

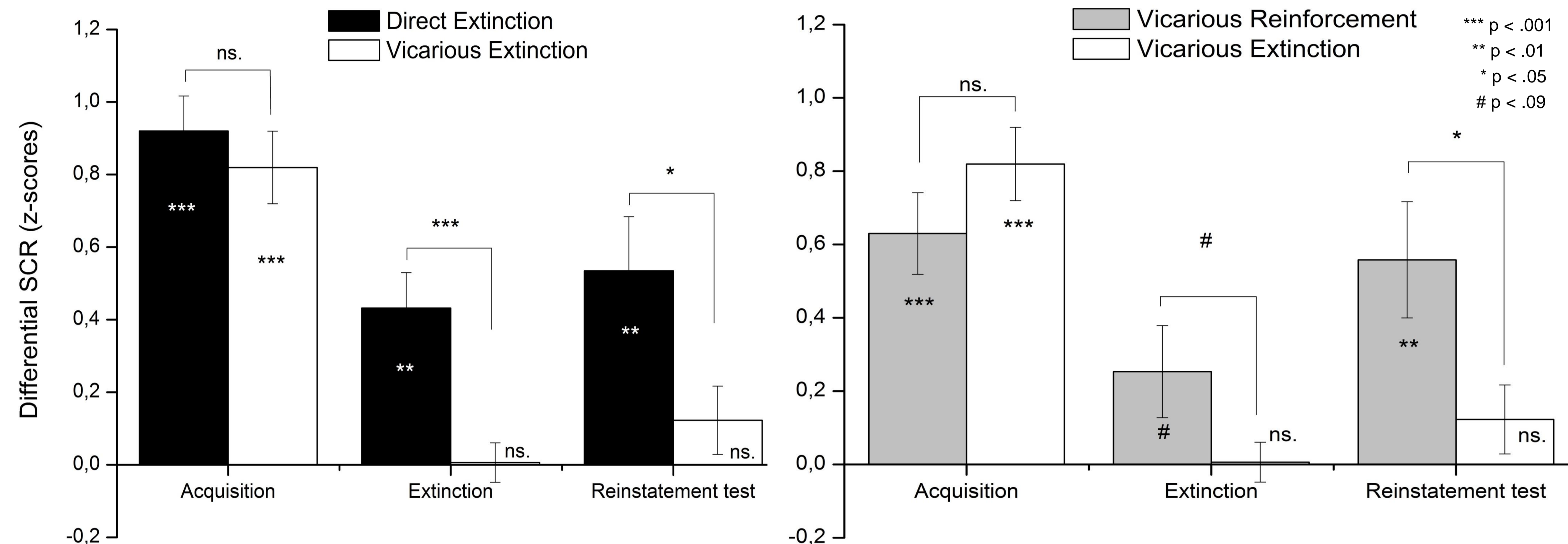
Others as means to a safe end: Vicarious extinction blocks the return of learned fear

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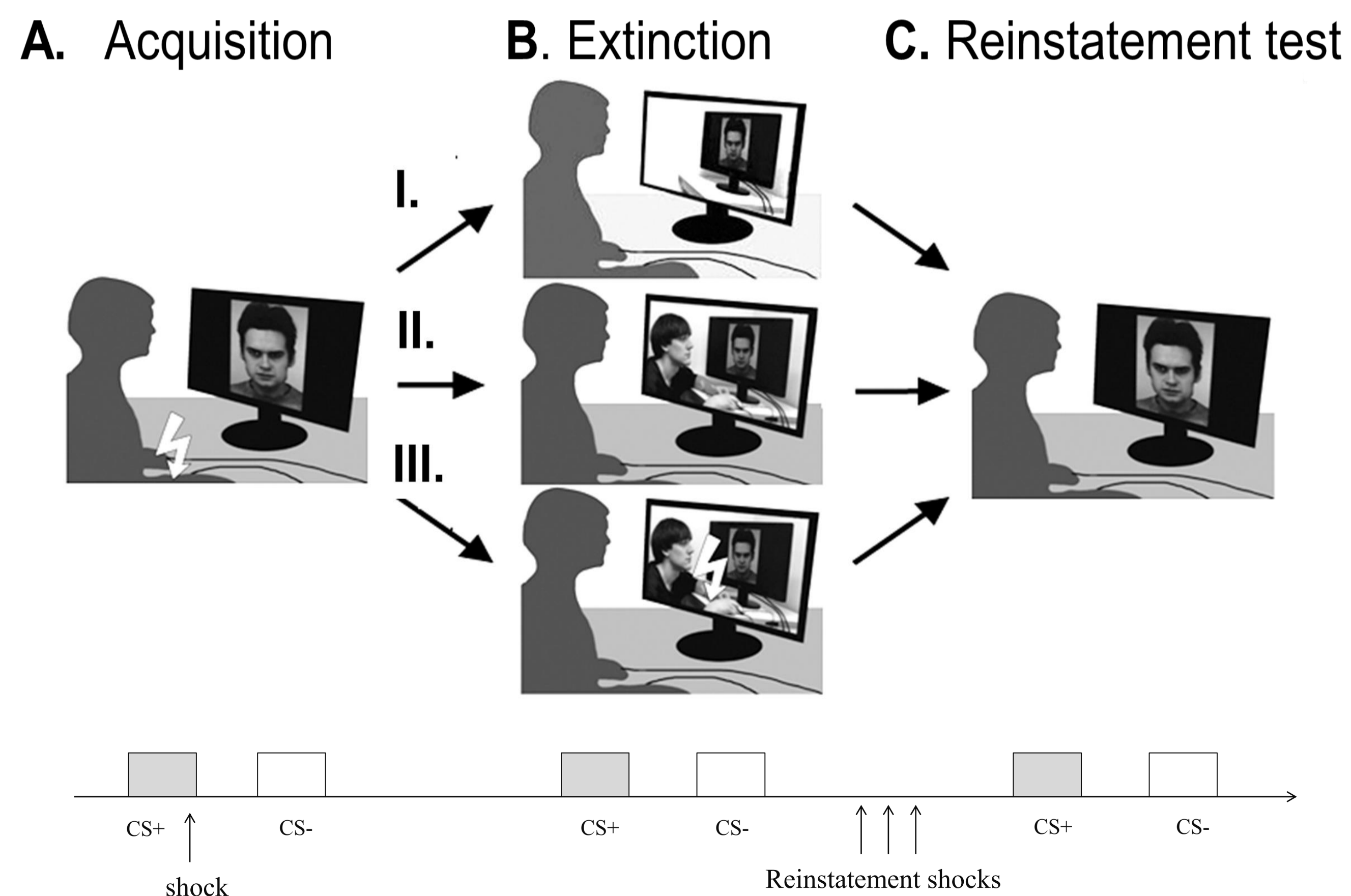
Introduction

- Information about what is dangerous and safe in our environment is often transferred from other individuals through social forms of learning.
- Past research has focused on the observational, or vicarious, acquisition of fears, but little is known about how social information can promote safety learning.
- To address this, we studied the effects of vicarious extinction learning on the recovery of conditioned fear.

Results



Methods



A. Participants underwent a fear conditioning protocol during which the presentation of one of two conditioned stimuli (CSs) was followed by a shock.

B. During extinction, participants were divided into three different groups: **I. Direct Extinction** (direct non-reinforced CS presentations) **II. Vicarious Extinction** (observe non-fearful model receive non-reinforced CS presentations) and **III. Vicarious Reinforcement** (observe model receive reinforced CS+ presentations).

C. Finally, participants underwent a reinstatement test that included three unsigned shocks followed by the presentation of the CSs. Conditioned responding was measured by skin conductance responses (SCR) throughout the experiment.

Conclusions

- Vicarious Extinction promoted better extinction and blocked the return of previously learned fear, as compared to Direct Extinction.
- Including the Vicarious Reinforcement group confirmed that this superior down-regulation of fear was driven by the learning model's experience of safety.
- These findings have implications for emotional learning, social affective processes, and clinical practice.