CHAPTER 20

Path salience in motion descriptions in Jaminjung*

Dorothea Hoffmann
The University of Manchester

This paper aims to position Jaminjung, a non-Pama-Nyungan language of northern Australia within a typology of Path salience, building on Ibarretxe-Antuñano (2009). Path is an obligatory conceptual part of any motion event description; however, regardless of their lexicalisation patterns, languages differ concerning the degree of Path detail in discourse (Slobin 1996). My analysis is concerned with narrative preferences in spoken communication using two different motion datasets of Frog Stories as well as natural discourse and narratives. Ultimately, it describes the effects of language-specific structural and granular prerequisites on discourse strategies within motion event descriptions. Jaminjung occupies a place towards the middle-section of the proposed Path salience cline. Additionally, cultural conditions suggest that event granularity might best be viewed separately from structural features.

Keywords: discourse strategies, lexicalisation patterns, non-Pama-Nyungan languages

* I would like to gratefully acknowledge financial support from the Gerhard Laves Scholarship, and (for work on Jaminjung) the DoBeS program of the Volkswagen Foundation for this project in allowing me to spend two months of fieldwork in Katherine, Timber Creek, and Ngukurr in Australia in 2010. The data collected during this fieldwork and a corpus of Jaminjung consisting of roughly 35 hours of audio- and video recordings compiled by Eva Schultze-Berndt between 1994 and 2008 formed the basis of this study. Furthermore, I would like to specifically thank Nancy Roberts, Nancy Carson, Margaret McDonald, Jerry Jones, Judy Marchant, Eileen Medil, Doris Roberts, and Josefine Jones for generously sharing their knowledge of Jaminjung with me.

1. Motion expressions in Jaminjung

This chapter examines narrative preferences and discourse frequency patterns of the path element in motion event expressions in Jaminjung, a highly endangered Non-Pama-Nyungan Australian Aboriginal Language spoken in the Victoria River area in the Northern Territory. It is shown that the degree of detail with which path is expressed in dynamic spatial relations is caused not only by structural characteristics of Jaminjung, namely lexicalisation patterns, but also by cultural preconditions independent of language type. Therefore this chapter shows that within the specific context of the Australian hunter-gatherer language Jaminjung, the nature of linguistic interaction may be distinctly influenced by structure and culture suggesting that inherent characteristics of 'motion' and Path are the result of an intimate interplay between both.

In Jaminjung, the function of 'verb' is fulfilled by members of two distinct parts of speech. There is a closed class of inflecting verbs (IVs) with thirty-five members. Additionally, an open class of uninflecting coverbs take functions of adverbs and verbs in other languages (Schultze-Berndt 2000: 69). Example (1) illustrates the intransitive verb *-yu* 'be' combined with the coverb *gurdij* 'stand'.

(1) *guruwuny=biya luba* ***gurdij*** *ga-**yu**=ngarndi*,
bottle.tree=NOW big stand 3SG-be.PRS=SFOC
'a big Boab Tree stands there' (ES99_V01_06ATG.381)[1]

For the purpose of this chapter it is worth noting that of the limited number of inflecting verbs in Jaminjung, a total of seven have been classified as locomotion verbs by Schultze-Berndt (2000) and in their primary senses only denote translational motion.[2] Additionally, there are five inflecting verbs that can be used for locomotion events in combination with some distinct coverbs.

---

1. The abbreviations used in this paper are: 1 = first-person, 2 = second-person, 3 = third-person, ABL = ablative, ALL = allative, ALSO = also, too, DAT = dative, DIR = directional, DIST = distal demonstrative, DU = dual, excl = exclusive, FUT = potential/future, IMP = imperative, IMPF = (past)imperfective, incl = inclusive, INTJ = interjection, LOC = locative, L.ABL = ablative (on locational nominals), L.ALL = allative (on locational nominals), NEG = negative marker, NOW = 'now, then' (clitic), n_top = toponym, PL = plural, PRO = pronoun, PROX = proximal demonstrative, PRS = present, PST = past-tense, QUAL = quality, RDP = reduplication, RESTR = restrictive clitic ("just, right at"), SFOC = sentence focus, SG = singular, TR = transitive marker (in Kriol), *taunwei* = Kriol is marked in Jaminjung examples in cases of code-switching with underlining, and prosodic breaks are marked by %, … or ,.

2. Locomotion verbs are involved in a translational motion event which is an activating process consisting of a transition by a Figure with respect to a Ground (Talmy 2000b: 227).

In any motion description, Path is an obligatory element. It is defined by Talmy (2007: 71) as "the Path followed or site occupied by the Figure object with respect to the Ground object". Translocational motion expressions obligatorily contain a Figure (*Thomas* in Example (2)), which is the moving entity, and the Path (*up*) along which the Figure is moving. Additionally, a Ground can be expressed which may be a source, goal (*mountain*), or an element passed along a trajectory. Other optional components are Manner (*ran*) and Cause of motion.

(2) *Thomas ran up the mountain.*

In Jaminjung, Path is expressed to a limited extent in the inflecting verb (*-arrga* 'approach' in Example (3)). Furthermore, Path as well as Manner (*yugung* 'run') can optionally be encoded in an accompanying coverb. Ground is also an optional element expressed by landmarks (*jarriny-ngunyi* 'from the hole' in Example (10)), toponyms, or deictics (*yinaya* 'there' in (3)), which are optionally or mandatorily allative-, ablative- or locative-marked, depending on a number of semantic constraints (Hoffmann 2011a). Absolute directionals, such as *manamba* 'upstream' furthermore can indicate the Path of motion.

(3) ***yugung***=*biya* *gan-**arrga*** ***yinaya***
run=NOW 3SG>3SG- approach.PST DIST
'he approached him running, over there' (ES01_A03_08tr_0033)

It has been observed that the underlying components of a motion event are encoded in different ways in the languages of the world. Talmy (1985, 2000a, 2000b, 2007) introduced a binary division of languages into verb-framed and satellite-framed on the basis of lexicalisation patterns of Manner and Path in languages. In this typology, a language such as English is classified as satellite-framed in expressing Path-information in a satellite accompanying the main verb, as in *up* in Example (2). Manner in these languages can be expressed in the main verb (*ran*). Verb-framed languages, on the other hand, express Path in the main verb (*salió* 'exit.PST' in the Spanish example in (4)) and need an additional complement to the verb to express Manner (*flotando* 'floating') in a motion event.

(4) *la* *botella* ***salió*** ***flotando***
the bottle exit.PST floating
ited floating' (Talmy 2000b: 223)

Ever since its first introduction, the typology has been a subject of debate. One major issue concerns a number of languages that seem to fall outside the typology in, for example, expressing Path information in more than one lexical item within a clause. One possible solution to this problem is offered by Slobin (2006: 62) with the introduction of a third type of languages that express Manner and Path in

roughly equivalent lexical forms: equipollently-framed languages. An example is Mandarin Chinese in (5), which is a serial-verb language without grammatical marking of finiteness. This presents a problem for Talmy's typology, which depends on identifying the "main verb" in a clause.

(5) ***fei1 chu1 lai2*** *yi1 zhi1 mao1tou2ying1*
fly exit come one only owl
'only one owl flew out (of the hole)' (Slobin 2006:62)

It has been observed by Slobin (2004, 2006:65) and Schultze-Berndt (2007) that Jaminjung, too, seems to fall outside the typology. The language expresses (restricted) Path information in the inflecting verb (*-uga* 'take' in Example (6)), and Manner (*mingib* 'crawl'), as well as additional Path information in the uninflecting coverb (*burduj* 'go up').

(6) *mingib=bung gan-kuga burduj*
crawl=RESTR 3SG>1SG-take.PST go.up
'he took me up crawling' (ES08_A04_06_0256, IP)

At first glance this would seem like an equipollently-framed language. However, Slobin (2006:65) expects those types of languages to encode Manner as regularly as satellite-framed languages since both, additional Path information as well as optional Manner expression, are readily available in the language. In Jaminjung, however, Path coverbs occur much more frequently than Manner coverbs in motion expressions. In fact, Manner seems to be only expressed when foregrounded in discourse and combinations of both a Manner and Path coverb with an inflecting verb rarely ever occur.[3] I discuss percentages and distribution patterns in more detail in Section 2.1.

These observations then make Jaminjung an interesting candidate for the study of Path salience as proposed by Ibarretxe-Antuñano & Hijazo-Gascón (this volume) and Ibarretxe-Antuñano (2009). Unlike the Manner component, the concept of Path is obligatory in any motion description (Slobin 1996), but languages differ in the degree of detailed description with respect to the Path component. This is true regardless of their lexicalisation pattern in light of Talmy's typology. Consequently, a typology of motion event descriptions based on a scale of high- to low-Path salience languages is introduced (Ibarretxe-Antuñano 2009).

Within this approach, a distinction can be made regarding the distribution of minus- and plus-Ground expressions. In minus-Ground expressions, motion

3. For a detailed discussion of Manner Salience please refer to Chapter 6.3 in Hoffmann (2011a).

verbs stand alone or with a satellite (such as *fall* and *fall down* in English and *caer* 'fall' in Spanish). Plus-Ground expressions, on the other hand, include motion verbs accompanied by some Ground element (*fall down into the river* and *caerse al río* 'fall to the river') (Ibarretxe-Antuñano 2009:406). I discuss this approach for Jaminjung in Section 2.1.

Secondly, as explained in more detail in 2.2, the notion of a complex Path or journey (Slobin 1996) is taken into account. This considers extended Path descriptions that include more than one Ground in a single verb phrase as in (7), where there are source (*from its hole*), goal (*into the field*), and an element passed along the trajectory (*past the sleeping cat*) combined in one verb phrase. There is also typological variation concerning the number of Ground elements 'allowed' in a single VP (Bohnemeyer et al. 2007). Furthermore, other types of complex Path encodings are taken into account. In Jaminjung, they consist of one or more path coverbs (or a path and a manner coverb) and/or one or two explicit ground NPs as in (8) combining a manner and a path coverb in a complex predicate with a source-encoding NP.

(7) *The mouse ran from its hole into the field past the sleeping cat.*

(8) *malara galu-galu a **yirr** ga-ram **gardag-ngunyi***
frog RDP-footwalk ah move.out 3SG-come:PRS tin-ABL
'the frog, it comes right out of the tin' (DH10_A11_05_0020, MM)

Finally, Path and event granularity is considered in 2.3, analysing the degree of detailed description of an event beyond the clause level. Granularity is independent of the number of Path components accompanying a single verb, but it considers the total number of detailed Path descriptions in the linguistic encoding of a motion event in discourse (Slobin 1996). For this analysis, a specific scene from the Frog Story is being used.

It is argued (Ibarretxe-Antuñano 2009) that the reasons for languages following a high- or low-salience pattern seem to be based on a number of interrelated factors such as linguistic devices, word order, tolerance for verb omissions, the existence of "dummy verbs", cultural values, orality, and standardisation. Some of these factors are investigated for Jaminjung in Section 3.

Generally, this chapter aims to position Jaminjung within the Path salience typology. The language has a rich repository of linguistic devices to encode movement and location, such as case marking of source and goal and the depiction of Manner, Path, and position in coverbs accompanying the verb in a motion event clause. Furthermore, a somewhat problematic classification of Jaminjung as equipollently-framed makes it an excellent candidate for further investigations into salience patterns.

2. Path salience

For my analysis of Jaminjung, I compiled two motion event datasets. For both, I drew on data collected by Schultze-Berndt between 1996 and 2008 as well as from my own fieldwork carried out between July and August 2010 in Katherine and Timber Creek, Australia. One is a collection of different types of discourse such as personal and traditional narratives, communicative discourse (e.g. route descriptions), and elicited narrations such as the Frog Story and called 'Complete Motion Dataset" (CMD). It contains 1,142 motion event descriptions in 32,754 words. The majority of motion events (59 per cent) are described using an inflecting verb only. More than a quarter of all these events (29 per cent) include a Path coverb, but only 11 per cent a Manner coverb as seen in Figure 1.

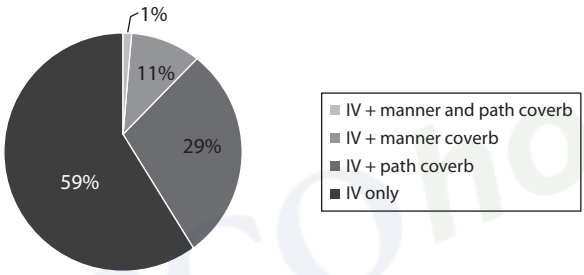

Figure 1. Manner and Path distribution in the CMD

Additionally, a corpus of 7,010 words made up of a collection of Frog Stories only was used ("Frog Motion Dataset" FMD).[4] This dataset includes only 355 motion events; considering locomotion verbs as well as other inflecting verbs that can be used in combination with certain Manner and Path coverbs or on their own to indicate movement and change of location. Again, the majority of motion expressions (49 per cent) were inflecting verbs only. This is followed by Path (35 per cent) and Manner coverb combinations (15 per cent) as in Figure 2.

4. The Frog Story is a Picture book which has been used in a wide range of cross-linguistic studies (Berman and Slobin 1994; Strömqvist and Verhoeven 2004) and which contains 29 pictures telling the story of a boy and a dog searching for a frog in the woods. The story is particularly rich in motion event prompt images and has therefore been used extensively for cross-linguistic comparisons.

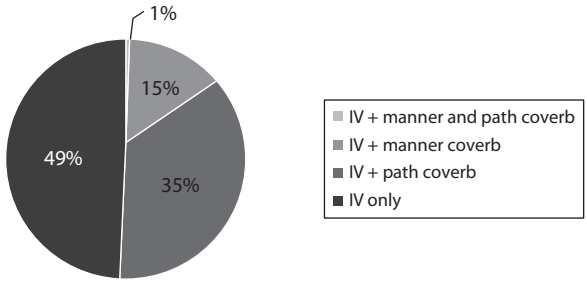

Figure 2. Manner and Path distribution in FMD

All in all, the general trend for the distribution of Manner and Path seems to be similar in both datasets, with a clear preference for Path over Manner specifications. However, the specific nature of the frog story narration appears to trigger the expression of slightly more detail in Manner encodings. Nonetheless, it turns out that there are rather close similarities between the results of both dataset analyses, suggesting that some of the trends observed within the rather artificial Frog Story narration setting, also carry over to a more general dataset of different discourse environments. Therefore, I continue to present results from both datasets and comment on similarities and differences where appropriate.

2.1 Ground specifications in discourse

Ibarrexte-Antuñano (2009) investigates Slobin's (1996: 205) claim that satellite-framed languages describe Path in more detail than verb-framed ones. Slobin bases this claim on the observations that in satellite-framed languages such as English verbs of motion (often conflated with Manner) are readily available and can be associated with satellites and prepositional phrases to express detailed Paths in relation to Ground elements. In contrast to that, verb-framed languages seem to pay more attention to static scene setting than to the dynamics of motion.

Languages can be distinguished in terms of using minus- and plus-Ground phrases depending on the number of verbs standing alone or with a satellite and the number of verbs accompanied by some Ground element (Ibarretxe-Antuñano 2009: 405–406) comes to the conclusion that there is a clear continuum in the elaboration of Path amongst her sample of languages, which includes all three typological types. It can furthermore be shown that there is inter- as well as intra-typological variation, with no clear tendencies for either type of languages.

For Jaminjung a minus-Ground expression is exemplified in (9). Here the Path coverb *buru* 'return' specifies the trajectory of motion, but no Ground is expressed. Example (10), on the other hand, is a plus-Ground expression where Path

is encoded in the reduplicated Path coverb *burl* 'emerge' and the Ground – source in this case – is specified by an ablative-marked landmark (*jarriny-ngunyi* 'from the hole') as well as a case-marked deictic (*ngiyi-ngunyi* 'from here').

(9) *yawayi, nga-ngga biyang… **buru***
yes 1SG-go.PRS now return
'yes, I'm going now, … back' (ES96_A08_02.034)

(10) ***ngiyi-ngunyi** majani **burl-burl** burru-ruma-ny **jarriny-ngunyi***
PROX-ABL maybe RDP-emerge 3PL-come-PST hole-ABL
'from here they maybe came out, out of the hole' (ES97_A03_01.294)

In Jaminjung, a combination of different Ground specifications is possible, as in Example (11), where Path is expressed in the coverb *buru* 'return' and the Ground specified by an allative-marked landmark (*kul-bina* 'to the school') as well as by the absolute directional *janggagu* 'upwards'. However, as will be shown below in this chapter, this is not a preferred discourse strategy.

(11) *buru=biya yirr-angga kul-bina janggagu*
return=NOW 1PL.EXCL-go.PRS school-ALL up
'let's go back, up to the school!' (ES08_A13_01tt.045)

For both datasets, a clear preference for not expressing Ground can be observed: in the FMD 64 per cent are minus-Ground compared to 58 per cent in the CMD. The fact that the percentage is very similar for both datasets is strong evidence for the preferred usage of minus-Ground expressions in Jaminjung. The analysis of the datasets leads to the conclusion that Jaminjung occupies a position towards the minus-end of the scale for plus- and minus-Ground (see Figure 3) as introduced in a cross-linguistic study (Ibarretxe-Antuñano and Hijazo-Gascón this volume; Ibarretxe-Antuñano 2009).

However, this method of establishing Path salience has some shortcomings. Even though not confirmed by a thorough corpus search yet, during my fieldwork trip to Australia, I noticed a preference in speakers to express the goal of a motion event not by using an allative-marked NP, but by a scene-setting locative-marked goal, which is described in a separate clause. The example in (12) was collected from an elicitation task and the scene described involved a car driving from a rock over a bridge to a tree. The event here is described online as it is happening. However, the same structure remains when the speaker changed the tense to past when repeating the phrase for clarification. All of these instances involved landmarks as goals and described the endpoint of the moving Figure as standing next to the goal of motion.

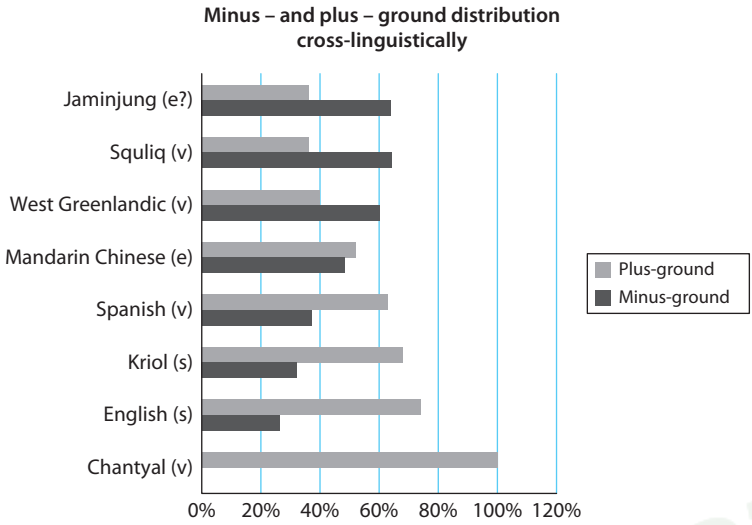

Figure 3. Plus- and Minus-Ground languages adapted from Ibarretxe-Antuñano (2009: 406)

Note: s stands for satellite-framed, *v* for verb-framed, and *e* for equipollently-framed language

(12) *marraj gan-unga-m wagurra yugung ga-ngga*
go.past 3SG>3SG-leave-PRS rock run 3SG-go.PRS
brij-gi gurdij ga-yu langiny-gi
bridge-LOC stand 3SG-be.PRS wood-LOC
'He goes past the rock leaving it, is running over the bridge and is standing at the tree' (DH10_A03_05)

In all elicitation tasks like this, different speakers preferred to use the above described type of motion expression, which uses two separate clauses over a single clause with goal and source combinations. In Slobin's (1996) method of counting plus- and minus-Ground expressions, an expression like *gurdij gayu langinygi* 'it stands at the tree' would not be counted as a Ground expression even though it technically mentions the goal of motion.

Generally, however, there is a strong, noticeable preference for the expression of goal over source or passed ground in both datasets. Considering plus-ground expressions alone, 57 per cent in the FMD, and 65 per cent in the CMD involve mention of a goal compared to only 38 per cent (FMD), and 24 per cent (CMD) for source (see Figure 4).

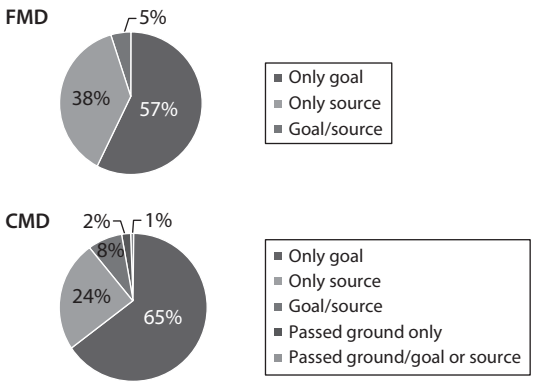

Figure 4. Ground specifications in CMD and FMD

This is not a surprising result when considering what e.g. Stefanowitsch and Rhode (2004: 250) and Lakusta and Landau (2005) call the 'goal-bias'. According to (Verspoor et al. 1999: 98), any human activity "involves human volition and we tend to be far more interested in the goal of the action than in the source of the action. Therefore … the goal is far more salient than the source," Furthermore, as Marrotta and Meini (this volume) suggest for observations in L2 learners, there might also be some linguistic factors accounting for and triggering the 'goal-bias'.

In Jaminjung, goals are, not mandatorily, allative case-marked. The allative suffix *-bina* can be left out for toponyms and deictic goal NPs, but not for landmarks, and this is, in fact, the preferred strategy. Case-marking on deictics and toponyms usually only occurs when needed for clarification in contrast with a source or to specify that more than one goal element belong together. This then makes the concept of goal the unmarked default interpretation of toponyms as well as deictics. Such a distinction between the source as marked and goal as unmarked term has also been observed by others (Ikegami 1987: 125–127). Additionally, Lewandowski (this volume) argues that the specific argument structure schema singling out the endpoint of motion in Polish (and Spanish) might also account as evidence for the goal-bias.

There is a noticeable difference between the two datasets concerning this goal-bias. How can this be accounted for? The specific nature of the Frog Story narrative gives a clue. Here, the speaker is confronted with a number of static pictures to tell a story. During the session, even though the speaker is encouraged to speak freely, he/she is still looking at each picture while telling the story. This can then lead to an exercise that is more of a description than an actual narrative. And such descriptions are possibly more complete than natural discourse, where generally a source of motion is possibly only mentioned once in a bigger chunk of

discourse. For a narrative, however, more detailed Path and Ground descriptions appear useful and comprehensible. Additionally, the Frog Story also includes a high number of events, such as the owl scene where an owl suddenly flies out of a hole towards the boy, where source over goal is salient.

2.2 Complex Path expressions

A second notion of analysis in within an investigation into Path salience involves what Slobin (1996) calls a 'complex Path'. This analysis is still concerned with the verb phrase, but now a closer look at more complex motion descriptions is being conducted. Such constructions may include Path information in more than one mentioning of a Ground in the motion event in a single clause. This strategy is also called clause compacting and is exemplified in (13). The example is a single verb phrase mentioning both source (*from the cliff*), and goal (*into the river*), in addition to a path satellite (*down*).

(13) *He fell down from the cliff into the river.*

The occurrence of such complex Paths in a given language can also be accounted for by Bohnemeyer et al.'s (2007) approach of a typology of motion event segmentation. Within this typology, Jaminjung appears to belong to those types of languages that allow for a goal and a source NP to be encoded within one verb phrase. To include a passed ground, however, (normally) a separate VP is needed. Example (14) shows a combination of source (*wagurra* 'rock') and goal (*gugu* 'water') NPs only.

(14) ***wagurra-ngunyi*** … *dibard* *gan-unga-m* … ***gugu-bina***
rock/money-ABL jump 3SG>3SG-leave-PRS water-ALL
'from the rock, he jumps into the water' (DH10_A11_02_0062, JM)

Passed grounds may only combine with goal or source NPs if the source and goal grounds are understood to be connected by the passed ground (Bohnemeyer et al. 2007: 512). In Example (15) from an elicitation task, the speaker describes the movement of a car over a bridge from one side to another. There are a tree and a rock at the respective sides of the bridge.

(15) ***langiny -ngunyi*** … *buru* ***malang*** *ga-ram* … ***bindidurru-ni***
wood-ABL return cross 3SG-come.PRS bridge-LOC
gurrurrij, gurdij *ga-yu* *wagurra-ni*
car stand 3SG-be.PRS rock/money-LOC
'the car came back from the tree, crossing the bridge and is now standing at the rock' (DH10_A13_03_0033, JoJ)

In discourse, speakers normally separate source and goal expressions from a passed ground event. However, even though passed ground encodings are possible in the language, such are extremely rare as can be seen in Figure 4 in Section 2.1.

In Example (16), source and goal sub-events are included in a single VP and the passing event, with an implicit ground that is the deictic centre, is added by a separate VP.

(16) *Timber Creek-ngunyi* *biya* *yurru-ruma-ny,* *marraj=ung.*
n_top-ABL NOW 1PL.incl-come-PST go.past=RESTR
yurr-ijga-ny, *Gregory-bina*
1.PL.incl-go-PST n_top-ALL
'we came from Timber Creek, we went past (here), to Gregory'
(ES95_A20_routedescr_001)

Generally, in Jaminjung, a combination of more than one Ground in discourse is very rare. In less than 3 per cent of cases for the CMD and in 1.5 per cent for the FMD, these constructions occur. Much more common is a separation of different ground-encoding NPs into separate clauses as in Example (17) where the source of the motion event is encoded in an ablative-marked deictic (*yina* 'there') in a verb phrase containing a complex predicate with the IV *-yu* 'say/do. To encode the goal of motion, a second IV *–wardgiya* 'throw' combines with an allative-marked deictic (*yinawurla* 'over there') and absolute term (*manamba* 'upstream').

(17) ***yina-ngunyi*** *diwu* *ba-yu* ….
DIST-ABL fly IMP-say/do
yinawurla-ngining*=biyang* *diwu* *ba-wardgiya* ***manamba-ngining***
DIST:DIR-L.ALL=NOW fly IMP-throw upstream-L.ALL
'throw it from there; throw it over there upstream' (ES97_A01_03.304-5, DB)

As a more general observation, one can conclude then that complex Path constructions including two Ground NPs in narratives are used only as a repetition of already mentioned sources and as afterthoughts to clarify a statement as in Example (18) where the source is mentioned to provide the listener with a more detailed description and to ensure understanding.

(18) *wirib* *gayi,* *ga-dba-ny=ni* ***gugu-bina*** *bu,*
dog ALSO 3SG-fall-PST=SFOC water-ALL enter.water
balarraj-giyag*,* *gurrany* *gani-ngawu,*
cliff-ABL NEG 3SG:3SG-see.PST
'the dog too, he fell, into the water, from the cliff, he didn't see it'
(ES96_A01_04.297/299)

The same pattern can be observed in all other cases of complex NP path as well. Instances of two-Ground encodings in one VP are deliberately made less 'compact' by adding an intonation break. Therefore, densely packaged event descriptions appear not to be preferred encoding strategies of speakers. The placement of additional Grounds within or outside of the prosodic unit of a motion event description has, so far, not been considered in studies investigating the possibility of multiple Ground encodings in a single VP. As discussed above, Bohnemeyer et al. (2007) introduce a semantic property encoding temporality within the clause, and Slobin (1996, 2004) and Ibarretxe-Antuñano (2009) only consider syntactic measures as the verb phrase. Therefore, I propose that the prosodic unit as a means of analysing event segmentation needs to be taken into account as well. Then Jaminjung speakers, while semantically and syntactically allowing for multiple Grounds in a single motion event description, prefer to de-compact the expressions by intonation breaks which points towards a general preference for single- over multiple-Ground expressions.

However, for this part of the analysis, one must also consider other types of complex path expressions as exemplified in Example (8) above. These consist of all types of path expressions including Ground specifications and Path coverbs. In both datasets, however, even such constructions were rather rare only accounting for 11% of all motion event descriptions in the CMD and 10% in the FMD.

In Ibarretxe-Antuñano's (2009) cross-linguistic study, this places Jaminjung in a middle ground position as a type of language that prefers to express only one Path element per motion event description in discourse as seen in Figure 5.

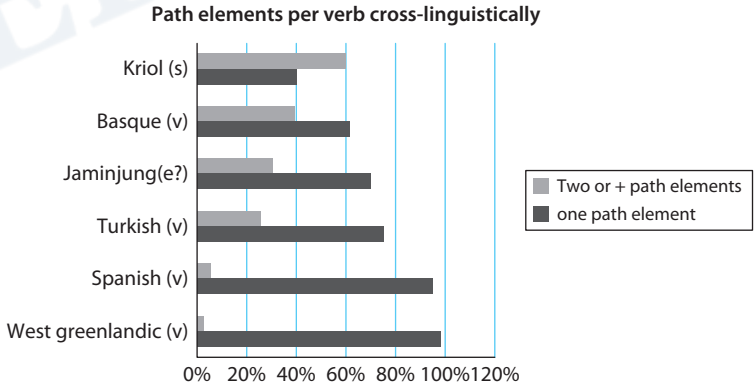

Figure 5. Complex Path expressions cross-linguistically adapted from (Ibarretxe-Antuñano 2009: 407)

2.3 Path and event granularity

Motion event granularity identifies the frequency of Path complements mentioned in discourse independent of the availability of complex clauses. Granularity is a concept that relates to "the investigation of different levels of precision (detail) in different relationships (events) when the level of precision is a relative concept and divided between fine- and coarse-grained" (Tutton forthcoming). Therefore, the level of Path detail expressed in a larger chunk of discourse is analysed. For this purpose (Ibarretxe-Antuñano 2009), following (Slobin 1996), uses the cliff scene of the Frog Story, which is a particularly motion-rich episode in the picture book.

In the scene, a deer picks up the boy onto its antlers, runs with him towards a cliff and finally drops him over the edge (see Figure 6). The dog meanwhile is running alongside the deer and the boy, and so the two of them fall down, and eventually land in the water. Slobin (1996) segmented this scene into six sub-scenes, a segmentation which is adopted by (Ibarretxe-Antuñano 2009: 409):

> (1) deer starts to run, (2) deer runs, carrying the boy, (3) deer stops at cliff, (4) deer throws the boy (off the antlers/down), (5) boy and dog fall, (6) boy and dog land in water. (Ibarretxe-Antuñano 2009: 409)

Figure 6. The cliff scene in the Frog Story

The granularity is measured by counting the number of segments that are mentioned by the speakers while describing this scene. High event granularity is assumed when always or mostly more than three segments are mentioned. According to (Ibarretxe-Antuñano 2009: 408–409) this is the case for Arrernte and Ewe, as well as Germanic languages, and Thai. The other end of the scale is occupied by Hebrew, Tagalog, and Romance languages, which mention at least three segments less than half the time. All four Jaminjung Frog Stories investigated mention at least three and up to five segments of the cliff scene. Example (19) is a particularly rich description that includes five of the six segments.

(19)

Segment 1: Deer starts to run

(a) *barlbba biyang burr-ijga-ny,*
side.by.side now 3PL-go-PST
'they went side by side now,'

(b) *burr-ijga-ny biyang,*
3PL-go-PST now
'they went then'

Segment 2: Deer runs carrying the boy

(c) *ngayin.. thanthiya-ni gan-uga,*
meat/animal DEM-ERG 3SG:3SG-take.PST
wurlg gan-arra-ny jalig,
carry.on.shoulder 3SG:3SG-put.PST child
'the animal, that one, took him, took him on its shoulder, the child'

Segment 4: Deer throws the boy down

(d) *jalig balarraj thanthu wurrg,*
child cliff DEM chuck
'it threw the child off at that cliff'

Segment 5: The boy falls

(e) *thanthiyu na ga-dba-ny jalig*
DEM now 3SG-fall-PST child
'the child then fell'

Segment 6: The boy lands in the water

(f) *barr ga-dba-ny=ni jamurrugu,*
hit.against 3SG-fall-PST=SFOC below
'he fell and hit the bottom'

(g) *gugu-bina bu ga-dba-ny* \
water-ALL enter.water 3SG-fall-PST
'he fell into the water' (ES96_A01_04.289-295)

Using these measures, Jaminjung can be analysed as an elaborate Path granularity language. In Example (19) only segment 3 is not expressed. However, the individual clauses in the scene are by no means examples of particularly complex motion expressions. There is only one case-marked Ground in this motion-rich scene – *gugu-bina* 'into the water'– and only one absolute term: *jamurrugu* 'down(wards)'. Furthermore, in the last three clauses, IVs that are not locomotion verbs are used to express motion events. It is, however, noteworthy to mention that the speaker here seems to have paid particular attention to the action of motion itself. Twice,

first in segment 1 and then in segment 5, movement itself is mentioned as a recollection of a longer process. The deer's running with the boy on its antlers as well as the fall of the boy is, as such, especially foregrounded.

The equivalent scenes in the other Frog Stories are slightly less elaborate and mention three or four segments respectively, but often repeat one segment of the scene numerous times rather than stating other segments. In those scenes, the speakers all concentrate on the deer carrying the boy on its horns, throwing him off the cliff, and the landing of the boy and the dog in the water. Fewer speakers focus on the running of the deer and the landing in the water of the two protagonists. However, considering all seven stories in the Jaminjung FMD, speakers mentioned three or more segments 85 per cent of the time, making it therefore a highly elaborate Path salience language.

3. Factors for Path salience

The reasons for languages following a high- or low-salience pattern seem to be based on a number of interrelated factors such as linguistic devices, word order, tolerance for verb omissions, the existence of "dummy verbs", cultural values, orality, and standardisation (Ibarretxe-Antuñano 2009: 410–411). Jaminjung has a high number of lexical and morphological resources for the encoding of motion events. The language uses allative and ablative case marking for the encoding of source and goal on landmarks (14)), toponyms (16), as well as directional absolute terms (11), and deictics (10). Furthermore, a locative case can denote the location of an entire motion event or the endpoint of a change of location event (Schultze-Berndt 2000: 48–60). As such it can be used to mark a passed ground of a motion event as in (20).

(20) *jalbud-**gi**=marlang marraj ga-ngga*
house-LOC= GIVEN go.past 3SG-go.PRS
'it goes past the house' (DH10_A11_03_0035, MMc)

Generally, the existence of seven specific locomotion-inflecting verbs out of a total number of roughly thirty-five is rather astonishing. Furthermore, there are five other inflecting verbs that can denote a motion event only add to this high number. In the FMD, there are occurrences of fourteen different Path and seven Manner coverbs. In the CMD, an additional fourteen distinct Path coverbs are in use as well as ten more Manner coverbs. In both categories, the use of Kriol loans such as the Manner verb *budok* in (21) and the Path verb *tenof* in (22) add to the coverb lexicon and therefore to the richness of this inventory. This affluent

register is a clear indication of the cultural importance of motion event descriptions to the Jaminjung people as expressed in the language.

(21) *yirri=ma* *yirr- inyji=wunthu* *budok*
1PL.excl=SUBORD 1PL.excl-go:IMPF=COND walk.on.foot
'as for us, when we used to go on foot' (ES01_A07_03tt_0274)

(22) *tenof* *ga-ram* *Magulamayi-bina*
turnoff 3SG-come:PRS n_top-ALL
'he turns off to M' (ES95_A20_routedescr_025)

A factor influencing high Path salience is the existence of "dummy verbs". The semantic load of these verbs is usually poor or generic; however, when accompanied by Path complements, they are used for the description of motion events. High Path salience languages are more likely to employ dummy verbs in motion constructions than low-Path salience ones. Even though, the term "dummy verb" is rather problematic, one could dub Jaminjung's inflecting verbs dummy verbs. They do not carry a high semantic load, but merely indicate the fact of motion; however, they are clearly more specific semantically than verbs like 'do', which are most usually associated with the term "dummy verb". Path and Manner of motion, on the other hand, are indicated by accompanying coverbs.

In discourse, path was expressed only within the inflecting verb in 39 per cent of motion events in the CMD and in less half of the events (47.5 per cent) in the FMD. Therefore, in the majority of times, inflecting verbs are not used on their own, but occur in combination with Manner or Path coverbs, Ground phrases, or directionals. These findings, then, seem to support the claim that in languages using semantically generic inflecting verbs, other means of expressing motion components become more frequent. However, as my analysis of Jaminjung shows, using (Ibarretxe-Antuñano 2009) method of establishing Path salience, this is not reflected in the results. While Jaminjung appears to occupy a position towards the low-Path salience cline considering path expressions on the clause level, it has high-salience with regard to event granularity. If one considers the frequent use of both Path and Manner coverbs, as well as Grounds and directionals, the language seems to be occupying a more motion-intensive position.

This last factor influencing Path salience concerns only path granularity. It can be argued that languages displaying a high level of path event granularity in larger chunks of discourse are more likely to possess cultural systems in which space and motion play a more important role than languages that do not (Ibarretxe-Antuñano 2009: 411). I argue that while frequency of path encodings appears to have its roots in the general structure of motion event expressions in Jaminjung, event encodings in larger chunks of discourse appear not to be affected by this

and might therefore have their origins in cultural systems. For other Australian languages such as Warlpiri and Arrernte it has been claimed that "cultural factors are directly linked to the way space and motion are described … [in] Central Desert Aboriginal communities [that] show detailed attention to motion, paths, journeys, and orientation in space" (Ibarretxe-Antuñano 2009: 411).

Hence, it has been pointed out that the nature of dreamtime stories as travel through space across the land is one factor influencing the high significance of motion in aboriginal culture (Bavin 2004: 19). Simpson (2002: 298–299) also emphasises the importance of travel in ancestral myth as well as lifestyle in the semi-desert country of Warlpiri and Arrernte.

Bavin (2004: 18–19) remarks that the Warlpiri have such a close connection to their traditional lands that they are able to develop a detailed mental map of their country and recall almost all topological features. Highly valued are skills in route-finding, orientation, and memory of locations. The geographic features of the traditional land and the customary lifestyle of Jaminjung speakers as hunters and gatherers point towards a similar significance of motion and orientation as found in Warlpiri and Arrernte (Wilkins 2006). Furthermore, high event granularity has also been observed for Kriol which typologically and in terms of Path salience on the clause level follows the pattern of its lexifier English, but where the cultural significance placed on motion and travel also appears to lead to detailed Path descriptions in larger chunks of discourse (Hoffmann 2011a; Hoffmann 2011b).

The high salience of event encodings beyond the clause level is connected to the need of explicitly describing the traditional country or routes travelled within it to find food and water. However, this does not have anything to do with frequent path encodings on the clause level as argued by (Ibarretxe-Antuñano 2009) since Jaminjung and other languages such as Squilq do not show such a correlation.

These observations however, do not entail that all languages that were identified by (Ibarretxe-Antuñano 2009) as high path granularity languages, are spoken in hunter-gatherer type societies (for example speakers of Basque, Chinese, and Germanic languages were also found to employ detailed elaboration of path beyond the clause level). However, these languages also show high Path salience with reference to ground-encodings and complex paths on the clause level. For Jaminjung, there is a remarkable mismatch between event granularity and clause-level Path salience. Therefore, I argue that the event granularity as part of Ibarretxte-Antuñano's (2009) analysis of Path salience might have to be viewed separately from structural Path salience components such as ground-encodings and the number of path elements per verb to explain differences between the level of path detail on and beyond the clause level.

4. Implications and outlook

My analysis of Jaminjung was based on three complementary areas. Firstly, an investigation of ground specifications in discourse revealed that Jaminjung occupies a position towards the minus-Ground languages section of the cline. In 67% in the CMD and in 71% of all motion expressions in the FMD ground was not explicitly expressed. Secondly, the distribution of complex paths was analysed. The combination of two explicit ground elements within one VP is a very rare construction appearing only in 3% of all cases in the CMD and 1.5% in the FMD. However, when considering other path elements within a motion event verb phrase, Jaminjung appears to encode path in much detail. In 49% of all motion expressions in the CMD and in 42% of the FMD one path is explicitly expressed in a ground, a path coverb or implicitly within an IV or coverb. The combination of more than one path element however, is much less frequent with 11% in the CMD and 10% in the FMD. For this part of the analysis, Jaminjung then appears to be placed in a middle ground for the Path salience cline.

Ibarretxe-Antuñano (2009) also included an analysis of the degree of detailed description of a motion event scene beyond the clause level, namely the cliff scene in the frog story, into her typological analysis of Path salience (see also Ibarretxe-Antuñano and Hijazo-Gascón, this volume). However, I argue that this part of the investigation needs to be kept separate from the two levels of analysis mentioned above. Contrary to Path encoding frequency on the clause level, Jaminjung here needs to be considered as a highly elaborate Path salient language. 85% of speakers expressed three or more segments of the scene placing Jaminjung among the majority of languages in Ibarretxe-Antuñano's (2009) study.

A continuum as proposed by (Ibarretxe-Antuñano 2009) is on the one hand a useful addition to the Talmy/Slobin typology, which has been challenged many times. On the other hand, it is very difficult to truly situate a language along such a continuum. Which factors are of more importance in attempting the analysis – the clause-compacting ones or the ones involving granularity and factors of Path salience (see Lewandowski, this volume)?

Furthermore, I am not completely convinced about the method of analysing event granularity using the Frog Story cliff scene. The nature of the task, which involves the pictures being in front of the speaker at all times, might reveal the individual segments as proposed by Slobin (1996). Additionally, there is an inherent difficulty of deriving a dynamic description based on static stimuli as opposed to video or animation that are also used in many motion event studies. Moreover, the degree of compacting of a motion event might be related to the degree of planning of a motion scene as well as the literacy of the speaker. These problematic

issues in mind, however, I do acknowledge that this is, at the moment, the best way to compare cross-linguistically because of the Frog Story's extended usage in the field.

Within the wider scope of the current volume, my chapter suggests that within a study of dynamic spatial relations in discourse, what needs to be considered are intra- (e.g. lexicalisation patterns) as well as extra-linguistic factors, such as cultural prerequisites. Cross-linguistic diversity then should be analysed from a number of different angles using not only widespread tools such as the Frog Story, but also taking into account language-specific discourse environments such as personal and traditional narratives, and communicative discourse to account for cultural circumstances.

References

Bavin, E. L. 2004. Focusing on 'where': An analysis of Warlpiri Frog Stories. In *Relating Elements in Narrative.* Vol. 2: *Typological and Contextual Perspectives*, eds., S. Stroemqvist & L. Verhoeven, 17–35. Mahwah, New Jersey: Lawrence Erlbaum.

Berman, R., and D. I. Slobin, eds. 1994. *Relating Events in Narrative: A crosslinguistic developmental study*. Hillsdale, NJ: Lawrence Erlbaum.

Bohnemeyer, J., *et al.* 2007. Principles of event segmentation in language: The case of motion events. *Language* 83: 495–532.

Hoffmann, D. 2011a. Descriptions of motion and travel in Jaminjung and Kriol, School of Languages, Linguistics and Cultures, The University of Manchester.

Hoffmann, D. 2011b. The many ways of falling down a cliff: Culture- and language-specific ways of expressing path in Jaminjung and Kriol. Paper presented at *Language Documentation and Linguistic Theory 3*, School of Oriental and African Studies, University of London.

Ibarretxe-Antuñano, I. 2009. Path salience in motion events. In *Crosslinguistic Approaches to the Psychology of Language: Research in the Tradition of Dan I. Slobin*, eds., E. Lieven et al., 403–414. New York: Psychology Press.

Ikegami, Y. 1987. 'Source' vs. 'goal': A case of linguistic dissymmetry. In *Concepts of Case*, eds., R. Dirven & G. Radden, 122–146. Tuebingen: Narr.

Lakusta, L., and B. Landau. 2005. Starting at the end: The importance of goals and spatial language. *Cognition* 96: 1–33.

Schultze-Berndt, E. 2000. *Simple and Complex Predicates in Jaminjung. A Study of Event Categorisation in an Australian Language.* Vol. 14: MPI Series in Psycholinguistics. Nijmegen: University of Nijmegen.

Schultze-Berndt, E. 2007. On manners and paths of refining Talmy's typology of motion events via language documentation. In *Proceedings of the Conference on Language Documentation and Linguistic Theory, 7–8 Dec. 2007*, eds., P. K. Austin, O. Bond, & D. Nathan, 223–233. London: SOAS.

Simpson, J. 2002. From common ground to syntactic construction: Associated path in Warlpiri. In *Ethnosyntax: Explorations in Grammar and Culture*, ed., N. J. Enfield, 287–307. Oxford: Oxford University Press.

Slobin, D. I. 1996. Two ways to travel: Verbs of motion in English and Spanish. In *Grammatical Constructions: Their Form and Meaning*, eds., M. Shibatani & S. A. Thompson, 195–219. Oxford: Clarendon Press.

Slobin, D. I. 2004. The many ways to search for a frog: Linguistic typology and the expression of motion events. In *Relating Events in Narrative.* Vol. 2: *Typological and Contextual Perspectives*, eds., S. Stroemqvist & L. Verhoeven, 219–257. Mahwah, NJ: Lawrence Erlbaum.

Slobin, D. I. 2006. What makes manner of motion salient? Explorations in linguistic typology, discourse and cognition. In *Space in Languages: Linguistic Systems and Cognitive Categories*, eds., M. Hickmann & S. Robert, 59–81. Amsterdam & Philadelphia: Benjamins.

Stefanowitsch, A., and A. Rohde. 2004. The goal bias in the encoding of motion events. In *Motivation in Grammar*, eds., K.-U. Panther & G. Radden, 249–268. Berlin and New York: Mouton de Gruyter.

Talmy, L. 1985. Lexicalization patterns: Semantic structure in lexical forms. In *Language Typology and Syntactic Description: Grammatical Categories and the Lexicon*, ed., T. Shopen, 57–149. Cambridge: Cambridge University Press.

Talmy, L. 2000a. *Toward a Cognitive Semantics: Concept Structuring Systems*. Vol. 1. Cambridge, MA: MIT Press.

Talmy, L. 2000b. *Toward a Cognitive Semantics: Typology and Process in Concept* Structuring. Vol. 2. Cambridge, MA: MIT Press.

Talmy, L. 2007. Lexical typologies. In *Language Typology and Syntactic Description*, ed., T. Shopen, 66–168. New York: Cambridge University Press.

Tutton, M. Forthcoming. Granularity, space and motion-framed location. In *Motion Encoding in Language and Space*, eds., M. Dimitrova-Vulchanova & E. van der Zee, Oxford: Oxford University Press.

Verspoor, M., R. Dirven, and G. Radden. 1999. Putting concepts toegther: Syntax. In *Cognitive Exploration into Language and Linguistics*, eds., R. Dirven & M. Verspoor, 87–115. Amsterdam & Philadelphia: Benjamins.

Wilkins, D. 2006. Towards an Arrernte grammar of space. In *Grammars of Space: Explorations in Cognitive Diversity*, eds., S. C. Levinson & D. Wilkins, 24–62. Cambridge: Cambridge University Press.

Contents of the companion volume

Language, culture, and cognition

Part III. Conceptualizing spatio-temporal relations