'He Descended Legs-Upwards': Position and Motion in Tzeltal Frog Stories.

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1 Background: Frog story research

Mercer Mayer's wordless picture book 'Frog, where are you?' has been the focus of an extensive cross-linguistic investigation into narrative style and its development in children (Berman and Slobin 1994; henceforth B&S). As a visual prompt for eliciting what is essentially a 'journey' story, the picture-book provides a rich resource for examining the temporal and spatial organization of events in narratives from different languages and cultures, and how narrative style is acquired by children.

The B&S research has established that there are clear differences between languages with respect to the event components that speakers encode, due to the 'channeling of attention' involved in thinking for speaking. In particular, the semantic typology of a language as 'verb-framed' or 'satellite- framed' (Talmy 1985) is reflected in the linguistic expression of locative trajectories. In verb-framed languages like Spanish the preferred locus for PATH is in the verb; furthermore, these tend to be concise, bare verbs of motion often without further locative specification (e.g., 'he ascended'). Satellite-framed languages like English prefer to encode PATH in a satellite, and complex trajectories are often encoded in one clause (e.g. 'he climbed up the rock to the tree branch.').

Another important discovery in the B&S research is that, in children's narrative development, there are language-specific interactions between narrative organization and linguistic expression. Narrative functions that are ex

pressed by obligatory devices all appear early (by about age three). Linguistic devices do not have to be obligatory to influence narrative development: children can learn early linguistic forms that are late-learned by children learning other languages (e.g. relative clauses, passives) if they are either (a) grammaticized, or (b) 'accessible' (frequent, in contrast sets with other frequent items, prosodically emphasized), i.e. if they are easily expressed in the child's own language.

The present study of Tzeltal frog stories contributes to this large comparative project additional data with two new features. The first is that the data comes from a predominantely illiterate, monolingual community of Mayan peasants in Chiapas, Mexico. Secondly, the study focuses on the integration of position (stasis) and motion in event descriptions. It is argued that specification of position as well as motion in journey descriptions is just such an 'accessible' characteristic of the language and influences Tzeltal children's narrative style from age three.

In Frog story research to date, a great deal of attention has been devoted to linguistic and cultural differences in the packaging of event descriptions and the deployment of spatial language (locative trajectories, the lexicalization of manner and path, etc.) (B&S 1994, Wilkins 1997). No attention has been paid to **position** (as location, as the end result of motion, or position-while-moving), which from an Indo-European perspective seems irrelevant to locative description. But Tzeltal elaborates position as an important element in descriptions of location (Brown 1994). Here I'll argue that it is also important in motion descriptions, and that these positionals can bring Manner (e.g., how the Figure is positioned while moving) into the clause.

2 Tzeltal linguistic resources

There are four relevant word classes used in journey descriptions (Brown in press); none of these is grammatically obligatory.

i. a core set of <u>motion verbs</u> encoding MOTION + PATH (e.g. 'go'/ 'come', 'enter/exit', 'ascend'/ 'descend', 'pass by', 'return'. In this respect Tzeltal is a 'verb-framed' language.

ii. a set of <u>directionals,</u> adverbials that directly follow the verb and are grammaticized from the core motion verbs. Directionals convey PATH (direction of motion or orientation of a path or of a static array).

iii. a set if <u>auxiliaries,</u> grammaticalized from the same core set of PATH-encoding motion verbs, which precede the verb and convey a 'motion-cum-purpose' meaning.

iv. several hundred <u>positionals,</u> a class of verb roots conveying POSITION (in stasis, or concurrent-with or as-a-result-of motion). In a clause, these roots can take any one of three predicative forms: it may be a

predicate adjective ('be-in-position'), which is by far the predominant form in the frog stories, alternatively it may be derivationally transitivized (to indicate 'put-into-position'), or intransitivized ('get-into-position').

Thus Tzeltal is in part a 'verb-framed' language with a core set of PATH-encoding motion verbs, so that the bare bones of the Frog story can consist of verbs translating as 'go'/ 'come'/ 'ascend'/ 'descend'/ 'arrive'/ 'return', etc. But Tzeltal also has PATH-encoding adverbials which provide the direction of motion or the orientation of static arrays. Furthermore, motion is not only encoded bare-bones, but vivid detail may be provided by positionals which can describe the position of the Figure as an outcome of a motion event; motion and stasis are thereby combined in a single event description. For example: (positionals are in boldface, motion/path in italics, in all examples)

<1> **xojol** *moel* sjol ta ala plastiko.
 'His head [the dog's] is **inserted-tightly** *upwards* into the little plastic thing'.
<2> **chawal** *ya x'anix* te kereme.
 '**Lying face-up** the boy *has fled* [from the bird]'.
<3> jipot **jawal** ta lum.
 'He [the boy] has been thrown **lying_face-upwards_spread-eagled** to the ground.'

Why should Tzeltal speakers be inclined to combine position and motion in the same clause? Positionals bring MANNER-like information into the verbal clause, although this is not manner-of-motion but 'manner' of the state of affairs described by the whole clause, picking out the Figure. Resources for expressing MANNER of motion are much less elaborated; there are a few MANNER or MANNER + PATH verbs (e.g., 'fly', 'swim', 'flee', 'chase'), and some specialized devices (e.g. reduplication).

3 Hypotheses for Tzeltal Frog stories

Given the importance of positionals as an integral (though non-obligatory) part of locative and motion descriptions, I hypothesized that:
 1. A large proportion of Frog story narrative clauses will specify the position of the Figure.
 2. Tzeltal children will attend to position (their attention will be channeled to it) by age three.
 3. Rather than simply alternating background/scene-setting position-descriptions with descriptions of pure motion that move the story along

through time, speakers will sometimes express position in the same clause as motion, to convey not just pure motion but a kind of 'manner' associated with the scene. Position and motion are <u>both</u> foregrounded in such clauses.

4. Although, cross-linguistically, even by age nine children have not fully mastered adult narrative style (B&S), relatively early Tzeltal children will begin to combine motion event and position description in the same clause.

Frog stories were collected from ten adults and nineteen children, in videotaped sessions mostly in the subjects' homes. A pure frog story approach (B&S:22-25) was unworkable in this community, since even some adults tended to construe the task as a picture-labelling exercise. Therefore I or another caregiver first went through the storybook, identifying the protagonists and the objects portrayed. Then the narration event was conducted in a culturally natural interactive way, with other interlocutors interjecting conversational responses and prompting questions. Several of the children provided multiple retellings, on different occasions. For this analysis I have edited out irrelevant picture-descriptive detail, looking only at event descriptions which move the narrative forward through time and focussing on those expressing motion, path, and/or position. The children are grouped into three age-groups: age 3-5 (prior to schooling), age 6-7 (the beginning years for schooling), and age 8-13 (school children).

4   Adult Frog stories

The narrative style of adult storytellers in this task involves introducing protagonists and scene-setting elements with the predicate *ay* 'exist', often specifying their position as well as existence, using positionals for static background description, and using motion or action verbs along with directionals and positionals to move events and actions through time. If we look only at clauses which describe the activities/positions of the protagonists (boy, dog, frogs, bees, bird and deer), and ignoring for current purposes those describing just the setting (fallen-down logs, etc.), we find many motion-event descriptions with single motion verbs, or a motion verb plus a directional, conveying MOTION or MOTION + PATH. For example:

<5>   ya *xben*, spisil *ya xbenik* ta te'tikil.
      'He's *walking*, both of them are *walking* in the woods.'
<6>   *ch'ay tal koel* i keremi.
      'The boy *fell coming downwards*.'

Many other clauses portray static scenes with a positional only, or positional plus directional:

<7> in te tz'i'e, ay bi **jipil** ta te', ya syaan *tal* **ya stejk'an sba** yu'un.
    'As for the dog, there's something **hung** in the tree, he's stretching
        towards it, he **stands-himself-on-hind-legs** because of it.'
<8> te xpokoke **jukul** ya xk'abuot.
    'The frog [i.e. groundhog] is being looked at **squatting**.

And many clauses combine adjectival positionals with motion verbs and/or
directionals:

<9> *ch'ay koel* **jawal** niwan ek.
    'He *fell downwards* **lying-face-up** perhaps too.'
<10> **pakal** *jilel* tz'i' ta yanil ton.
    'The dog is **belly-down** *remaining-behind* at the bottom of the
        stone.'

5 Adult and child narratives compared

Tzeltal adults mix position with motion; both are important aspects of the
Frog story for them. But do children? And at what age? I took a central se-
quence where an elaborate trajectory is portrayed (the 'cliff scene', pp. 14-19
of the book): the scenes portrayed show the boy climbing onto a rock, being
carried off by a deer, thrown over a cliff into the water below, and sitting up
with the dog on his head. In descriptions of this cliff scene, all clauses
which express motion or position or a combination of both were analyzed.
The proportion of such clauses which express POSITION alone, MOTION/
PATH alone, or POSITION + MOTION/PATH, are given in Table 1, for
adults and for three groups of children.

	POSITION alone	MOTION /PATH alone	POSITION + MOTION/ PATH	TOTAL motion/ path and/ or position clauses
children 3-5	24 (52%)	21 (46%)	1 (2%)	46
children 6-7	20 (23%)	62 (71%)	5 (6%)	87
children 8-13	20 (25%)	41 (52%)	18 (23%)	79
adult	74 (39%)	99 (52%)	17 (9%)	190

Table 1: Cliff scene - position and motion/path expressed in clause

As Table 1 shows, position alone or motion alone are preferred by the youngest children aged 3-5. For example:

position alone:

<11> pet (3;5): **t'umul** sok yala tz'i'.
     'He [boy] is **immersed-in-water** with his little dog.'
<12> sil (5;0): **chawal** ch'in kerem.
     'The little boy is **lying-face-upwards**.'

motion alone:

<13> mal (3;0): *moem* ta te'.
     'He [boy] *has ascended* (into a) tree.'

By age 6-7 there is a big increase in MOTION + PATH descriptions with a motion verb and directional; for example:

<14> x'an (6;1): *ch'ayix tal koeli* ala keremi.
     'The little boy *has fallen coming-downwards*.'

The children at age 6-7 display proportionately more narrative attention to MOTION/PATH in fact than do the older groups, producing a U-shaped curve reflecting their emphasis on motion and path, although at this age they still are not using much MOTION/PATH + POSITION combined. The expression of MOTION/PATH + POSITION in a single clause increases with age, for the three groups of children. For example:

<15> pon (6;3): **kajal** *moel* ta sjol te'tikil chij.

    'He [boy] is **mounted-on** upwards the head of the deer.'

<16> alu (6;5): **xjawawet** *tal* koel

    'He [boy] is **face-up-mouth-open** *coming descending*.'

<17> sil (6;1): **chawalik** *k'oel*.

    They [boy and dog] are **lying-face-up-arms-outstretched** *arriv-*
ing-   there [in the water].'

In the 8-13 age group we find a large spurt in the expression of MOTION/PATH + POSITION, which are expressed concurrently in 23 per-cent of the clauses, a notably higher proportion than that for the adults (9 percent). (Adults of course told much longer and more elaborate stories than the children, more than twice as long, on average.) On the face of it, this pattern by the 8-13 group also reveals a U-shaped curve, possibly attribut-able to a heightened sensitivity to the language-specific pattern which adults manifest to a lesser degree.

Complex clauses. Motion descriptions in Tzeltal can only specify Source or Goal in one clause, but not both; therefore one cannot encode complex paths in one clause. But, as we have seen, other complex semantic combina-tions are indeed possible by combining a verb with directionals and/or posi-tionals. A crude index of how frequent such a strategy may be can be ob-tained by looking at all the complex clauses in the frog stories, and ascer-taining the frequency of combinations in one clause of the semantic ele-ments PATH, MOTION, and POSITION. Since Tzeltal is a verb-framed language (at least in part), we would expect a high percentage of verb-only clauses in descriptions of motion scenes (cf. B&S 1994: 621). Table 2 shows, for the adults and children, the percentages of complex predicates with different semantic elements encoded in one clause:

(i) MOTION + PATH (with a motion verb and directional; e.g. 'he is walk-ing awaywards'),

(ii) other verb + PATH (a non-motion, non-positional verb plus directional; e.g. 'it (dog) is looking upwards at him'),

(iii) motion + POSITION (with a motion verb or directional and a positional; e.g. 'he is falling down face-up'),

(iv) other verb + POSITION (a non-motion verb and positional, e.g. 'he was thrown face-up spread-eagled').

Age group	MOT. + PATH	OTHER VERB + PATH	MOT. + POSIT.	OTHER VERB + POSIT.	TOTAL complex pred.s	TOTAL motion/ path/ position clauses
3-5	40 (20%)	30 (15%)	6 (3%)	2 (1%)	78 (38%)	204
6-7	73 (19%)	112 (29%)	19 (5%)	3 (1%)	207 (54%)	381
8-13	76 (22%)	95 (27%)	25 (7%)	3 (1%)	199 (58%)	346
adults	129 (16%)	139 (17%)	37 (5%)	15 (2%)	320 (40%)	796

Table 2: Clauses with complex predicates in the frog stories

As Table 2 shows, a considerable proportion of all the clauses that convey motion/path/position or some combination of these in frog stories - from 38 to 58 percent of such clauses - have complex predicates that encode either verb + PATH (with a directional) or verb + POSITION. For all the age groups, verb + PATH (a verb plus a directional) is the favorite combination, but all age groups, even the youngest, have some positional plus motion verb or directional clauses, and again, the 8-13 year olds outstrip the adults in the percentage of clauses with both position and direction encoded. Nonetheless, for all age groups, clearly MOTION/PATH is more crucial to the Frog journey texts than is POSITION, as measured by proportion of clauses encoding these semantic elements.

5   Conclusions

The 'Tzeltal type' of frog narration integrates MOTION + PATH (expressed with motion verbs and directionals) and 'MANNER'-like stasis (expressed with positionals), to provide vivid snapshots of events in the Frog journey. This characteristic is compatible with the observation (Brown 1994) that, in Tzeltal, position is integral to descriptions of where things are and where they are going. This is a property of 'thinking for speaking' which Tzeltal children have to learn.

Even 3-5 year-olds are attuned to this propensity, as seen in the roughly equal incorporation of position and motion in their stories (Table 1), al

though for the most part they lack the syntactic ability to combine both in one clause. The expression of position and motion/path in one clause increases with age for children. However, the adults produce less as a percentage of total clauses than do the 8-13 year olds, and in any case this is not a highly frequent linguistic strategy. This suggests that expressing POSITION + MOTION/PATH in one clause is a stylistic resource that children even at 3-5 are beginning to acquire; by the 8-13 age range they are outstripping adults, showing 'over-sensitivity' to this feature of Tzeltal narrative style.

Though Tzeltal is a verb-framed language - since the preferred locus for PATH is in the verb or the adverbial directional - complex predicates play an important role in motion description and a significant portion of these (up to 7 percent in the Frog stories taken as a whole; up to 35 percent in the cliff scene) convey PATH and POSITION in the clause.

The results of this exploratory study are broadly compatible with the B&S findings, despite the unfamiliarity of the task for these subjects and the consequent departures from the B&S elicitation procedure. Children of 3-5 do seem to be already attuned to non-obligatory features of narrative style in their language, if these are accessible and easily expressed in the language.

References

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