

DOI: <http://dx.doi.org/10.1590/1982-4017-160305-0916D>

## MINDING YOUR MANNERS: LINGUISTIC RELATIVITY IN MOTION

Michele I. Feist\*

University of Louisiana at Lafayette  
English Department  
Lafayette, LA, USA

**Abstract:** *Do speakers think about the world differently depending on the language they speak? In recent years, this question has generated substantial interest in the cognitive sciences, driven in part by Talmy's (1985; 2000) observations regarding the typology of motion descriptions. However, a flurry of research (CIFUENTES-FEREZ; GENTNER, 2006; GENNARI et al., 2002; NAIGLES; TERRAZAS, 1998; PAPAFRAGOU; HULBERT; TRUESWELL, 2008; among others) has produced mixed results, leaving us no closer to understanding the role of language in motion event cognition. In this paper, I revisit the linguistic analysis, combining Talmy's observations with those of Slobin (2004) to refocus the question on the differential salience of Manner across languages. I then present results from three studies that suggest that cross-linguistic differences in the salience of Manner are connected to speakers' likelihood of encoding Manner information, in line with the Linguistic Relativity Hypothesis.*

**Keywords:** *Linguistic relativity. Motion verb. Manner salience.*

### 1 INTRODUCTION

Think about how you got to your current location: if you are a speaker of English, chances are that you thought something akin to the sentence in (1); if you are a speaker of Spanish or Portuguese, chances are that the sentence you thought was more similar to that in (2).

I walked into the room.  
Entré en la habitación.  
enter-1sg-pst in the-fem room  
*I entered the room.*

However, if you were to picture your arrival at your current location rather than to describe it in language, you would envision not only yourself as mover (the *Figure* in the motion event), but also the room you were entering (the *Ground*) and the *Path* that you were following (*into* the room), along with the fact that you were moving and the way in which you moved (the *Manner* of motion: *walking* in the examples above). While all these elements of the event are available to all observers, languages vary in how they are

---

\* PhD in Linguistics. Associate Professor of Linguistics. E-mail: [feist@louisiana.edu](mailto:feist@louisiana.edu).

encoded (TALMY, 1985, 2000; SLOBIN, 2004), both in terms of which elements tend to be encoded and in terms of the lexical classes most typically used to encode each element. For example, whereas both sentences (1) and (2) encode the Figure, the Ground, the fact of motion, and the Path, only sentence (1) encodes the Manner of motion. In addition, the two sentences differ in how they encode the Path, which surfaces as a separate word in sentence (1) but is conflated (TALMY, 1985) in the verb in sentence (2).

Based on differences such as these in descriptions of motion events across languages, Talmy (1985; 2000) argued that languages may be categorized according to how they encode motion. One category of languages, verb-framed languages, tends to encode the Path of motion in the main verb, as exemplified by the sentence in (2); this category includes Romance languages such as Spanish and Portuguese, as well as Japanese and Greek. In contrast, satellite-framed languages, such as Germanic and Slavic languages, tend to encode the Path of motion in a separate element (the satellite), thus leaving the verb free to encode Manner along with the fact of motion, as seen in example (1). The categorization of languages as either verb-framed or satellite-framed has received support from the appearance of similar patterns in elicited motion descriptions across a variety of studies and a variety of languages (BERMAN; SLOBIN, 1994; GENNARI et al. 2002; PAPAFRAGOU; MASSEY; GLEITMAN, 2002; PAPAFRAGOU; MASSEY; GLEITMAN, 2006; SLOBIN, 1996; STRÖMQVIST; VERHOEVEN 2004, *inter alia*).

While Talmy's observations, and the elicited data, make clear that speakers of different languages talk about motion differently, there remains an open question regarding whether speakers also think about motion differently. As demonstrated in the example above, all aspects of a motion event are available to observers, regardless of whether these elements would likely be encoded in a linguistic description, suggesting that while language may vary, cognition need not. However, although the entire event is doubtless available to a speaker, there are more details than the speaker is likely to encode, with the result that "experiences [may be] filtered through language into verbalized events" (SLOBIN, 1996, p. 71). Thus, the mere fact that the entire event is available to all observers does not indicate that as a result all observers *do* think about motion in the same way.

How can we know whether patterns in the language lead to differences in how speakers think about motion? What might we expect if observers think about motion in ways that are consistent with their language's encoding of motion events? One salient difference between verb-framed languages and satellite-framed languages is the element that tends to be conflated with the fact of motion in the main verb: in verb-framed languages, this is the Path of motion, whereas in satellite-framed languages, this is more frequently the Manner. As a result, we might expect speakers of verb-framed languages to pay more attention to Path than to Manner, while speakers of satellite-framed languages may exhibit the opposite pattern. This hypothesis has been tested across a multitude of studies, including those focused on recognition memory (e.g., BILLMAN; KRYCH, 1998; GENNARI et al. 2002; PAPAFRAGOU; MASSEY; GLEITMAN, 2002), judgments of similarity (e.g., FINKBEINER et al. 2002; GENNARI et al. 2002;

PAPAFRAGOU; MASSEY; GLEITMAN, 2002), and visual attention (e.g., PAPAFRAGOU; HULBERT; TRUESWELL, 2008), with mixed results.

For example, Gennari and her colleagues (2002) looked at recognition for videotaped motion events in speakers of one satellite-framed language, English, and one verb-framed language, Spanish. Participants were asked to remember a set of target events under one of three conditions which manipulated the role of language at encoding: (1) after naming the events; (2) while repeating nonsense syllables (so as to block access to verbal working memory); or (3) with no concomitant task. To test whether speakers attend to the element that is privileged in their language (either Path or Manner) at the expense of the other, the experimenters created two recognition foils: one which showed the same Path as the target video, but differed in Manner; and one which showed the same Manner of motion, but differed in Path. They then presented all three versions of each event, in random order, during the recognition test. Gennari and her colleagues observed an effect of language on participants' ability to recognize the target items, with English speakers performing better than Spanish speakers (particularly when the role of language at encoding was reduced), suggesting that language may influence recognition for motion events. However, there was no effect of language on speakers' recognition performance for previously unseen items (i.e., the recognition foils), contrary to the predictions of the Linguistic Relativity Hypothesis.

In the same study, Gennari and her colleagues (2002) collected similarity judgments for each of the recognition foils relative to its target event. They reasoned that if language influences such judgments, then Spanish speakers, who encode Path in the verb, would judge the same-Path variant as more similar than the same-Manner variant; but English speakers, who encode Manner in the verb, would show the opposite pattern in their similarity judgments. They found that amongst participants who had named the target events during encoding, Spanish speakers were more likely than English speakers to judge the same-Path variant as more similar than the same-Manner variant, in line with the Linguistic Relativity Hypothesis. However, same-Path choices did not differ between the two language groups for speakers who had not previously completed the description task.

Finally, Papafragou and her colleagues (PAPAFRAGOU; HULBERT; TRUESWELL, 2008) asked whether speakers of Greek (which is verb-framed) and speakers of English (which is satellite-framed) would attend to different parts of a visual scene when watching a motion animation. To find out, they used an eye-tracker to track participants' gazes while watching a series of clip art animations. When speakers were told that they would need to describe the events after watching them, there was a clear effect of language: Greek speakers attended first to the Path endpoint and only later to the instrument indicating Manner, and English speakers evidenced the opposite pattern.<sup>1</sup> However, no effect of language was observed when speakers were told to remember the animations, without being asked to describe them.

---

<sup>1</sup> These patterns obtained only for the bounded animations; there was no Path endpoint for participants to look at in the unbounded animations.

The results of these studies leave open many questions regarding potential effects of language on motion event cognition. While each of these studies revealed effects of language, the effects were limited and only surfaced under particular circumstances, suggesting that effects of language on cognition, when present, are in fact quite weak. However, the inconsistency in the results, both within and across studies, raises another possibility. Before we can conclude that the effects of language in this domain are indeed modest, we must be sure that the cross-linguistic differences motivating the studies completely characterize the way in which motion information is encoded in the languages, and that the studies are testing cognitive consequences that are consistent with the information encoded in the languages. The studies reviewed above all share a conceptual foundation in two assumptions: first, that Manner and Path are conceptually equally weighted, allowing researchers to compare attention allocated to each; and second, that the information encoded in the main verb is uniquely important. Should a reexamination of the linguistic data reveal that either or both of these assumptions may be flawed, this would similarly call into question conclusions regarding the limited effects of language on cognition.

## 2 LINGUISTIC ANALYSIS REVISITED

Talmy (2000, p. 25) defined a basic motion event as “one object (the Figure) moving or located with respect to another object (the reference object or Ground)”. As Slobin (2004, p. 223) points out, Path is thus an obligatory element of a motion event (see also Jackendoff 1996), but Manner is optional. This suggests an asymmetry between Path and Manner, as (1) Path, but not Manner, is obligatory; and (2) Path is intimately connected to another element, the Ground (see also FEIST, 2010). As Feist (2010) has shown, this asymmetry is borne out in differences in the linguistic expression of Path and Manner in single-clause motion event descriptions.

Feist (2010) examined the sentences used in a sample of studies which explored the role of the syntactic frame in speakers’ inferences about the meanings of novel verbs (CIFUENTES-FEREZ; GENTNER, 2006; NAIGLES; TERRAZAS, 1998; HOHENSTEIN, 2005; HOHENSTEIN; NAIGLES; EISENBERG, 2004). She identified three syntactic frames that were used in these studies: the bare intransitive frame (3), the transitive frame (4), and the intransitive plus prepositional phrase frame (5).

- (1) I walked.
- (2) I entered the room.
- (3) I walked into the room.

Whereas the bare intransitive frame can occur with both Path and Manner verbs (HOHENSTEIN; NAIGLES; EISENBERG 2004), the other two frames introduce biases due to their heightened likelihood to occur with only one type of verb: the transitive frame occurs more frequently with Path verbs, and the intransitive plus prepositional phrase frame, with Manner verbs (CIFUENTES-FEREZ; GENTNER, 2006; HOHENSTEIN,

2005; HOHENSTEIN; NAIGLES; EISENBERG 2004; NAIGLES; TERRAZAS, 1998). These biases have been found to interact with the typological tendencies of a speaker's language: when adult speakers of satellite-framed English and verb-framed Spanish were asked to interpret novel verbs presented in the biasing frames, their typological preferences were evident, with English speakers preferring Manner interpretations and Spanish speakers, Path interpretations (CIFUENTES-FEREZ; GENTNER, 2006; NAIGLES; TERRAZAS, 1998). However, when speakers were asked to interpret novel verbs in the unbiased bare intransitive frame (NAIGLES; TERRAZAS, 1998), no typological differences were observed. More surprisingly, speakers preferred the Manner interpretation to the Path interpretation, despite Path's obligatory status in a basic motion event (SLOBIN, 2004; TALMY, 2000).

To account for these findings, Feist (2010) examined how the conceptual elements of a motion event (the Figure, Ground, Path, Manner, and fact of motion) surfaced in the lexical items in the three frames in use in these studies. Consider first the two biasing frames, exemplified above in examples (4) and (5). In the path-biasing transitive frame (example 4), the Figure surfaces as the subject (*I*) and the Ground as the direct object (*the room*), while Path is conflated with the fact of motion in the verb (*entered*). In the manner-biasing intransitive plus prepositional phrase frame (example 5), the Figure again surfaces as the subject (*I*), but this time the Path surfaces in the preposition (*into*) and the Ground, as the object of the preposition (*the room*), leaving a slot open in the verb for conflation of Manner (*walked*) along with the fact of motion. Finally, in the non-biasing bare intransitive frame (example 3), the Figure again surfaces as the subject (*I*), and the verb is available to encode one element in addition to the fact of motion (TALMY, 1985). Although the bare intransitive allows both Path and Manner verbs, the experimental findings suggest a preference for conflating Manner with the fact of motion (NAIGLES; TERRAZAS, 1998). Converging evidence may be found in elicited narratives, with the majority of adult English speakers' Manner verb usages in Frog story narratives being intransitive<sup>2</sup>. As a result, the bare intransitive frequently encodes the Figure and Manner, leaving the Path and Ground unexpressed.

From these patterns, we can see that Manner is encoded in a description in two situations: when both Path and Ground are (intransitive plus prepositional phrase frame) and when neither is (the bare intransitive frame). In contrast, Path is preferentially encoded whenever the Ground is (i.e., in the transitive frame and in the intransitive plus prepositional phrase frame), suggesting a conceptual link between the Path and the Ground. This linkage makes sense, given that the Path requires a Ground as its substrate (c.f. SLOBIN 2004, in which the assumption that Path is obligatory in a basic motion event results from Talmy's [2000] specification of motion "with respect to another object"). The linkage of Path to another element of a motion event may increase its salience when either the Path or the Ground is mentioned in the description (FEIST, 2010). Because there is no parallel linkage for manner, this suggests that the conceptual weight – and likely salience – of Manner and Path may not be equal.

---

<sup>2</sup> Slobin (2004) reports that combined transitive and intransitive Manner verbs occur in just under 60% of adult English motion event descriptions (Slobin 2004: Figure 2), while intransitive tokens occur in just under 45% of descriptions (SLOBIN, 2004: Figure 3).

The above analysis also makes clear that the three sentence frames used in the experimental literature encode the Figure, the Ground, and the Path in elements other than the verb. Thus, much of the information about the event – in fact most of it – is routinely encoded elsewhere in the sentence frame. Furthermore, Feist (2010) has argued that the conflation of Path or Manner in the verb may be predictable based on Gricean (GRICE, 1975) principles. She argues that to satisfy Grice's Maxim of Quantity, the conflated element should not be encoded elsewhere in the sentence, while to satisfy the Maxim of Relation, it should "be maximally related to those elements which are encoded" elsewhere in the sentence (FEIST, 2010, p. 194). Thus, the choice of which conceptual element to encode in the verb is highly dependent on the semantics of the other lexical items in the sentence. The interdependence of the lexical items, including the verb, suggests that the elevated importance accorded to the verb in many studies of linguistic relativity may in fact be misplaced.

Taken together, the linguistic evidence suggests two things. First, there appears to be a conceptual asymmetry between Path and Manner, whereby Path is (1) more foundational to an event's classification as a motion event, and (2) more intimately connected to other elements of the motion event. Because Path and Manner may not be on conceptually equal footing nonlinguistically, it is impossible to interpret asymmetries between them amongst speakers of typologically different languages. Second, the conceptual elements of a motion event are distributed across the lexical items in a description, with the conflation of one element in the verb dependent on which other elements are encoded across the string. As a result, the information encoded in the verb, rather than being uniquely important, is highly interdependent with the information encoded in other lexical items.

### 3 LANGUAGE AND THOUGHT

If language were to influence motion event cognition, what form might that influence take? The reanalysis of the linguistic data suggests that languages may not in fact differentially feature either Path or Manner in motion descriptions. As a result, framing the question around the comparison of Path and Manner may not tap into differences in how languages encode motion events. More specifically, the observation that Path is obligatory for an event to be a motion event (JACKENDOFF, 1996; SLOBIN, 2004; TALMY, 2000) suggests that languages may not differ in the prominence accorded to Path. However, whereas Path may not be differentially salient to speakers of typologically different languages, Slobin (2004) has argued that Manner is.

Looking beyond what is encoded in the verb to take into account other sentential elements and, indeed, surrounding context, Slobin (2004) observed variation in the expression of Manner that went well beyond the lexical differences that Talmy (1985; 2000) had uncovered. For example, languages vary in their use of adverbials (e.g., ÖZÇALIŞKAN; SLOBIN 2003), ideophones (e.g., IBARRETXE-ANTUÑANO, 2003), and gesture (e.g., MCNEILL; DUNCAN, 2000) to encode manner information. Furthermore, Slobin noted intratypological variation in the use of Manner verbs themselves, with Germanic languages making modest use of them as compared to

Mandarin and, even more strikingly, Russian, despite all of these languages being satellite-framed. Slobin argued that the observed variation in the likelihood of encoding manner is too fine-grained to be accommodated by the two part Talmian typology contrasting verb-framed and satellite-framed languages, and instead proposed that languages may fall along a cline of Manner salience.

Manner salience indexes the ease and naturalness with which Manner information is encoded in a description of a motion event (SLOBIN, 2004) – in other words, the *codability* (cf. BROWN; LENNEBERG, 1954) of Manner. High Manner salience within a language is evident from frequent references to Manner in motion descriptions, a rich lexicon of Manner-encoding items which mark fine distinctions between Manners, and the early acquisition of Manner verbs amongst children (SLOBIN, 2003). Slobin (2003) goes on to argue that the salience of Manner in a language impacts not only the use of language, but also speakers' conceptualizations of motion events. As such, Manner may be expected to be more accessible to speakers of high-Manner-salient languages, and more likely to be encoded when those speakers observe motion events. These predictions provide a means for testing the hypothesis that motion language influences motion cognition while avoiding the pitfalls associated with a comparison between attention to Path and attention to Manner.

In order to assess the relation between salience and accessibility of Manner information, Feist (2013) asked speakers of high-Manner-salient English and of low-Manner-salient Spanish to describe short motion events, using only one word in each description. The events involved a range of Manners of motion, but kept the Path and Ground constant, allowing an examination of the codability of Manner in these two languages. Feist reasoned that one way in which language may influence thought is through easing the accessibility of highly codable concepts (HUNT; AGNOLI, 1991). Thus, in addition to testing whether Manner was more codable in English than in Spanish, she examined the relation between codability and cognitive cost for this set of motion events.

Feist measured the codability of the Manners in her motion events in three ways. First, she calculated the length in phonemes of the descriptions elicited for each event, with higher codability indicated by shorter descriptions (BROWN; LENNEBERG, 1954; ROSCH; HEIDER, 1972). A second index of length of descriptions can be found in the proportion of participants who provided a one-word description as requested; this, thus, constituted the second measure of codability. Finally, she calculated the degree to which participants agreed on the label for each event, with higher codability indicated by higher interpersonal agreement (BROWN; LENNEBERG, 1954; LUCY; SHWEDER, 1979). By all three measures, Feist found that Manner was more highly codable for speakers of high-Manner-salient English than for speakers of low-Manner-salient Spanish.

To estimate the difficulty participants had accessing concepts associated with each motion event, Feist used two measures of cognitive cost. First, she measured the latency between seeing an event and beginning to type a description, with longer latencies indicating greater difficulty accessing the relevant concept (Traxler 2012). Second, reasoning that greater difficulty accessing a concept may lead to greater uncertainty in the response, Feist measured the rate at which participants changed their responses to

each of the motion events. Both measures revealed lower cognitive cost for speakers of high-Manner-salient English than for speakers of low-Manner-salient Spanish, suggesting that language may influence the ease of accessibility of Manner of motion information.

In related work, Feist, Rojo, and Cifuentes (2007) asked whether the contextual salience of Manner information would influence the ease with which speakers could verify whether or not a Manner-encoding verb described an event. Participants viewed events either in a high Manner salience condition (i.e., viewing multiple events that differed only in Manner of motion) or a low Manner salience condition (i.e., viewing a single motion event) before indicating whether a description employing a Manner verb was true of the target motion event. They found that English speakers were faster to respond in the low Manner salience condition than in the high Manner salience condition, likely due to the higher cognitive load associated with maintaining multiple events in working memory. However, this difference was not evident for the Spanish speakers, who responded equally quickly to event descriptions in the two conditions, suggesting that the heightened salience of Manner introduced by the context may have facilitated Spanish speakers' access to Manner information, counteracting the difference in cognitive load associated with holding more vs fewer events in working memory.

Both of these studies examined accessibility of Manner information as revealed by access to and retrieval of lexical items. However, if speakers' conceptualizations of motion events are indeed influenced by the salience of Manner within their language, speakers of high-Manner-salient languages may also be more likely to encode and remember information about Manner of motion from the motion events they observe (SLOBIN, 2003). Furthermore, if cross-linguistic differences in memory for Manner are indeed due to the differential salience of Manner, these effects should be attenuated by variation in the contextual salience of Manner (FEIST; ROJO; CIFUENTES, 2007). To test these hypotheses, Feist and Cifuentes-Férez (2013) asked speakers of English and Spanish to remember short motion events for later recognition. As in their earlier work (FEIST; ROJO; CIFUENTES, 2007; FEIST, 2013), the events involved a variety of Manners of motion, but kept the Path and Ground constant, allowing the contextual salience of Manner information to be manipulated through the number of motion events participants were shown during the first phase of the experiment: participants saw either three or ten events, of which recognition memory would subsequently be probed for just three.

The results suggest that cross-linguistic differences in the salience of Manner do influence memory for Manner information: English speakers made fewer errors overall than did Spanish speakers on the recognition task, regardless of the contextual salience of Manner. Looking more closely at the data, however, complexities emerge in the interplay of Manner salience, language, and memory for Manner. As with other tests of recognition memory (e.g., BILLMAN; KRYCH, 1998; GENNARI et al., 2002; PAPAFRAGOU; MASSEY; GLEITMAN, 2002), there were two ways participants could make an error in the recognition test: participants could indicate that they thought they had seen a previously unseen item (*a false alarm*), or they could indicate that they thought they had not seen one of the events shown to them during the initial phase of the

experiment (a *miss*); and the effects of language and contextual salience differed for the two kinds of errors. As with the overall error rates, the false alarm rates revealed an effect of language whereby English speakers evidenced fewer false alarms than did Spanish speakers. The data on misses, in contrast, echoed the earlier data on motion verb verification (FEIST; ROJO; CIFUENTES, 2007): English speakers performed better in the low Manner salience condition than in the high Manner salience condition, but Spanish speakers performed better in the *high* Manner salience condition than in the low Manner salience condition, indicating that for speakers of a low-Manner-salient language, the contextual salience of manner may counteract the heightened difficulty of the task.

Taken together, these results suggest that the salience of Manner may influence its encoding and retrieval, even when speakers need not produce linguistic descriptions. However, the salience of Manner is a function not only of its codability in the language (FEIST, 2013), but also of its prevalence in the context (FEIST; ROJO; CIFUENTES, 2007), with different consequences for recognition memory depending on the source of Manner's heightened salience. As such, the evidence suggests that language likely influences motion event cognition, and that these influences act in concert with the context within which a motion event is experienced.

#### 4 CONCLUSIONS

Talmy's (1985; 2000) careful analyses of the lexicalization of motion revealed an independence between concepts and lexical items, whereby the same concepts may be lexically packaged in a variety of ways. Talmy further argued that individual languages, rather than making full use of the variety of mapping possibilities, demonstrated characteristic patterns in their encoding of these concepts. The ease with which languages may be classed in Talmy's (1985; 2000) typology and the separation between lexical items and conceptual elements have made motion cognition an attractive domain in which to test whether language influences thought, with many studies focusing on cross-linguistic differences in the conceptual element typically encoded within the main verb. Within and across studies, this body of research has uncovered a mixed tapestry of evidence suggesting that effects of language, when present, may be limited and fragile.

However, the motion verb is but one element in a linguistic description, as Talmy (1985; 2000) very clearly showed. Language provides an extremely rich and nuanced medium for the encoding of experience. Complexities in the mapping of concepts to language have been observed at many levels of linguistic structure, including lexical items (e.g., FEIST, 2008), constructions (e.g., GOLDBERG, 1995), and narratives (e.g., SLOBIN, 2004). In the case of motion event descriptions, the mappings between concepts and lexical items are intertwined, such that the encoding of each concept is dependent on the identity and mapping of other encoded concepts across the description (FEIST, 2010), as detailed above. As such, unique focus on a single lexical element – the verb – may be obscuring the richness of information to which language may direct a speaker's attention.

Looking closely at motion language with this in mind, it becomes evident that the two conceptual elements figuring most prominently in Talmy's (1985; 2000) typology, Path and Manner, are not equivalently weighted in motion conception. First, whereas

Manner is optionally encoded, Path, which surfaces in the most common sentence patterns across typologically different languages, is one of four obligatory elements defining a motion event (JACKENDOFF, 1996; TALMY, 2000). In addition, Path and Ground are conceptually interdependent (FEIST, 2010), with the result that the mention of the Ground may heighten the salience of the Path. Manner, in contrast, may stand alone, and thus does not receive a boost in salience from the mention of other conceptual elements. This asymmetry undermines comparisons between attention to Path and attention to Manner, like those forming the basis of much research investigating the influence of language on cognition in this domain.

Moving beyond Talmy's original typology, Slobin and his colleagues (ÖZÇALIŞKAN; SLOBIN 2003; SLOBIN, 2003, 2004) have argued that languages vary in the salience accorded to Manner of motion, rather than merely in the mapping of conceptual elements to lexical items. The variation across languages in the salience of a single conceptual element opens new avenues for studying potential effects of language on motion cognition. Across three studies, Feist and her colleagues (FEIST, 2013; FEIST; CIFUENTES-FEREZ, 2013; FEIST; ROJO; CIFUENTES, 2007) observed connections between the salience of Manner in a language and its availability to speakers as they described and recognized short motion events. Furthermore, these connections were likewise evident across differences in the contextual salience of Manner information (FEIST; CIFUENTES-FEREZ, 2013; FEIST; ROJO; CIFUENTES, 2007), implicating the salience of Manner *per se* as a driving force behind the effects of language in these tasks. These results suggest not only that language influences motion cognition, but also that a complete understanding of the influence of language will require consideration of patterns in linguistic descriptions rather than in individual lexical items.

Cross-linguistic variation, like language itself, is extremely rich and nuanced. These nuances are critical to an understanding of the interplay of language and cognition, an interplay that extends beyond lexicalization patterns to tendencies in encoding that pervade language use.

## ACKNOWLEDGEMENTS

I am grateful to Paula Cifuentes-Férez and Ana Rojo for their help with portions of this research and for many discussions of these ideas. I would also like to thank Jan Edson Leite for his help translating the title and abstract.

## REFERENCES

- BERMAN, R. A.; SLOBIN, D. I. *Relating Events in Narrative: A Cross-Linguistic Developmental Study*. Hillsdale, NJ: Lawrence Erlbaum Associates, 1994.
- BILLMAN, D.; KRYCH, M. Path and Manner Verbs in Action: Effects of 'Skipping' or 'Exiting' on Event Memory. In: *Proceedings of the Twentieth Annual Conference of the Cognitive Science Society*. Edited by Morton Ann Gernsbacher and Sharon J. Derry, p. 156–161. Hillsdale, NJ: Lawrence Erlbaum Associates, 1998.
- BROWN, R. W.; LENNEBERG, E. H. "A Study in Language and Cognition." *Journal of Abnormal and Social Psychology* v. 49, n. 3, p. 454-462, 1954.
- CIFUENTES-FEREZ, P.; GENTNER, D. Naming Motion Events in Spanish and English. *Cognitive Linguistics*, v. 17, n. 4, p. 443-462, 2006.
- FEIST, M. I. Space between Languages. *Cognitive Science*, v. 32, p. 1177-1199, 2008.

- \_\_\_\_\_. Motion through Syntactic Frames. *Cognition*, v. 115, n. 1, p. 192-196, 2010. doi:10.1016/j.cognition.2009.11.011.
- \_\_\_\_\_. Codability and Cost in the Naming of Motion Events. *Rivista Italiana Di Filosofia Del Linguaggio*, v. 7, n. 3, p. 45-61, 2013. doi:10.4396/174.
- FEIST, M. I.; CIFUENTES-FEREZ, P. Remembering How: Language, Memory, and the Salience of Manner. *Journal of Cognitive Science*, v. 14, p. 379-398, 2013.
- FEIST, M. I.; ROJO, A.; CIFUENTES, P. Salience and Acceptability in Spanish Manner Verbs: A Preliminary View. *International Journal of English Studies*, v. 7, n. 1, p. 137-148, 2007. <<http://revistas.um.es/ijes/article/view/48951>>.
- FINKBEINER, M.; NICOL, J.; GRETH, D.; NAKAMURA, K. The Role of Language in Memory for Actions. *Journal of Psycholinguistic Research*, v. 31, n. 5, p. 447-457, 2002. doi:10.1023/A:1021204802485.
- GENNARI, S. P.; SLOMAN, S. A.; MALT, B. C.; FITCH, W. T. Motion Events in Language and Cognition. *Cognition*, v. 83, n. 1, p. 49-79, 2002. <http://cognitntrn.psych.indiana.edu/rgoldsto/courses/concepts/gennari.pdf>.
- GOLDBERG, A. E. *Constructions: A Construction Grammar Approach to Argument Structure*. Edited by Gilles Fauconnier, George Lakoff, and Eve Sweetser. *Culture*, Vol. 25. Cognitive Theory of Language and Culture. University of Chicago Press, 1995. doi:10.1016/S0378-2166(97)81937-6.
- GRICE, H. P. Logic and Conversation. In: *Syntax and Semantics: Vol. 3. Speech Acts* Edited by P. Cole and J. L. Morgan. NY: Academic Press, 1975. p. 41-58.
- HOHENSTEIN, J. M. Language-Related Motion Event Similarities in English-and Spanish-Speaking Children. *Journal of Cognition and Development*, v. 6, n. 3, p. 403-425, 2005.
- HOHENSTEIN, J. M.; NAIGLES, L. R.; EISENBERG, A. R. Keeping Verb Acquisition in Motion: A Comparison of English and Spanish. In: *Weaving a Lexicon*. Edited by D. Geoffrey Hall and Sandra R. Waxman. Cambridge, MA: MIT Press, 2004. p. 569-602.
- HUNT, E.; AGNOLI, F. The Whorfian Hypothesis: A Cognitive Psychology Perspective. *Psychological Review*, v. 98, n. 3, p. 377-389, 1991.
- IBARRETXE-ANTUÑANO, I. Motion Events in Basque Narratives. In: *Relating Events in Narrative: Typological and Contextual Perspectives*. Edited by Sven Strömquist and Ludo Verhoeven. Mahwah, NJ: Lawrence Erlbaum Associates, 2003.
- JACKENDOFF, R. The Architecture of the Linguistic-Spatial Interface. In: *Language and Space*. Edited by Paul Bloom, Mary A. Peterson, Lynn Nadel, and Merrill F. Garrett, 1-30. Cambridge, MA: MIT Press, 1996.
- LUCY, J. A.; SHWEDER, R. A. Whorf and His Critics: Linguistic and Nonlinguistic Influences on Color Memory. *American Anthropologist*, v. 81, n. 3, p. 581-615, 1979. doi:10.2307/675777.
- MCNEILL, D.; DUNCAN, S. D. 2000. Growth Points in Thinking-for-Speaking. In: *Language and Gesture*. Edited by David McNeill. Cambridge, UK: Cambridge University Press, 2000. p. 141-161.
- NAIGLES, L. R.; TERRAZAS, P. Motion-Verb Generalizations in English and Spanish: Influences of Language and Syntax. *Psychological Science*, v. 9, n. 5, p. 363-369, 1998.
- ÖZÇALIŞKAN, Ş.; SLOBIN, D. I. Codability Effects on the Expression of Manner of Motion in Turkish and English. In: *Studies in Turkish Linguistics*. Edited by A. S. Özsoy, D. Akar, M. Nakipoğlu-Demiralp, E. Erguvanlı-Taylan, and A. Aksu-Koç, 259-70. Istanbul: Boğaziçi University Press, 2003.
- PAPAFRAGOU, A.; HULBERT, J.; TRUESWELL, J. Does Language Guide Event Perception? Evidence from Eye Movements. *Cognition*, v. 108, n. 1, p. 155-184, 2008. doi:10.1016/j.cognition.2008.02.007.
- PAPAFRAGOU, A.; MASSEY, C.; GLEITMAN, L. Shake, Rattle, 'N' Roll: The Representation of Motion in Language and Cognition. *Cognition*, 2002. doi:10.1016/S0010-0277(02)00046-X.
- \_\_\_\_\_. 2006. When English Proposes What Greek Presupposes: The Cross-Linguistic Encoding of Motion Events. *Cognition*, v. 98, n. 3, p. B75-87. doi:10.1016/j.cognition.2005.05.005.
- ROSCH HEIDER, E. 1972. Universals in Color Naming and Memory. *Journal of Experimental Psychology*, v. 93, p. 10-20, 1972.
- SLOBIN, D. I. *Language and Thought Online: Cognitive Consequences of Linguistic Relativity*. MIT Press, p. 157-192, 2003.
- \_\_\_\_\_. From 'thought and Language' to 'thinking for Speaking.' In: *Rethinking Linguistic Relativity*. Edited by J. J. Gumperz and Stephen C. Levinson, p. 70-96. Cambridge UK: Cambridge University Press,

1996.

\_\_\_\_\_. The Many Ways to Search for a Frog: Linguistic Typology and the Expression of Motion Events. In: *Relating Events in Narrative: Typological and Contextual Perspectives*. Edited by Sven Strömquist and Ludo Verhoeven, p. 219-257. Mahwah, NJ: Lawrence Erlbaum Associates, 2004.

STRÖMQVIST, S.; VERHOEVEN, L. (Eds.). *Relating Events in Narrative: Typological and Contextual Perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates, 2004.

TALMY, L. Lexicalization Patterns: Semantic Structure in Lexical Forms. In: *Language Typology and Syntactic Description*, Vol. 3, edited by Timothy Shopen, p. 57-149. Cambridge, UK: Cambridge University Press, 1985.

\_\_\_\_\_. *Toward a Cognitive Semantics*, Vol. 2. Cambridge, MA: MIT Press, 2000.

TRAXLER, M. J. 2012. *Introduction to Psycholinguistics: Understanding Language Science*. Wiley-Blac. West Sussex, 2012.

**Recebido em: 13/07/16. Aprovado em: 28/10/16.**

**Título:** *Olhando seus modos: a relatividade linguística em movimento*

**Autora:** Michele I. Feist

**Resumo:** *Os falantes refletem sobre o mundo de forma diferente, dependendo da língua que falam? Nos últimos anos, essa pergunta gerou um interesse substancial nas ciências cognitivas, parcialmente motivado pelas observações de Talmy (1985; 2000) a respeito da tipologia das descrições de movimento. Entretanto, variadas pesquisas (CIFUENTES-FÉREZ; GENTNER, 2006; GENNARI et al. 2002; NAIGLES; TERRAZAS, 1998; PAPAFRAGOU; HULBERT; TRUESWELL, 2008; entre outras) obtiveram resultados diferenciados entre si, impedindo-nos de chegar próximo à compreensão integral do papel da linguagem na cognição de eventos de movimento. Neste artigo, faz-se uma revisita às análises linguísticas, combinando as observações de Talmy com as de Slobin (2004) para reconsiderar a questão da saliência diferencial de Modo (Manner) entre as línguas. Apresentam-se resultados de três estudos que sugerem que as diferenças translinguísticas na saliência de Modo são relacionadas à probabilidade de os falantes codificarem informações sobre Modo, alinhados com o que postula a hipótese da Relatividade Linguística.*

**Palavras-chave:** *Relatividade linguística. Verbo de movimento. Saliência de modo.*

**Título:** *Mirando a sus modos: la relatividad lingüística en movimiento*

**Autora:** Michele I. Feist

**Resumen:** *¿Los hablantes reflejan sobre el mundo de manera diferente, dependiendo de la lengua que hablan? En los últimos años, esa pregunta hay generado interés substancial en las ciencias cognitivas, parcialmente motivado por las observaciones de Talmy (1985; 2000) con respecto de la tipología de las descripciones de movimiento. Sin embargo, variadas investigaciones (CIFUENTES-FÉREZ; GENTNER, 2006; GENNARI et al. 2002; NAIGLES; TERRAZAS, 1998; PAPAFRAGOU; HULBERT; TRUESWELL, 2008; entre otras) hay obtenido resultados diferenciados entre ellos, impidiéndolos de llegar próximo de la comprensión integral del role del lenguaje en la cognición de eventos de movimiento. En este artículo se hace una revisita a los análisis lingüísticos, combinando las observaciones de Talmy con las de Slobin (2004) para reconsiderar la cuestión del sobresaliente diferencial de Modo (Manner) entre las lenguas. Son presentados resultados de tres estudios que sugieren que las diferencias tras-lingüísticas en el sobresaliente Modo son relacionadas con las probabilidades de los hablantes codificaren informaciones sobre Modo, alineados con lo que postula el hipótesis de la Relatividad Lingüística.*

**Palabras-clave:** *Relatividad lingüística. Verbo de movimiento. Modo sobresaliente.*



Este texto está licenciado com uma Licença Creative Commons Atribuição 4.0 Internacional.