

Serial dependence in a joint action context

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Human perceptual decisions are biased by prior events, a phenomenon known as serial dependence. For instance, when judging the orientation of a sequence of stimuli, responses are systematically biased toward the orientation of the preceding stimulus. This phenomenon has been extensively studied focusing on one participant at a time, thus limiting the findings to the level of individual perception and cognition. In the present study we investigate serial dependence within a social interaction context, in which two participants are presented with the same stimulus and the task of providing an orientation judgment is randomly assigned to one of them. This design allows us to assess whether lingering traces of prior stimuli remain active even when no explicit response is required from the individual, and instead, a co-agent engaged in the same task performs the judgment. We tested 20 participants who performed the task under three conditions: alone, with a computer, or with another participant. In each condition, participants responded to only half of the trials; during the remaining trials, the response was provided by the computer or the co-agent. Our initial results reveal dissociable effects of the joint context on the bias and precision of perceptual judgments: while a systematic bias toward previous orientations was observed across all conditions, the variability of perceptual judgments decreased considerably when participants performed the task with a human co-actor compared to a computer.

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