

A Morphosyntactic Basis for Variation in the Encoding of Motion Events

John Beavers, Beth Levin, and Tham, Shiao Wei
 Department of Linguistics
 Stanford University
 {jbeavers,beth,tham}@csli.stanford.edu

1 Introduction

- Talmy (1975, 1985, 2000) proposes that languages fall into two typological categories based on how path and manner of motion are encoded and combined in one clause:

(1) (a) S(atellite)-framed (English, Russian, German, Mandarin):

Path is encoded as a *satellite* to a manner main verb.¹

John limped into the house. (English)

(b) V(erb)-framed (Spanish, French, Turkish, Japanese, Hebrew):

Path is encoded as a *main verb*; manner must be a subordinate adjunct.

Je suis entré dans la maison (en boitant).

I am entered in the house in limping

‘I entered the house limping’ (French)

- **Refinements:** Path has been argued to mean “path that crosses a boundary” (Aske, 1989, Slobin and Hoiting, 1994, Stringer, 2001); V-languages allow S-language paths when the path does not involve boundary crossing.
- **Extensions:** Various researchers have extended this typology to include a third category for serial verb languages, e.g. “equipollently-framed languages” where “path and manner are expressed by equivalent grammatical forms” (Slobin, 2004, 249; see also Zlatev and Yangklang, 2004, Slobin and Hoiting, 1994)
- We show that even these revisions are insufficient when faced with the full range of possibilities for encoding path and manner and combining them in one clause.
- We argue that the variation arises from very general encoding constraints:

(2) **Morpholexical Generalizations about Manner/Path Encoding**

(a) Manner must be encoded in an (ad)verbal category.

(b) Path may be encoded in any (non-nominal) category.

- Independent language-specific morpholexical features (e.g. availability of result phrases, aspectual affixes) restrict possible path encodings for particular languages.
- Independent language-specific morphosyntactic features (e.g. serialization, applicativization) restrict possible combinations of manner and path in one clause (cf. Bouchard, 1995, Pustejovsky and Busa, 1995, Cummins, 1996, 1998, Song and Levin, 1998).

¹Talmy (2000, 102) defines a satellite as including any category other than NP/PP that is a sister to V and is a dependent of V, including affixes (separable and inseparable), particles, co-verbs, etc.

2 Cross-Linguistic Data

2.1 Morpholexical Variation in encoding Path and Manner

- **Path particles/affixes:** Path is often encoded via a particle or affix to a manner V:

- (3) (a) *An owl popped out* (English)
(b) ... *weil da eine Eule plötzlich raus-flattert.*
... because there an owl suddenly out-flaps
'...because an owl suddenly flapped out.' (German)
(c) ... *omdat er een uil uit-vliegt.*
... because there an owl out-flies
'...because an owl flew out.' (Dutch)
(d) *Tam vy-skočila sova.*
there out-jumped owl
'An owl jumped out.' (Russian) (Slobin, 2004)

- This is the canonical S-language pattern.
- **Until-markers:** In some languages *until*-markers may mark goals even with manner Vs (Beavers, 2003, 2004):

- (4) (a) *The bottle floated as far as/until the cave.* (English)
(b) *La cire coule jusqu'au/*au bord de la table.*
The wax flowed until.to/to edge of the table
'The wax flowed to the edge of the table.' (French; Cummins (1996))
(c) *La botella flotó hasta/??a la cueva.*
The bottle floated until/to the cave
'The bottle floated to the cave.' (Spanish; Aske (1989))
(d) *John-wa kishi-made/*ni oyoida/tadayotta/hatta.*
John-TOP shore-until/to swam/drifted/crawled
'John swam/drifted/crawled to the shore.' (Japanese; Beavers (2003))

- This is S-language behavior, but many of these languages are purported V-languages.
- Aske (1989) argues that these markers do not entail “boundary crossing”, refining Talmy’s typology to be sensitive to the encoding of “telic” vs. “atelic” paths with V (see also Slobin and Hoiting 1994, Martínez Vázquez 2001, Stringer 2001) .
- But the status of the (a)telic path distinction is unclear:

- *Until*-markers generally do entail or implicate arrival (as in (4)).
- There is no sense in which (5) doesn’t entail boundary crossing.

- (5) *John-wa dōkutu-no naka-made oyoida.*
John-TOP cave-GEN inside-until swam
'John swam into the cave' (Japanese; Kiyoko Uchiyama, p.c.)

- Thus, many V-languages are showing S-language behavior.
- **Applicatives:** Tswana applicative *-ǝl-* adds goals to manner verbs (Schaefer, 1985):

- (6) (a) *mò-símàné ó-kííbítl-à fá-tlàsé gá-dì-tlhàrè.*
 CL 1-boy he-run heavily-IMP NEARBY-under LOC-CL 8-tree
 ‘The boy is running with heavy footfall under the trees.’
- (b) *mò-símàné ó-kííbítl-ǝl-à kwá-tlàsé gá-thàbà.*
 CL 1-boy he-run heavily-to-IMP DISTANT-under LOC-mountain
 ‘The boy is running with heavy footfall to the top of the mountain.’
 (Schaefer, 1985, Table VI, (2), Table VII, (2))

- Manner verbs in Tswana otherwise resist goal interpretations, a property of V-languages.
- But applicativization puts the path outside the verb, which is instead S-language behavior.
- That is, some languages exhibit properties of both V- and S-framed languages.

2.2 Morphosyntactic Variation in Combining Manner and Path

- Independent of morpholexical encoding, different compositional processes allow variation in encoding manner and path in one clause.
- **Manner Adverbials:** Manner can be expressed in a subordinate adverbial clause that includes a verbal participle (typical of V-languages):

- (7) (a) *La botella entró a la cueva (flotando).*
 the bottle entered to the cave floating
 ‘The bottle entered the cave floating.’ (Spanish)
- (b) *Je suis entré dans la maison (en boitant).*
 I am entered in the house in limping
 ‘I entered the house limping’ (French)

- **Compound Vs:** Japanese (Yoneyama, 1986, Wienold, 1995) and Korean (Choi and Bowerman, 1991, Kim, 1997) exhibit V+V compounds combining path and manner.

- (8) (a) *John-wa eki-e hashitte-itta.*
 John-TOP station-to running-went.
 ‘John ran (in)to the station’
- (b) *John-wa kishi-e oyoide-itta.*
 John-TOP shore-to swimming-went.
 ‘John swam to the shore’ (Japanese)
- (9) (a) *Ku salam-i cip-ulo ttwui-e tul-e kassta.*
 that person-SUBJ house-to run-C(ONNECTIVE) enter-C went.
 ‘That person ran into the house.’

- (b) *Ku salam-i cip-ulo ttwui-e kassta.*
 that person-SUBJ house-to run-C went.
 ‘That person ran to the house.’ (Korean; Slobin and Hoiting (1994))

- **Serial Verb Constructions (SVCs):** SVCs can combine manner and path:

- (10) (a) *chán won jónn klàp khâw hóng.*
 I circle reverse return enter room
 ‘I returned circling back into the room.’
 (b) *chán dæŋ won klàp jónn khâw paj.*
 I walk circle return reverse enter go
 ‘I am walking in a circle, returning back inside.’
 (Thai; Zlatev and Yangklang (2004))

- Slobin (2004), Zlatev and Yangklang (2004) argue for a class of “equipollent” languages, which encode path and manner in parallel forms (depending on one’s theory of SVCs).
- However, some Caribbean English Creoles (CECs) have SVCs with only manner+deictic path verbs, expressing goal/path via satellites (cf. Winford, 1990):

- (11) (a) *dem a waak go a maakit*
 ‘They’re walking to (the) market’
 (b) *dem ron kom in a di house*
 ‘They ran into the house’
 (c) *Mieri swim-we gaan*
 ‘Mary swam away’

- Thus the path is spread out over multiple categories even in SVCs.

2.3 Pragmatics

- Acceptability of motion descriptions often are context dependent:

- (12) Directional use of English locational Ps (Nikitina, 2004):
John walked in the room
 (Acceptable when John is just outside, unacceptable when John is far away)

- (13) Manner verbs with goal-markers in French (Stringer, 2003):
 (In a context of a mother shouting to her children to come inside.)

- (a) *Allez, courons dans la maison!*
 go-2PL, run-1PL in the house
 ‘Come on, let’s run in the house!’
 (b) *?#Allez, entrons dans la maison en courant!*
 go-2PL, enter-1PL in the house in running
 ‘Come on, let’s enter the house running!’

- Even supposedly categorically unacceptable expressions vary in acceptability.

3 A Morpholexical/Compositional Approach

- The data outlined in the previous section shows a wide variety of encoding possibilities for path and manner that go beyond a two- or three-way typology.
- We instead look at the morpholexical/syntactic inventories of different languages regardless of typology:

(14) Semantic Component	Morpholexical Category	Example Language
Manner	verb	all
	adverb	French, Japanese, English
Path notions		
Path	verb	Romance, Mandarin
	adposition	English, Russian
	verb affixes	Russian
	verb particles	German, Dutch, English
	applicative morpheme	Tswana
	case	Finnish
Limit	adposition	Romance, English

- There appear to be only two general constraints on encoding manner and path:

(15) Morpholexical Generalizations about Manner/Path Encoding

- Manner must be encoded in an (ad)verbal category.
- Path may be encoded in any (non-nominal) category.

Manner is restricted in its encoding; path is virtually unrestricted.

- Constraints for *particular* languages depend on factors not specific to motion events.
- For example, Romance and Japanese:
 - Lack applicatives (cf. Tswana), “aspectual” affixes (cf. Russian), particles (cf. Dutch), have limited case inventories (cf. Finnish).
 - Have adpositions, but lack secondary predication (e.g. result phrases, cf. English) (Aske, 1989, Talmy, 1991, 2000, Snyder, 1995a,b, Washio, 1997).

∴ There are two possible encodings for path in these languages: *V* and *until*-marker.

- Both of these possibilities are in fact realized (although potentially each language could encode path in only a subset of the remaining possibilities, e.g. Russian lacks path *V*s).
- Likewise, independent compositional methods differ across languages:

(16) Compositional Method	Example
Serial Verbs ($V_{manner} + V_{path}$)	Thai, CEC
Compound Verbs ($V_{manner} + V_{path}$)	Japanese, Korean
Adverbial Participles ($V_{path} + V_{manner}$ [prt])	Romance

- Again, the compositional possibilities are independent of motion (e.g. Japanese and French have similar lexical inventories, but French generally lacks V+V compounds).

Conclusion: The encoding possibilities for different languages are the result of:
 (a) Morpholexical restrictions on encoding manner
 (b) Independent properties of particular languages

4 Revisiting Talmy's Typology

- The dichotomy embedded in Talmy's typology may be a result of (15) (repeated here):

(17) **Morpholexical Generalizations about Manner/Path Encoding**

- (a) Manner must be encoded in an (ad)verbal category.
 - (b) Path may be encoded in any (non-nominal) category.
- The only morphosyntactic category path and manner encodings share is **verb**.
 - Only one or the other may be encoded in the main V *for a given expression in a given language*.
 - **Path as V:** If path is expressed in V for a given expression, there are a limited number of options for expressing manner:
 - If the language has SVCs/compounding, manner may be a V.
 - Manner can always be a subordinate adverbial V.
 - **Manner as V:** If manner is expressed in V, there are a wider range of encoding possibilities for path ("satellites").

Thus the Talmy typology is a product of overlap of path/manner encoding in V.

- The typology itself is just a tendency. It is quite possible for languages to allow both S- and V-language manner+path combinations if they are not independently ruled out:

- (18) (a) The dog crawled into the doghouse.
 (b) The dog went into the doghouse crawling. (English)

- (19) (a) *ha-kelev zaxal la-meluna.*
 the-dog crawled to.def-doghouse
 'The dog crawled into the doghouse.'
 (b) *ha-kelev nixnas la-meluna be-zxila.*
 the-dog entered to.def-doghouse in-crawl_V
 'The dog entered the doghouse crawling.' (Hebrew; Itamar Francez, p.c.)

5 Linguistic Relativity

- Work by Slobin and his colleagues (1987, 1991, 1996, 1997, 2000, 2003, 2004) has suggested that the Talmy typology arises because speakers of typologically different languages have different conceptualizations of motion events available.
- This suggestion was based on two observations:
 - The apparent restrictions in encoding path.
 - The relative frequency of overt path and manner expressions in corpora and elicited texts from speakers of typologically distinct languages.
- The data presented here shows that the apparent restrictions on path encoding are due to broader morpholexical and syntactic parameters.
- The relative frequency of expressing path and manner in typologically distinct languages could be due to the interaction of a variety of factors:
 - Particular lexical encodings may favor certain types of expressions over others for economy reasons (Slobin, 2004) (e.g. subordinate adverbials are generally dispreferred when avoidable, cf. (18))
 - Frequency may depend partly on the inferability of a component (e.g. Papafragou et al. (2004) shows that overt expression of manner among speakers of Greek is more frequent when the manner is unconventional for a particular motion event).
 - These factors plus cultural factors may yield independent stylistic patterns and narrative styles (Stringer, 2001, Slobin, 2004).
- Thus variation in motion expressions may be explainable in terms of broader typological patterns and non-grammatical factors.
- Additionally, non-linguistic categorization of motion events by manner/path doesn't necessarily follow linguistic categorization (Gennari et al., 2002, Pourcel, 2003).
- Linguistic relativity must be demonstrated through other means.

6 Conclusion

- Current typological approaches to the encoding of motion events fail to capture the full richness of motion descriptions cross-linguistically.
- We propose that the wide variation falls out of very general constraints on how manner and path may be encoded in languages.
- Further apparent restrictions are due to independent properties of particular languages.
- The classic Talmy typology itself may be due to the fact that V may generally encode both manner and path but not simultaneously.
- This type of explanation may also apply to other apparent typological differences between languages (cf. Hale and Keyser (1997, 1998) on causatives, Harley (1995, 1997), Hoekstra (1995), Siewierska (1998), Snyder (1995a,b) on dative alternation).

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