

## The coding of movement in ten versions of the “Frog Story” from Nahuatl of Hueyapan

The fact that all languages can encode movement linguistically is an uncontroversial statement, but considerable variation regarding how languages encode movement is attested across the languages of the world. Jackendoff (1983)’s analysis of semantic factors has been influential in this regard. He divides motion events into semantic primitives such as SOURCE, GOAL, PATH, PLACE, MANNER (and more). These semantic primitives may be encoded in different parts of the sentence in different languages. For instance, in Spanish the PATH is usually encoded on the verb and the MANNER would be encoded by an auxiliary verb (*La pelota entró<sub>[PATH]</sub> ala cueva flotando<sub>[MANNER]</sub>*). Contrast this with an English sentence, where MANNER would usually be encoded on the verb (*the ball floated<sub>[MANNER]</sub> into the cave<sub>[PATH]</sub>*) and the PATH is an adverbial phrase. Building on this Talmy (1985) introduces a typology dividing languages into either verb-framing (PATH coded on the verb) or satellite-framing (PATH coded on a satellite phrase outside the verb) languages. Even though this typology has been criticized for being overly simplistic (cf. Zlatev et al., 2021), the central idea has proven useful in descriptions of the grammar of motion. For example, in a Mesoamerican context, Mesoamerican languages has been described as “radically verb-framing”, meaning that the path is always encoded on the verb (Bohnenmeyer et al., 2007; Robbers & Hober, 2018).

Investigating the packaging of motion information is interesting, because the linguistic repertoire of a language has been shown to influence the way motion events are conceptualized. Slobin (1996) describes how some events are more readily (or obligatorily) described in some languages than others. He argues that this influences how people think about the events, calling the concept “thinking-for-speaking”. He argues that the way you think about an event is at least partly dependent on how a language prompts you to speak about the event. This means that a description of motion events in a language is not simply a description of form and distribution of information, but also an investigation of how motion is conceptualized in a language.

This chapter presents an analysis of the encoding of movement in Nahuatl of Hueyapan, Morelos. This variety of Nahuatl belongs to the Central dialect-area (Lastra, 1986), and is similar to the varieties of Northern Morelos, and South West Puebla. We describe how motion events are described in this variety of Nahuatl, and how that compares to previous descriptions of motion in both Nahuatl (e.g. Sasaki, 2011; Amith, 1988; Launey, 2011), other Mesoamerican languages (Bohnenmeyer et al., 2007; Robbers & Hober, 2018), and general typologies of motion descriptions (Ibarretxe-Antuñano, 2009; Levinson & Wilkins, 2006).

The analysis is based on a small corpus of ten different speakers’ narrations of the ‘cliff-scene’ in the story “Frog, where are you?” by Mercer Mayer (1969). The corpus we analyze consists of a total of 1067 words. In Comparative Linguistics the cliff-scene has

been used as visual stimulus to prompt speakers to tell the narrative of a little boy searching for his frog in a forest. Because the Frog Story recordings use the same picture story to prompt different speakers to tell the same narrative, the Frog Story is useful for collecting data that is comparable between speakers, since they all must use the same basic narrative structure. The part of the Frog Story our texts are from, the 'cliff scene' in which the boy is thrown off a cliff by a deer, has been used in several analyses of the semantic encoding of motion events in different languages (e.g. Talmy, 1985; Ibarretxe-Antuñano, 2009; Levinson & Wilkins, 2006; Slobin, 2004).

This analysis of motion events in the Frog Stories aims to describe the linguistic coding of motion events in Nahuatl. This description contributes more generally to the typology of the grammar of motion events. We analyze how spatial information is distributed in the sentence, and what types of motion information is most commonly present in the motion descriptions. Expressions of complex motion events is especially interesting. An example of a complex motion event is an event that involves both a SOURCE and GOAL such as sentence (1). Speakers of Nahuatl of Hueyapan express complex motion events using multiple clauses instead of packing all the information into a single clause.

(1) The deer runs from the bush<sub>[SOURCE]</sub> to the cliff<sub>[GOAL]</sub>

As an example, instead of expressing both the source and the goal in the same clause such as in English in (1), the events are segmented into multiple clauses each denoting a sub-part of the complex motion event as in example (2).

(2) It Emerges from the bush. It approaches the cliff.

We discuss how this tendency in the language can be understood in relation to the high degree of verb-framing and other general facts of the language. Especially the use of the locational and relational nouns in Nahuatl is interesting in this regard. These categories of nouns have previously been described as taking the PLACE function (and being PATH-neutral), but this is not entirely unambiguous in our data. This might be explained by influence from Spanish, as also suggested by Robbers & Hober (2018). They argue that the preposition *de* designates PATH when borrowed into Mesoamerican languages. This is also attested in our data, and in addition to those examples, some examples suggest that the influence of the PATH encoding prepositions might have caused a shift for previous locative and relational nouns to gain a more prepositional status that can designate PATH. We argue that this highlights an interesting relationship between structural category and semantic function; the shift in structural category is accompanied by a shift in the semantic content of the signs.

## References

- Amith, J. D. (1988). The use of directionals with verbs in the Nahuatl of Ameyaltepec, Guerrero. In J. K. Josserand & K. Dakin (Eds.), *Smoke and mist: Mesoamerican studies in memory of thelma d. Sullivan* (pp. 395–421). B.A.R.
- Bohnemeyer, J., Enfield, N. J., Essegbey, J., Ibarretxe-Antuñano, I., Kita, S., & Lüpke, F. (2007). Principles of event segmentation in language: The case of motion events. *Language*, 83(3), 495–532.
- Ibarretxe-Antuñano, I. (2009). Path salience in motion events. In *Crosslinguistic approaches to the psychology of language: Research in the tradition of dan isaac slobin* (pp. 403–414). Psychology Press.
- Jackendoff, R. (1983). *Semantics and cognition*. MIT Press.
- Lastra, Y. (1986). *Las áreas dialectales del náhuatl moderno*. Universidad Nacional Autónoma de México, Instituto de Investigaciones Antropológicas.
- Launey, M. (2011). *An introduction to classical Nahuatl*. Cambridge University Press.
- Levinson, S. C., & Wilkins, D. P. (2006). *Grammars of space: Explorations in cognitive diversity*. (S. C. Levinson & D. P. Wilkins, Eds.). Cambridge University Press.
- Mayer, M. (1969). *Frog, Where Are You?* Dial Books for Young Readers.
- Robbers, M., & Hober, N. (2018). Verb-framed spatial deixis in Mesoamerican languages and the increasing complexity of source constructions via Spanish de. *STUF - Sprachtypologie Und Universalienforschung*, 71(3), 397–423.  
<https://doi.org/10.1515/stuf-2018-0016>
- Sasaki, M. (2011). Classical Nahuatl locatives in Typological. *Tokyo University Linguistic Papers (TULIP)*, 31, 287–316.
- Slobin, D. I. (1996). From "thought and language" to "thinking for speaking". In J. J. Gumperz & S. C. Levinson (Eds.), *Rethinking linguistic relativity* (pp. 70–96). Cambridge University Press.
- Slobin, D. I. (2004). The many ways to search for a frog: Linguistic typology and the expression of motion events. In S. Strömquist & L. Verhoeven (Eds.), *Relating events in narrative: Vol 2. Typological and contextual perspectives* (Vol. 2, pp. 219–257). Lawrence Erlbaum Associates. <https://doi.org/10.4324/9781410609694>
- Talmy, L. (1985). Lexicalization patterns: Semantic structure in lexical forms. *Language Typology and Syntactic Description*, 3(1), 57–149.
- Zlatev, J., Blomberg, J., Devylder, S., Naidu, V., & Weijer, J. van de. (2021). Motion event descriptions in Swedish, French, Thai and Telugu: a study in post-Talmian motion event typology. *Acta Linguistica Hafniensia*, 53(1), 58–90.  
<https://doi.org/10.1080/03740463.2020.1865692>