

Introduction

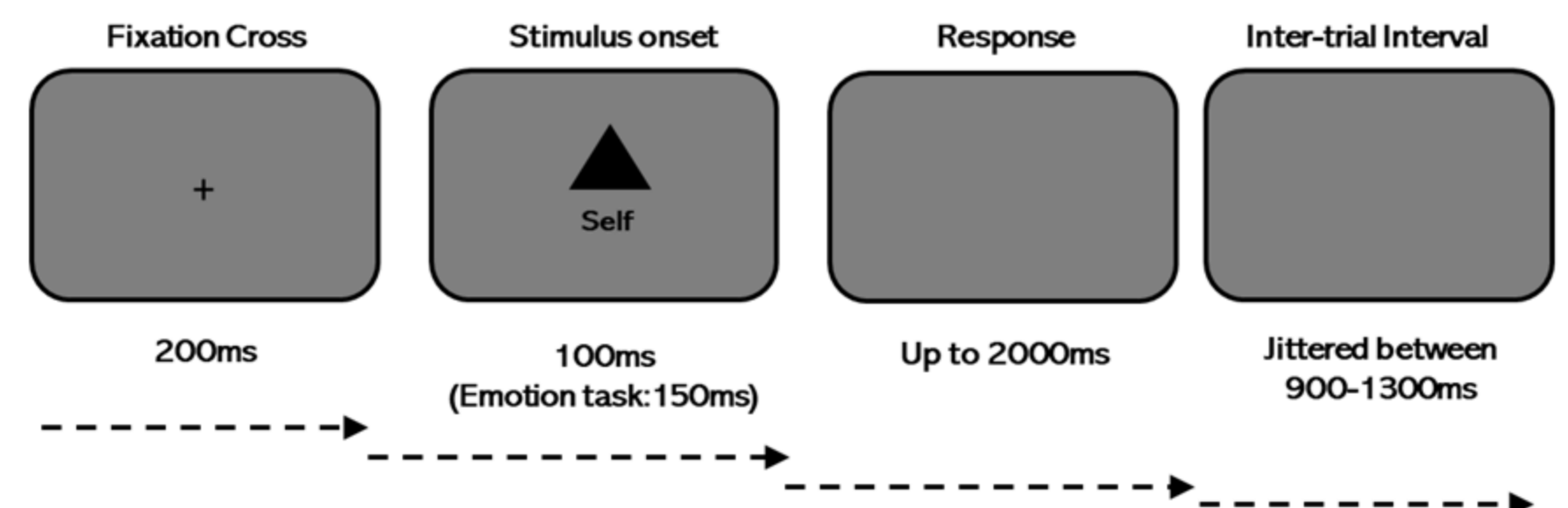
- There is longstanding evidence that the salient properties of social stimuli influence information processing
- Specifically, people show fastidious biases towards information related to self-relevance, value-based reward, and emotional-nuance
- For example, these factors have been shown to drive attention, facilitate behaviour, and modulate memory recall
- Neurological research indicates that the processing of these effects may share similar cognitive mechanisms.

Aim:

- In a series of two pilot experiments, we addressed previous inconsistencies surrounding the relationship between these biases, and questioned:
 - Can the same prioritisation effects be observed in a 2-item compared with a 3-item matching task?
 - Does the number of associations effect the magnitude of biases and the degree to which prioritization effects are related with each other at a behavioural level?

Method

- We utilised two variants of an associative matching task
- Participants had to learn associations between identities/monetary rewards/emotions and geometric shapes (Experiment 1: Two associations, Experiment2: Three associations).



Results

- In both experiments we found a prioritization effect for self-relevance, positive-emotion, and value-based reward.

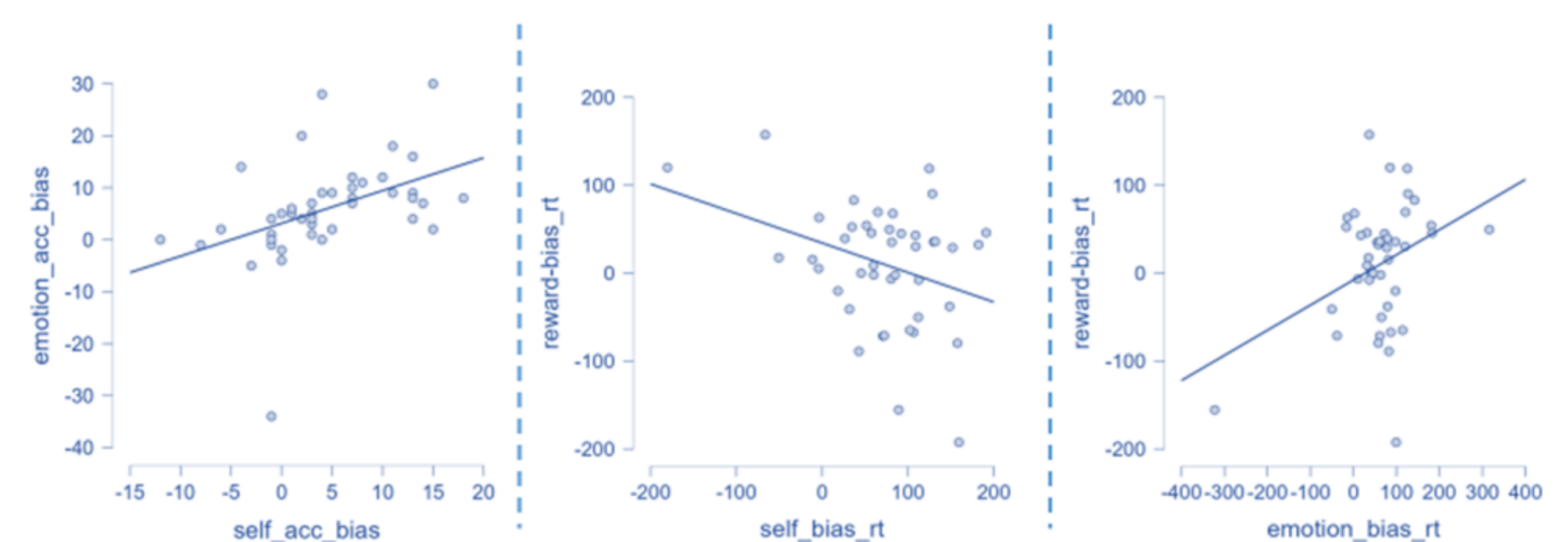
Magnitude of prioritization effects:

- In Experiment 1 accuracy advantages were higher for Positive emotion- compared to Reward-bias and response time advantages were higher for Positive emotion- and Self-compared to Reward-bias, however no differences were found for advantages in Experiment 2.

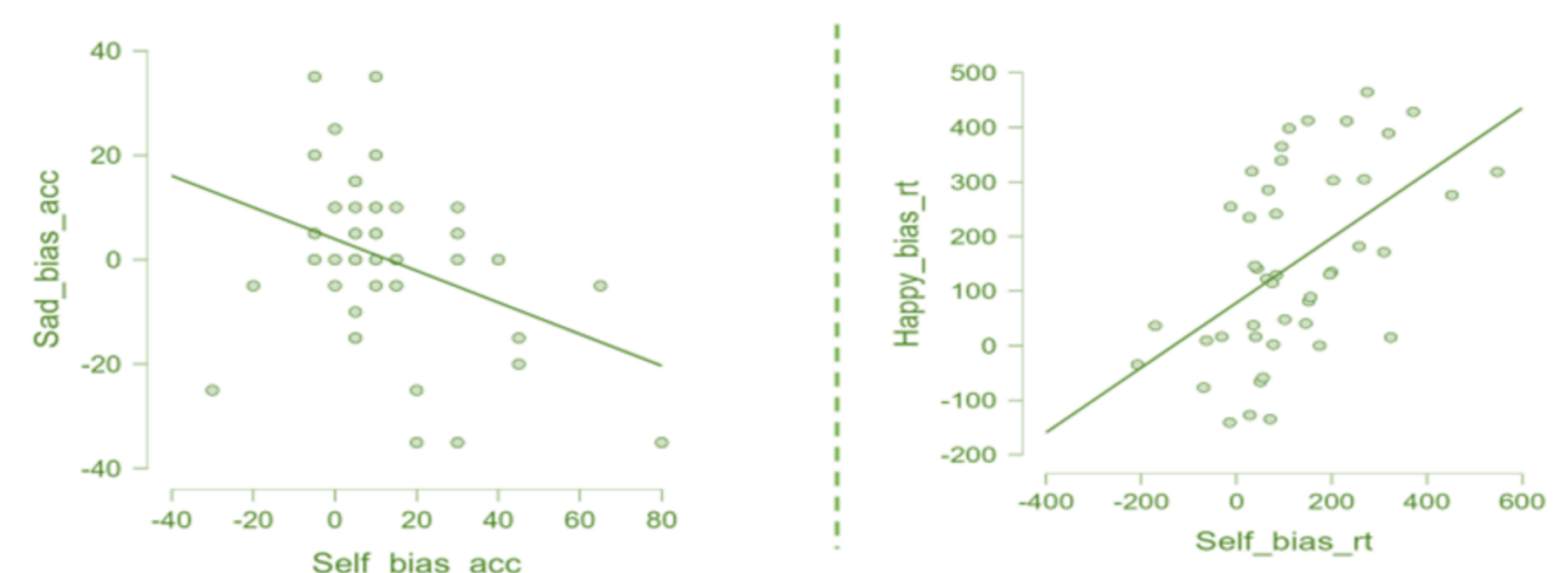
The relationship between prioritization effects:

- Correlation analyses indicated in Experiment 1, there was a positive relationship between Self-and Positive emotion-bias and between Reward- and Positive emotion-bias and a negative relationship between Self- and Reward-bias.
- In Experiment 2 we found a positive relationship between Self- and Positive emotion-bias and a significant weak negative relationship between Self-, and Sad-bias.

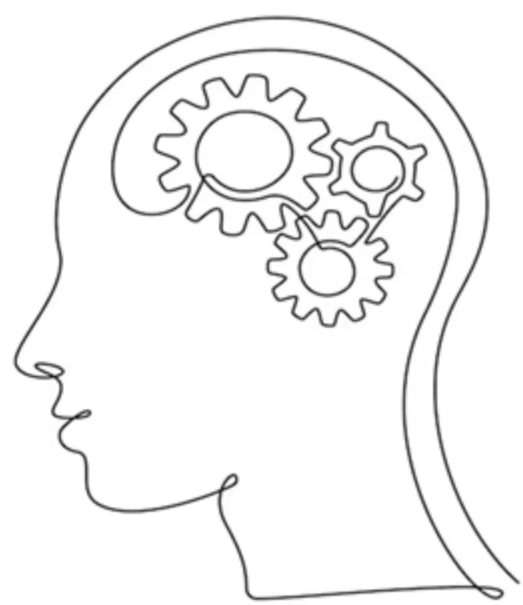
Experiment 1



Experiment 2



Discussion



- Self-, reward- and emotion-prioritization effects can be observed across 2- and 3-item associations
- Findings indicate less of a distinction between the magnitude of biases for self-relevance, value-based reward and positive emotion when there were 3 associations
- The relationship between self-relevance and positive emotion is stable and consistent
- The relationship between self-relevance and reward could be sensitive to the magnitude of the biases
- The distinction between the magnitude of biases for self-relevance, value-based reward and positive emotion could be sensitive to the interaction between working memory and attention
- Findings have direct clinical implications towards the treatment and diagnosis of various neurological and neuropsychiatric disorders related to self-, reward-, and emotion-processing

References

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- Dolcos, F., Katsumi, Y., Moore, M., Berggren, N., de Gelder, B., Derakshan, N., . . . Dolcos, S. (2020, 2020). Neural correlates of emotion-attention interactions: From perception, learning, and memory to social cognition, individual differences, and training interventions. Great Britain.
- Sui, J., He, X., & Humphreys, G. W. (2012). Perceptual Effects of Social Salience: Evidence From Self-Prioritization Effects on Perceptual Matching. (5), 1105.