social anxiety on the perception of negative emotions in faces

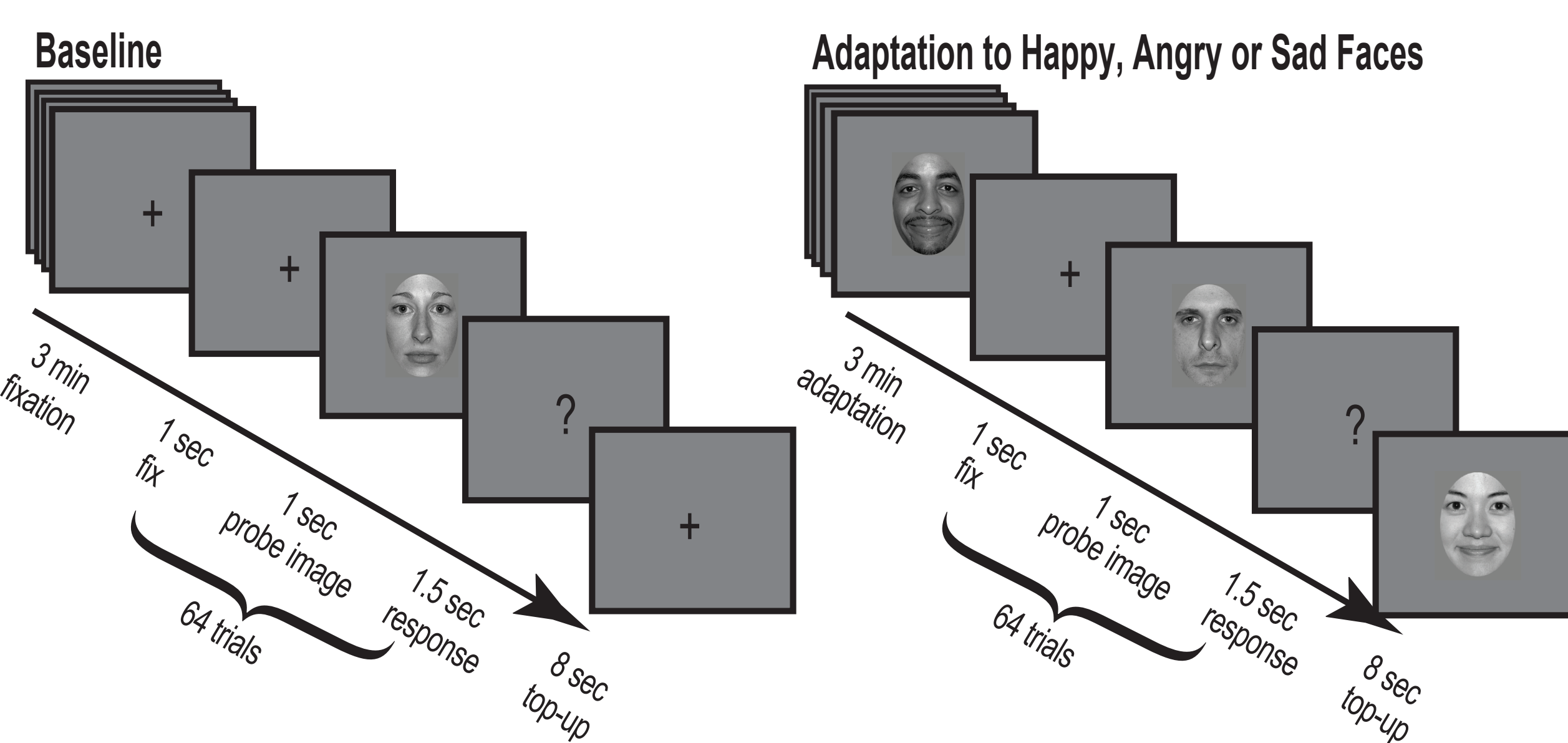
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INTRODUCTION

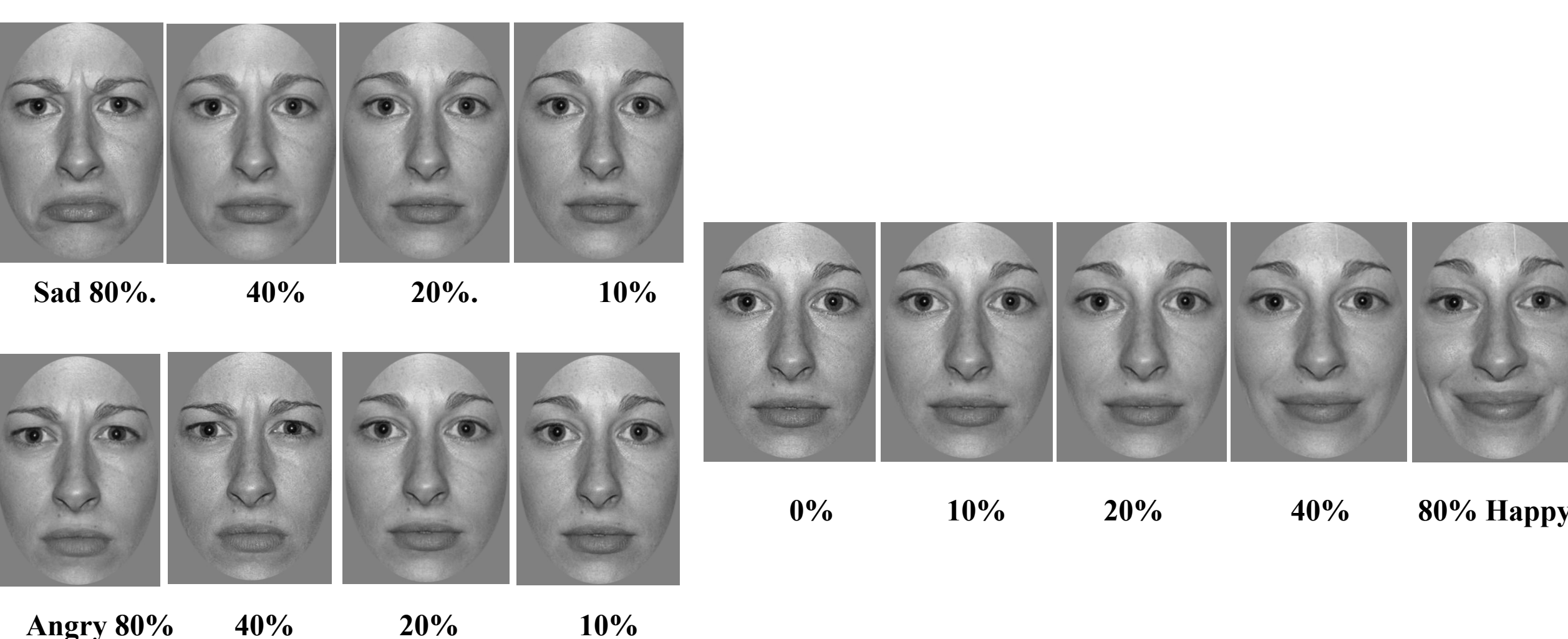
Accurately interpreting emotions is crucial for social interaction. However, biases in perceiving emotional information may vary as a function of social anxiety status. Social anxiety is characterized by fear of negative evaluation (American Psychiatric Association, 1994). Evidence suggests individuals high in social anxiety have negative biases in perceiving and interpreting the emotional information conveyed by faces (Mohlman et al., 2007) and are more attentive to angry faces and process them more quickly (Horley et al., 2004; Joorman & Gotlib, 2006). In the current study we compared perceptual biases to two different negative emotions, angry and sad relative to happy. We expected the strength of adaptation to negative emotional information to be greater for sad compared to angry faces. Participants viewed faces morphed along the angry/happy continuum and judged the faces as happy or angry, or faces morphed along the sad/happy continuum, and judged the faces as happy or sad.

METHODS



Stimuli & Methods

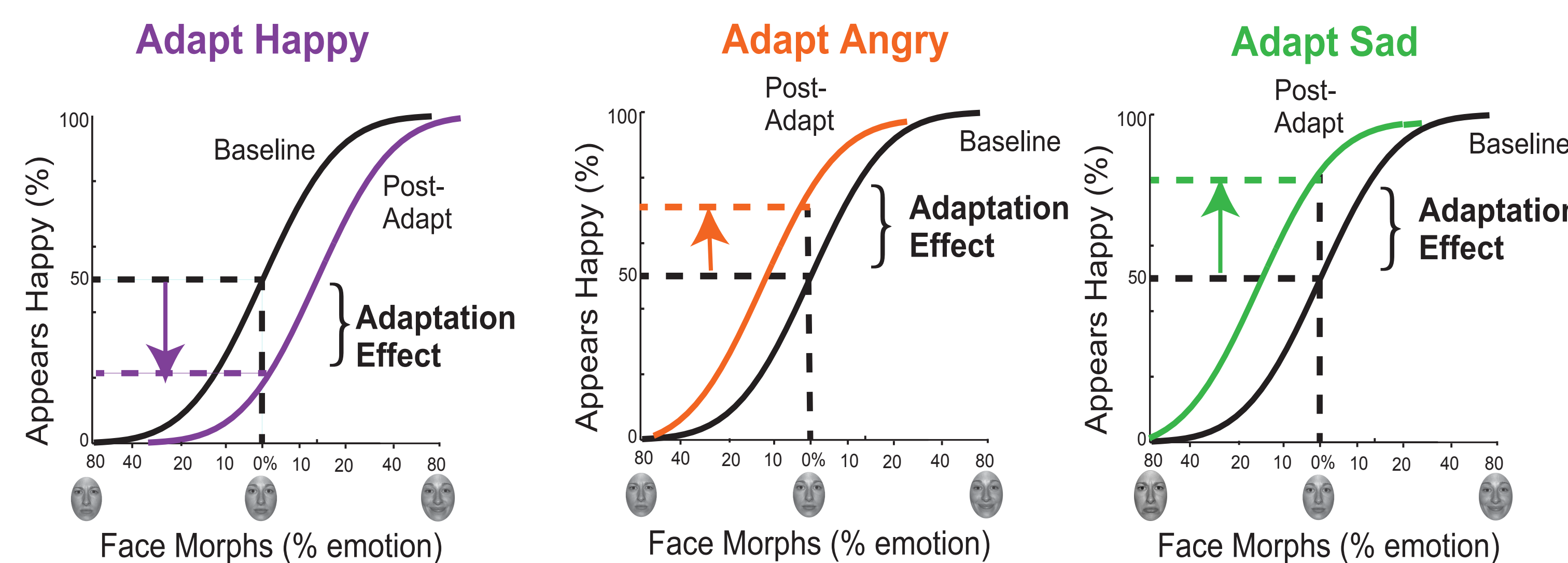
Participants viewed a series of 64 face images morphed along an emotional continuum (i.e., 80%, 40%, 20%, and 10% happy to neutral with the same morphs in the sad and angry dimension). Using a two-alternative forced choice paradigm, subjects judged each face as either happy or sad/angry. Participants were then adapted to happy, angry, or sad faces and then judged the same face morphs. The Point of Subjective Equality (PSE), the point at which an individual sees a face as neutral, equally happy and angry/sad, was quantified before adaptation and happy judgments of this same neutral face were evaluated post-adapt.



PREDICTIONS

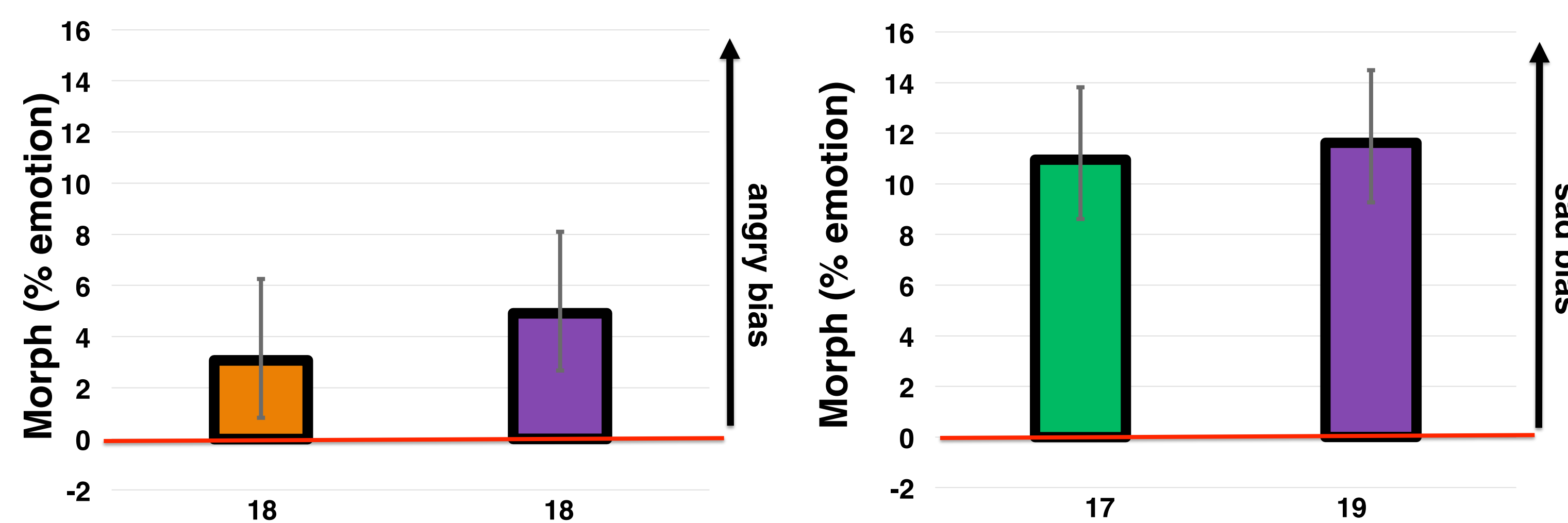
We predicted individuals high in socially anxiety would adapt less to negative emotional faces (angry/sad) than to positive emotional faces (happy).

We also expected individuals high in social anxiety to adapt less to the negative emotion of anger than the negative emotion of sadness, given the threatening and automatic nature of processing anger.

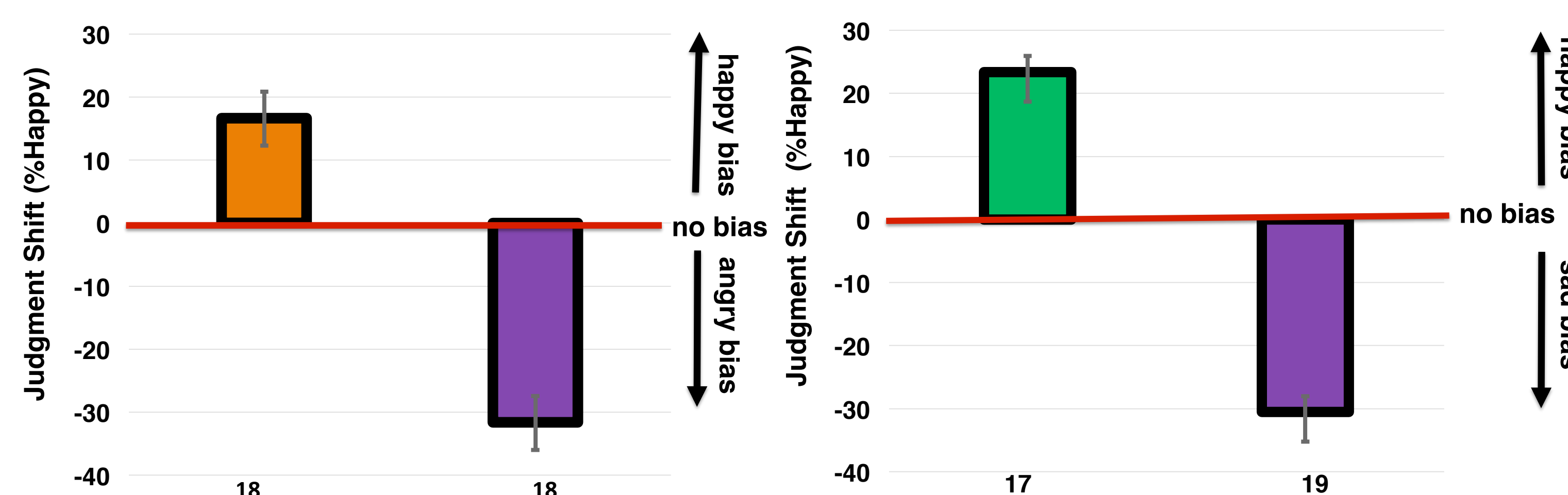


RESULTS

Baseline Biases:



Strength of Adaptation:



Participants

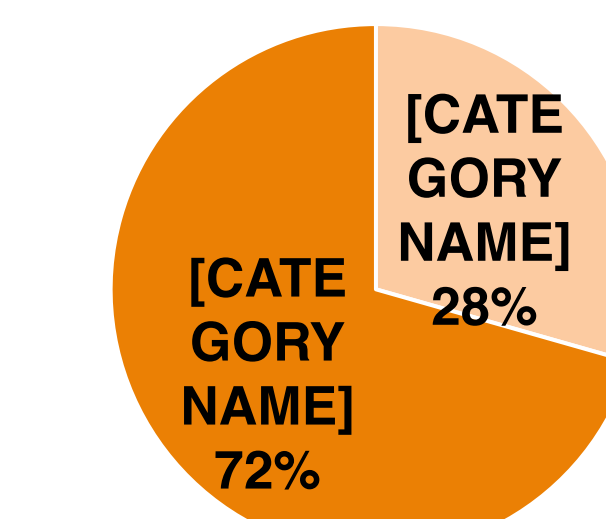
All subjects were students recruited from UMass Boston. A total of **72** socially anxious individuals participated

(mean age = 23.7 years, SD = 0.79)

To assess social anxiety status we used the Brief Fear of Negative Evaluation (BFNE) and followed up with a phone interview screening. Subjects scoring > 25 were categorized as high in social anxiety

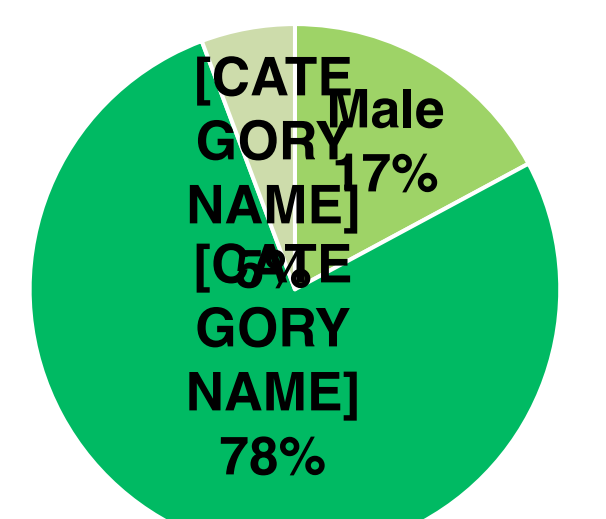
(adapt happy/sad: mean BFNE = 32.2, SD = 0.86)
(adapt happy/angry: mean BFNE = 32.5, SD = 1.92)
(adapt happy/sad: mean DASS = 6.3, SD = 0.78)
(adapt happy/angry: mean DASS = 9.2, SD = 2.58)

Adapt Happy/Angry



Male Female

Adapt Happy/Sad



Male Female Other

CONCLUSIONS

- At baseline, socially anxious participants tended to be biased in perceiving faces more negatively, more positive emotion was needed in the face morph for it to be seen as neutral at baseline.
- As expected, individuals with higher levels of social anxiety tended to adapt less overall to negative emotions (angry or sad) compared to the positive emotion, happy.
- Our sample of socially anxious individuals seemed to be especially sensitive to angry faces, tending to show weaker adaptation to this emotion compared to the other negative emotion of sadness.

References

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Horley, K., Williams, L. M., Gonsalvez, C., & Gordon, E. (2004). Face to face: Visual scanpath evidence for abnormal processing of facial expressions in social phobia. *Psychiatry Research*, 127(1), 43–53.

Joormann, J., & Gotlib, I. H. (2006). Is this happiness I see? Biases in the identification of emotional facial expressions in depression and social phobia. *Journal of Abnormal Psychology*, 115(4), 705–714

Mohlman, J., Carmin, C. N., & Price, R. B. (2007). Jumping to interpretations: Social anxiety disorder and the identification of emotional facial expressions. *Behaviour Research & Therapy*, 45(3), 591–599.

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