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Abstract

Object-based attention acts as people paying more attention to the stimulus within an object. There are various definitions of the object, from the original definition at the lower processing level (e.g., the frame), to the high semantic level (e.g., the Chinese word), to the learned level (e.g., learned object). However, few studies examined the object at the middle representational level - frame of reference (FOR). Here, we modified the classical two-object task to induce two FORs with different salience by four cues in four experiments. Results consistently showed that shorter response time (RT) and lower error rates (ER) in the valid cue condition than that in the invalid cue condition. Whats more, RT was longer and ER was lower in the invalid cue within the FOR of high salience condition than that in the invalid cue within the FOR of low salience condition. Our study verified the existence of object-based attention in FORs at the representational level and offered a new insight of the mechanism of the FOR-object-based attention.