

Hypnotic Suggestions Provide Evidence for a Causal Role of Affect Sharing in Driving Observational Fear Learning

P266.01

Alexa Müllner-Huber¹, Lisa Anton-Boicuk¹, Ekaterina Pronizius¹, Lukas Lengersdorff¹, Andreas Olsson², Claus Lamm¹

1) Dept. Cognition, Emotion, and Methods in Psychology, Faculty of Psychology, Univ. Vienna, Austria
2) Dept. Clin. Neuroscience, Division Psychology, Karolinska Institutet, Stockholm, Sweden

INTRODUCTION

Observational fear learning: In humans and other social species, fears of and knowledge about what is dangerous and should be avoided are often learned through observing another individual (termed **demonstrator**) in a distressing situation rather than through one's own experiences.

Empathy may play a role in this type of learning, especially the **affect sharing** aspect of empathy, i.e. the ability to partially re-experience another person's feelings.

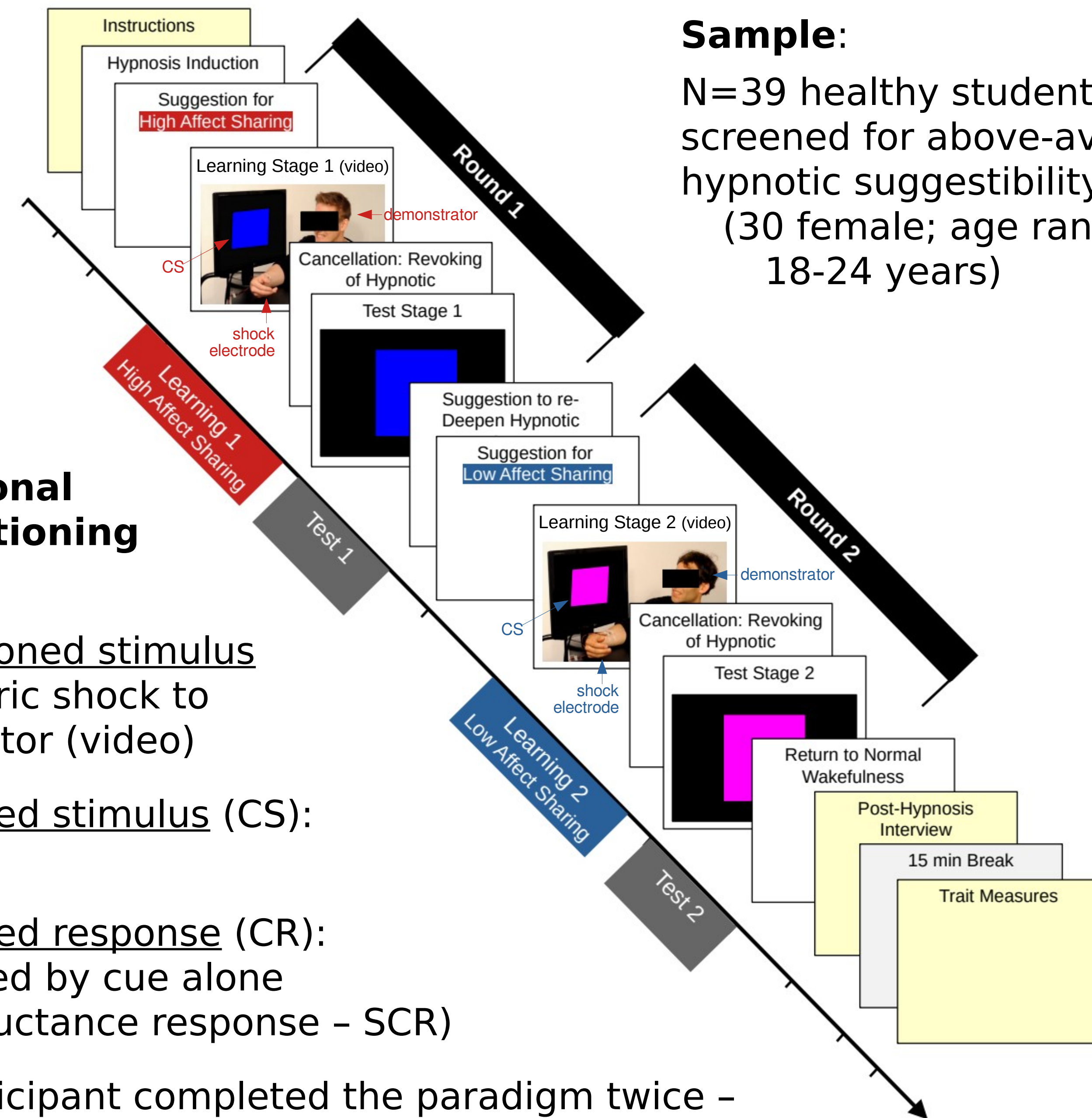
Aim of the study:

To assess the causal role of affect sharing in observational fear learning.

METHODS

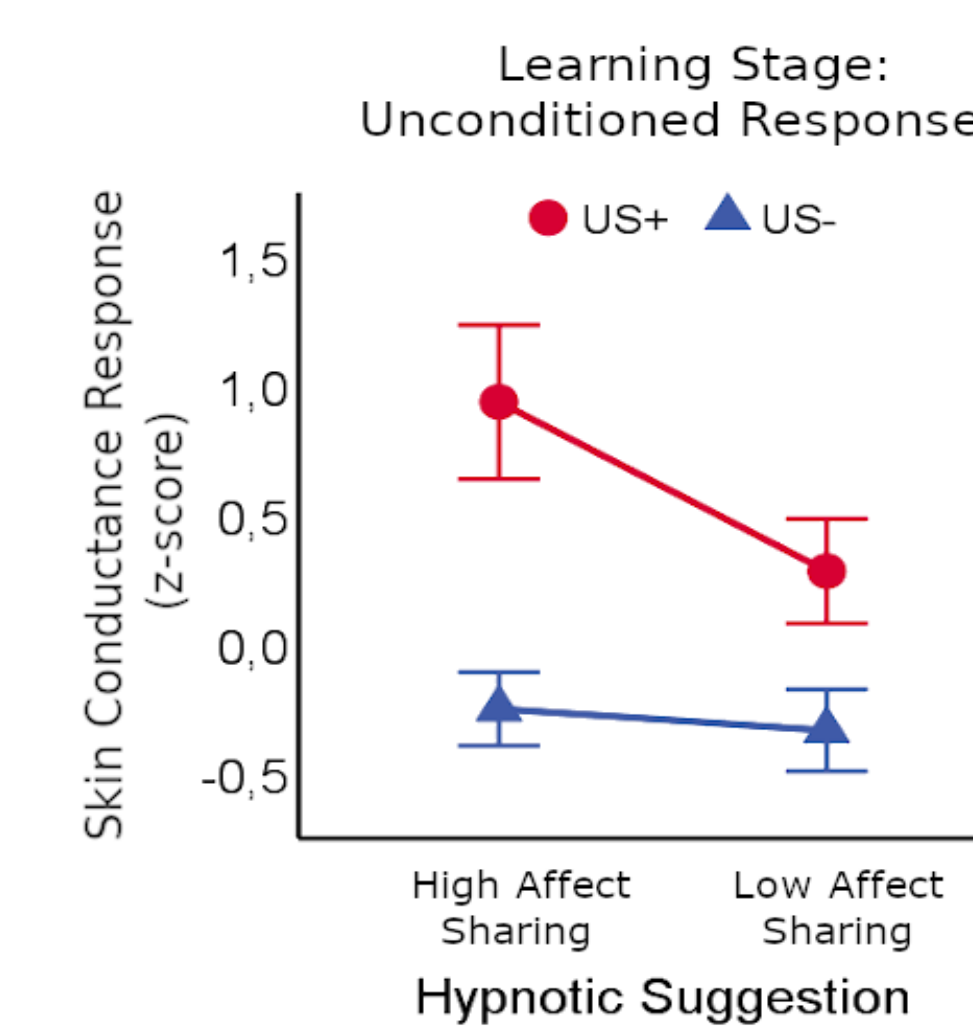
Fig. 1: Observational fear conditioning paradigm:

- **Unconditioned stimulus (US):** electric shock to demonstrator (video)
- **Conditioned stimulus (CS):** colour cue
- **Conditioned response (CR):** fear induced by cue alone (skin conductance response – SCR)
- Each participant completed the paradigm twice – under **high / low affect sharing** induced by hypnosis (order counterbalanced across participants)



Learning stage

Fig. 2: Stronger unconditioned skin conductance responses to the demonstrator's distress during high vs. low affect sharing



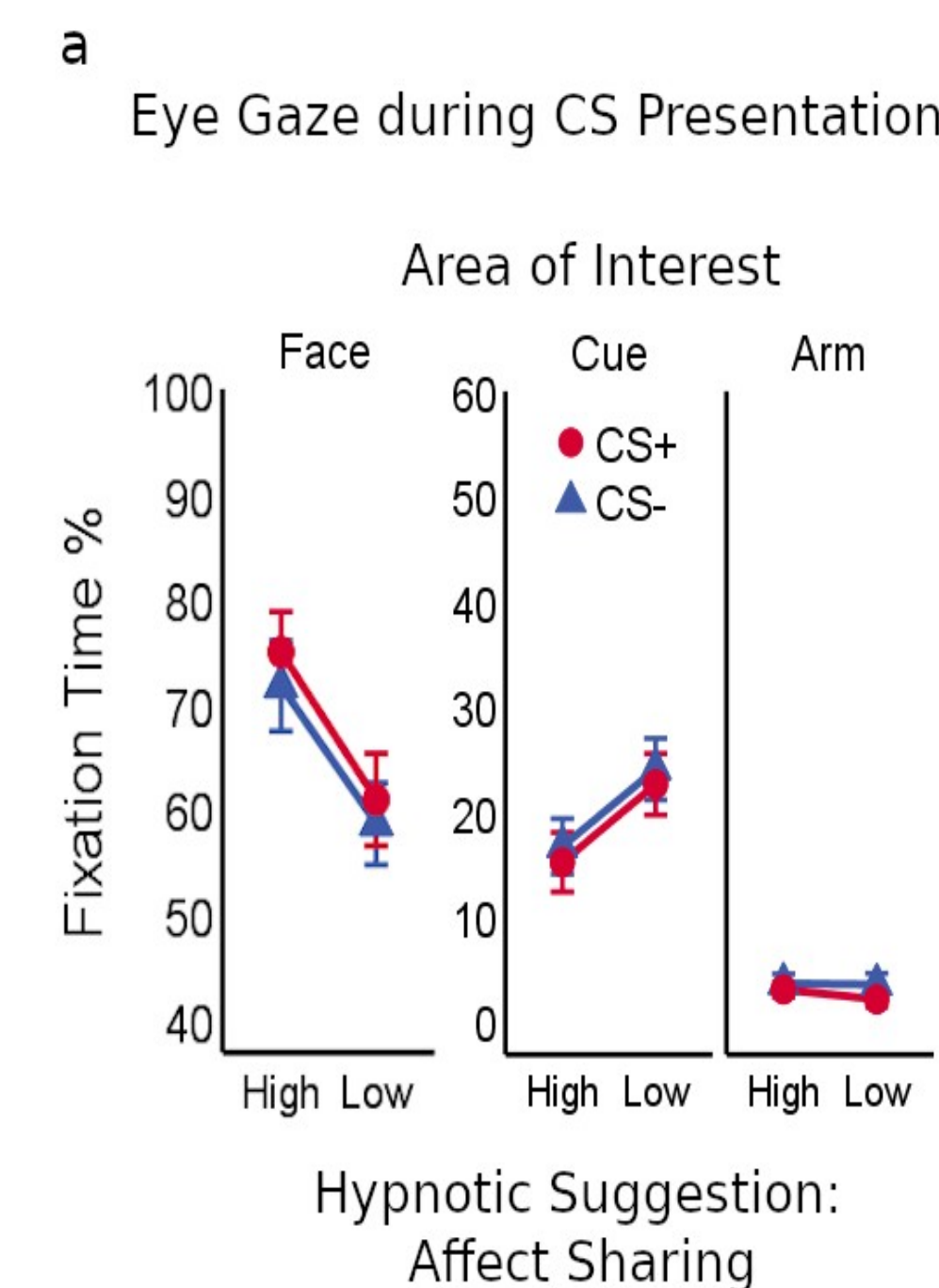
Skin conductance

Fig. 3: a) Higher selfreported unpleasantness while watching the demonstrator's distress during high affect sharing b) No effect on CS-US contingency memory



Self-report

Fig. 4: Increased eye gaze toward the demonstrator's face during high vs. low affect sharing



Eye gaze

RESULTS

Test stage

Fig. 5: Stronger conditioned fear response (SCR) under high vs. low affect sharing

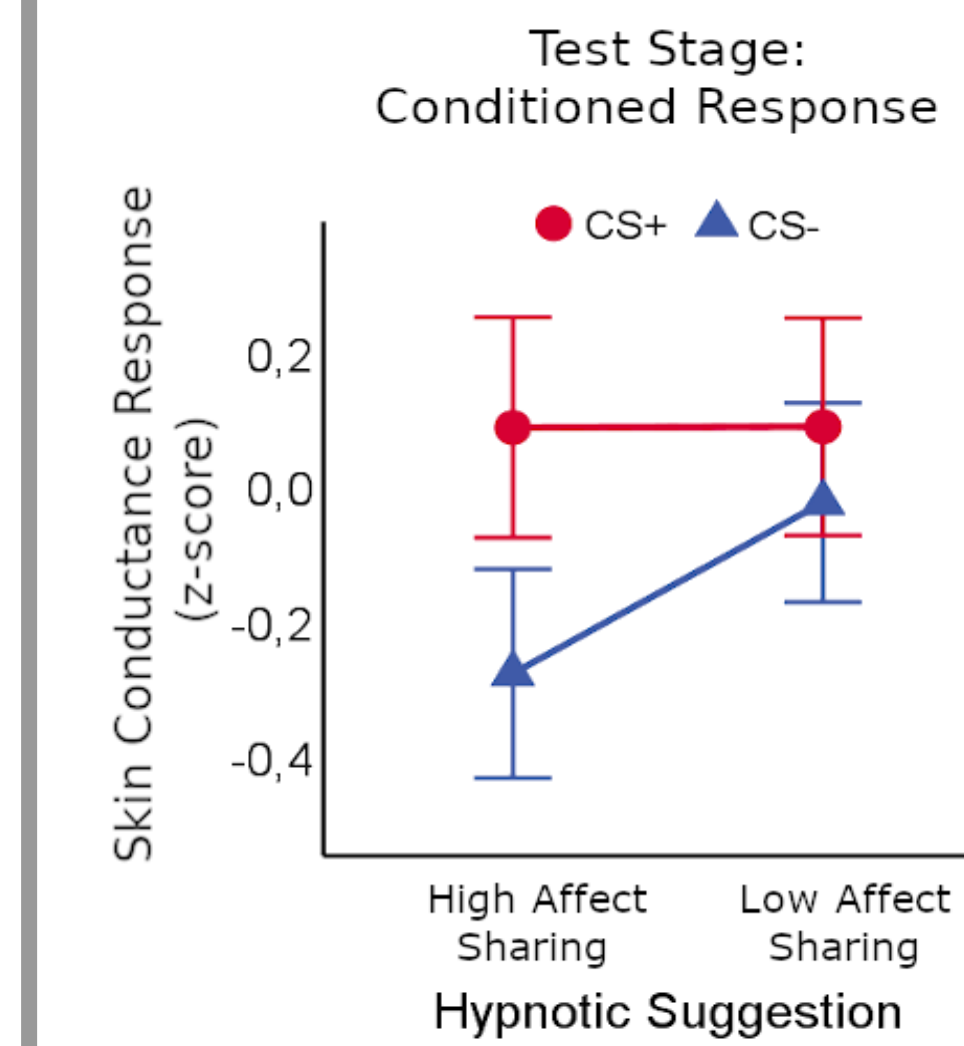
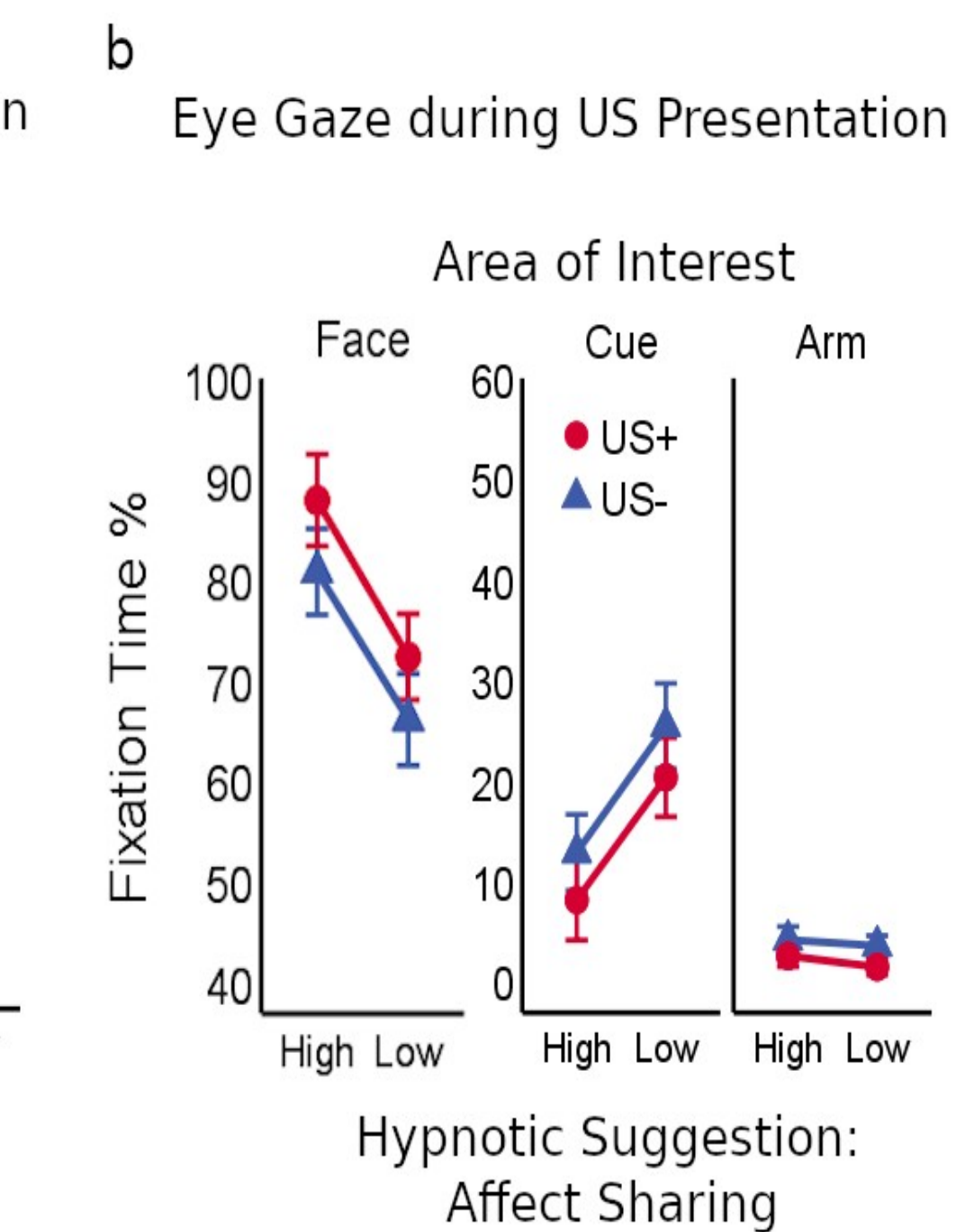
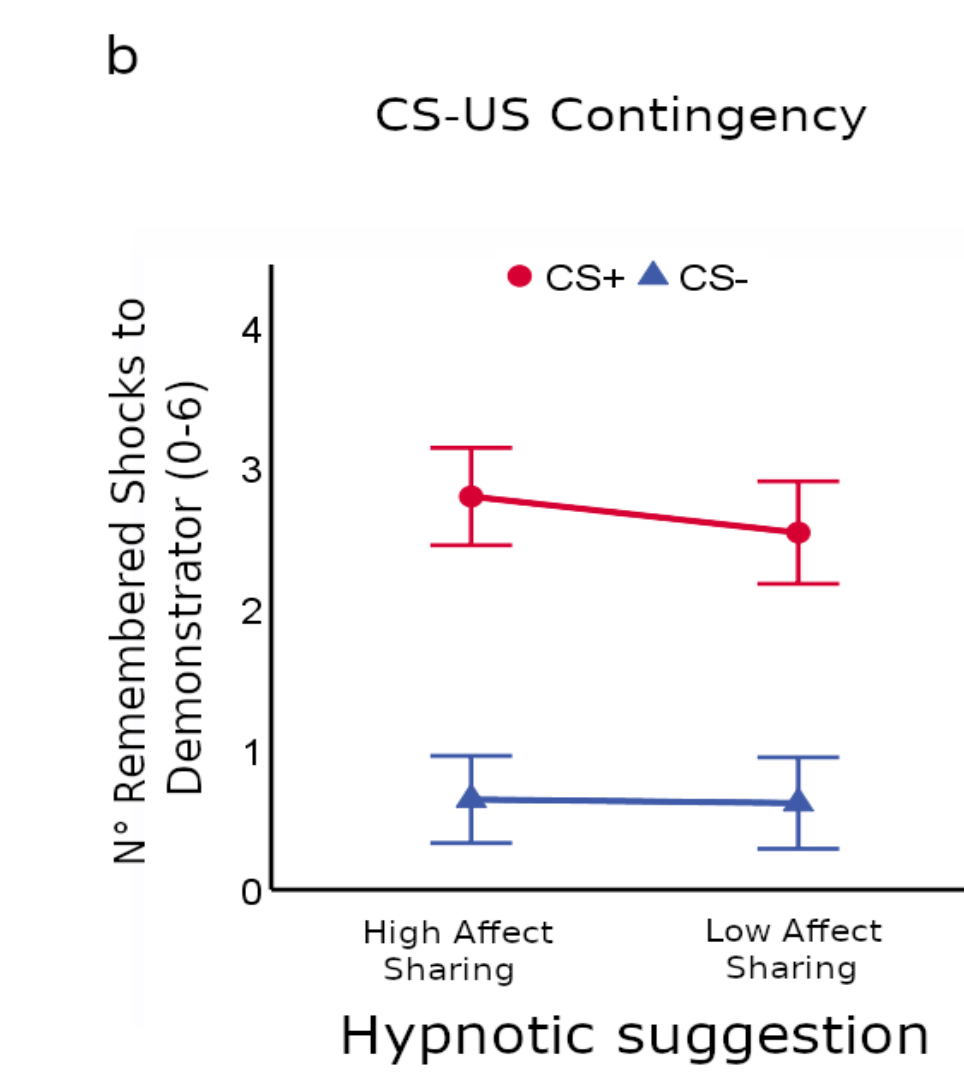


Table 1: SCR under high vs. low affect sharing: Spearman correlations

	UR (learning)	CR (test)
UR (learning)	--	-.03
CR (learning)	.07	.45**
Hypnotizability	.44**	-.04
Trait Empathy cognitive	-.09	.20
Trait Empathy affective	-.45**	.11

SCR - skin conductance response; UR - unconditioned response; CR - conditioned response; **) p < .01



CONCLUSION

Affect sharing is causally involved in driving observational fear learning

alexahuber@univie.ac.at
ORCID: 0000-0003-2372-7942