Exploring speech-gesture synchronization in speed description in French

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Languages display considerable systematic variation in how they encode information concerning translocational voluntary motion events in speech and co-speech gestures (Kita & Özyürek, 2003; McNeill, 2005; Özyürek et al., 2008). Drawing on Talmy's (1991) typological framework, inter-typological variation has been explored from the perspective of speech-gesture synchronization (McNeill, 2000; McNeill & Duncan, 2000). In essence, this body of research suggests that (i) the extent to which languages are Manner-sensitive is typologically-driven (Slobin, 1996), (ii) typologically-different languages differ in their gestural representation of Manner. Therefore, in satellite-framed languages (e.g. English), gesture can either downplay it (when a Manner verb is time-aligned with a Path gesture) or reinforce it (by unconsciously synchronizing a Manner verb with a Manner gesture); in verb-framed languages (e.g. French), gesture tends to incorporate Manner which is typically lacking from the spoken channel, by means of the so-called "Manner fogs" (McNeill, 1992). However, a closer examination of the literature reveals that the expression of Manner is generally described in a broad sense, with little attention paid to fine-grained distinctions.

To fill this research gap, this study zooms into one specific subcategory of Manner, speed, and examines it from a multimodal perspective (i.e. considering how speakers describe it in speech and gesture). Although speed seem to be a "pervasive underlying dimension of motion" (Slobin et al. 2014: 728), relatively little research has been conducted on its expression in satellite-framed languages (Taremaa & Kopecka, 2023, 2023). Even less so in verb-framed languages, where it seems to be a source of intra-typological variation (Slobin et al. 2014), while the field remains underexplored. Moreover, gesture studies on speed of motion are virtually non-existent, presumably due to methodological issues both in terms of (i) data elicitation (how to make people gesture about speed), (ii) data analysis (how to measure and code for speed).

The present talk aims to sketch a methodological framework to elicit and code speed of Motion on the basis of the preliminary results of an ongoing empirical exploratory study conducted on 12 functional monolingual speakers of French.

The first part of the talk will focus on the methodological decisions underlying the experimental design. Data were obtained from a video-based speech and gesture elicitation tool designed for the MOTIV Project on Motivation, iconicity and arbitrariness in the processing of multimodal language (PID2021-123302NB-I00) on purpose to examine intra-typological variation in the description of speed within verb-framed languages. To do so, two patterns of human locomotion, three goals of motion and three levels of pace were performed by different actors to control for eventual interferences of the Figure. Clips were recorded using a Sony Handycam HDR videocamera and post-edited to match the actors' speed of motion using Wondershare Filmora 10.0.0.94. Order of videos was counterbalanced.

The second part of the talk will focus on data coding and analysis and preliminary results on one verb-framed language (French). Data were collected following the procedure of a Director-Matcher task (Clark et al., 1973): (i) one person (the Director) watches the short clips and after each clip tells another person (the Matcher) what happens, (ii) the Matcher (who has not watched the films) needs to identify the scene in a list of images, so that the Director feels the need for providing enough details. Oral clip-descriptions were recorded using a Sony A6600 videocamera. Audiovisual materials were annotated and coded using ELAN 6.4 (Lausberg & Sloetjes, XXXX). Speech and gestures produced during the first description of the target-event were annotated separately. Three considerations were made for data coding: (i) whether speakers describe or not the target speed (hypothesis: French speakers focus more on the speed of motion than in the pattern of motion), (ii) average duration of gestures, calculated on the basis of the mean during of gestures of each participant (hypothesis: shorter duration for fast movements, longer duration for slow movements), (iii) speech-gesture synchronization (hypothesis: gestures depicting speed will not necessarily align with its description in speech).

Index Terms: motion events, speech-gesture synchronization, speed

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