**Title**

Impact of past answer on serial dependence in numerosity perception

**Permalink**

https://escholarship.org/uc/item/62285349

**Journal**

Proceedings of the Annual Meeting of the Cognitive Science Society, 45(45)

**Authors**

Morimoto, Yukihiro

Makioka, Shogo

**Publication Date**

2023

**Copyright Information**

Peer reviewed

# Impact of past answer on serial dependence in numerosity perception

**Yukihiro Morimoto**
Osaka Prefecture University, Sakai, Japan

**Shogo Makioka**
Osaka Metlopolitan Unversity, Sakai, Japan

### Abstract

Serial dependence is a phenomenon in which the perception of current stimuli is induced by the perception of past stimuli. We examined the serial dependence when participants estimated the total number of coins, or the monetary value displayed and observed attractive effects in both tasks. We also analyzed the effect of response history, and found that the immediately prior response had an attractive effect on current responses, while the immediately prior stimuli exerted a repulsive effect. These results suggest that serial dependence depends on the response to the stimulus, rather than on the perception. In this study, we aimed to separate the effect of the stimulus and that of the response by direct experimental manipulation. Specifically, we compared the magnitude of the serial dependence between trials in which participants only saw the dots in the previous trials and trials in which participants answered the number of dots in the previous trials.