Background and experimental design

Emergence of self-prioritization may be affected by the conditions under which information is learned. While in deterministic (i.e., certain) task settings, learning is faster for self- (vs friend) related information [1], the opposite is seen in a probabilistic (i.e., uncertain) task setting [2].

The behavioral consequences of these learning experiences have not yet been established. We used an associative learning paradigm including both deterministic and probabilistic conditions in combination with a stimulus-classification task (N = 56). Our aim was to explore how self-related information previously learned under varying degrees of certainty influences self-bias in decision processing.

Participants were required to learn, based on provided feedback, which symbol in each of six different pairs of characters was most likely to represent them (i.e., self) or a friend. They then had to decide who each character was associated with without receiving feedback.

Results – learning phase

No difference was observed between learning performance in self and friend trials.

Results – test phase

Responses were faster to self-related (vs. friend-related) characters in the deterministic, but not in the probabilistic conditions.

Discussion

Self-prioritization was only observed when target-stimulus associations were learned in a deterministic condition, consistent with previous observations that this effect is sensitive to the strength of target-stimulus associations in working memory [6], and that self-relevance in non-laboratory settings is almost always deterministic [1].