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Gaze-mediated Fear Transmission

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INTRODUCTION

Social fear learning

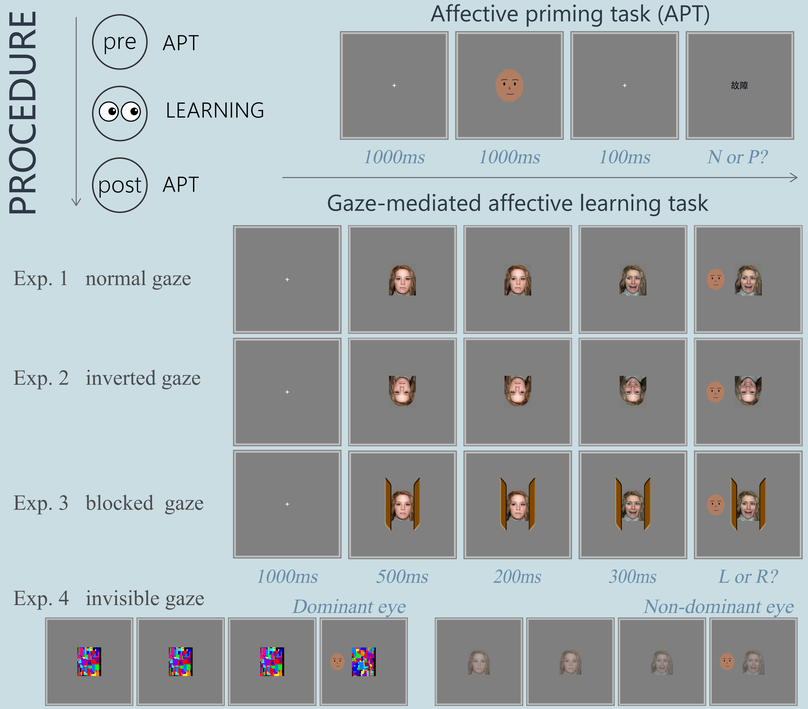
-- Fear can be learned from observing other conspecies' fearful responses (e.g., fearful expressions).
-- In this process, human sensitivity to social cues (e.g., eye gaze) is very important.
-- However, no research has yet explored the role of eye gaze during social fear learning.

Eye gaze serving as a vital social cue

-- It can induce the cueing effect (Friesen & Kingstone, 1998; Friesen et al., 2004).
-- It can also impose intentions: objects and faces gazed-at by others are rated as more desirable or affective than those gazed-away (Bayliss et al., 2006; Becchio et al., 2008; Jones et al., 2007).
-- However, it remains unclear whether eye gaze could also transfer negative properties?

Question: whether fear could be learned through the eye gaze?

PROCEDURE



METHOD

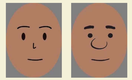
Design

A gaze-mediated affective learning task in conjunction with pre-and-post tests of the affective priming task were conducted. The former was adapted from the central cueing task, for each participant, one cartoon face (randomly selected) was fearful-associated while the other was happy-associated. The latter task was conducted with cartoon faces serving as primes to detect potential changes in the affective properties they contained indirectly.

Stimuli

Cue faces (2 females and 2 males, with neutral, happy, and fearful expressions) were used (Tottenham et al., 2009).
Target words (30 negative, 30 positive) were selected from the Chinese Affective Words System (CAWS)
CFS masks consisted of high-contrast and colored noise patterns that changed at a rate of 10Hz (Tsuchiya & Koch, 2005).

Associations



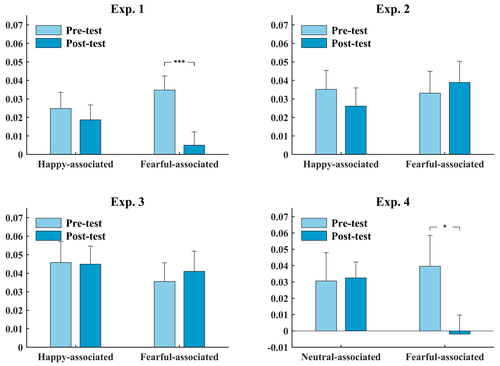
Two previously neutral cartoon faces

Fearful associated
fear gazed-at while happy gazed-away

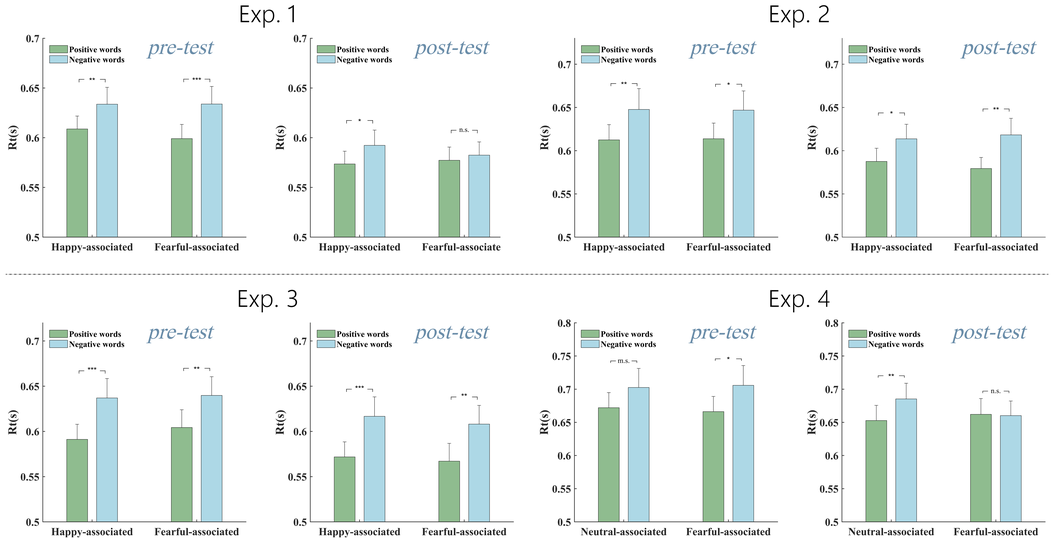
Happy associated
happy gazed-at while fear gazed-away

gaze-associated instead of paired appearance

Affective Index = RT negative – RT positive



RESULTS



CONCLUSION

-- The fear property could be conveyed through eye gaze and imposed into gazed-at cartoon faces (previously neutral)
-- This gaze-mediated fear transmission was not induced by low-level visual stimuli or the general attention effect
-- Such effects depended on the observer's perception of the intention and mentral attributes of observed others
-- The gaze-mediated fear transmission was independent of conscious awareness

The gaze-mediated fear transmission exists!

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