What the interplay between speech and gesture reveals about motion events in European Spanish: cross-modal distribution and semantic congruency

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Co-speech gestures are pervasive in human interaction: speakers in all cultures unconsciously produce hand movements that co-occur with speech and represent semantic content in an iconic way (Özyürek, 2021). While speech and gesture tend to be semantically co-expressive, the two modalities do not always express identical aspects (McNeill, 1992). Iconic gestures usually add new information, whereas the interaction of speech and gesture generally modulates the idea conveyed in words, by either reinforcing or downplaying it (McNeill, 2000).

In the domain of motion events (Talmy, 1991; Slobin, 1996; i.a.), multimodal analyses have shown that motion event encoding varies inter-typologically in what Path and Manner information is encoded in iconic gestures and in how it is distributed across modalities (McNeill, 2000; Özyürek et al., 2008). Despite the growing theoretical interest in the tight relationship between speech and gesture, research on speech-gesture synchronization is still scarce at a granular level.

The main aim of this talk is to explore the interplay between speech and gesture when speaking about motion in Spanish. More precisely, this study provides a granular description of two specific issues related to Path and Manner encoding that still remain underexplored in the literature: (i) cross-modal distribution of semantic components at the clause-level, (ii) speech-gesture semantic congruency (SGSC) at the verb level.

Data consist of 178 videotaped oral descriptions by 12 native speakers of European Spanish. Following Kita and Özyürek's (2003) procedure, data were elicited using the Tomato Man set of stimuli (Özyürek et al., 2001). Utterances and event-external gestures produced during the first description of the target event were coded using ELAN (Lausberg & Sloetjes, 2009). Narrations of two participants were also coded by a second independent coder to check for inter-rater reliability.

Two were the main research questions in this study. The first question investigated whether the gestural means of encoding Path and Manner depend on the strategy used in speech. Previous research had shown that speakers of verb-framed languages such as Japanese and Turkish tend to use separate gestures for Path and Manner, thus mirroring the typologically-congruent clausal packaging strategy in speech, i.e. separate clauses (Özyürek et al., 2008). However, McNeill (2005) reported a contradictory behaviour in Spanish speakers: they showed a preference for conflated gestures. Results support this finding and suggest that (i) Spanish speakers are likely to combine a Path-only or a Manner-only gesture with a conflated gesture, (ii) packaging strategies in gesture might depend on the ones used in speech.

The second question asked whether and, to what extent, information conveyed in gesture is congruent with that encoded in speech. In satellite-framed languages, Manner verbs might coordinate with either Path or Manner gestures depending on the component foregrounded by the speaker (McNeill, 2000). However, little is known about how Path verbs coordinate with gestures in verb-framed languages (e.g. Spanish). Results revealed that (i) Path and Manner verbs are not strictly semantically-congruent with co-expressive gestures, (ii) SGSC depends on the component conveyed by the verb.

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