Gestures on Memory: How Speech-Gesture Congruency Influences Memory and Metamemory Across Test Types

Nilsu Sağlam
Bilkent University, Ankara, Turkey

Demet Özer
Bilkent University, Ankara, Turkey

Miri Besken
Bilkent University, Ankara, Turkey

Abstract

The current study investigates how (dis)fluency, manipulated by the (in)congruence between speech and gesture, can impact metamemory and memory. In two experiments (N=36 for each), we employed a mismatch paradigm where participants were presented with short videos of an actor simultaneously verbalizing a verb-object pair (e.g., distributing cards) while performing the congruent (e.g., distributing cards) or incongruent iconic hand gesture (e.g., drawing cards). After each video, participants evaluated speech-gesture compatibility on a 5-point Likert scale and provided a JOL rating (0-100). In Experiment 1, they were administered a free recall test, writing only the speech, while Experiment 2 utilized a recognition test to identify the exact video from the encoding phase. Results indicate higher memory performance and higher JOL ratings for congruent videos than incongruent videos. In contrast, no significant differences in memory or metamemory were observed in the second experiment.

In D. Barner, N.R. Bramley, A. Ruggeri and C.M. Walker (Eds.), *Proceedings of the 47th Annual Conference of the Cognitive Science Society*