

## DIRECTIONALS VERSUS ASSOCIATED MOTIONS IN CAVINEÑA

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THIS PAPER IS AN ATTEMPT TO ANALYZE<sup>1</sup> some verbal inflections having to do with notions of motion in Cavineña, an Amazonian language of the Takanan family, spoken in northern Bolivia.

The study is based on a corpus of 23 texts that I personally collected and transcribed from three different native speakers (four months of fieldwork in summer 1997 and summer 1998).

Cavineña is a highly agglutinative language in terms of its verbal morphology. Among the many possible inflections a verb can take, many have to do with notions of motion. An example of a verb inflected with motion morphemes is given in (1) below<sup>2</sup>:

- (1) *tudya ike taraka-ju bade-tsura-diru-kware*  
then 1SING.ABS corral-LOC perch-upward-while.going.back-PAST  
'Then, I perched up on the corral while I was going back.'

In the data, I found a total of thirteen different motion inflections. The purpose of this paper is an attempt at analyzing seven of them<sup>3</sup>. The seven inflections are given in Table 1 (overleaf). I will give evidence that these seven motion inflections can be further subdivided into two sets: a first set labeled *associated motions* and a second set labeled *directionals*.

In order to better understand the discussion of motion inflections, I will first give basic information about the morpho-syntactic structure of Cavineña.

1. GENERAL MORPHO-SYNTACTIC FACTS ABOUT CAVINEÑA. Cavineña is an ergative language. The ergative argument is case-marked by the morpheme *-ra*. The absolutive argument is unmarked. There are no cross-referencing affixes or clitics in the verb. As an illustration, consider the following pair of examples, the first one transitive, the second intransitive:

- (2) *Roberto etare-ju judiru-kware* (intransitive)  
Roberto.ABS house-LOC arrive-PAST  
'Roberto arrived at the house.'
- (3) *Roberto-ra Rosa riwi-sha-jeri-nuka-kware* (transitive)  
Roberto-ERG Rosa.ABS fall-CAUS-almost-iterative-PAST  
'Roberto almost made Rosa fall again.'

<i>-tsura</i>	‘upward’
<i>-bute</i>	‘downward’
<i>-ti</i>	‘go and do’ <sup>4</sup>
<i>-na</i>	‘come and do’
<i>-nati</i>	‘do while going’
<i>-diru</i>	‘do while going back’
<i>-eti</i>	‘do while coming back’

Table 1. Cavineña set of motion inflections.

SET 1: DIRECTIONALS	SET 2: ASSOCIATED MOTIONS
<i>-tsura</i> ‘upward’	<i>-ti</i> ‘go and do’
<i>-bute</i> ‘downward’	<i>-na</i> ‘come and do’
	<i>-nati</i> ‘do while going’
	<i>-diru</i> ‘do while going back’
	<i>-eti</i> ‘do while coming back’

Table 2. Directionals and associated motions in Cavineña.

Word order is flexible but SOV seems the unmarked order as in the example (3). Also Cavineña has further features often associated with SOV languages such as postpositions, possessor-possessed order, verb-auxiliary order, as well as a propensity to suffixation as opposed to prefixation.

Finally, a finite verb in Cavineña minimally consists of the root followed by a tense suffix as in (2). Potentially, other suffixes—including the motion inflections to be discussed—can attach to the root which yields highly agglutinative verbs. This is seen in examples (1) and (3) above. These examples also show another characteristic of the Cavineña verb, namely that the tense suffix always occurs in the last position.

2. DISTRIBUTION OF MOTION INFLECTIONS. Based on their distribution inside the verb, the motion inflections can be split into two subsets as in Table 2. The distribution is as follows. First, inflections inside one set are mutually exclusive, that is, they never co-occur. On the other hand, an inflection from one set can co-occur with an inflection of the other set. Finally, in the case of co-occurrence, the order is fixed, namely inflections from set 1 obligatorily precede inflections from set 2.

The following example illustrates these observations:

- (4) *tudya ike taraka-ju*  
 then 1SING.ABS coral-LOC  
*bade-tsuradiru-kware*  
 perched-upward(DIR)-while.going.back(ASSOC.MOTION)-PAST  
 ‘Then, I perched up on the corral while I was going back.’

Thus we can observe that *-tsura* ‘upward’, an inflection from Set 1 *co-occurs with and precedes -diru* ‘do while going back’ which is an inflection from Set 2.

In the following, I will present further characteristics of each set, first the set of associated motions, second the set of directionals.

3. CAVINEÑA ASSOCIATED MOTIONS. The term *associated motions* comes from descriptions of Australian languages which have highly elaborated systems of this category (Koch 1984, Tunbridge 1988, Wilkins 1991).

As the term indicates, associated motion inflections *associate* the verb stem event with an event of motion. Thus in (5) the verb *ba* ‘see’ is associated with the motion event *-diru* ‘going back’.

- (5) *senda-ju ba-diru-kware beta dati*  
 path-LOC see-while.going.back-PAST two tortoise.ABS  
 ‘I saw two tortoises in the path while I was going back<sup>5</sup>.’

Associated motions always encode the motion of the *nominative* argument<sup>6</sup>. This is to say that, regardless of the transitivity of the verb stem, they always encode the motion of the subject argument<sup>7</sup>. As an illustration, consider (6) and (7)—in both cases the motion event encoded by *-diru* is the motion of the subject argument, namely ‘he’ in (6) and ‘I’ in (7) (but not the object ‘it’ in the latter example).

- (6) *tuja ekari-ju kwinana-diru-kware* (intransitive)  
 his path-LOC go.out-while.going.back-PAST  
 ‘He went out of his path while he was going back.’
- (7) *era amena etare japadama ijewe-diru-kware* (transitive)  
 1SING.ERG then house close throw-while.going.back-PAST  
 ‘I threw it (a crocodile) close to the house while I was going back.’

Another property of associated motions is to encode some temporal relation distinctions between the verb stem event and the motion event. The preceding examples (5), (6) and (7) encode *concurrent* motion, which means that the verb stem event and the motion event are simultaneous. In addition to the inflection *-diru* ‘going back’, the set of concurrent associated motion also includes *-nati* ‘going’ and *-eti* ‘coming back’.

On the other hand, two inflections, *-ti* and *-na*, encode *prior* motion, which means that the event of motion precedes the verb stem event in time<sup>8</sup>. As an illustration, consider (8):

- (8) *rewa yatse espere-ju kutsa-ti-chine* (prior motion)  
 here IDUAL.ABS creek-LOC bathe-go.and.do-PAST  
 ‘Here (on the picture), we two went and bathed in the creek.’

CONCURRENT MOTION		PRIOR MOTION	
-nati	'do while going'	-ti	'go and do'
-diru	'do while going back'	-na	'come and do'
-eti	'do while coming back'		

Table 3. Associated motions in Cavineña.

	'GOING' FORMS (away from speaker)	'COMING' FORMS (toward speaker)
'straight' forms	-nati 'do while going' -ti 'go and do'	-na 'come and do'
'return' forms	-diru 'do while going back'	-eti 'do while coming back'

Table 4. Cavineña basic deictic motion verbs.

The three concurrent associated motions and the two prior associated motions are summarized in Table 3.

Finally, associated motions encode notions of path/trajectory<sup>9</sup>. First, they encode deictic information. Thus there are 'going' versus 'coming' forms. 'Going' forms include -nati 'do while going', -diru 'do while going back' and -ti 'go and do' and encode motion *away from the speaker*. In opposition, the 'coming' forms, namely -eti 'do while coming back' and -na 'come and do' encode motion *toward the speaker*. Another path/trajectory distinction encoded by the associated motions is the notion of 'returning'. 'Returning' associated motions include -diru 'do while going back' and -eti 'do while coming back' as opposed to 'non returning' or 'straight' motion associated motions as for -nati 'do while going', -ti 'go and do' and -na 'come and do'<sup>10</sup>. These distinctions are summarized in Table 4.

4. CAVINEÑA DIRECTIONALS. The term *directionals* comes from descriptions of Mayan languages (Robertson 1980, Haviland 1991, 1993, Craig 1994, Zavala 1994) and Papua New Guinea languages (Foley 1986) which have extensive systems of this type of category.

Similarly to associated motions, Cavineña directionals also encode path/trajectory, namely the upward/downward opposition<sup>11</sup>. Thus, consider the following example showing the upward trajectory:

- (9) ukeda ba-tsu-tu juye chamakama neti-tsurā-chine  
 hot feel-and-CLIT ox.ABS finally stand-upward-PAST  
 'The ox felt hot and finally stood up.'

As stated in the preceding section, associated motions encode the motion of the *nominative* argument. However, this is not the case for directionals which encode the motion of the *absolute* argument<sup>12</sup>. Thus, in the case of a transitive verb

	5 ASSOCIATED MOTIONS		2 DIRECTIONALS
MOVING FIGURE	nominative argument		absolute argument
SEMANTICS	trajectory		
	motion		no motion (?)
	3 concurrent	2 prior	

Figure 5. Summary of verbal motion inflections in Cavineña.

inflecting with a directional, as for the verb *iya* ‘put’ and the directional *-tsura* as in (10), the upward trajectory is the trajectory of the object argument, namely ‘the wild pig and the two tortoises’, and not the subject argument ‘I’.

- (10) *tudya amena kwaba-ju iya-tsura-kware waburu* (trans)  
 hence then canoe-LOC put-upward-PAST wild.pig.ABS  
*beta dati jadya*  
 two tortoise.ABS and  
 ‘Then, I put the wild pig and the two tortoises [up] in the canoe.’

Unlike associated motions, Cavineña directionals do not specify any temporal relation between the verb event and the motion event. Interestingly, descriptions of directionals in Mayan and Papua New Guinea languages do not report any kind of temporal relation specifications either. What is more, Craig (1994) argues that in Jakaltek, a Mayan language, directionals do not actually encode any motion whatsoever but only specify the path/trajectory. Possibly, Cavineña directionals, similarly to Jakaltek directionals, only encode path/trajectory but not motion.

Thus in (10) the directional *-tsura* is attached to a motion verb, *iya* ‘put’. In other words, the motion element is already encoded by the lexical root and it is possible that the directional only brings path/trajectory specification but not motion.

5. CONCLUSION. In this study, I showed that Cavineña has five associated motions and two directionals. I first showed that both categories have distinct distributional properties—namely that they form two different paradigms and that each paradigm has its own slot in the verb. Then I discussed the fact that they both encode notions of motion, precisely the notion of path/trajectory. However I showed that they diverge on the argument on which their specification is applied, namely that associated motions specify the nominative argument whereas directionals specify the absolute argument. Finally I discussed the fact that associated motions clearly encode motion but that directionals might not. Table 5 recapitulates the characteristics of each set.

I have thus shown, based on the analysis of 7 verbal motion inflections, that Cavineña is a language with a highly sophisticated system of grammaticalized motion. Also, it is interesting to remind that Cavineña has actually more motion

inflections than the one discussed in this paper<sup>13</sup>, a fact which suggests that the overall system might be even more rich and complex.

<sup>1</sup> I thank Roberto Zavala and Colette Grinevald for their suggestions in preparing this paper.

<sup>2</sup> Glosses are as follows:

ABS	absolutive case	LOC	locative
CAUS	causative	PAST	past tense
CLIT	clitic (function unclear)	1SING	1st person singular
ERG	ergative case	1DUAL	1st person dual

<sup>3</sup> The nature of the six remaining motion inflections is not clear enough for me at the present to include them in the present discussion. Below is the list of these inflections with tentative glosses:

-aje	'do continuously while going'	-tsa	'do while going toward someone'
-etibe	'do continuously while coming back'	-dadi	'do while going behind someone'
-be	'do continuously while coming'	-kena	'do while leaving'

<sup>4</sup> In the glosses, *do* stands for the verb stem on which an inflection attaches to.

<sup>5</sup> The subject (1st person singular) is not overtly expressed in this example. This is another feature of Cavineña morpho-syntax that arguments need not be overtly expressed if the context can disambiguate. The same remark applies for some of the following examples. Thus the subject (3rd person singular) in (7), the object (3rd person singular) in (8) and the subject (1st person singular) in (10).

<sup>6</sup> By 'nominative argument' I mean the subject argument of an intransitive verb and the subject argument of a transitive verb, regardless of their case marking. As we saw in section one, Cavineña is an ergative language, and the two types of subjects do not receive the same marking: the first receives an absolutive marking whereas the second receives an ergative marking.

<sup>7</sup> Directionals on the other hand encode the motion of the *absolutive* argument as will be discussed below.

<sup>8</sup> Subsequent motion, where the motion event follows in time the verb stem event is not attested in Cavineña. However this distinction does indeed exist as it is found in some Australian languages (Tunbridge 1988, Wilkins 1991).

<sup>9</sup> I use the term *path* in the sense of Talmy (1984) which decomposes any motion event into the following elements: figure, motion, path, ground and manner. Other authors such as Craig (1994) also use the term *trajectory* to refer to the same notion.

<sup>10</sup> Further possible notions encoded in associated motions are illustrated in some Australian languages: path/trajectory notions such as upward/downward and past a point and manner notions such as the speed of the motion.

<sup>11</sup> Further path/trajectory distinctions are found in Mayan languages. For example, Jakaltek has the following inventory of directionals (Craig 1994):

-toj	'away from'	-(e/i)l	'out'
-tij	'toward'	-(e/i)k	'passing, through'
-(a)h	'up'	-pax	'back, again'
-(a)y	'down'	-kan	'remaining, still'
-(o/e/i)	'in'	-kanh	'up, suddenly'

<sup>12</sup> Again, I remind the reader that the notions of 'nominative' versus 'absolute' arguments used in our discussion of motion inflections are not to be confused with the marking of the grammatical functions which are those of an ergative language, as we described in section 1.

<sup>13</sup> See footnote 3.

## REFERENCES

- CAMP, ELIZABETH L. 1982. Referentes de movimiento y ubicacion en el discurso narrativo en Cavineña. *Revista latinoamericana de estudios etnolingüísticos* 2:81–122. Lima. Peru.
- CRAIG, COLETTE G. 1994. Jakaltek directionals: their meaning and discourse function. *Languages of the world* 7:23–36.
- FOLEY, WILLIAM A. 1986. *The Papuan languages of New Guinea*. Cambridge: Cambridge University Press.
- HAVILAND, JOHN B. 1991. *The grammaticalization of motion (and time) in Tzotzil*. (Working paper N° 2, Cognitive anthropological research group). Nijmegen: Max Planck Institute For Psycholinguistics.
- . 1993. The syntax of Tzotzil auxiliaries and directionals: the grammaticalization of 'motion'. *Proceedings of the nineteenth annual meeting of the Berkeley Linguistics Society*. Berkeley: University of California Press.
- KOCH, HAROLD. 1984. The category of 'associated motion' in Kaytej. *Language in central Australia* 1:23–34.
- ROBERTSON, JOHN S. 1980. *The structure of pronoun incorporation in the Mayan verbal complex*. New York: Garland.
- TALMY, LEONARD. 1985. Lexicalization patterns: Semantic structure in lexical form. In *Language typology and syntactic description*, vol. 3, ed by Timothy Shopen, 57–148. Cambridge: Cambridge University Press.
- TUNBRIDGE, DOROTHY. 1988. Affixes of motion and direction in Adnyamathanha. In *Complex sentences constructions in Australian languages*, ed. Peter Austin, 265–83. Amsterdam: John Benjamins.
- WILKINS, DAVID P. 1991. The semantics, pragmatics and diachronic development of 'associated motion' in Mparntwe Arrernte. *Buffalo papers in linguistics* 1:207–57.
- ZAVALA, ROBERTO. 1994. *Clause integration with verbs of motion in Mayan languages*. M.A. thesis. University of Oregon.



