## Cross-linguistic tendency of Path encoding: A production experiment of 14 different Paths in English, Hungarian, Italian, Japanese, and Russian

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This study examines if there is a cross-linguistic tendency in the coding of different Paths (e.g. ALONG, TO, INTO, ACROSS, UP), based on experimental results on five languages. It has been pointed out that there is a difference among Paths in their likelihood of being coded in the main verb positions. Matsumoto (2017), for example, points out that TO tends to be expressed by elements outside the main verb, i.e. adpositions and case affixes, whereas UP tends to be expressed by the main verb stem across languages. Based on this observation, Matsumoto et al. (2018) used a production experiment to examine the representation of 14 different Paths in five languages, French, Thai, Kupsapiny, Sidaama, and Tagalog, and suggested a semantic map-scale describing the likelihood of different Paths coded in the main verb. This previous study, however, did not examine typical head-external Path-coding languages, in which Path is coded outside the main verb position.

In the present study, we apply the same production experiment to five more languages: three head-external Path-coding languages (Russian, Hungarian, and English) and two head Path-coding languages (Italian and Japanese), in order to examine if the same tendency can be observed. The participants were asked to watch clips of various motion events with 14 different Paths, and verbally describe what they saw. Path coding positions are categorized into three: 1) the main verb (Head), 2) Adverbals (verb affixes, adverbs, particles), and 3) Adnominals (adpositions, case markers).

The results were generally consistent with earlier findings. In Italian and Japanese, vertical Paths (UP, DOWN) and boundary crossing Paths (ACROSS, OUT, INTO) tend to be coded in the main verb, while locative-like Paths and atelic Paths (VIA.BETWEEN, VIA.UNDER, AROUND, ALONG, and TOWARD) tend not to be coded in the main verb. In English, Hungarian and Russian, Path is almost always expressed in head-external positions, except for the vertical Paths (UP, DOWN) in Russian (UP: 56.7%, DOWN: 70.0%), again consistent with the map-scale.

A new finding is obtained in the pattern of Adverbal coding. Interestingly, Russian and Hungarian show a tendency of using Adverbal elements (if not the main verb) to represent Paths. Vertical Paths (UP, DOWN) and boundary crossing Paths (ACROSS, OUT, INTO) tend to be coded in the prefix/preverb, while locative-like Paths (VIA.BETWEEN, VIA.UNDER, AROUND and ALONG) tend not to be coded in the prefix/preverb. However, English speakers rarely used Adverbals for any Path in our results.

This new finding reveals the relevance of the map scale suggested in Matsumoto et al. (2018) not just to the Head coding of Path but also to the Adverval Path coding in head-external Path-coding languages, suggesting the Path coding in languages is not as different as previous typological studies might have suggested.

## References

Matsumoto, Y. (ed.) (2017). *Idoo-hyoogen no ruikeiron.* [Typology of linguistic expressions for motion events]. Tokyo: Kurosio.

Matsumoto, Y., Morita, T., Kawachi, K., Nagaya, N., & Takahashi, K. (2018). *Types of paths and their linguistic coding: A reconsideration of the typology of motion event descriptions based on a crosslinguistic video experiment.* Workshop at the 157<sup>th</sup> Meeting of the Linguistic Society of Japan, Kyoto University.