

# The effect of reversal on reproduction of observed temporal sequences

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**Abstract:** The processes that underpin the structure of time in human cognition are of singular relevance in many domains of cognitive research including psycholinguistics, connectionist modeling, and philosophy of mind. Much cognition involves observing sequences of environmental stimuli and producing related sequences of responses. The current study examined the effect of reversal on the reproduction of observed sequences. 20 participants observed sequences of two geometric stimuli (e.g., Circle Square), and were required to report the sequences using the temporal relational cues, Before or After (e.g., Circle Before Square or Square After Circle). Reporting the sequence using After required participants to reverse the observed sequence. Participants responded significantly faster on Before probes than After probes. No significant differences were observed in response accuracy. These findings suggest that re-organization of temporal sequences relative to observed sequences takes time and contribute to ongoing theoretical debate regarding how temporal sequences are encoded.