Long-Term Effects of Value-Driven Attentional Capture on Memory: Reward Influences Criterion but Not Discriminability

Value-driven attention capture (VDAC) is the process by which stimulus features associated with reward can involuntarily draw attention in contexts beyond the original one in which those associations were trained. Attention is a critical component of effective encoding into memory so it follows that VDAC may confer an advantage in remembering later stimuli that share those reward features. The aim of this study was to investigate whether participants trained to associate a color with probabilistically high or low reward amounts in one task would show improved memory for characters presented in a previously rewarded color on a separate memory task. In a learning phase, participants identified the orientation of a horizontal or vertical line positioned within a red or green circle. One color was paired with a higher reward contingency than the other color to imbue it with greater value. In a second task, participants viewed three sequential characters and made old/new judgments on a test character. Some lists contained a character that was presented in a previously rewarded color. We found no evidence that rewarded colors improved memory, but recognizers tended to employ a more conservative criterion on lists with rewarded colors.

1248/1250 characters