Inter- and Intra-Typological Variations of the Representations of Complex Trajectories

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This study presents the results of crosslinguistic stimuli-based experiments, concerning the linguistic representation of motion events which have complex trajectories consisting of multiple Path segments (source, medial, goal). The languages examined were English, Russian, Hungarian, Japanese, and Italian. Following Matsumoto's approach (2017) we use the terms head Path-coding languages (languages coding Path in the main verb) and head-external Path-coding languages (languages coding Path outside the main verb stem) to refer to different types of linguistic expressions of motion event descriptions.

Previous studies on the description of complex trajectory motion events explored the potential existence of universal principles of motion-event segmentation across languages (Bohnemeyer, et al. 2007) and introduced a concept of Path saliency cline inter- and intra-linguistically (Ibarretxe-Antuñano 2009). In this study we will present our data on several different cases of complex trajectories based on the video clips representing real motion events, for example, a dog running out of its cage under a bench into a soccer goal.

Through a video stimuli-based elicitation experiment we collected and analyzed cross-linguistic data on four self-agentive complex trajectory motion events involving source-medial-goal Path segments. In particular, we examined double-segmented and triple-segmented trajectories. We investigated how the complexity of trajectories influenced the description of motion events and looked at the frequency of the reference to the three Path segments.

Firstly, our findings confirmed that all five languages demonstrated the consistency with their typological patterns irrespectively of the complexity of motion trajectories. Japanese and Italian tended to code the Path in the head, while English, Russian and Hungarian didn't code the Path in the head. Secondly, of the three Path segments, the 'goal' segment had the highest frequency and the 'source' segment had the lowest, and this pattern was consistent across all five different languages despite their typological differences. Therefore, our findings supported the existence of source-goal asymmetry in line with the previous studies showing that the 'arrival' segment is cognitively more salient than the 'departure' segment. This tendency of Path indication saliency hierarchy can be potentially cognitively universal in the perception of complex trajectory motion events. Finally, our results demonstrated the preference for different sentence complexity in the case of a triple-segmented trajectory. For example, intra-typological comparison of the three head-external Path-coding languages outlined that languages with morphologically bound head-external elements (prefixes in Russian and preverbs in Hungarian) tended to use the repetition of verbal stems to describe a triple-segmented trajectory, which resulted in the use of more numerous coordinate structures than English, which could cover all the Path segments in a simplex sentence. Intra-typological comparison of the two head Path-coding languages (Italian and Japanese) also showed the difference in the use of subordinate structure.

Therefore, the investigation of complex trajectory motion events showed both language-specific and potentially linguistically universal characteristics giving more insights into both typological and cognitive aspects of motion event representation.

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