

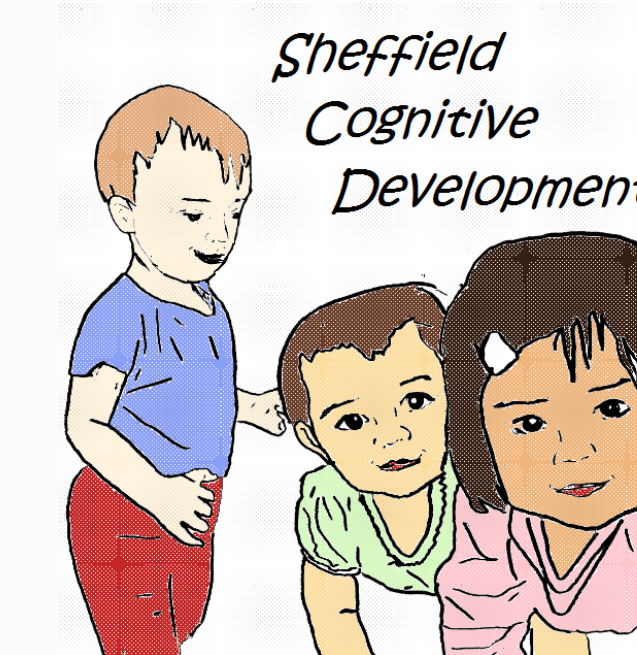


How Does Mood Affect Task Switching in 7-8 Year Olds?

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Introduction

- Mood can affect children's performance in cognitive tasks, including measures of delay of gratification (Shimoni et al., 2016), inhibition (Scrimin et al., 2014) and local processing (Schnall et al., 2008).
- However, no studies have examined how mood affects cognitive flexibility.
- Furthermore, mood induction studies with children have not typically controlled for baseline individual differences in mood or cognitive performance, or determined the specificity of mood effects to the cognitive process measured.
- In this study, we aimed to investigate the effects of mood on task-switching in children by using a controlled pre-post design, with a more engaging neutral condition, and more specific performance indices.

Method

Participants: 84 7-8 year olds (7;1 – 8;9 years, $M=7.83$).

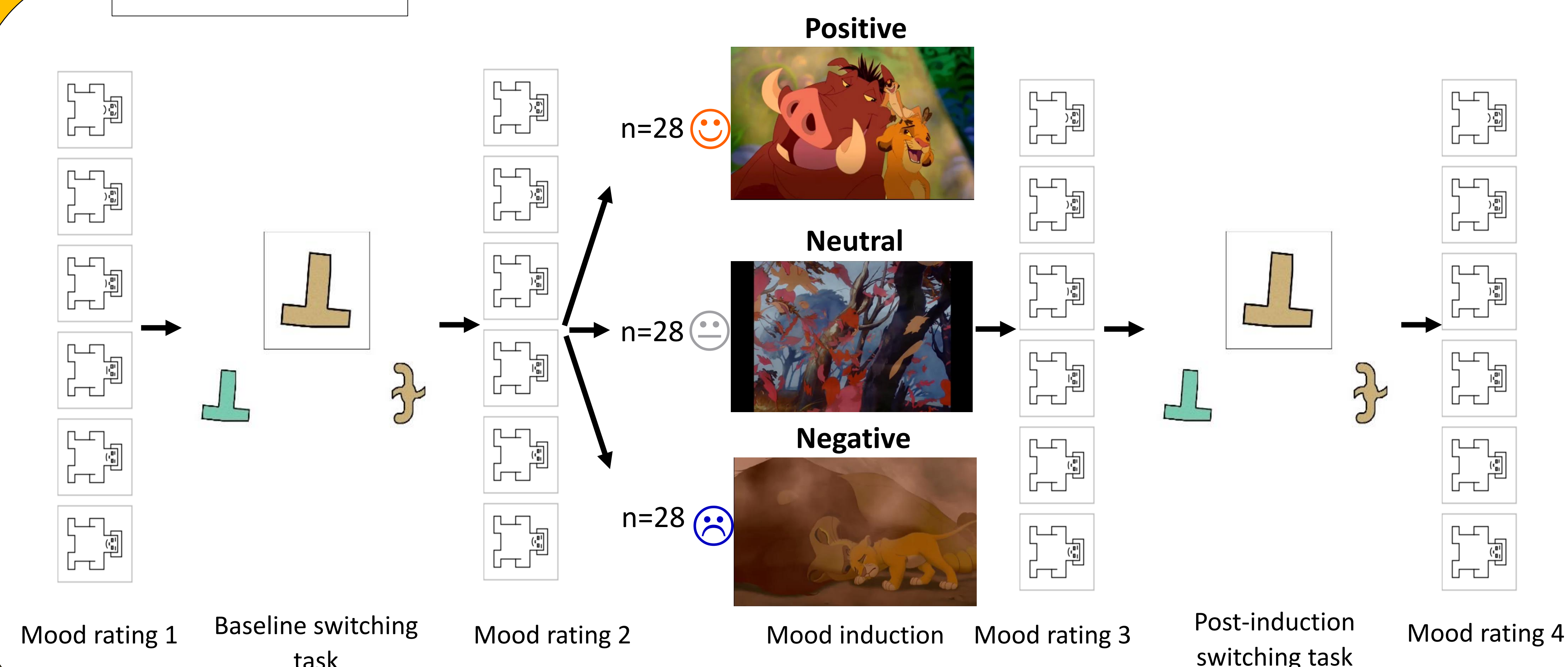
Design: 3 (mood group: positive, neutral, negative) x 2 (session: 1 or 2) mixed design.

Participants performed a computerised switching task (the Switching Inhibition & Flexibility Task or SWIFT).

This was completed both before and after watching a video selected to induce one of three mood states (positive, neutral, or negative).

Self-report measures of mood valence, arousal and task liking, were taken using pictorial scales at four time points.

Procedure



Results

1. Did the mood induction affect switching performance?

There was no effect of mood induction on task-switching performance, as suggested by a lack of interaction between session and mood group for efficiency, switch costs and mixing costs (p 's > .5)

2. Was the mood induction effective?

After the mood induction, mood valence was lower in the negative compared to the neutral video group ($U = 244.5$, $p = .013$).

However, the positive and neutral groups did not differ in mood ratings ($U = 353.5$, $p = .503$).

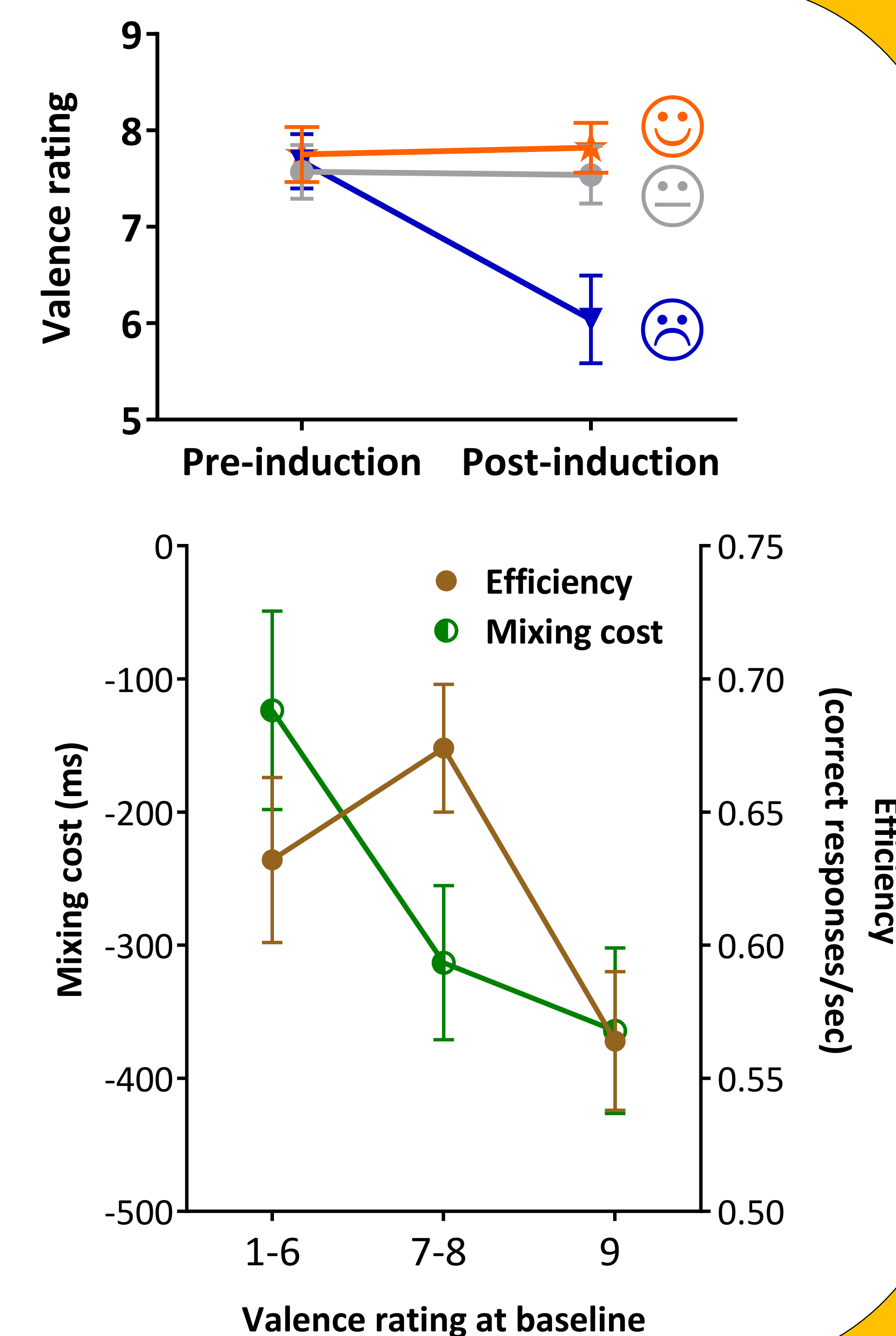
3. Did baseline mood affect switching performance?

Participants were split into 3 groups based on their baseline mood rating.

Efficiency was affected by mood ($F(2,79)=4.67$, $p=.012$, $\eta^2=.11$). The very positive mood group was less efficient than the moderate ($p=.009$) but not the lower mood group ($p=.316$).*

Mixing costs were affected by mood ($F(2,79)=3.26$, $p=.044$, $\eta^2=.077$) such that the very positive mood group had larger mixing costs than the lower ($p=.047$) but not the moderate mood rating group ($p=1.00$).*

*.Controlling for age as a covariate.



Discussion

- The mood inductions used did not affect task-switching performance.
- Mood ratings in neutral and positive conditions were very similar, which might be due in part to anchoring effects from the baseline and pre-induction mood ratings, or relatively positive content in the neutral video.
- However, very high positive mood at baseline impaired overall performance and specific mixing costs relative to lower mood, suggesting effects of mood at general and task-specific levels.
- This could reflect mood states or traits influencing cognitive flexibility.

References

- Schnall, S., Jaswal, V. K., & Rowe, C. (2008). A hidden cost of happiness in children. *Developmental Science*, 11, F25-F30.
- Scrimin, S., Mason, L., & Moscardino, U. (2014). School-related stress and cognitive performance: A mood-induction study. *Contemporary Educational Psychology*, 39, 359-368.
- Shimoni, E., Asbe, M., Eyal, T., & Berger, A. (2016). Too proud to regulate: The differential effect of pride versus joy on children's ability to delay gratification. *Journal of Experimental Child Psychology*, 141, 275-282.