# On manners and paths of refining Talmy's typology of motion expressions via language documentation

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# On manners and paths of refining Talmy's typology of motion events via language documentation

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#### 1. SETTING THE SCENE

The aim of this paper is to present a case study of the fruitful dialectic interaction between linguistic theory and in-depth language documentation. The language under investigation is Jaminjung, a Non-Pama-Nyungan language of the Mirndi family, still spoken by several dozen elderly people around Timber Creek, Kununurra and Katherine on the Northern Territory/Western Australia border in the north of Australia.

The theory to be addressed is Talmy's highly influential typology of motion expressions (Talmy 1985, 1991, 2000), which is based on the encoding of path information in a clause describing a motion event. The two basic types of languages recognised by Talmy are satellite-framed languages (where path is lexicalised as a "satellite" to the verb) illustrated by the English example in (1a) and verb-framed languages (where path is lexicalised as a semantic component of a motion verb) illustrated by (1b), the Spanish translation equivalent of (1a).

#### (1) (a) The bottle floated out

(b) La botella **salió** (flotando)

Research on the use of motion expressions in narratives (e.g. Slobin & Hoiting 1994, Slobin 1996, 2004) appears to corroborate the typology, in that the lexicalisation patterns of a given language are found to correlate with narrative style. Thus, speakers of satellite-framed languages appear to use more detailed descriptions of paths (because satellites can be stacked, as in *come down out of the rocks*), they produce more specific manner descriptions (because manner tends to be lexicalised in the motion verb itself). Moreover, verb framed languages, but not satellite-framed languages, were found to obey a BOUNDARY CROSSING CONSTRAINT. This means that manner expressions cannot be combined with boundary crossing expressions, as is possible in a satellite-framed language like English (2).

#### (2) The owl flew out of the hole

However, research inspired by Talmy's typology has also pointed to cases where it cannot be applied straightforwardly, and to the need for refining some of the categories on which it is built. First, the categories 'verb' and 'satellite' do not exhaustively characterise all expressions that may contribute to the description of a motion event cross-linguistically. For example, positionals in Tzeltal (Brown 2004), ideophones, e.g. in Basque (Ibarretxe-Antuñano 2004) and Turkish (Slobin 2004: 234), and associated motion inflections in Arrernte (Wilkins 2004) all play

an important role in expressing aspects of the motion event such as manner or path. Moreover, as will become relevant for the case of Jaminjung, the term 'satellite' is not particularly well defined in the first place (cf. Zlatev & Yanklang 2004: 160), and the dichotomy assumes that verbs will form an open class and satellites a closed class, which is not necessarily the case.

Second, on the semantic side, it appears that the notions of 'path' and 'manner' deserve some refinement as well. The term 'manner' can be interpreted broadly as including bodily posture, means of transport (e.g. vehicle), speed, and medium (e.g. water), or more narrowly as only involving bodily motion that leads to translocation (e.g. run, crawl, jump) (Zlatev & David 2004), and the frequency of manner expressions in discourse obviously depends on the inclusiveness of the definition. For example, the manner count for Jaminjung changes dramatically, at least for the Frog Stories, if the word wurdbaj 'looking around, searching, foraging' is counted as a manner expression, as its formal behaviour, (though perhaps not its meaning,) suggests. 'Path' is not a homogeneous concept either. The special status of boundary crossing expressions such as exit or out was already mentioned above. Talmy himself (2000: 53-57) now distinguishes between deictic component, Vector (defining the start or end point or itinerary), and Conformation (the region, e.g. 'interior', at arrival or departure). Zlatev & David (2004) propose a distinction between 'path' in the narrow sense, implying boundedness, and 'direction', without the implication of an endpoint, e.g. expressions for 'uphill' or 'circular'.

Third (and disregarding for the moment the difficulties surrounding the notions of 'path' and 'manner'), languages may give equal weight to manner and path in their lexicalisation patterns, as has been pointed out in particular for languages such as Thai (Zlatev & Yangklang 2004) and Ewe (Ameka & Essegbey, in press) in which both manner and path can be expressed by verbs in serial verb construction. Slobin (2004: 247) proposes to treat these and similar languages as EQUIPOLLENTLY-FRAMED, thus recognising a third type in the overall typology.

The correlation between lexicalisation pattern and narrative style is not perfect, either. Differences in narrative style were found to be gradual rather than absolute. Slobin (2004) therefore suggests that they depend on the relative accessibility (ease of processing) of manner expressions, and on language-specific restrictions on manner-path-combinations. It has also been suggested that differences in narrative style may depend on cultural factors overriding linguistic factors (Wilkins 2004).

Against the background of this ongoing discussion of the applicability of Talmy's typology of motion events I would like to consider the lexicalisation patterns and discourse uses of motion expressions in Jaminjung, neither of which neatly fit into the 'verb-framed', 'satellite-framed' or even 'equipollently-framed' category. It will be necessary to present some background information on Jaminjung grammar and lexicalisation first.

# 2. THE POINT OF DEPARTURE: SOME BACKGROUND INFORMATION ON JAMINJUNG

Jaminjung shares many of the grammatical characteristics of surrounding Non-Pama-Nyungan and also Pama-Nyungan languages. These include pragmatically conditioned word order, a combination of head- and dependent-marking strategies for the encoding of core argument status, ergative alignment with optional ergative marking, and the use of case markers as subordinators. Another, more areally restricted feature which will be of crucial importance to the description of lexicalisation patterns is the existence of a closed class of INFLECTING VERBS (IV) of a semantically generic nature and with a classificatory function (McGregor 2002, Schultze-Berndt 2000), and correspondingly a strong reliance on complex predicates. The latter involve, in addition to an Inflecting Verb, a member of a second, open part of speech, termed UNINFLECTING VERBS (UV) here, following McGregor (2002) (other terms found in the literature are preverb, coverb, and verbal particle). These clearly differ from both Inflecting Verbs and nominals in their morphological potential and their syntactic distribution; the relevant properties are summarised in Table 1 (UVs can take a subset of case markers in subordinating functions, hence the + sign in brackets in the row labelled 'case marking').

**Table 1**Properties of Inflecting Verbs (IV), Uninflecting Verbs (UV), and Nominals (N)

	IV	UV	N
	e.g. –ijga 'go'	e.g. <i>yugung</i> 'run'	e.g. <i>jalig</i> 'child'
TAM/person inflection	+	_	_
Independent predication	+	_	+1
Case marking	_	(+)	+
Determination	_	_	+
Referential use	_	_	+
Size of class	closed $(n = 35)$	open	open

Uninflecting verbs cover most of the meanings expressed by verbs, but also by verbal particles such as *up*, in languages like English. In complex predicates, they usually precede the IV, although other patterns are possible. Some complex predicates are illustrated in (3), where UVs are in boldface; IVs can be recognised

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<sup>&</sup>lt;sup>1</sup> Nominals may function as main predicates in verbless equative or ascriptive clauses.

by their person prefixes and tense/aspect suffixes. (If not otherwise indicated, examples come from my own fieldwork).<sup>2</sup>

(3) **thawaya** yirra-gba, Jalyarri=biyang **burl** ga-ruma-ny, eat 1PL.INCL- Subsection=now emerge 3SG-come.PST be.PST

marraj ga-jga-nypast 3SG-go.PST

Faced with the parts of speech system of Jaminjung, the first question that arises in our context is whether the terms 'verb' and 'satellite' can be applied to it. Do the closed-class Inflecting Verbs count as 'verbs' for the purposes of the typology? Can the notion of 'satellite' be applied to the open class of Uninflecting Verbs in Jaminjung? On the one hand, Talmy's (1991: 486) definition of a satellite as a constituent 'other than a nominal complement that is in a sister relation to the verb root' seems to be applicable to UVs. This also seems to underly the description of Warlpiri, a language with a very similar part of speech system (though with a somewhat larger class of around 120 IVs), as 'satellite-framed', both by Talmy (1991: 486) and Bavin (quoted in Slobin 2004: 256). On the other hand, most examples of 'satellites' in Talmy's and subsequent work seem to imply that satellites form a closed class. In the following section, the lexicalisation of components of motion events in Jaminjung in the different parts of speech will be examined without assuming that the latter can be equated with either 'verbs' or 'satellites' in Talmy's sense.

#### 3. APPROACHING THE LEXICALISATION OF MOTION IN JAMINJUNG

In examining the lexicalisation of motion events in Jaminjung, I will be restricting myself – as is common in similar research – to expressions of self-propelled translational (or translocational) motion, i.e. motion involving a change of location, excluding internal motion (e.g. 'shake') and caused motion (e.g. 'put'), unless accompanied by an entailment of translational motion.

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<sup>&#</sup>x27;we were eating, then Jalyarri appeared, (and) went past'

<sup>&</sup>lt;sup>2</sup> The abbreviations used in this paper are 1 = first-person, 3 = third-person, ABL = Ablative case, ALL = Allative case, COMIT = comitative case, ERG = ergative case, GIVEN = discourse marker on re-activated topics, INCL = inclusive (1st person), OBL = oblique pronoun, PL = plural, POT = potential mood, PRS = present tense, PST = past perfective, SG = singular. The unmarked absolutive case is not glossed. The symbol > separates Actor from Undergoer in glosses of pronominal prefixes.

#### 3.1. *Inflecting verbs*

Considering the small number (35) of Inflecting Verbs in Jaminjung, it is remarkable that seven of them, in their basic senses, entail translational motion as defined above; these are listed in Table 2. In addition to a simple (but potentially misleading) English gloss, a paraphrase aiming at a more accurate semantic description is provided. An indication of the morphological transitivity of the verb, which manifests itself in bound pronominal prefixes for subject only (intr.), or subject and object (tr.), is also given below.

Table 2
Inflecting verbs of Locomotion in Jaminjung

IV root	Gloss	Prefix	Paraphrase
-ijga	'go'	intr	'move' (most general term)
-ruma	'come'	intr	'move towards the deictic centre'
-uga / -antha	'take (along)'	tr	'move while taking s.o./s.th. along'
-anthama	'bring (along)'	tr	'move towards the deictic centre while taking s.o./s.th. along'
-arrga	'approach'	tr	'move towards a reference point'
-unga	'leave'	tr	'move away from a reference point'
-wardagarra	'follow'	tr	'move following a moving reference point'

Apart from the entailment of change of location, these locomotion verbs are further defined by their ability to combine with ablative-marked (source) and allative-marked (goal) NPs, as illustrated in (4), as well as with Uninflecting Verbs of manner (see section 3.2). However, the IV itself is the only obligatory element in a motion expression, as shown in (5).

- (4) warrgayin=nyanying **gan-uga** gugu-giyag larrman-bina far=properly 3SG>3SG- water-ABL dry-ALL take.PST
  - 'she took it right away from the water onto the dry (land)' (a woman dragging along a sawfish that she had caught)'
- (5) **yirri-ruma-ny,** nginju=biyang guyug dalb yirra-rra-ny
  1PL.INCL-come- this=now fire light 1PL.INCL>3SG-putPST
  PST

<sup>&#</sup>x27;we came here, and we lit this fire then'

The seven IVs in Table 2 encode few semantics components. One of them is translational motion; the meaning of the most generally applicable verb, -ijga 'go', is exhaustively described in this way. A second component is accompaniment by a second participant, which sets apart the two transitive verbs uga 'take' and -anthama 'bring'. Unlike their English translation equivalents, these verbs, in addition to encoding caused motion of the object, do entail translational motion of the subject at the same time. The third component is deixis; direction towards the deictic centre is the only feature that distinguishes ruma 'come' and -anthama 'bring' from their counterparts -ijga 'go' and -uga 'take', which are non-deictic (Schultze-Berndt (2000: 259-261, following the argument of Wilkins & Hill 1995). Finally, the three IVs -unga 'leave', -arrga 'approach' and -bardagarra 'follow' all encode motion as defined in terms of a reference point away from, or towards which the motion is directed. As argued in more detail in Schultze-Berndt (2000: 283, 285), these IVs do not entail boundedness of the motion event. Thus, as is illustrated in (6), the reference point does not have to be the starting point of motion for -unga 'leave', and neither does it have to be the endpoint of motion for -arrga 'approach' and -bardagarra 'follow'. Examples (6) to (10) below all come from Jaminjung renditions of the Frog Story.

(6)	wirib-ni-mij	marraj	gan-unga-m
	dog-ERG-	go.past	3sg>3sg-
	COMIT		leave.PST
	'they (bees) are	going past	him together with the dog' (lit. 'they are
	leaving him past	")	

A few additional IVs are also frequently employed in descriptions of motion scenes. With the exception of *-irdba* 'fall', however, they only appear in motion descriptions in collocation with a few specific UVs and have a primary meaning which is non-locomotional. As for *-irdba* 'fall', I have argued in some detail elsewhere (Schultze-Berndt 2000: 230-238; 2006: 88-91) that this IV entails neither downward motion nor, in fact, translational motion, but only change of position, even though it is used to describe 'falling' scenes.

Table 3
Further Inflecting verbs used to describe motion events

IV root	Gloss	Prefix	Paraphrase
-irdba	'fall'	intr	'change of position'
-ma	'hit'	tr	polysemous; locomotion use only with UVs of 'emerging/ appearance'
-angu / -mili	'get/ handle'	tr	polysemous; locomotion use only with UVs <i>yurl</i> 'chase' and <i>dibard</i> 'jump'
-yu(nggu)	'do'	tr	highly polysemous, used to express non- translational (internal) motion; rarely also with <i>yugung</i> 'run', <i>burduj</i> 'move up'

Summarising the semantic contribution of Jaminjung IVs to the lexicalisation of motion, and disregarding the component of 'accompaniment', they very clearly do not encode manner information. They do encode 'path' information, but this is of a limited nature: it is restricted to motion 'as such' (in Talmy's terminology, perhaps an unbounded, non-specific vector), an unbounded vector which is however specified with respect to a further participant (in the case of the last three verbs), and deixis. Notably, they do not encode boundary crossing or direction of the type lexicalised in the most frequently cited examples of path verbs in verb-framed languages, e.g. French *sortir* 'exit' and *descendre* 'descend, go down'. Considering the lexicalisation patterns for Inflecting Verbs alone, this makes Jaminjung more of a verb-framed language than a satellite-framed language, but certainly not a very typical one.

#### 3.2. Uninflecting verbs

As the open class of predicative elements in Jaminjung, Uninflecting Verbs cover a wide range of meanings which are usually assumed to be 'verbal'. For the purpose of this paper, we will focus on the contribution of UVs to descriptions of motion events; examples of UVs with a non-motion semantics are *thawaya* 'eat' in (3), and *dalb* 'light a fire' in (5).

Information about the manner of motion is exclusively encoded by Uninflecting Verbs such as warrng 'walk, flutter', yugung 'run, race, speed' (10), yawal 'run (of multiple animates)', burdurdub 'run, race', lululub 'run (of water)', rayib 'sneak', liwu 'swim', mingib 'crawl', or dibard 'jump' in (7) and (8). This list is not exhaustive: a search of a preliminary dictionary version of around 2000 lexical entries turned up 51 manner UVs (disregarding caused motion), which, given the under-documented state of the language, suggests a fairly rich lexicon of manner expressions of the type usually assumed for satellite-framed languages. The specific semantic distinctions found in the examples above point in the same direction (see also Schultze-Berndt 2000: 465-467). The following two examples illustrate the use of dibard 'jump' with an intransitive (7) and a transitive (8) IV of motion.

- (7) **dibard** ga-w-ijga walthub langiny-bina jump 3SG-POT-go inside wood-ALL 'It (frog) will jump away into the trees.'
- (8) **dibard**=biya gani-b-arrga mugmug-ni jump=now 3sG>3sG-POT-go owl-ERG 'it is about to jump at him now, the owl' (lit.: 'approach him jumping')

The same dictionary revealed 34 genuine UVs of 'path', and 102 positional UVs, some of which can also be used to encode the endpoint of a path in the same way as English verbal particles like *in*. Unlike positionals, UVs of 'path' may combine with IVs of locomotion, and sometimes other dynamic IVs, but not with stative IVs such as -yu 'be, be located'.

Semantically, path UVs fall into two main types. They can encode different kinds of boundary crossing which may be conflated with specific regions or specific figures. Examples include: *burl* 'emerge' (in (3) above), *malang* 'cross, get across', *gub* 'come off', *jab* 'come off, of long entity attached with its end point, e.g. grass or hair', *wurlurlu* 'enter a three-dimensional container such as a bag or a car', *ngabulg* 'enter water, dive in', or *lany* 'rise (of celestial body)'.

Path UVs can also describe direction in the sense of Zlatev & David (2004) as mentioned above, i.e. the shape of the path, without information about beginning or end point. Examples are *burduj* 'move upwards, ascend' in (9), *jid* 'move downwards, descend', *walig* 'move around, move on a circle-shaped path' in (10), as well as *buru* 'go back', *buyi* 'keep going in same direction', and *marraj* 'go past' (see examples (3) and (6) above). Notably, path UVs do not encode deixis.

- (9) **burduj** ga-jga-ny, jalalang miri go.upwards 3SG-go-PST hang leg '(the boy) has climbed up, his legs hanging down'
- (10) jalig=malang yugung walig ga-jga-ny=nu, child-GIVEN run go.around 3SG-go-PST=3SG.OBL 'the child ran around for him' (to pick up the dog after its fall from the window)'

As the discussion in this subsection has shown, expressions of manner and most expressions of path are encoded in exactly the same fashion in Jaminjung, by unmarked Uninflecting Verbs. Moreover, both UVs of manner and path or position can be combined in a single intonation unit with a single IV, as in examples (7) and (10). In this respect, Jaminjung has characteristics of an equipollent language, as is indeed proposed by Slobin (2004: 247), taking up a suggestion to this effect made in early drafts of Schultze-Berndt (2006). One would also expect this equipollent nature to be reflected in a discourse of roughly equal frequency of UVs of manner and of path. In order to test this prediction, I conducted a small corpus study.

#### 4. MOTION EXPRESSIONS IN DISCOURSE

In order to get an idea of the relative frequency of manner and path expressions in discourse, I considered only clauses containing one of the locomotion verbs listed in Table 2, in two small subcorpora, one consisting of 5 Frog Stories with a total length of 1122 intonation units, and the other consisting of 6 other narrative texts with a total length of 598 intonation units (in both cases, disregarding interruptions). UVs were only counted if they appeared in the same intonation unit as an IV of locomotion. Positionals were counted as 'other UVs', including the 'path-like' ones such as *walthub* 'inside'. The UV *wurdbaj* 'searching', which was particularly frequent in the Frog Stories, was counted separately since, as

already mentioned in section 1, it shares all formal properties with UVs of manner, but does not quite fit that class semantically.

The results are summarised in Table 4. Somewhat surprisingly, UVs of manner and path do not behave equipollently in discourse; rather, Jaminjung speakers use path UVs twice as frequently as manner UVs. Moreover, the possibility of combining UVs of path and manner with the same IV is exploited very rarely (only 3 examples in total). If the IVs appearing without either type of UV are also counted as path expressions, in fact 65% of locomotion clauses in the texts specify path, but only 18%, less than a third, specify manner. Thus, despite being equipollently-framed in a sense, Jaminjung shows tendencies of a 'verb-framed' lexicalisation pattern and narrative style.

Table 4
Frequencies of subtypes of motion expressions in some narrative texts

Type	Frog Stories	Other narrative texts	Total n	Total %
IV only	33	34	67	31
IV + path	36	36	72	33
IV + manner	19	18	37	17
IV + wurdbaj	10	3	13	6
IV + manner + path	1	2	3	1
IV + other UV	17	8	25	12
TOTAL Locomotion	116	101	217	100

How can this distribution in discourse be explained? The answers can only be tentative at this point. One conclusion is that manner expressions, although relatively 'accessible' in the sense of Slobin (2004) because of their formally unmarked nature, are in fact much less salient in discourse than in a typical satellite-framed language where manner is conflated with the main verb of motion. Thus, manner is freely expressed without resulting in a stylistically marked structure, but it is only expressed if manner information is foregrounded in discourse. This still leaves open for explanation why path UVs are so much more frequent. Part of the answer may lie in the additional finding – based on a search of a much larger corpus, but so far not on explicit grammaticality judgments of speakers – that Jaminjung appears to be obeying the boundary crossing constraint, just as predicted for a verb-framed language. That is, manner expressions are only compatible with non-boundary crossing paths; this could partly explain the low frequency of manner UVs combined with path UVs in the same clause.

Whatever the explanation, the findings show that the lexicalisation and discourse uses of motion expressions in Jaminjung neither fit the characteristics of an equipollently-framed language, as predicted by Slobin (2004) (and previously,

myself), nor do they reveal satellite-framed characteristics as claimed for the structurally similar language Warlpiri. A language like Jaminjung does however point to the need for a careful definition of 'verbs' and 'satellites' in the typology, in distinguishing between 'main verb status' and 'open class membership' as defining criteria. Given the closed-class nature of 'verbs' in Jaminjung, the language is of particular interest to theories of lexicalisation patterns because 'path' information does indeed get favoured over 'manner' information in the Inflecting Verbs, but not all types of 'path' information are treated equally. While deixis and motion with respect to a reference point is expressed by IVs, path shape ('direction'), information about the region at the end point, and boundary crossing information only get expressed by UVs, on a par with manner. A typological comparison, which is beyond the scope of this paper, of languages with closed-class verbs might well reveal an implicational hierarchy for the lexicalisation of these subtypes of path.

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