

Effects of Imagery Rescripting vs. Extinction on the Generalization of Extinction

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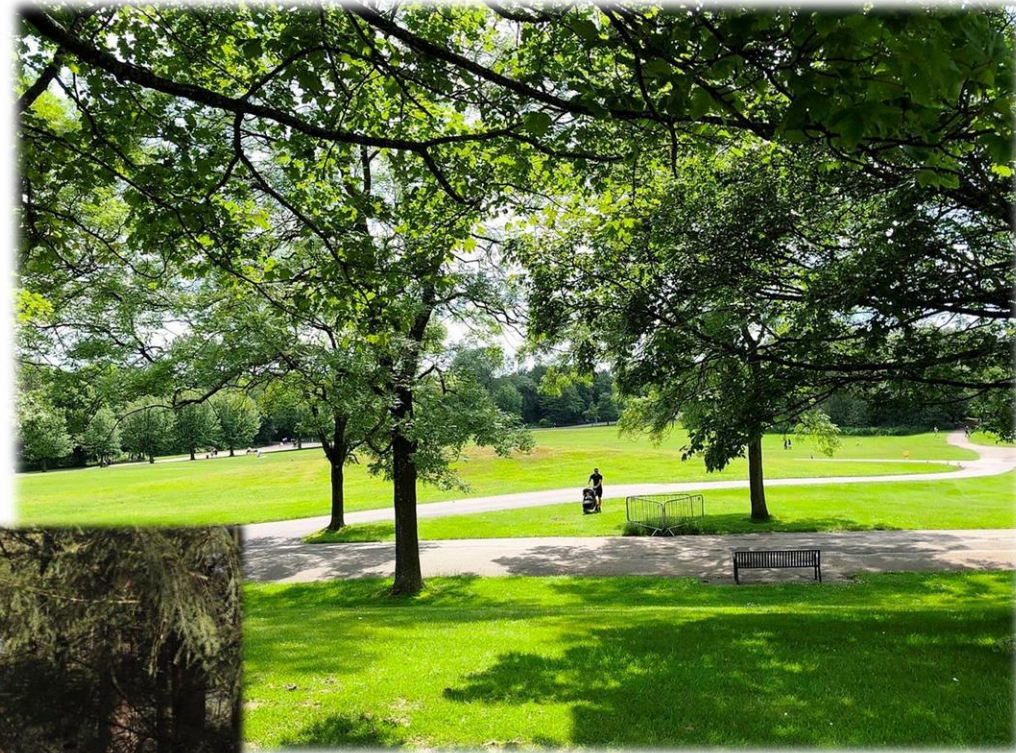
KU LEUVEN



Utrecht University



Exposure therapy



Generalization of extinction



Imagery Rescripting



Aim & Hypotheses

Disentangle distinct and combined effects of Imagery Rescripting (ImRs) and extinction (EXT) on the generalization of extinction:

Mechanisms:

H1: more US revaluation in ImRs (ImRs-only and ImRs + EXT), i.e., stronger decreases in US distress and US aversiveness ratings

H2: more expectancy learning in Extinction (ImRs+EXT and EXT-only), i.e., stronger decreases of US expectancy

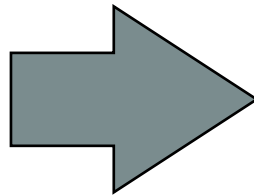
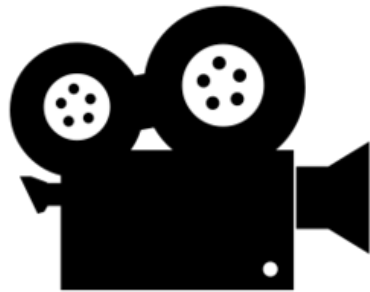
Generalisation:

H3: increased generalization of US expectancy after combined ImRs and Extinction

H4: increased generalization of CS distress and aversiveness after ImRs

Design – phase 1 (acquisition)

All groups



CS+1



US



CS+2



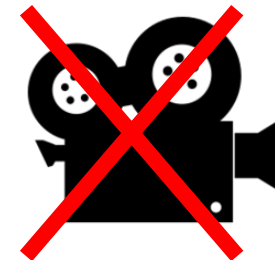
US



CS-

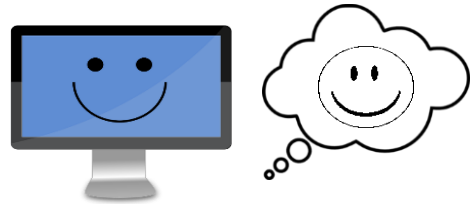


No
US



Design – phase 2 (manipulation)

ImRs-only
(*n* = 19)



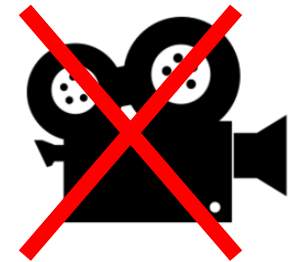
EXT-only
(*n* = 20)

CS+
12x

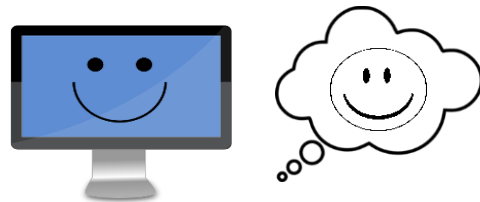


or

No US



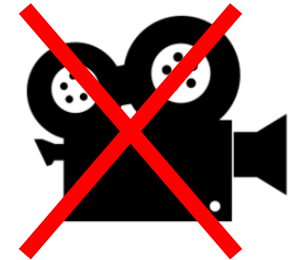
ImRs + EXT
(*n* = 18)



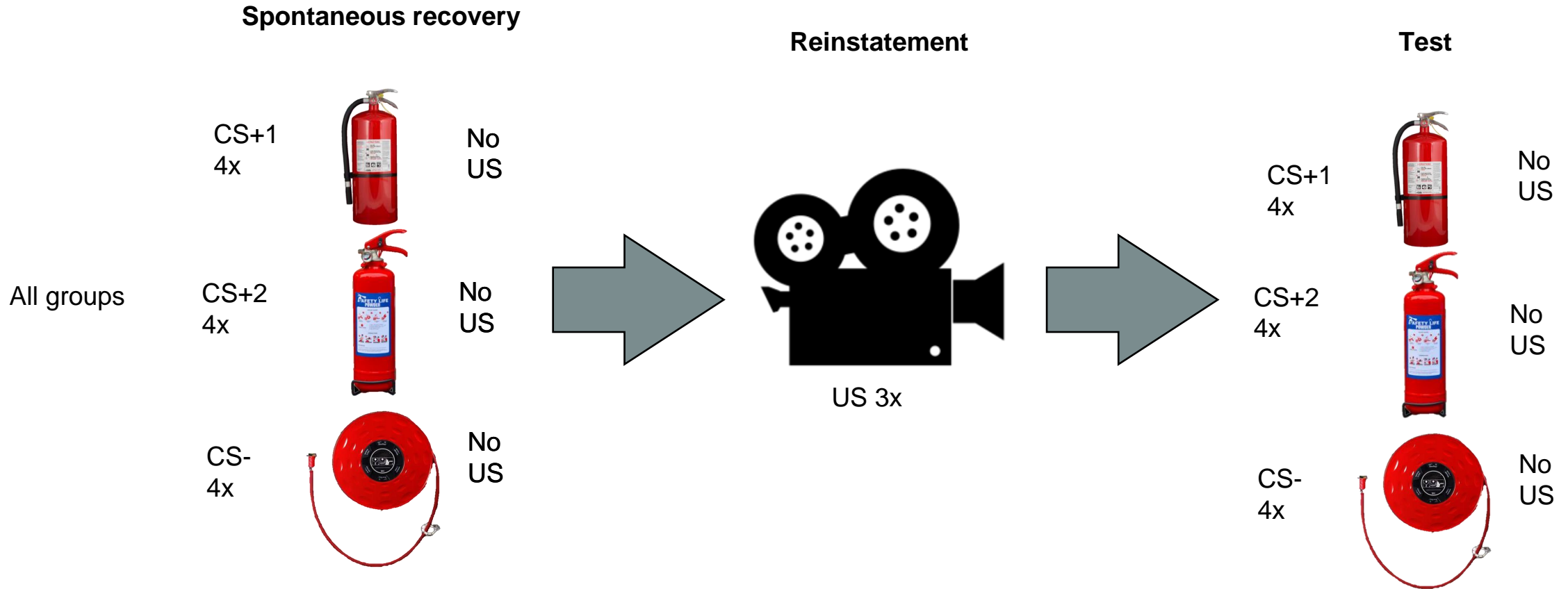
CS-
12x



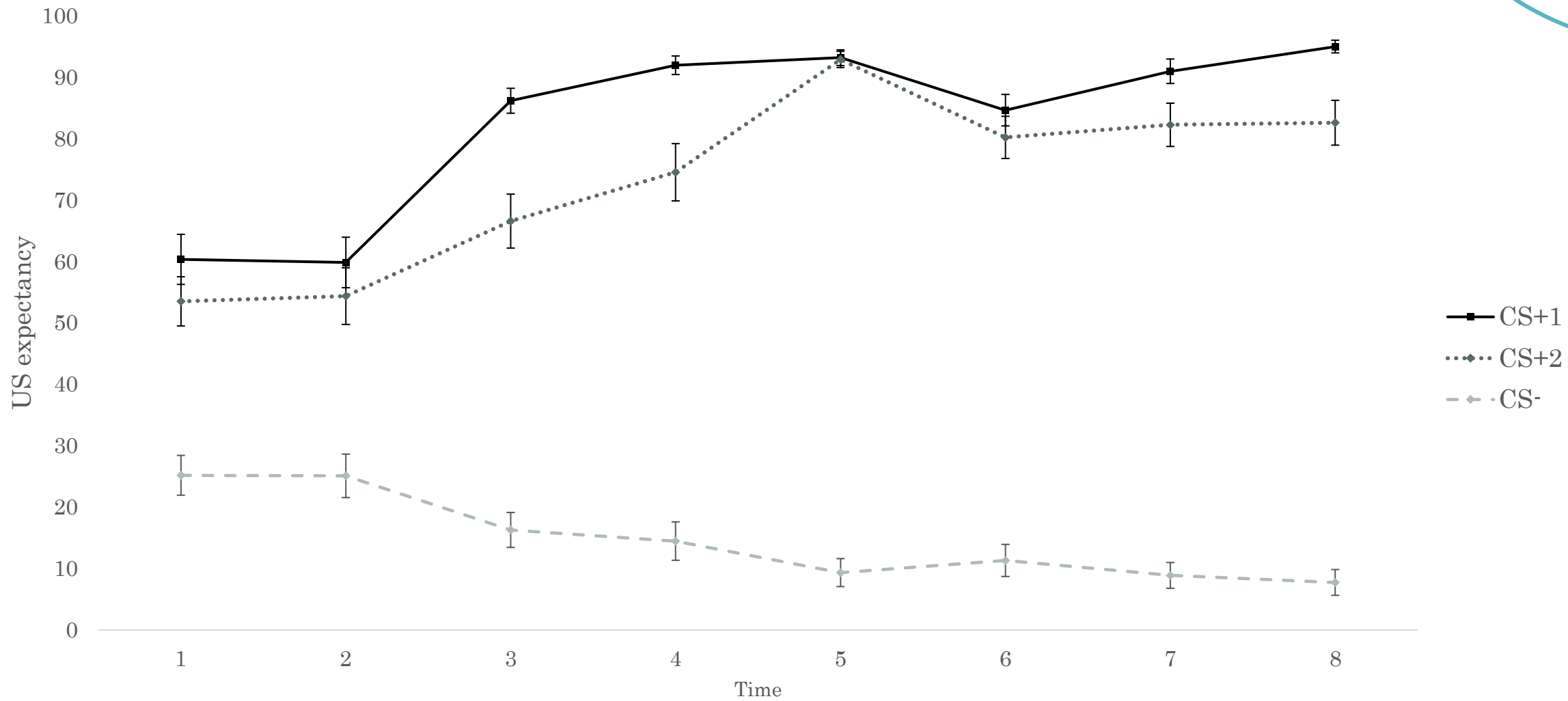
No US



Design – phase 3 (Generalization test)



Results - acquisition

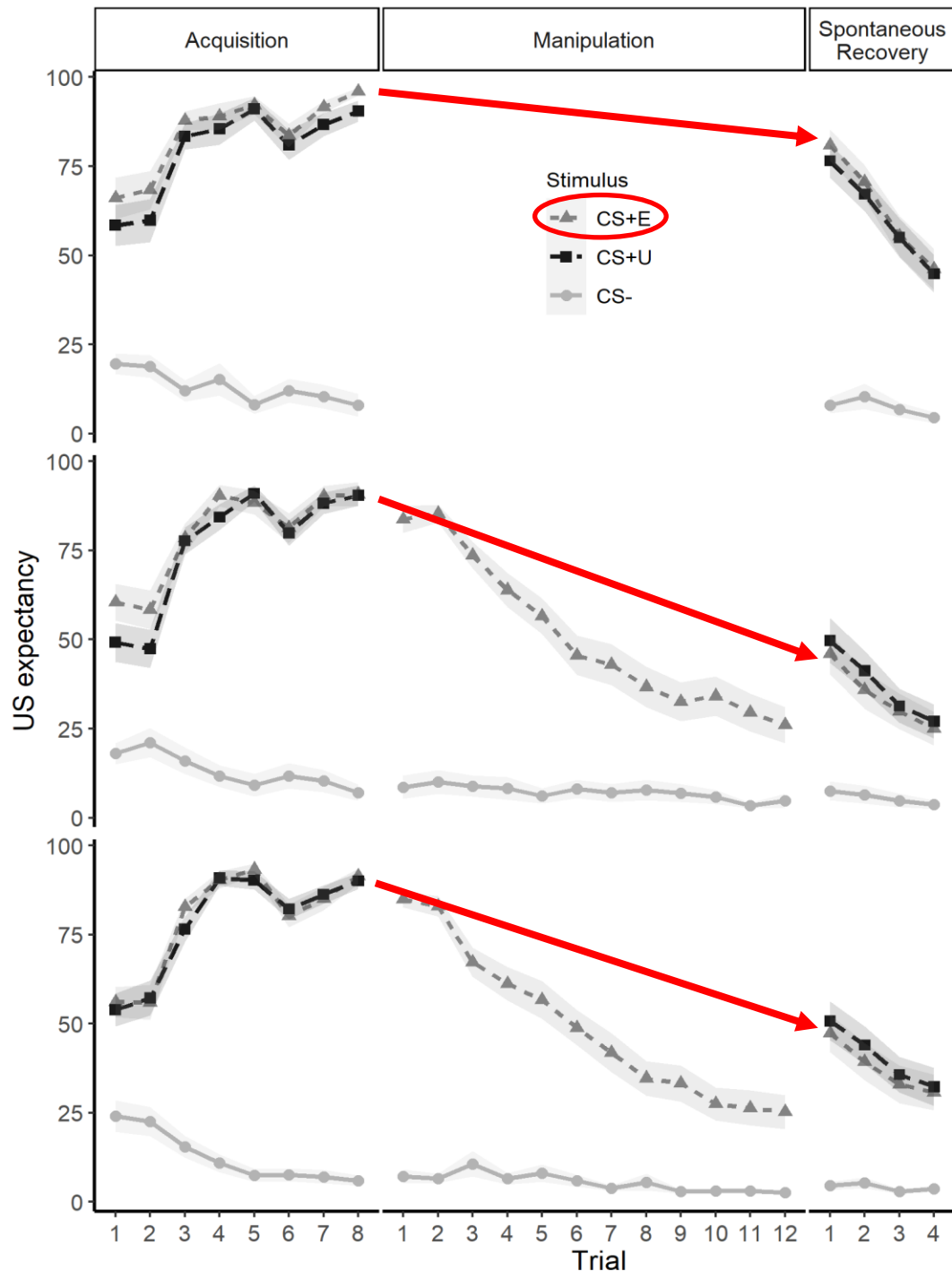


H1: more revaluation in Imagery rescripting

Pre to post manipulation:

- Larger decrease in US aversiveness in ImRs+EXT versus ImRs-only and EXT-only ($p_s < .027$)
- Larger decrease in US distress in ImRs+EXT versus ImRs-only ($p_s < .017$)

→ **Partly confirmed:** more revaluation for ImRs+EXT

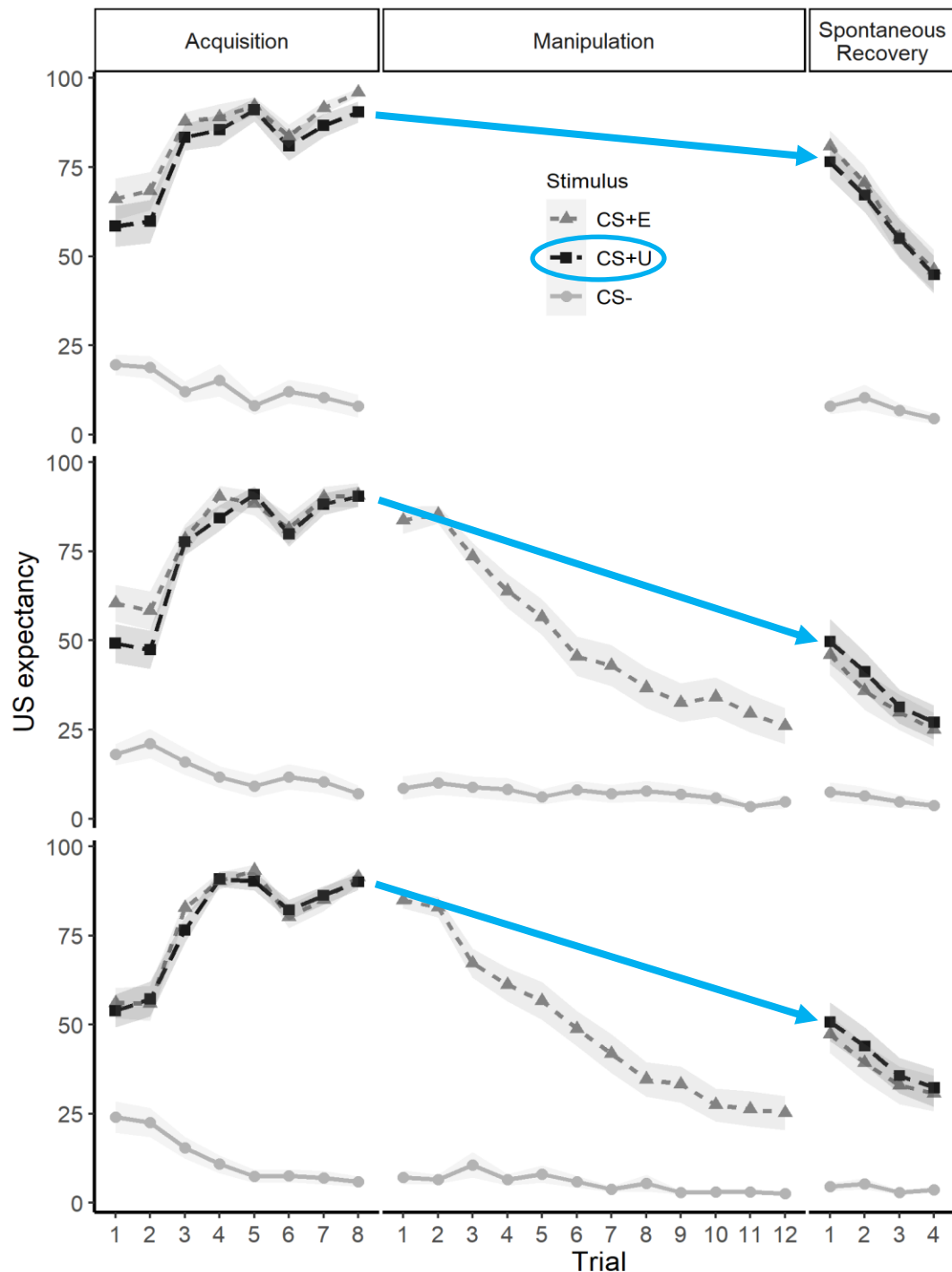


H2: more expectancy learning in Extinction

Pre to post manipulation:

- decrease in US expectancy for the CS+E in all conditions ($p < .002$)
- larger decrease in EXT-only and ImRs+EXT compared with ImRs-only ($p < .001$).

→ **Confirmed**



H3: increased generalization of US expectancy in ImRs+EXT

Pre to post manipulation:

- decreased US expectancy for the CS+U in all conditions ($p < .003$)

- larger decreases in EXT-only and ImRs+EXT versus ImRs-only ($p < .001$).

→ **Reject**, no difference in generalisation between ImRs and ImRs+EXT

H4: increased generalization of CS distress/aversiveness for ImRs

Pre to post manipulation:

- larger decrease in CS+E and CS+U distress for ImRs+EXT and EXT-only ($ps < .032$)
 - larger decrease in CS+E and CS+U aversiveness in EXT-only versus ImRs-only ($ps < .015$)
 - larger decrease in CS+E aversiveness in ImRs+EXT versus ImRs-only ($p = .039$)
- **Reject**, ImRs+EXT (and EXT) superior to ImRs-only

Conclusion

- Expectancy learning in extinction versus ImRs
 - Revaluation learning in ImRs but also in Extinction
 - Generalisation in ImRs but also in Extinction
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Next?

- US thinking instead of US expectancy?
- Other paradigms better for testing revaluation?
- Testing generalisation in clinical studies (increase ecological validity)?

Thank you

