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## **Associated motion, associated posture and imperfective aspect in Tacana (Amazonian Bolivia)**

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### **Abstract**

This paper is the first detailed description of the exceptionally rich subsystem of verbal inflections that express imperfective aspect in Tacana, an endangered and underdescribed language from the Takanan family. The unusually high degree of elaboration of this system, which includes nine members in paradigmatic opposition, is achieved by co-expressing imperfective aspect with spatial meanings taken from two distinct categories: associated motion (with five values: ‘going’, ‘coming’, ‘going back’, ‘coming back’, ‘wandering’) and what I will call “associated posture” (with three values: ‘standing’, ‘lying/bending’, ‘hanging’). The ninth member is a default imperfective marker that does not carry any spatial meaning. The paper challenges linguistic theories that consider grammatical(izable) concepts as belonging to a strictly limited range of notional domains from which motion and posture are excluded. Additionally, the paper provides strong support for a new comparative concept of “associated posture” in linguistics.

**Keywords:** grammar of space, motion, posture, imperfective aspect, inflectional morphology, Amazonian languages

### **1 Introduction**

This paper describes the highly elaborate subsystem of verbal inflections that express imperfective aspect in Tacana, an endangered and underdescribed language from the Takanan family, spoken in the Amazonian lowlands of northern Bolivia. The system, illustrated with the verb root *tsiatsia* ‘shout’ in (1a-c), consists of nine circumfixes in

paradigmatic opposition with one another and with other TAM markers.<sup>1</sup> Segmentally, the circumfixes are made of an identical prefixal part *e-* (with allomorph *y-*) and nine different suffixal parts. The nine circumfixes express similar imperfective meanings, such as progressive, iterative, habitual, etc. (Comrie 1976; Bybee et al. 1994). The suffixal part of the circumfixes specifies whether the verb event is realized concurrently with a spatial co-event, which can be of motion (1a) or posture (1b), or whether motion or posture are not relevant (1c). The performer of this co-event is always the subject argument (S/A) of the verb event.

- (1) a. Imperfective (progressive) & associated motion  
*e-tsiatsia-'u* 'be shouting while going'  
*e-tsiatsia-siu* 'be shouting while coming'  
*e-tsiatsia-buyu* 'be shouting while going back'  
*e-tsiatsia-beyu* 'be shouting while coming back'  
*e-tsiatsia-niuneti* 'be shouting while wandering around'
- b. Imperfective (progressive) & associated posture  
*e-tsiatsia-neti* 'be shouting while standing'  
*e-tsiatsia-sa* 'be shouting while lying/bending'  
*e-tsiatsia-bade* 'be shouting while hanging'
- c. Imperfective (progressive) only  
*e-tsiatsia-ni* 'be shouting'

The prefixal part *e-* and the nine different suffixal parts are not analyzed as compositional because they must occur together in order to achieve the imperfective meanings, with or without motion or posture specifications.

The data and analyses presented in this paper make a contribution to at least three strands of linguistic research. First, they expand our knowledge of the grammatical encoding of space in Takanan, Amazonian and South American languages. Within the Takanan context, this paper is the first fully detailed study of associated motion (henceforth AM) and associated posture (henceforth AP) in Tacana<sup>2</sup> and in a language from the Takanik branch of the language family (following Girard 1971's classification).<sup>3</sup> Beyond the Takanik branch of

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<sup>1</sup> The paradigm in (1) featuring a unique verb root, *tsiatsia* 'shout', is designed for expository purposes and is partly artificial. It includes five forms that are not actually attested in the available data on Tacana, namely the combinations of *tsiatsia* with the three associated motion imperfective markers *e-...-'u*, *e-...-buyu* and *e-...-niuneti*, and *tsiatsia* with the two associated posture imperfective forms *e-...-neti* and *e-...-sa*. This is because I was not able to find examples of the nine imperfective circumfixes occurring with the same verb root. The missing forms in (1) have been constructed by analogy to attested forms with a semantically similar verb (communication or sound emission verb): *id'ebati* 'laugh' with *e-...-'u*, as in (12a), *pa* 'cry' with *e-...-buyu*, as in (24), *tisitisi* 'grumble' with *e-...-niuneti*, as in (28a), *jeje* 'shout' with *e-...-neti*, as in (7a), and *karara* 'emit a gurgling sound' with *e-...-sa*, as in (49c).

<sup>2</sup> Preliminary analyses of some of the AM affixes can be found in Ottaviano & Ottaviano (1965, 1967, 1989) and Guillaume (2013b, 2016: 163-65, 2017b).

<sup>3</sup> Some information is available on AM and/or AP in the other two Takanik languages Araona and Reyesano (a.k.a. Maropa), but only sparingly and at any rate not to the degree of detail and exhaustivity provided in this

Takanan, the current paper complements the extensive research on AM in Cavineña, from the Kavinik branch (Guillaume 2000, 2006, 2008, 2009, 2013a), and AM and AP in Ese Ejja, from the Chamik branch (Vuillermet 2009, 2012, 2013, 2022).

Second, this paper makes a contribution to old questions in linguistics, of particular interest to the subfields of cognitive semantics, psycholinguistics and grammaticalization theory, as to which concepts can receive grammatical (as opposed to lexical) expression crosslinguistically (Lyons 1968: 435-38; Talmy 1985; Slobin 1997; Croft 2003: 225-26) and what it means for an expression to have grammatical status (Boye & Harder 2012). The Tacana data to be presented bring to light a system in which the meanings of motion and posture occur in expressions that manifest, according to formal criteria, a very advanced stage of grammaticalization (inflectional morphology). They question the assumption, found in numerous works on grammaticalization, that (1) grammaticalizable concepts belong to a limited range of notional domains; (2) motion and posture are excluded from this range; (3) therefore, motion and posture are necessarily lost (“bleached”) in the processes of grammaticalization.

Third, this paper contributes to linguistic typology. With regards to the typology of AM (Guillaume & Koch 2021b), the Tacana data are noteworthy for displaying a number of crosslinguistically rare properties, among which the expression of AM as part of an inflectional (i.e. obligatory) paradigm. However, the paper’s most original typological contribution is its empirical support for the recognition of the category of AP as a new comparative grammatical concept. This concept will be valuable for describing and comparing various phenomena related to the grammatical expression of posture across languages worldwide.

The paper is organized as follows. Section 2 presents the concepts of associated motion and associated posture. Section 3 provides preliminary information on Tacana, its speakers, the data for this study, the structure of verbal predicate in Tacana and the elements of the predicate that make reference to space. Section 4 introduces the set of imperfective circumfixes that are the subject of this study. After outlining the overall system of TAM inflections of the language, this section deals successively with the formal realization of the imperfective circumfixes, their frequency of use in texts and their aspectual meanings. Sections 5 and 6 delve into the spatial semantic component of the AM and AP imperfective markers, respectively. Section 7 aims to demonstrate that the default imperfective circumfix does not encode any spatial meaning. Section 8 evaluates previous analyses of these morphemes. Section 9 describes the lexical counterparts that correspond to the suffixal part of the three AP circumfixes and the default imperfective circumfix. Section 10 shows why all the imperfective circumfixes can be considered to be at an advanced stage of grammaticalization. Section 11 briefly presents the AM and AP systems of Ese Ejja and contrasts them with those of Tacana. Section 12 summarizes and concludes.

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paper. For Araona, see Pitman (1980) and Tallman (2020, 2021) and for Reyesano, see Guillaume (2012) and Gallinate Soliz (2019, 2021). Information can also be found in Guillaume’s (2013b, 2016, 2017b) comparative surveys.

## 2 Associated motion and associated posture

I argue that the forms in (1a-b) co-express, in addition to imperfective aspect, the categories of AM (associated motion) and what I will call AP (associated posture). AM is a relatively new, although by now well-established comparative concept (in the sense of Haspelmath 2010). Following Guillaume (2016: 92), “an AM marker is a grammatical morpheme that is associated with the verb and that has among its possible functions the coding of translational motion”. The main typological parameters relevant to the analysis of AM systems, as synthesized in works such as Guillaume (2016), Guillaume & Koch (2021b) or Ross (2021), include the following: the argument role of the moving figure (typically subject or object), the temporal relation between the motion and the verb event (typically prior, concurrent or subsequent), the path of the motion (typically itive/ventive, returnative or ambulative) and the aspectual realization of the verb event (typically perfective/punctual or imperfective/continuous/repeated). In some languages, AM markers with path specifications can also function as “pure” directional markers when they are used with certain motion verbs. In this function, they only contribute path specifications to the motion that is already encoded by the verb event.

Unlike AM, the phenomenon of AP has no established label or agreed-upon definition in comparative or typological linguistics. In this paper, AP is defined as follows, by analogy with the concept of AM:

(2) Definition of AP:

An AP marker is a grammatical morpheme that is associated with the verb and that has among its possible functions the coding of postural meanings (‘sit’, ‘stand’, ‘lie’, ‘bend’, ‘hang’, etc.)

Expressions that come close to this definition have been frequently mentioned in studies on the grammaticalization of posture verbs (see, among others, Bybee et al. 1994: 127-33; Kuteva 1999, 2001: Ch. 3; Newman 2002a, 2002b; Lemmens 2005; Grinevald 2006; Ameka & Levinson 2007a, 2007b). For instance, the Dutch progressive auxiliaries in (3a-c) retain the literal postural meanings of their source verbs ‘sit’, ‘stand’ and ‘lie’.

Dutch (Indo-European, West Germanic)

(3) a. *Ik zat te lezen.*

I sat to read.INF

‘I was (sitting and) reading.’

b. *Ik stond te wachten.*

I stood to wait.INF

‘I was (standing and) waiting.’

c. *Ik lag te slapen.*

I lay to sleep.INF

‘I was (lying and) sleeping.’

(Lemmens 2005: 184)

Another well-known case in European languages is the grammaticalization of posture verbs into continuative/durative/progressive aspect markers in pseudocoordination constructions in several North Germanic languages such as Danish, Icelandic, Norwegian and Swedish (Kuteva 1999, 2001: Ch. 3; Ross & Lødrup 2017). As discussed in Kuteva (2001: 45), in these constructions, “in most cases, the verbs ‘sit’/‘stand’/‘lie’ are employed according to the bodily position of the subject”.

Such expressions have never been systematically explored from a crosslinguistic perspective, nor have they been assigned a standard label. They are typically mentioned as part of studies centered on the grammaticalization of posture verbs (also called position or stance verbs) into locative verbs and/or TAM auxiliaries, as in the studies cited above. In some works, they are discussed under the domain of “classifiers”. See for instance Watkins’ (1976) discussion of the “classification function” of “position auxiliaries” in some Southeast Northamerican languages. See also Vuillermet’s (2022) similar approach in the case of the Ese Ejja (Takanan) present tense posture suffixes.

The term “associated posture” first emerged in the 2000s, starting with Enfield’s (2002) discussion of posture verbs in serial verb constructions in Lao (Tai-Kadai). It was subsequently employed in other descriptive or typological works focusing on similar constructions in various languages, including Ameka (2006), Aikhenvald (2018: 71) and Obert (2019: 188-90). However, posture verbs in serial verb constructions, as well as in auxiliary or pseudo-coordination constructions, do not serve as ideal representative examples of the concept of AP, as defined in (2), because they do not unambiguously qualify as grammatical morphemes. It was only in the late 2000s and mid-2010s that more suitable data supporting the recognition of AP (similar to AM) as a label for a verbal grammatical category began to emerge. These early discussions occurred informally within the context of unpublished workshop or conference presentations by linguists who were studying languages with morphological (and therefore more grammaticalized) systems of AM and AP. These languages include Nahuatl from the Uto-Aztecan family in Mexico (Peralta Ramirez 2009) and Ese Ejja (Vuillermet & Grinevald 2016; Vuillermet 2017a), Tacana (Guillaume 2017a, 2019), and Araona (Tallman 2020), three languages from the Takanan family in Amazonian Bolivia and Peru.

### **3 Preliminary information**

#### **3.1 Tacana and its speakers**

Tacana, with its two dialects (Tumupasa and Ixiameño), is one of the five extant languages of the small Takanan family, together with Araona, Cavineña, Ese Ejja and Reyesano (a.k.a. Maropa), spoken in the Amazonian lowlands of Bolivia and Peru. The language is critically endangered, with only a few dozen elderly speakers, most of them speakers of the Tumupasa dialect. Until recently, Tacana had only been studied by missionary linguists, essentially Ida and John Ottaviano from the Summer Institute of Linguistics (SIL). The main linguistic contributions of these authors consist in a grammar sketch written in the tagmemic framework (Ottaviano & Ottaviano 1965, 1967), a Tacana-Spanish dictionary (Ottaviano &

Ottaviano 1989) and a small collection of bilingual (Tacana-Spanish) narrative texts (Ottaviano 1980).

### 3.2 The data for this study

This study is based for the most part on firsthand data (narrative texts, participant observation and elicited utterances) from the Tumupasa dialect that I collected in Tumupasa (province of Iturralde, Bolivian department of La Paz) over the course of four months of fieldwork that involved four field trips between 2009 and 2013. In my Field Linguist's Toolbox database, these data amount to 4,729 sentences (4,000 from texts, 729 from elicitation). Firsthand data are complemented by secondhand SIL data on the same Tacana dialect published by Ida and John Ottaviano. These comprise their collection of narrative texts (981 sentences in Toolbox), the entries and illustrative sentences of their dictionary (ca. 5000 entries) and their translation of the New Testament into Tacana (Ottaviano & Ottaviano 1981; 1036 pages of text). In the SIL data, I only systematically explored the imperfective circumfixes in the non-religious narrative texts. Importantly, I did not conduct systematic controlled elicitation with native speakers on the topics of motion and posture, which means that to a large extent the present study relies on my own interpretation of the available data.

The English translations of the illustrative examples that come from my corpus or from Ottaviano & Ottaviano's data correspond to my own interpretation of their meaning, taking into account the original translation in Spanish provided by my language consultants or by Ottaviano & Ottaviano as well as my understanding of their context, the Tacana morphology, etc. In the case of the examples from Ottaviano & Ottaviano's monolingual Tacana translation of the New Testament (Ottaviano & Ottaviano 1981), the English translations correspond to the English verses in the New International Version (NIV) of the Bible (<https://www.biblegateway.com/>, last access 27 January 2024), which has been chosen for practical reasons.

In the interlinearized examples, the code at the end of the English translation line (e.g., "em044-045" in (4), below) corresponds to the reference of that example in my Toolbox database. The extension "ott" in a code (e.g., "tr070\_ott" in (13b), below) further indicates that the corresponding example is taken from Ottaviano's (1980) text collection. Unless specified otherwise, the examples come from texts. A few examples are repeated in the paper. When this happens, they are given a new number, and the number of the first occurrence is given next to the code of the example in the English translation line (e.g., "[=(12a)] in (16a) below).

### 3.3 Predicate structure

Lexical verbs can appear in two types of predicates with no semantic difference between them: finite verb predicates, where the lexical verb takes the inflectional morphology, and non-finite verb predicates (which can be characterized as light verb constructions), where the lexical verb does not take the inflectional morphology, the latter being optionally carried by

a light verb. Both types are illustrated in (4).<sup>4</sup> Compare the first occurrence of *tutua* ‘spill O’, where it is marked by the inflectional prefix *e-*, with its second occurrence, where it is left unmarked and the inflectional prefix *e-* is carried by the light verb *a* ‘do’. Note that the compound verb *jemi-tsua* ‘lift O up’ in (4), like the first occurrence of *tutua*, also appears in a finite verb construction and is marked with the same prefix *e-*.<sup>5</sup>

- (4) *Dapia=da etse beu se e-tutua. E-jemi-tsua=da etse*  
 there=PTC 1DU PTC fish EVP-spill EVP-take\_out-go\_up=PTC 1DU  
*beu tutua=da etse y-a.*  
 PTC spill=PTC 1DU EVP-do  
 ‘There we are going to spill the fish (on the ground). We are going to lift (the fish trap from the water of the lake) up and then spill them (on the ground).’  
 em044-045

The structure of the verbal predicate, with a lexical verb or a light verb, is considered polysynthetic. As shown in Table 1, there are distinct slots for lexical morphemes making up compounds (−1 and +1) and for many affixes (prefixes, suffixes and circumfixes) that express a wide range of meanings and functions such as valency changes, person indexation (essentially 3<sup>rd</sup> person), adverbial-like modifications (space, manner, time of day, etc.) and TAM, among others (−3, −2 and +2 to +9).

**Table 1.** Morphological structure of finite lexical verbs or finite light verbs in Tacana

-3	Aspect, mood, motion, posture and morphological filler <i>e-</i>
-2	Valency change
-1	Nominal lexeme forming compound
0	Verb Root
+1	Verbal lexeme forming compound (including motion and posture)
+2	Valency change
+3	Adverbial-like modification (including motion)
+4	3 <sup>rd</sup> person indexation
+5	Temporal distance
+6	Vertitive
+7	Adverbial-like modification (including motion)
+8	Tense, aspect, mood, motion and posture
+9	Reiterative

In order to be finite, a lexical verb or a light verb in Tacana requires the obligatory marking of certain categories. Following Bybee (1985: 81-82), I consider obligatory markers as

<sup>4</sup> The motivation for using one construction or the other is not fully understood yet, although it might have to do with the discourse status of the event or some specific discourse genres.

<sup>5</sup> The Tacana consonant phonemes are *p, b, t*, (slightly retroflex) *d [d], d' [d̠ʰ/d̠ʰ]*, ' [ʔ], *dh [ð]*, (slightly retroflex) *ts [tʂ], ch [tʂ]*, (slightly retroflex) *s [s], sh [ʂ], k, kw [kʷ], r [r], m, n, j [h], w [w/β]* and *y [j]*. The vowel phonemes are *a, e, i [i/j]* and *u [u/w]*. Stress falls on the syllable that contains the 3<sup>rd</sup> mora (i.e., vowel or semi-vowel [j] or [w]) counting from the left edge of the phonological word.

inflectional and non-obligatory markers as non-inflectional. The Tacana verbal inflectional categories are expressed by way of exponents that occur in three specific slots, -3, +4 and +8, which are shaded in Table 1. Importantly, not all of the three inflectional slots need to be filled at the same time. They are filled simultaneously only in the case of verbs marked by circumfixes (slots -3 and +8) with a 3<sup>rd</sup> person subject (slot +4). In all other situations, only one or two of these three slots are filled: -3 in the case of prefixes, +8 in the case of suffixes and +4 if the subject is a 3<sup>rd</sup> person.<sup>6</sup>

### 3.4 Expression of motion and posture in the verbal predicate

A remarkably high number of elements of the Tacana verbal predicate, in different slots, make reference to space. First, there is the set of inflectional imperfective circumfixes that is the topic of this paper. Their prefixal part *e-* occurs in slot -3 and their suffixal parts in slot +8. As indicated in Table 1 and described further below, the inflectional imperfective circumfixes are in paradigmatic opposition, in slots -3 and/or +8, with other inflectional affixes.

Second, in the non-inflectional morphological slots, there is a set of ten AM suffixes. One of them appears in slot +7 (*-jeu* ‘come & do’) while the rest appear in slot +3. They are illustrated with the transitive verb *ba* ‘see O’ in (5).<sup>7</sup>

- (5) Non-inflectional AM
- |                       |   |
|-----------------------|---|
| <i>ba-ti-</i>         | ‘go and see O’                            |
| <i>ba-jeu-</i>        | ‘come and see O’                          |
| <i>ba-(sa)seu-</i>    | ‘arrive there and see O’                  |
| <i>ba-(sa)sena-</i>   | ‘arrive here and see O’                   |
| <i>ba-na-</i>         | ‘see O repeatedly while going’            |
| <i>ba-be-</i>         | ‘see O repeatedly while coming’           |
| <i>ba-niuneti(a)-</i> | ‘see O repeatedly while wandering around’ |
| <i>ba-wanana-</i>     | ‘see O once while passing by’             |
| <i>ba-tsu-</i>        | ‘see O after O has approached’            |
| <i>ba-(j)use(a)-</i>  | ‘see O before O moves away’               |

The semantics of some of these suffixes overlap with the semantics of some of the inflectional AM circumfixes, and combinations of non-inflectional AM suffixes and inflectional AM circumfixes are possible within the same predicate. In the corpus, however, the attested combinations remain very limited and infrequent. The form *-niuneti(a)*, which encodes ‘wandering’ motion, has a dual status, occurring as both a non-inflectional AM suffix and as the suffixal part of an inflectional AM imperfective circumfix as in (1) above. In terms of their use in discourse, one member of the non-inflectional AM set, *-ti* ‘go & do’, occurs with

<sup>6</sup> 3<sup>rd</sup> person indexation is in fact slightly more complex in that in intransitive clauses, it is only marked if the subject is plural, and that even in this situation its marking is not absolutely obligatory; for more details, see Guillaume (2018).

<sup>7</sup> The paradigm in (5), like the one in (1), featuring a unique verb root (here *ba* ‘see’), is designed for expository purposes and partly artificial. It includes three constructed forms that are not actually attested in the available data on Tacana, namely the combinations of *ba* with *-(sa)seu*, *-niuneti(a)* and *-(j)use(a)*.

overwhelmingly higher frequency than all the others members. In my own corpus of narratives, which includes 4,000 sentences, *-ti* is found 373 times (85%) out of a total of 438 occurrence of non-inflectional AM suffixes. The non-inflectional AM suffixes are not further discussed here. For more information, see a preliminary account in Guillaume (2013b, 2017b, 2016: 163-65). See also the detailed descriptions of very similar non-inflectional AM systems in the two related Takanan languages Cavineña (Guillaume 2006, 2008, 2009, 2013a) and Ese Ejja (Vuillermet 2012, 2013).

Third, compounding lexical verbs of posture or motion in slot +1 is yet another means to modify the meaning of a lexical verb root in terms of spatial semantics in Tacana. For instance, the three transitive caused-posture verbs *netia* ‘stand O’, *wana* ‘lay O’ and *badiana* ‘hang O’ are commonly compounded with a range of transitive physical action verbs such as ‘put O in’, ‘cut O’, ‘strike O’, ‘tie O’, ‘throw O’, ‘cook O’, ‘close O’ or ‘leave O’. In this function, the posture verb specifies the resulting posture of the O argument referent of the other verb, as illustrated in (6) with the transitive verb *rubiu* ‘put O in’.

- (6) a. ***Rubiu-netia-ta-idha***            *shita*            *etsuti=su*.  
       put\_in-stand.TR-3A-REM.PST sugarcane house\_corner=LOC  
       ‘He stood the sugarcane in a corner of the house.’            n3.0032 (elicited)
- b. ***Rubiu-wana-ta-idha***            *shita*            *etsuti=su*.  
       put\_in-lay-3A-REM.PST    sugarcane house\_corner=LOC  
       ‘He lay the sugarcane in a corner of the house.’            n3.0031 (elicited)

The most frequent motion verbs found in compounding constructions are the intransitive path-of-motion verbs *tsua* ‘go up’, *bute* ‘go down’ and *kwina(na)* ‘go out’, and transitive caused motion *nubia* ‘make O enter’. In this function, they add a motion component or a mere path specification that relates to the absolutive (S or O) argument of the verb with which they are compounded. See for instance *tsua* ‘go up’ compounded with the transitive motion verb *jemi* ‘remove, take out’ in (4) above, where *tsua* specifies that the removed O argument moves in an upward direction.

Motion and posture verbs in compounding constructions can be distinguished from AM suffixes and the suffixal part of AM and AP imperfective circumfixes in terms of the following properties. They occupy different positions (slots) in the verb structure. Motion and posture verbs in compounds can only combine with a limited number of verb roots, unlike AM and AP affixes, which can be used with basically any lexical verb. The meaning contribution of motion and posture verbs in compounding is frequently unpredictable, unlike the meaning of AM and AP affixes, which is most often compositional. Finally, the motion or posture specification in compounds is assigned to the absolutive argument (S/O, never A) while in AM and AP affixation it is assigned to the nominative or accusative argument (S/A with some affixes, O with others, never S/O).

Like non-inflectional AM suffixes, posture and motion verbs in compounding constructions will not be further discussed in this paper. For a detailed description of verb compounding in the Takanan language Ese Ejja, see Vuillermet (2017b).

## 4 Inflectional AM, AP and default imperfective circumfixes

In this section, I zoom in on the Tacana imperfective circumfixes. I first provide overall information on the full system of TAM inflections (Section 4.1) and on the formal realization of the imperfective circumfixes (Sections 4.2 and 4.3). The next two sections respectively address their frequency of use in texts (Section 4.4) and their imperfective aspectual meanings (Section 4.5).

### 4.1 TAM inflectional morphology

The imperfective circumfixes are presented in Table 2, in shaded cells, in the wider context of the full TAM inflectional system of the Tacana verb in independent clauses. The two prohibitive markers require the additional presence of a particle *be* that occurs before the verb. Besides the imperfective circumfixes that are the focus of this paper, the TAM inflectional system includes an additional marker with imperfective meaning: the habitual past tense suffix *-(i)na* ‘HAB.PST’. This marker will not be discussed in this paper, as it differs substantially from the set of circumfixes. Its semantics are much more restricted as it is specifically dedicated to the expression of habitual aspect in remote past tense settings. Additionally, from a formal perspective, *-(i)na* ‘HAB.PST’ is not a circumfix as it lacks the prefixal part *e-*. The parentheses indicate parts of morphemes that can be phonologically silent in their surface realization in certain contexts.

**Table 2.** Inventory of inflectional TAM affixes and particles in Tacana

	Particle	Verbal slot		Gloss
		-3	+8	
<b>Declarative mood</b>				
default past			-a	PST
recent past			-(a)na	REC.PST
remote past			-(i)dha	REM.PST
habitual past			-(i)na	HAB.PST
semantically empty		e-		EVP
imperf. & going		e-	-’u	CIRC-...-IPFV.GOING
imperf. & coming		e-	-siu	CIRC-...-IPFV.COMING
imperf. & going back		e-	-buyu	CIRC-...-IPFV.GOING_BACK
imperf. & coming back		e-	-beyu	CIRC-...-IPFV.COMING_BACK
imperf. & wandering		e-	-niuneti(a)	CIRC-...-IPFV.WANDERING
imperf. & standing		e-	-(n)eti / -netia	CIRC-...-IPFV.STANDING
imperf. & lying/bending		e-	-sa	CIRC-...-IPFV.LYING/BENDING
imperf. & hanging		e-	-bade	CIRC-...-IPFV.HANGING
imperf. (default)		e-	-(a)ni / -inia	CIRC-...-IPFV.DFLT
potential future			-kwa	POT
<b>Directive mood</b>				
imperative			-ke	IMP.SG
		me-	-ke	IMP.PL
prohibitive	be		-ji	PROH.SG
	be	me-	-ji	PROH.PL
restricted hortative*		me-		HORT.DL
		me-	-ja	HORT.PL
extended hortative		pa-		HORT.EXT
		pa-	-ja	HORT.EXT.PL

\* The distinction between “restricted” and “extended” hortative refers to the range of possible addressees, whether it is restricted to first-person dual and plural inclusive referents or accessible to a much larger class of referents. See Guillaume (To appear).

## 4.2 Morphological variants

The prefixal part of the imperfective circumfixes and the suffixal parts of three of them display allomorphic variants. The prefixal part *e-* common to all the circumfixes is realized *y-* [j] before the vowel *a*, as in, for instance, *y-ase-’u* ‘CIRC-walk-IPFV.GOING’ (from (34) below).

The suffixal parts of the ‘standing’ and default imperfective forms, *-neti* and *-ani*, both feature an allomorph ending in *a*, *-netia* and *-inia*, respectively, in the specific case where they occur in a transitive verb with a 1<sup>st</sup> or 2<sup>nd</sup> person subject. In the case of *-inia*, there is also a change from *a* to *i* at the beginning of the allomorph. The two allomorphs of the ‘standing’ imperfective circumfix are illustrated in (7a,b).

- (7) a. *Ema=mu e-jeje-neti* “Tata, tata, pue-yu-ke!”  
 1SG=CNTR CIRC-shout-IPFV.STANDING father father come-REITR-IMP  
 ‘I was shouting standing, “Daddy, daddy, come over here!”.’ mc041a
- b. *Yama=da e-id'ua-netia* *jida wirakucha...*  
 1SG.ERG=PTC CIRC-wait\_for-IPFV.STANDING.1/2A that gentleman  
 ‘I’m waiting for that gentleman [while I’m standing, e.g., standing outside of  
 my house].’ n2.0230 (elicited)

The suffixal part *-niuneti* of the ‘wandering’ circumfix also exhibits an allomorph *-niunetia* ending in *a*. For lack of sufficient data on this morpheme, it is not known what conditions the use of one allomorph or the other. In the available corpus, there are examples of the allomorph ending in *a* in transitive verbs with a 3<sup>rd</sup> person subject, as in (8), which suggests that the conditioning factor is different from that of the allomorphs of the ‘standing’ and default imperfective circumfixes just discussed.

- (8) *Ebake=je e-chaku-ta-niunetia.*  
 top=PERL CIRC-search\_for-3A-IPFV.WANDERING  
 ‘In the top (of the trees) (the jaguar) was searching around for (the fox).’ bu024

The allomorph *-neti* of the suffixal part of the ‘standing’ circumfix displays a shortened variant *-eti* in free variation with the longer variant *-neti*. In many instances, this shortened variant *-eti* is found in combination with the highly frequent polyfunctional verb *pu* ‘be, do, say, etc.’, as in (9a). However, the longer variant *-neti* is also occasionally found in very similar contexts, as in (9b), and conversely there are instances in the corpus where the shortened variant *-eti* occurs with verbs other than *pu*, as in *e-tisitisi-eti* ‘CIRC-complain-IPFV.STANDING’ from (43a) below. The distribution of *-neti* and *-eti* thus appears to be unconditioned.

- (9) a. *Id'eti=di tuche-da e-pu-eti.*  
 sun=ALSO strong-ASF CIRC-be/do-IPFV.STANDING  
 ‘The sun was very hot.’ lp078
- b. *Dapia=pa=da ye dumitakai=di tusa e-bu=je*  
 there=QUOT=PTC this dung\_beetle=ALSO 3SG.GEN ENP-face=PERL  
*ububu jaitiana e-pu-neti.*  
 every\_so\_often pass CIRC-be/do-IPFV.STANDING  
 ‘It is said that (in the old time,) this dung beetle used to pass near His face  
 (the face of God, in Heaven) over and over again.’ je002

The allomorph *-ani* of the suffixal part of the default imperfective circumfix displays a shortened variant *-ni* when attached to a root or stem ending in *a*, *e* or a syllable that contains the vowel sequences *ei* or *iu*. An example of *-ni* following *a* can be seen in *e-id'ua-ta-ni*

‘CIRC-wait\_for-3A-IPFV.DFLT’ from (11a) and of *-ni* following *e* in *y-ase-ni* ‘CIR-walk-IPFV.DFLT’ from (64).

Finally, the suffixal part *-u* of the ‘going’ imperfective circumfix displays a range of variants, in free variation and often not easily perceptible, from [ʔo] to [o], with different degrees of closure of the glottal stop and possibly other phonetic correlates. Complete loss of *-u* can occur when following a root or stem ending in *u*. In this paper, the different realizations of *-u* in particular examples are not noted.

### 4.3 Prefixal and suffixal parts of the imperfective circumfixes

The prefixal part *e-* of the nine imperfective circumfixes must be distinguished from a separate prefix *e-* that is used alone, despite the fact that they are segmentally identical, feature the same allomorph *y-* [j] before the vowel *a* and occupy the same slot within the predicate structure. The reason for analyzing them as distinct is that *e-* used alone never has imperfective meanings, even if its exact meanings (if any) are not fully understood yet. My current analysis is that synchronically, *e-* used alone is essentially a semantically empty marker that functions as a morphological filler, used when no other inflectional TAM categories are marked on the verb.<sup>8</sup> Different contexts of use trigger different readings. Verbs other than posture verbs marked by *e-* typically have a perfective rather than imperfective reading, as is the case of *jeje* ‘shout’ in (10), to be contrasted with the same verb marked by the circumfix *e-...-neti* ‘IPFV.STANDING’ and featuring an imperfective reading in (7a).

- (10) *Kimisha nuati deja e-jeje.*  
 three time man EVP-shout  
 ‘The man shouted three times.’ pe025

Posture verbs marked by *e-* take a stative reading and function as locative, existential or possessive predicates, as will be illustrated in Section 9. If they are to take an imperfective reading, however, posture verbs require an imperfective circumfix like any other verb, in their case the default imperfective marker, as will be shown in Section 7.

As a corollary to this analysis, in the imperfective constructions where *e-* is combined with another morphological element in slot +8, a compositional analysis where *e-* alone would mark imperfective is problematic. Since both parts must occur together in order to achieve imperfective meanings, one is compelled to go for an analysis of these markers as circumfixes. However, the specification of an additional AM or AP meaning, or of a lack thereof, is a contribution of the suffixal part alone, which results in a type of complex circumfix (imperfective assigned to both prefixal and suffixal parts, AM/AP meanings or lack thereof assigned to suffixal part alone).

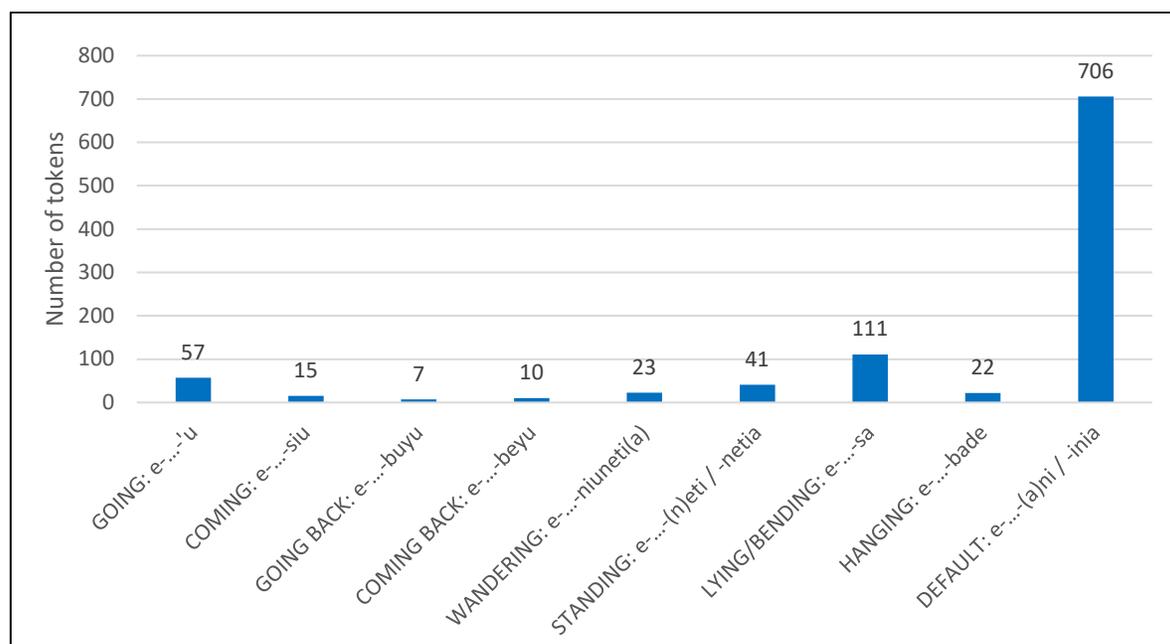
The suffixal parts of the three AP circumfixes *e-...-(n)eti* / *e-...-netia* ‘IPFV.STANDING’, *e-...-sa* ‘IPFV.LYING/BENDING’ and *e-...-bade* ‘IPFV.HANGING’ and of the default imperfective circumfix *e-...-(a)ni* / *e-...-inia* ‘IPFV.DFLT’ must be distinguished from their etymological

<sup>8</sup> Nouns denoting body parts (or parts of entities) or kinship relations similarly display a dummy prefix *e-* (glossed ‘ENP’, for Empty Noun Prefix), possibly historically related to the verbal *e-* prefix (see, e.g., *bu* ‘face’ in 45a and *wane* ‘wife’ in 49a).

lexical counterparts, still in use in contemporary Tacana, namely the independent posture verbs *neti* ‘stand.INTR’, *netia* ‘stand.TR’, *sa* ‘lie’, *bade* ‘hang’ and *ani* ‘sit’. (The suffixal parts of the five AP circumfixes do not have lexical counterparts.) This discussion is postponed to Section 9, which gives a presentation of these posture verbs, and Section 10, which summarizes the evidence for the advanced grammaticalized status of all imperfective circumfixes, regardless of their semantic content and whether or not they have recognizable lexical etymological counterparts.

#### 4.4 Frequency of use

Figure 1 reports the number of occurrences of each of the nine inflectional imperfective markers in my own corpus of narratives, which includes 4,000 sentences.



**Figure 1.** Number of occurrences of the imperfective circumfixes in a corpus of Tacana narratives (Toolbox database of 4,000 sentences)

This corpus exhibits 112 occurrences of AM imperfective markers, 174 occurrence of AP imperfective markers and 706 occurrences of the default imperfective marker. Of note is the very high number of occurrences of the default imperfective form, which represents 71% of the total number of occurrences of inflectional imperfective forms (992). For comparison, among the AM and AP imperfective forms, the second most frequent one (AP *e-...-sa* ‘IPFV.LYING/BENDING’, with 111 occurrences) only amounts to 11% of the total number of occurrences, and the third most frequent one (AM *e-...-u* ‘IPFV.GOING’, with 57 occurrences) to nearly 6% of them.

The overwhelmingly higher frequency in discourse of the default imperfective form, as compared to the other forms, is consistent with its semantically less marked nature.

#### 4.5 Imperfective meanings

The nine circumfixes express broadly similar imperfective meanings. “Imperfective” is used here in the sense of Comrie (1976) and Bybee et al. (1994: Ch. 5), that is, encompassing a broad range of semantically related meanings having in common that the situation is viewed as unbounded. In this sense, typical imperfective meanings include the progressive (or continuous), the habitual, the iterative, the frequentative and the continuative.<sup>9</sup>

Here, only a brief illustration of the progressive versus non-progressive meanings of the Tacana imperfective circumfixes will be provided. In the case of non-progressive examples, no attempt will be made to determine their most appropriate characterization (habitual, iterative, etc.) or to investigate whether or not all subtypes of non-progressive meanings can be expressed by all the circumfixes. A thorough analysis of the aspectual semantic component of the Tacana imperfective circumfixes, as well as their use in discourse, remains to be undertaken. At any rate, the focus of this paper is on the AM and AP function of the imperfective circumfixes, and not on their aspectual values.

Pairs of progressive (in a.) versus non-progressive (in b.) examples are given for the default imperfective marker in (11), AM imperfective marker in (12) and AP imperfective marker in (13).

(11) Default imperfective

a. Progressive

*E-id'ua-ta-ni*                      *ema kema*              *e-wane=ja.*  
 CIRC-wait\_for-3A-IPFV.DFLT 1SG 1SG.GEN ENP-wife=ERG  
 ‘My wife is waiting for me.’

os014

b. Non-progressive

*Etsau=kama=we*              *pamapa*              *tsine e-tia-ichenu-ta-ni*  
 bone=RESTR=RESTR all day CIRC-give-COMPAS-A3-IPFV.DFLT  
*mesa uchi=kwana.*  
 3SG.GEN dog=PL

‘Everyday they would give only bones to their dogs, the poor ones.’

ha010

(12) AM imperfective

a. Progressive

*Zorro=mu*              *beu e-id'ebati-'u.*  
 fox.SPL=CNTR PTC CIRC-laugh-IPFV.GOING

‘The (mischievous) fox was going away laughing (escaping from the stupid jaguar).’

bu022

<sup>9</sup> In Bybee et al. (1994: 125-27, 317) these categories are defined as follows. The progressive (or continuous) “views an action as ongoing at reference time”. The habitual refers to a “situation [that] is customary or usual, repeated on different occasions over a period of time”. The iterative denotes an “action [that] is repeated [multiple times] on one occasion”. The frequentative refers to an “action [that] occurs frequently, not necessarily habitually, nor necessarily on one occasion, as is the iterative”. Finally, the continuative “includes progressive meaning [...] and additionally specifies that the agent of the action is deliberately keeping the action going”.

b. Non-progressive

*Tueda etse e-ina-'u beu.*

that 1DL CIRC-grab-IPFV.GOING PTC

‘And one goes (lit. we two go) grabbing them (the fish fallen on the ground).’

ps030-031

(13) AP imperfective

a. Progressive

*Tu=e-wia-neti=su=pa watena-ta-idha*

3SG=CIRC-urinate-IPFV.STANDING=TMP=QUOT jump\_on-3A-REM.PST

*beu e-tibeini=jenetia.*

PTC ENP-behind=ABL

‘While he was urinating, (the jaguar) jumped on him from behind.’ ti012

b. Non-progressive

*Dapia beju kwati e-utsu-neti=su*

there PTC fire/firewood CIRC-burn-IPFV.STANDING=LOC

*e-inakwawi-ta-ni=wekwana.*

CIRC-singe-3A-IPFV.DFLT=3PL

‘(In the old time, the women) would singe them (the peccaries) in the

fire(wood) that was burning.’ tr070\_ott (Ottaviano 1980: 28-29)

In some examples, the imperfective only applies to (i.e., has scope over) the motion component of the process. This only happens with the first four AM circumfixes, *e-...-'u* ‘IPFV.GOING’, *e-...-siu*, ‘IPFV.COMING’, *e-...-buyu* ‘IPFV.GOING\_BACK’ and *e-...-beyu* ‘IPFV.COMING\_BACK’, which then take a “motion-with-purpose” reading. In that situation, the motion is temporally prior to (rather than concurrent with) the verb event. This reading is illustrated in (14a,b).

(14) a. *e-nawi-'u*

CIRC-bathe-IPFV.GOING

‘He is on his way there to bathe.’ (\*he is bathing while going away)

n3.0081 (elicited)

b. *e-nawi-siu*

CIRC-bathe-IPFV.COMING

‘He is on his way here to bathe.’ (\*he is bathing while coming)

n3.0081 (elicited)

The imperfective circumfixes (like the prefix *e-*) are not specified for tense, unlike all other inflexional TAM markers. Examples featuring events in past and present contexts have already been provided above. In texts, these seem to be used with equal frequency. Uses in future contexts are fairly rare in the data (and will not be further exemplified in this paper), but not unattested, as illustrated in (15a,b).

- (15) a. *Tueda yama beu e-chudu-inia.*  
 that 1SG.ERG PTC CIRC-pick\_up-IPFV.DFLT.1/2A  
 ‘I will be picking them up (the fish, scattered on the ground).’ ps044
- b. *Yama=da e-tsipi-sa.*  
 1SG.ERG=PTC CIRC-tie-IPFV.LYING/BENDING  
 ‘I will weave [bending down] (the wild sugarcane straps in order to make a fishtrap).’ ba078

## 5 Spatial semantics of AM imperfective circumfixes

In this section and the next, the spatial content of the inflectional AM and AP imperfective markers is described in detail.

The set of AM imperfective markers comprises the following five circumfixes: *e-...-’u* ‘IPFV.GOING’, *e-...-siu* ‘IPFV.COMING’, *e-...-buyu* ‘IPFV.GOING\_BACK’, *e-...-beyu* ‘IPFV.COMING\_BACK’ and *e-...-niuneti(a)* ‘IPFV.WANDERING’. Drawing from the terminology of AM studies (see Section 2), the five AM imperfective markers encode a translational motion that is temporally either concurrent or prior to the verb event and that relates to its subject (S or A) argument. They differ in terms of the path of the encoded motion, characterized by different combinations of the following values: itive versus ventive, one-way versus returnative, straight versus ambulative.

The expression of AM by way of inflectional (i.e., obligatory) morphology is typologically remarkable and crosslinguistically rare. Among the many languages and language families with AM systems documented across the world in Guillaume & Koch (2021a), only the following seem to have comparable inflectional AM markers: Mudburra and Warumungu (Pama-Nyungan, Australia; Osgarby 2021), the Koman languages (Koman, Ethiopia-Sudan borderlands; Otero 2020, 2021) and the Otomi languages (Otomangean; Mexico; Hernández-Green & Palancar 2021). Also noteworthy is the prior motion-with-purpose (‘be on one’s way to do’) meaning that certain Tacana AM circumfixes can take, in which the imperfective reading only applies to the motion component. To my knowledge, no such meaning has ever been documented in an AM system so far.

The AM imperfective circumfixes are not very frequent in the data and do not all occur with equal frequency. As shown in Figure 1 above, they are encountered 112 times within my Field Linguist’s Toolbox text database consisting of 4,000 sentences. Among these 112 occurrences, more than half (precisely 57) correspond to the *e-...-’u* ‘IPFV.GOING’ form. The same corpus shows that AM imperfective circumfixes are used much less frequently (nearly 4 times less) than non-inflectional AM suffixes, which are found 438 times (see Section 3.4).

The following sections first provide a detailed description of the spatial meanings of the five inflectional AM circumfixes in their use as canonical AM markers: ‘going’ and ‘coming’ forms in Section 5.1, ‘going back’ and ‘coming back’ forms in Section 5.2 and ‘wandering’ form in Section 5.3. In Section 5.4, I explore the use of AM circumfixes as “pure directionals” with certain motion verbs. Section 5.5 discusses the use of the AM imperfective circumfixes with the polyfunctional verb *pu* ‘be (located), do, say, etc.’, a highly frequent

verb displaying unexpected semantics. Finally, Section 5.6 provides a distribution calculation in texts for the various uses of AM imperfective circumfixes, encompassing AM, pure directional, and the uses with the polyfunctional verb *pu*.

### 5.1 *e-...-’u* ‘IPFV.GOING’ & *e-...-siu* ‘IPFV.COMING’

The two AM imperfective circumfixes *e-...-’u* ‘IPFV.GOING’ and *e-...-siu* ‘IPFV.COMING’ encode a one-way motion that is either temporally concurrent with the verb event or prior to the verb event. These two circumfixes only differ in terms of deixis, with *e-...-’u* ‘IPFV.GOING’ encoding itive motion (i.e., motion away from the deictic center)<sup>10</sup> and *e-...-siu* ‘IPFV.COMING’ encoding ventive motion (i.e., motion towards the deictic center). The concurrent temporal relation is the more common in the data and is therefore illustrated first.

Examples of *e-...-’u* ‘IPFV.GOING’ with a concurrent motion reading are provided below with intransitive verbs in (16) (motion of S) and transitive verbs in (17) (motion of A).

- (16) a. *Beu=pa puti-a, zorro=mu beu e-id’ebati-’u.*  
 PTC=QUOT go-PST fox.SPL=CNTR PTC CIRC-laugh-IPFV.GOING  
 ‘The (mischievous) fox had gone away, he was going away laughing  
 (escaping from the stupid jaguar).’ bu022 [= (12a)]

- b. *Mm, be e-manu-ta-’u se=kwana=mu.*  
 INTJ PTC CIRC-die-S3.PL-IPFV.GOING fish=PL=CNTR  
 ‘The (poisoned) fish were dying (carried away by the stream’s current).’  
 ba133

- (17) a. ... *enekita puti-dha jida deja beu edid’i=je=pa*  
 really go-REM.PST that man PTC path=PERL=QUOT  
*e-pu-’u,*<sup>11</sup> *e-watsi-chaku-ta-’u=pa.*  
 CIRC-be/do-IPFV.GOING CIRC-foot-look\_for-3A-IPFV.GOING=QUOT  
 ‘This man had gone away, he was going away on the path, he was going  
 away searching for the footprints (of his wife).’ os032-033

- b. *Se=mu chupia beu, muri-da=su e-dajaja-ni.*  
 fish=CNTR there PTC dry-ASF=LOC CIRC-fall-IPFV.DFLT  
*Tueda etse e-ina-’u beu.*  
 that 1DL CIRC-grab-IPFV.GOING PTC  
 ‘There, the fish fall on the ground (lit. in the dried). And one goes (lit. we  
 two go) grabbing them (the fish).’ ps030-031 [= (12b)]

Note that in both (16a) and (17a), the ‘going’ meaning expressed by *e-...-’u* redundantly repeats the ‘going’ meaning first introduced by the independent lexical verb *puti* ‘go’ within

<sup>10</sup> The meaning of this itive form (and other itive AM morphemes) would perhaps be more accurately glossed as ‘in any direction other than towards the deictic center’. This issue requires more work.

<sup>11</sup> With the polyfunctional verb *pu*, AM circumfixes have slightly unexpected semantics, as discussed in Section 5.5.

the same sentence. This pattern, where an AM-marked verb redundantly repeats a motion event denoted by an earlier lexical verb of motion (or denoted by an earlier AM-marked verb) is very frequent in AM systems cross-linguistically and known in the literature on AM as “echo construction” (see Guillaume & Koch 2021b: 15 and references therein). In Tacana, “echo constructions” are attested with both AM and AP circumfixes. In the literature on AM, the “echo phenomenon” is understood as a manifestation of the discourse backgrounding function of the AM markers, i.e. the function of encoding a motion event as a background to the lexical event encoded by the AM-marked verb (see in particular the discussion in Rose 2015: 128-30, 149-52). As discussed in more detail in Section 10, the “echo phenomenon” can be taken as clear evidence of the advanced stage of grammaticalization of both AM and AP imperfective circumfixes.

Examples of *e-...-siu* ‘IPFV.COMING’ with a concurrent motion reading are provided next, with intransitive verbs in (18) (motion of S) and transitive verbs in (19) (motion of A).

(18) a. ... *uchi=kwana e-mimi-ta-siu beu.*  
 dog=PL CIRC-speak-3S.PL-IPFV.COMING PTC  
 ‘... the dogs were coming speaking.’ ha019

b. *Kwade-ke tueda epuna, ekwana=tije*  
 send\_away-IMP that woman 1PL=BEHIND  
*e-tsiatsia-siu=putsu.*  
 CIRC-shout-IPFV.COMING=TMP  
 ‘Send her (that woman) away, for she keeps crying out [lit. shouting] after us.’<sup>12</sup> (Matthew 15.23; Ottaviano & Ottaviano 1981: 72)

(19) a. ... *ema kema e-wane e-chaku-siu e-dia=puji.*  
 1SG 1SG.GEN ENP-wife CIRC-look\_for-IPFV.COMING EVP-eat=PURP  
 ‘... I’m coming searching for my wife in order to eat her.’ os037

b. *Edid’i=je yama pudu e-dia-siu.*  
 path=PERL 1SG.ERG tamale CIRC-eat-IPFV.COMING  
 ‘I’m coming eating tamale on the path.’ n4.0338 (elicited)

Note that the motion expressed by the AM circumfixes need not be initiated or controlled by the verb subject. This is evident in an example like (20), with an inanimate subject (*urucuri* nuts) that moves in virtue of the animate entity who carries it (a hunter).

<sup>12</sup> Source of English version: <https://www.biblegateway.com/passages/?search=Matthew+15&version=NIV> (last access 20 October 2023).

- (20) *Senda=je e-uru-'u tumi=mu.*  
 path.SPL=PERL CIRC-fall-IPFV.GOING urucuri\_palm=CNTR  
 ‘The *urucuri* nuts were falling (from the hunter’s bag) along the path (followed by the hunter).’ ye056

See a similar example in (16b) above, where the motion of the subject (dying fish) is caused by the motion of the ground (a stream).

The encoding of a motion that is temporally concurrent with the verb event, illustrated above, is the most frequent reading of *e-...-'u* ‘IPFV.GOING’ and *e-...-siu* ‘IPFV.COMING’ in the corpus. However, as mentioned in the discussion of the imperfective readings of the circumfixes (Section 4.5 and examples 14a,b), in a few cases, a different reading is obtained, in which (1) the imperfective reading only applies to the motion component, (2) the motion is temporally prior to (rather than concurrent with) the verb event and (3) the motion bears a purposive relation to the verb event. Unlike with the concurrent reading, at reference time, the verb event has not started yet, and may actually never start at all. In the literature on AM, this reminds of the concept of ‘motion-with-purpose’ (Guillaume & Koch 2021b: 12). Further examples are provided below, with intransitive verbs (21), and transitive verbs in (22) and (23). It must be added that most available examples with this reading are elicited and that Example (23) features one of the very rare instances in a narrative text.

- (21) *Tuneda e-bana~bana-ta-'u te=su.*  
 3PL CIRC-plant~plant-3S.PL-IPFV.GOING garden=LOC  
 ‘They are on their way to plant in the garden.’ n2.0010 (elicited)

- (22) *Tata=ja te e-ba-ta-'u.*  
 father=ERG garden CIRC-see-3A-IPFV.GOING  
 ‘Daddy is on his way there to see the garden. (He has not arrived yet.)’ n4.0099 (elicited)

- (23) *Du apu-da=su tu=mewa piapujisu*  
 howler\_monkey dark-ASF=LOC 3SG=ALONE sometimes  
*e-manuame-ta-'u.*  
 CIRC-kill-3A-IPFV.GOING  
 ‘Sometimes, he would go alone by night to kill howler monkeys.’  
 ma106\_ott (Ottaviano 1980: 34-35)

## 5.2 *e-...-buyu* ‘IPFV.GOING\_BACK’ & *e-...-beyu* ‘IPFV.COMING\_BACK’

The next pair of AM imperfective circumfixes, *e-...-buyu* ‘IPFV.GOING\_BACK’ and *e-...-beyu* ‘IPFV.COMING\_BACK’, are very scarce in the data. My own corpus of texts features fewer than ten instances of each (see Figure 1). Consequently, good examples are not always available to illustrate unambiguously the details of their use and their semantics. They appear to me to

display the same deictic contrast (itive<sup>13</sup> versus ventive) as *e-...-'u* and *e-...-siu*, and to be able to express the same range of AM meanings in terms of the temporal relation between the motion they encode and the verb event (either concurrent or prior/motion-with-purpose). However, they differ from *e-...-'u* and *e-...-siu* in having returnative semantics, i.e., in denoting a motion back to a previous location.

The only unambiguous example in the corpus of *e-...-buyu* 'IPFV.GOING\_BACK' encoding concurrent AM is the one in (24).<sup>14</sup>

- (24) ... *id'aba-ta-idha mesa uchi janana, tu=tije*  
 hear-3A-REM.PST 3SG.GEN dog baby 3SG=BEHIND  
*e-pa-buyu.*  
 CIRC-cry-IPFV.COMING\_BACK  
 '(The man) heard his little dog, it was crying behind him as it was going  
 back home (together with the man).' pe012

Three examples of *e-...-beyu* 'IPFV.COMING\_BACK' encoding concurrent AM are given with intransitive verbs in (25) (motion of S) and with a transitive verb in (26) (motion of A).

- (25) a. *E-pa-beyu.*  
 CIRC-cry-IPFV.COMING\_BACK  
 'He was coming back home crying.' n2.0178 (elicited)
- b. *E-tsiatsia-beyu ema.*  
 CIRC-shout-IPFV.COMING\_BACK 1SG  
 '(As he was returning home, the injured man was shouting:) "I'm coming  
 back home shouting (in pain)".' rn040\_ott (Ottaviano 1980: 14-15)
- (26) ... *beidaji=neje miada e-mapa-beyu.*  
 happy=ASSC 2SG.ERG CIRC-carry\_on\_one's\_shoulder-IPFV.COMING\_BACK  
 '(Suppose one of you has a hundred sheep and loses one of them... When he  
 finds it,) he (lit. you) joyfully puts it on his shoulders and goes home.'<sup>15</sup>  
 (Luke 15.4-6; Ottaviano & Ottaviano 1981: 328)

<sup>13</sup> The meaning of the deictic component of this second itive form, like that of the first (see footnote 10), would perhaps be more accurately glossed as 'in any direction other than towards the deictic center'. Again, this issue requires more work.

<sup>14</sup> From the perspective of the parameter of path, the Spanish translation provided by my Tacana consultant Leonardo Marupa for this text example, '*lo escuchó a su perrito trás de él venir llorando*', using the ventive verb *venir* 'come', does not align with my itive analysis. My understanding is that in this utterance, the deictic center assumed by the narrator was the main character of the story (the man) while the deictic center assumed by the translator was our (translator + myself) position at the time of the transcription session.

<sup>15</sup> Source of English version: <https://www.biblegateway.com/passage/?search=Luke+15&version=NIV> (last access 20 October 2023).

An example of *e-...-buyu* ‘IPFV.GOING\_BACK’ encoding prior imperfective motion with a purposive relation to the verb event is given in (27).

- (27) *E-nawi-buyu=jia* *kema tata*  
 CIRC-bathe-IPFV.COMING\_BACK=DUBIT 1SG.GEN father  
*mesa e-wane=neje.*  
 3SG.GEN ENP-wife=ASSC  
 ‘Could it be that my father is on his way back to bathe with his wife?’  
 es094\_ott (Ottaviano 1980: 48-49)

No examples with this reading are available with *e-...-beyu* ‘IPFV.COMING\_BACK’.

### 5.3 *e-...-niuneti(a)* ‘IPFV.WANDERING’

The fifth AM imperfective circumfix, *e-...-niuneti(a)* ‘IPFV.WANDERING’, contrasts with the preceding four in that it encodes a non-deictic motion with an ambulative path, i.e., a motion that is explicitly not straight between its starting and ending points, but wanders aimlessly through multiple non-aligned locations. In terms of its temporal relation with the verb event, the motion is always concurrent. It is never found with a prior motion-with-purpose reading (i.e., meaning ‘be wandering around on one’s way to do the verb event’). Examples of *e-...-niuneti(a)* are provided below, with intransitive verbs in (28) (motion of S) and transitive verbs in (29) (motion of A).

- (28) a. *E-tisitisi-niuneti* *kuchi.*  
 CIRC-grumble-IPFV.WANDERING pig.SPL  
 ‘The pig is going around grumbling.’ (Ottaviano & Ottaviano 1989: 111)

- b. *E-dhutedhute-niuneti.*  
 CIRC-stagger-IPFV.WANDERING  
 ‘(The drunk man) is staggering around.’ (Ottaviano & Ottaviano 1989: 35)

- (29) a. *Daja ema e-buetsua-ta-niuneti* *ejije duje.*  
 thus 1SG CIRC-teach-3A-IPFV.WANDERING forest inside  
 ‘This is how he (the duende) would teach me while wandering inside the forest.’ du046

- b. *Ebake=je e-chaku-ta-niunetia.*  
 top=PERL CIRC-look\_for-3A-IPFV.WANDERING  
 ‘Across the top (of the trees) (the jaguar) was searching around for (the fox).’

bu024 [= (8)]



(32) *Jesús cielo=su e-tsua-buyu chama-ta-na=wekwana.*  
 Jesus sky.SPL=LOC CIRC-go\_up-IPFV.COMING\_BACK watch-3A-REC.PST=3PL  
 ‘They (the disciples) watched Jesus going back up into Heaven.’  
 (Ottaviano & Ottaviano 1981: 487)<sup>18</sup>

(33) a. *Mesa alojamiento=su e-kwina-buyu=je beu*  
 3SG.GEN accomodation.SPL=LOC CIRC-arrive-IPFV.COMING\_BACK=PERL PTC  
*batasiu-piru-idha jida mesa tata=mu.*  
 spit-START-REM.PST that 3SG.GEN father=CNTR  
 ‘As he was arriving back at his lodging, his father started to vomit.’ su093

b. *Tueda be e-ba-ta aicha-ji e-kwina-beyu.*  
 3SG PTC EVP-see-3A meat-PROP CIRC-arrive-IPFV.COMING\_BACK  
 ‘They (the owners of the plantain grove) saw him (the hunter) arriving back  
 home with meat.’ ye139

Not all semantic classes of intransitive motion verbs yield pure directional meanings. In (20), for instance, the combination of *e-...-’u* ‘IPFV.GOING’ with the path-of-motion verb *uru* ‘fall’ expresses AM, not pure direction. That is, *e-...-’u* adds a motion of ‘moving away’, distinct from the verb’s motion of ‘falling (repeatedly)’. With a pure directional reading, the translation would have been ‘were falling away’.

Examples of the pure directional function with different semantic classes of transitive motion verbs are given below: caused-motion in (34) and non-caused-motion in (35a,b) and (36).

(34) *Ejije=su shu, etse e-dusu-ta-’u*  
 forest=LOC INTJ:GO\_FAST 1DL CIRC-take/transport\_there-3A-IPFV.GOING  
*edue deja=detse, ekene e-pu-’u,*  
 sibling man=DL in\_front\_of CIRC-be/do-IPFV.GOING  
*edid’i=je y-ase-’u.*  
 path=PERL CIRC-walk-IPFV.GOING  
 ‘We would go into the forest, our (two) brothers leading (lit. taking) us, going  
 ahead (of us), we would walk on the path.’ ci022

(35) a. ... *yanana=eje tije y-a-ta-siu.*  
 child=PERL go\_behind CIRC-do-3A-IPFV.COMING  
 ‘(The mother of the baby squirrel monkey) was chasing (the hunter on his  
 way back home) for her baby (that the hunter had captured).’ ye134

<sup>18</sup> This example is not a biblical verse but the legend of a drawing featured in the Tacana version of the Bible (Ottaviano & Ottaviano 1981) showing Jesus’ disciples watching Jesus ascend into the sky. The English translation is mine.

b. *Tije y-a-ta-niuneti=putsu...*  
 go\_behind CIRC-do-3A-IPFV.WANDERING=TMP  
 ‘Because he (the jaguar) was chasing him (the wicked fox) everywhere...’  
 bu002

(36) *Beju ema Ishawa=ja e-naria-ta-siu.*  
 PTC 1SG Devil=ERG CIRC-approach-3A-IPFV.COMING  
 ‘The prince of this world is coming (lit. the Devil is approaching me, towards here).’<sup>19</sup> (John 14.30; Ottaviano & Ottaviano 1981: 455)

In all these examples, the semantics of the verb roots imply motion of the A, regardless of whether the O is also in motion, as in (34) and (35), or whether the O is motionless, as in (36). I do not have examples of AM imperfective circumfixes with transitive motion verbs whose semantics would imply motion of the O only, such as ‘throw’, ‘send’, etc. With such verbs, I suspect that the circumfixes would assume an AM function, indicating that the A is also in motion.

It should be mentioned that a number of examples with transitive verbs provided in Sections 5.1 to 5.3 could be alternatively analyzed as expressing pure direction rather than AM, when the verb event is one that is typically (or perhaps obligatorily) realized while the subject is moving, as is the case of *chaku* ‘look for, search’ featured in (17a), (19a), and (29b), and *mapa* ‘carry on one’s shoulder’ in (26).

The available data do not show any cases where a motion verb marked with an AM imperfective circumfix has an AM reading in some contexts and a pure directional reading in others. This could suggest that the distinction between AM and pure directional functions is determined lexically and not by the context.

### 5.5 AM circumfixes with the polyfunctional verb *pu* ‘be (located), do, say, etc.’

A discussion of the use of the AM imperfective circumfixes with the polyfunctional non-motion verb *pu* ‘be (located), do, say, etc.’ is in order because their combination is highly frequent and the resulting semantics unexpected.<sup>20</sup> In this context, *pu* behaves as if it were a motion verb, and the AM markers accordingly receive pure directional readings.

When *pu* is not used with AM imperfective circumfixes, it functions either as a general locative verb (‘be located’), as in (37a), or as a general activity verb (‘do, say, etc.’), as in (37b). Importantly, in this context, *pu* never has motional meanings (‘move’).

(37) a. *Tueda escuela=su pu-ina.*  
 3SG school.SPL=LOC be/do-HAB.PST  
 ‘He was in the school.’  
 na205

<sup>19</sup> Source of English version: <https://www.biblegateway.com/passage/?search=John+14&version=NIV> (last access 20 October 2023).

<sup>20</sup> Recall that *pu* can also function as a light verb in association with a non-finite lexical verb (see Section 3.3). AM imperfective circumfixes marking *pu* in light verb constructions do not display any unexpected readings.

- b. *Da=mida e-pu.*  
 thus=2SG EVP-be/do  
 ‘This is how you’re going to do it (help a pregnant woman deliver her baby).’ pa104

However, when *pu* is marked with an AM imperfective circumfix, as illustrated in (38a,b), (39a,b) and (40), it does not have its general locative or general activity meaning, but behaves as a general motion verb (‘move’) specified for a particular direction. As a matter of fact, the combination of *pu* and an AM circumfix is never interpreted as meaning ‘be located somewhere while going/coming/etc.’ (where *pu* would be assuming its general locative function) or ‘be doing something while going/coming/etc.’ (with *pu* assuming its function of general activity verb).

- (38) a. *Beu etseju e-pu-'u, cena e-pu=puji.*  
 PTC 1DL.EXCL CIRC-be/do-IPFV.GOING have\_dinner.SPL EVP-be/do=PURP  
 ‘We are on our way to have dinner.’ su076

- b. ... *pia kwara=di e-pu-siu beu nasa...*  
 other mother=ALSO CIRC-be/do-IPFV.COMING PTC plantain  
*nasa=metse, aicha e-turuka-ti=puji.*  
 plantain=ASSC.FLANKING meat EVP-exchange-MID=PURP  
 ‘... the other woman was coming with plantain in order to exchange it for meat.’ ye159

- (39) a. *Kepia mikwana e-pu-'u?*  
 where 2PL CIRC-be/do-IPFV.GOING  
*Beju ekwanaju e-pu-buyu-icha ete=su.*  
 PTC 1PL.EXCL CIRC-be/do-IPFV.COMING\_BACK-REITR house=LOC  
 ‘Where are you going (the bear man asked his wife and children)? [...] We are on our way back home, once again(, they responded to him).’ au105, au108

- b. *Dasu ema beu tipei-da e-pu-beyu.*  
 then 1SG PTC fast-ASF CIRC-be/do-IPFV.COMING\_BACK  
 ‘(I’m very hungry.) This is why I’m coming back home quickly.’ mu028

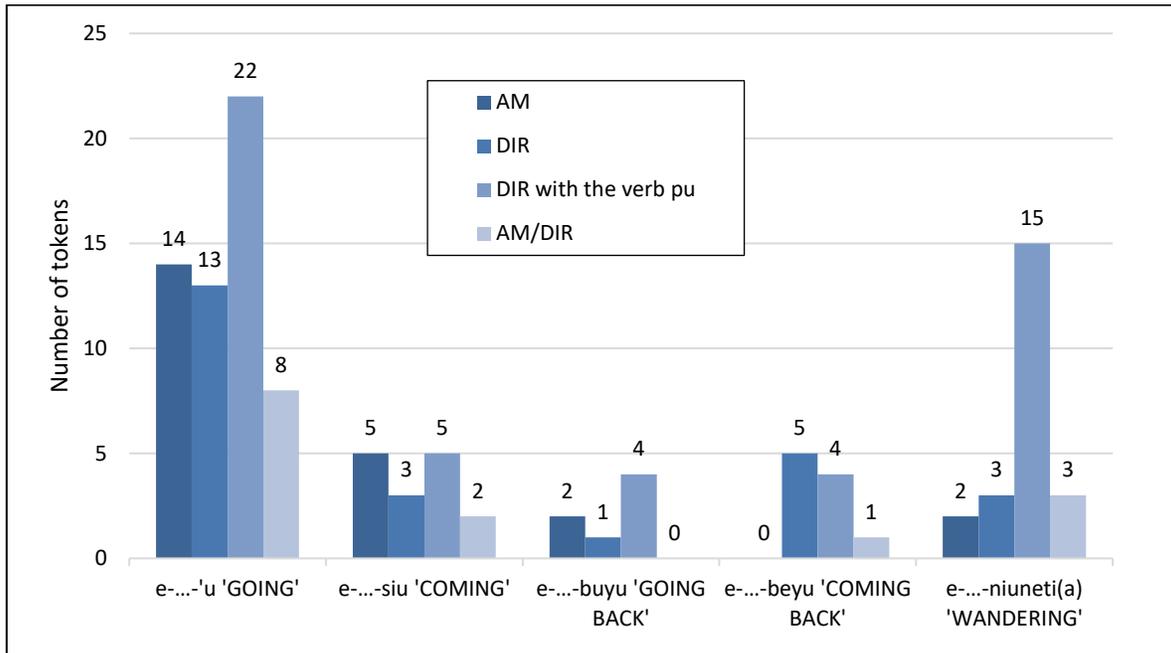
- (40) *Pisa-ji e-pu-ta-niuneti.*  
 sting-PROP CIRC-be/do-3S.PL-IPFV.WANDERING  
 ‘They walk around with arrows.’ cq040\_ott (Ottaviano 1980: 96, 99)

The idea that *pu*, in combination with an AM imperfective circumfix, conveys a sense of motion is supported by the observation that in this context, it can be further modified by “rate” adverbs, such as *tipei-da* ‘fast’ in (39b). Such modification is not observed in the absence of AM imperfective circumfixes. This pattern raises the possibility that historically

*pu* once had a motional meaning and retained it only when associated to AM imperfective circumfixes.

### 5.6 Distribution of the different uses of AM imperfective circumfixes

Figure 2 reports the number of occurrences in my own corpus of text narratives, for each of the AM imperfective circumfixes, of the different uses described above. These include the AM function with non-motion and motion verbs, the pure directional function with motion verbs (coded ‘DIR’ in the graphic), and the particular case of the pure directional function with the synchronically non-motion verb *pu* ‘be (located), do, say, etc.’ (coded ‘DIR with the verb *pu*’ in the graphic). Figure 2 also displays the number of cases where the exact function (AM or DIR) of an AM imperfective circumfix is unknown, e.g. with verbs like *chaku* ‘look for, search’ or *mapa* ‘carry on one’s shoulder’ (coded ‘AM/DIR’ in the graphic).



**Figure 2.** Number of occurrences of AM imperfective circumfixes with AM meanings, DIR meanings, DIR meanings with the polyfunctional verb *pu* ‘be (located), do, say, etc.’ and with unknown (AM or DIR) meanings in my corpus of Tacana narratives (Toolbox database of 4,000 sentences).

As one can observe, when we exclude the use of the AM imperfective circumfixes with the polyfunctional verb *pu* ‘be located’, ‘do’, ‘say’, etc., we find that the AM and DIR functions exhibit a nearly equal distribution for each of the markers, with approximately the same number of tokens.

## 6 Spatial semantics of AP imperfective circumfixes

The set of AP imperfective markers consists of the following three circumfixes: *e-...-(n)eti* / *e-...-netia* ‘IPFV.STANDING’, *e-...-sa* ‘IPFV.LYING/BENDING’ and *e-...-bade* ‘IPFV.HANGING’. In all three cases, the specified posture is that of the subject of the verb (intransitive S or transitive A), never that of its object (transitive O). Recall that the form of the suffixal part of *e-...-(n)eti* / *e-...-netia* ‘IPFV.STANDING’ is sensitive to the grammatical function (S or A) and the person of the subject of the verb (see Section 4.2).

The posture expressed by the AP imperfective markers is hardly ever explicitly translated in Spanish by my consultants. The motion expressed by the AM imperfective markers, by contrast, is more commonly translated.

In terms of use in discourse, as shown by the results of my text count in Figure 1 above, as a whole the AP imperfective circumfixes tend to be more frequent than the AM circumfixes. In my Field Linguist’s Toolbox text database comprising 4,000 sentences, they occur 174 times, a figure that can be compared to the 112 instances of AM imperfective circumfixes.

The following sections provide a semantic description of the three inflectional AP circumfixes, starting with the ‘standing’ marker in Section 6.1, followed by the ‘lying/bending’ marker in Section 6.2 and the ‘hanging’ marker in Section 6.3.

### 6.1 *e-...-(n)eti* / *e-...-netia* ‘IPFV.STANDING’

The AP imperfective circumfix *e-...-(n)eti* / *e-...-netia* ‘IPFV.STANDING’ is the second most frequent of the AP circumfixes, with 41 occurrences in my text corpus (to be compared to the 111 occurrences of the ‘lying/bending’ circumfix and the 22 occurrences of the ‘hanging’ circumfix; see Figure 1 above). It encodes straightforward standing postural meanings, as well as a number of non-postural semantic extensions, some of which non-spatial.

The following examples illustrate the typical standing postural meaning of *e-...-(n)eti* / *e-...-netia* with human subject referents in (41) – see another example in (13a) – and an animal subject referent in (42).

- (41) a. *Daja e-jeje-neti=je=pa* *beju,*  
 thus CIRC-shout-IPFV.STANDING=PERL=QUOT PTC  
*echuadudu=su neti-tsua-ti=putsu=pa*  
 log=LOC stand.INTR-go\_up-GO&DO=TMP=QUOT  
*e-jeje-neti...*  
 CIRC-shout-IPFV.STANDING  
 ‘As she was shouting this way (standing), she went and stood up on a log  
 and was shouting this way...’ gu072

b. *Ja-wija-ti-ke*                      *mike*                      *puluku*,  
MID-remove-MID-IMP    2SG.GEN                      sandal  
*yawa*    *iyu-da=mi*                      *e-tidhi*<sup>21</sup>-*netia=putsu*.  
land    respected-ASF=2SG                      CIRC-step\_on-IPFV.STANDING.1/2A=TMP  
‘(Then the Lord said to him,) “Take off your sandals, for the place where  
you are standing is holy ground.”’<sup>22</sup> (lit. as you are stepping standing on  
respected land)                      (Acts 7.33; Ottaviano & Ottaviano 1981: 515)

(42) *Dukei=base*    *e-neti*                      *ena=su*                      *e-id'i-ti-neti*.  
deer=DEPR    EVP-stand.INTR    stream=LOC    CIRC-drink-MID-IPFV.STANDING  
‘There is a deer standing in the water, drinking while standing.’ hv027

Note that in (41a) and (42), the ‘standing’ meaning expressed by *e...-neti* redundantly repeats the ‘standing’ meaning first introduced by the independent lexical verb *neti* ‘stand’ in the preceding sentence. This is the same phenomenon of “echo construction” that was mentioned in the discussion of the AM imperfective circumfixes (see Section 5.1), and which will be further discussed in Section 10.

Different perspectives on what constitutes a typical ‘standing’ posture are adopted in particular instances. In some sentences, the circumfix refers to a standing position that appears to amount first and foremost to an absence of motion. This interpretation is coherent with the fact that ‘stop moving’ is a possible meaning of the source lexical verb, as we will see in Section 9. Such a meaning is likely present in the two examples below. In (43a), the speaker recounts how, as a little girl, she once had to stop walking during a journey because she was very tired. While at rest, she was complaining to her older brother. In (43b), another speaker tells of how, after having an accident in the forest, he once had to return home with an injured ankle and had to stop walking many times along the way to think about the best path to follow. Other examples where the use of the ‘standing’ form is likely motivated by the absence of motion are (13a) and (42) above.

(43) a. *Pishiwe beu*    *ema*    *e-tisitisi-eti*,                      *carga...*                      *carga*  
weak    PTC    1SG    CIRC-complain-IPFV.STANDING    load.SPL                      load.SPL  
*abu-ja=mue=su*.  
carry-DESID=NEG=TMP  
‘I was tired, I was complaining (standing), I did not want to carry this load (a  
heavy basket) anymore.’ ci064

<sup>21</sup> Wrongly spelled *tidi* in Ottaviano & Ottaviano (1981).

<sup>22</sup> Source of English version: <https://www.biblegateway.com/passage/?search=Acts+7&version=NIV> (last access 20 October 2023)

- b. *Ena=biasu neti, <sup>23</sup> e-piba~piba-neti ema.*  
 stream=ON\_TOP\_OF stand.INTR CIRC-think~think-IPFV.STANDING 1SG  
 ‘I stopped (walking) above the stream (on a log) and I was thinking (“Where  
 am I going to go from here?”)’ lp014-015

In (43b), note the “echo construction”, where *e-...-neti* redundantly repeats the ‘standing’ meaning first introduced by the lexical posture verb *neti* ‘stand’ in the preceding sentence.

In other sentences, it seems rather the vertical axis necessarily associated with a standing posture that is foregrounded. In (44a), the ‘standing’ imperfective circumfix likely coincides with the fact that the activity of harvesting corn ears in a field is performed at a man’s height and therefore requires harvesters to be standing upright. In (44b), it is coherent with a situation where the brother-in-law is located in a tree, which implies an upright posture of the speaker who is searching for him.

- (44) a. *Tueda beju e-rari-netia=je...*  
 that PTC CIRC-harvest-IPFV.STANDING.1/2A=PERL  
 ‘As we were harvesting that (corn ears, in the field I had planted near the  
 house)...’ du050
- b. *Yanakane yama... kema d’aki yama*  
 in\_vain 1SG.ERG 1SG.GEN brother\_in\_law 1SG.ERG  
*e-chaku-netia.*  
 CIRC-search\_for-IPFV.STANDING.1/2A  
 ‘I’m searching for my brother-in-law (in trees) in vain.’ ch047

Another example is in the first clause of (13b), which depicts a burning fire emitting heat and flames vertically.

An extension from verticality to height probably explains the use of *e-...-(n)eti / e-...-netia* in a number of examples such as (45a,b), where the relevant subjects are neither humans nor higher animates and no posture or verticality may plausibly be involved. Emphasizing height would make sense in (45a), where the activity of ‘passing’ is performed near the face of God, i.e., in Heaven. It would likewise be appropriate in (45b) given the sun’s natural position high in the sky.

- (45) a. *Dapia=pa=da ye dumitakai=di tusa e-bu=je*  
 there=QUOT=PTC this dung\_beatle=ALSO 3SG.GEN ENP-face=PERL  
*ububu jaitiana e-pu-neti.*  
 every\_so\_often pass CIRC-be/do-IPFV.STANDING  
 ‘It is said that (in the old time,) this dung beetle used to pass near His face  
 (the face of God, in Heaven) over and over again.’ je002 [(9b)]

<sup>23</sup> This is a non-finite predicate construction, where the posture verb *neti* does not take the inflectional morphology and where the inflecting light verb is not present.

- b. *Id'eti=di tuche-da e-pu-eti.*  
 sun=ALSO strong-ASF CIRC-be/do-IPFV.STANDING  
 'The sun was very hot.' lp078 [= (9a)]

In yet another set of examples where postural meaning seems unlikely or is clearly impossible, the motivations at play in the selection of *e-...-(n)eti* / *e-...-netia* appear to be related to what Newman (2002a: 2) calls “force dynamics” (degree of control and balance), and more specifically to the degree of “sensorimotor control which is needed in order to maintain the position”. Of all postures, the required control is highest in the standing posture. The clearest example I have of this sense is (46), which I collected during a transcription session where both my consultant Leonardo Marupa and I were sitting at a table in his yard. This utterance is what Leonardo shouted to his old uncle, Eusebio Marupa, who was passing in the street, and who happened to be the speaker of the recording that we were transcribing. I suspect that Leonardo used *e-...-(n)eti* / *e-...-netia* to emphasize the seriousness with which he and I were doing the transcription work.

- (46) *Mike kisa=kwana etseju e-dere-netia.*  
 2SG.GEN story=PL 1DL.EXCL CIRC-paint-IPFV.STANDING.1/2A  
 'We are transcribing (lit. painting) your story.'  
 n4.0327 (participant observation)

I also suspect that “force dynamics” account for the use of *e-...-(n)eti* / *e-...-netia* in (47a,b). In (47a), the narrator depicts a fight between the hero (a bear-man) and a dangerous enemy. Although they might indeed be standing up straight, what seems more relevant in this example is the intensity of the fight, and the effort that the hero has to produce to beat his opponent. In (47b), the speaker probably uses the ‘standing’ marker to highlight the seriousness with which the Chama people look after their sacred mountain.

- (47) a. *Dasu beju, kristianu=kwana, kwati dhita-piru-ta-idha=wekwana,*  
 then PTC person.SPL=PL fire/firewood gather-START-3A-REM.PST=3PL  
*tu=e-iche-ti-eti=kama.*  
 3SG=CIRC-hit-MID-IPFV.STANDING=WHILE  
 'The people started to gather firewood while he (the bear-man) was fighting  
 (with the cannibal).' au254
- b. *Tueda beju e-inatsiwa-ta-neti mesa.*  
 that PTC CIRC-look\_after-3A-IPFV.STANDING 3SG.DAT  
 'They (wild Chama people) look after it (the holy Caqueahuaca mountain).'  
 cq005\_ott (Ottaviano 1980: 93, 99)

Finally, there are still other examples where neither ‘absence of motion’, ‘verticality’, ‘height’ nor ‘seriousness or intensity’ seem to account for the use of *e-...-(n)eti* / *e-...-netia*. For instance, the use of *e-...-(n)eti* / *e-...-netia* on the verb ‘rot’ in (48) within an utterance depicting the decomposition of dead animals, does not seem to relate to any of the above extensions. According to my consultant Leonardo Marupa, the use of the ‘standing’

circumfix here implies an advanced stage of decomposition. Otherwise, the 'lying/bending' circumfix should be used instead.

- (48) *Etseke=mu, mesa animalu=kwana e-iwi-neti=su*  
 outside=CNTR 3SG.GEN animal.SPL=PL CIRC-rot-IPFV.STANDING=TMP  
*pue-idha beju.*  
 come-REM.PST PTC  
 'In the yard, his animals (pigs, chickens, etc.) were (dead and) rotting when he arrived.'  
 ti070

Further work is needed to reach a better understanding of the range of possible extensions of the postural semantics of *e-...-(n)eti / e-...-netia*.

## 6.2 *e-...-sa* 'IPFV.LYING/BENDING'

The second AP imperfective circumfix, *e-...-sa* 'IPFV.LYING/BENDING', is the most frequent of the AP circumfixes, with 111 occurrences in my text corpus (to be compared to the 41 occurrences of the 'standing' circumfix and the 22 occurrences of the 'hanging' circumfix; see Figure 1). It expresses a lying or a bending posture, or certain spatial meanings closely related to these postural meanings, such as 'in a less controlled standing posture' or 'close to the ground'.

Typical lying postural meanings are found in a number of examples such as those in (49), with human referents performing stationary activities.

- (49) a. *Tu=e-tawi-sa=su, mesa e-wane=ja,*  
 3SG=CIRC-sleep-IPFV.LYING/BENDING=TMP 3SG.GEN ENP-wife=ERG  
*sawana=neje, biad'ama-ta-na.*  
 bed\_sheet.SPL=ASSC cover-3A-REC.PST  
 'When he was sleeping (drunk), his wife covered him with a bed sheet.'  
 br010
- b. ... *dapia ema e-sa, buepatia beu. [...]*  
 there 1SG EVP-lie at\_midday PTC  
*Ema, e-piba~piba-sa ema.*  
 1SG CIRC-think~think-IPFV.LYING/BENDING 1SG  
 '... I'm lying down there, at midday. [...] I'm thinking (as I'm lying down).'  
 lp054-058
- c. *Kema tata=mu e-karara-sa.*  
 1SG.GEN father=CNTR CIRC-emit\_a\_gurgling\_sound-IPFV.LYING/BENDING  
 'My father is snoring with a gurgling sound.' n4.0013 (elicited)

In (49b), note the "echo construction", where *e-...-sa* redundantly repeats the 'lying' meaning first introduced by the lexical posture verb *sa* 'lie' in the preceding sentence.

Ongoing activities, whether stationary or not, that are performed by animals or inanimates entities that, in terms of posture or movements, are normally associated with the

horizontal axis, typically require *e-...-sa*, as in (50a,b) with fish, (51) with caimans and the second clause of (50b) with lakes.

- (50) a. *Enekita beu se=kwana e-manu-ta-sa.*  
 really PTC fish=PL CIRC-die-3S.PL-IPFV.LYING/BENDING  
 ‘Really, the (poisoned) fish were dying (in the little stream).’ ch107
- b. *Se=kwana=mu beu e-siu-sa beu*  
 fish=PL=CNTR PTC CIRC-escape-IPFV.LYING/BENDING PTC  
*bai=jenetia, e-d'ud'u-sa beu.*  
 lake=ABL CIRC-drip-IPFV.LYING/BENDING PTC  
 ‘The fish are escaping from the lake, as (the lake) is being drained (lit. is dripping lying).’ em017
- (51) *De, ebuteji=su=we e-sa jida caimán. Aki jurujuru=nime*  
 there dock=LOC=RESTR EVP-lie that caiman.SPL tree rotten=SIMLR.SPL  
*e-pu-sa*  
 CIRC-be/do-IPFV.LYING/BENDING  
*wa bed'a~bed'a e-pu-sa.*  
 thus float~float CIRC-be/do-IPFV.LYING/BENDING  
 ‘There, at the dock, is that caiman lying. It is (lying) like a rotten tree, floating (lying) like that.’ ci167-168

In (51), note the “echo construction”, where the two occurrences of *e-...-sa* redundantly repeat the ‘lying’ meaning first introduced by the lexical posture verb *sa* ‘stand’ in the preceding sentence.

The ‘lying/bending’ circumfix is also frequently used with subject referents performing activities in a ‘bending’ posture, with the upper part of the body, the head or the hands close to or touching the ground. A fair number of examples with this meaning involve verbs of putting, taking or searching for something which is on the ground, as in the following examples.

- (52) a. *Ai=kwana e-bana-ti-sa te=su.*  
 thing=PL CIRC-plant-MID-IPFV.LYING/BENDING garden=LOC  
 ‘He is planting things for himself in his garden.’ gu014

- b. *Tueda beu, e-wiru-ta-bade* *wara~wara*  
 then PTC CIRC-harvest-3A-IPFV.HANGING spilled~spilled  
*playa=je.*  
 beach.SPL=PERL  
*E-chudu~chudu-sa* *ema ejud'uji=su*  
 CIRC-pick\_up~pick\_up-IPFV.LYING/BENDING 1SG clothes=LOC  
*polera tiwe=su e-chudu-sa.*  
 t\_shirt.SPL edge\_of\_clothes=LOC CIRC-pick\_up-IPFV.LYING/BENDING  
 ‘(My sister, while standing in a tree,) was picking (fruits) and dropping them  
 down on the beach (of the river). I (down on the beach) was collecting them  
 in my clothes, I was collecting them in my t-shirt (lit. in the edge of my t-  
 shirt).’ ci121-122
- c. *Yama, tuwanu ina=kwana*  
 1SG.ERG copa\_palm leaf=PL  
*e-dhita-sa=kama=mida*  
 CIRC-gather-IPFV.LYING/BENDING=WHILE=2SG  
*asau y-a.*  
 food\_cooked\_on\_embers.SPL EVP-do  
 ‘While I am gathering (dead/dried) *copa* palm leaves (on the ground to make  
 a fire), you will cook (the capybara) on embers.’ mc034
- d. *Kea tata=mu e-chaku-ta-sa=we...*  
 1SG.GEN father=CNTR CIRC-search\_for-3A-IPFV.LYING/BENDING=RESTR  
 ‘My father is searching for them (dead bats, on the ground).’ mc085

In (52b), note the “echo construction”, here between two subsequent verbs marked with *e-...-sa*.

In (52b), note also the contrast, within the same sentence, between the action of collecting fruits from the ground, marked with the ‘lying/bending’ form, and the action of picking fruits up in a tree, marked with the ‘hanging’ form. Similarly, contrast (52d), where the action of searching for dead bats on the ground is marked with the ‘lying/bending’ form, with (44b), where the action of searching for someone located up in a tree is marked with the ‘standing’ form.

Additional examples of *e-...-sa* in the corpus with ‘bending’-related (rather than ‘lying’) meanings are given below.

- (53) a. *E-situ-ti-sa* *tueda.*  
 CIRC-play-MID-IPFV.LYING/BENDING 3SG  
 ‘(My child) is playing (on the ground, bent over his little cars, which he has  
 fun rolling around).’ n3.0071 (participant observation)

- b. ... *jida pia=kwana dia-ta-iti-a=kwana=di beu*  
 that other=PL eat-3A-TDM-PST=PL=ALSO PTC  
*e-batasiu-ta-sa.*  
 CIRC-spit-3S.PL-IPFV.LYING/BENDING  
 ‘The other ones who had eaten (the empanadas) were also vomiting.’  
 su096
- c. *Epuné e-nawi-sa, tusa enabaki=su,*  
 young\_lady CIRC-bathe-IPFV.LYING/BENDING 3SG.GEN stream=LOC  
*tsi-ta-idha.*  
 steal-3A-REM.PST  
 ‘The young girl was bathing in her stream when he (the bear-man)  
 kidnapped her.’  
 au005

This use of *e-...-sa* for ‘bending’-related activities may also involve animal subjects, as in (54).

- (54) a. *Jida asunu Chaplin=mu, ... e-waniba-ta-sa...*  
 that donkey.SPL Chaplin=CNTR CIRC-smell-3A-IPFV.LYING/BENDING  
 ‘That donkey called Chaplin was sniffing him (Don Antonio, who was  
 sleeping drunk in his bed).’  
 br040
- b. *Dapia=pa=da be e-id'aba-ta be wabukere=kwana*  
 there=QUOT=PTC PTC EVP-hear-3A PTC collared\_peccary=PL  
*e-dia~dia-ta-sa,*  
 CIRC-eat~eat-3S.PL-IPFV.LYING/BENDING  
*e-dia~dia-ta-sa.*  
 CIRC-eat~eat-3S.PL-IPFV.LYING/BENDING  
 ‘There he heard collared peccaries eating, eating (with their snouts foraging  
 for food in the ground).’  
 ye083

A number of examples involving human subjects, such as those in (55), suggest that *e-...-sa* can also be used whenever, for some reason, an action normally performed while standing, is realized in a less controlled standing posture, thereby involving a lower degree of “force dynamics” (on this notion, see Section 6.1).

- (55) a. *Kema tata=ichenu=mu, tida=putsu mm, apena*  
 1SG.GEN father=COMPAS=CNTR lame=TMP INTJ with\_difficulty.SPL  
*e-kwina-sa beu, kaju*  
 CIRC-arrive-IPFV.LYING/BENDING PTC box.SPL  
*ja-mapa-ti...*  
 MID-carry\_on\_shoulder-MID  
 ‘Because my father was lame, he was arriving with difficulty, carrying his  
 (heavy) load...’  
 em064

- b. *Kunu=base=ja=mu eskupeta*  
 brother=DEPR=ERG=CNTR shotgun.SPL  
*e-jemi-ute-ta-sa.* *Me-jududu-ke=da!*  
 CIRC-remove-go\_down-3A-IPFV.LYING/BENDING IMP.PL-run-IMP=PTC  
 ‘Your (drunk) brother is grabbing (lit. removing down) the shotgun. So run  
 away!’ tm046-47

Finally, some examples suggest that the mere meaning of ‘close to the ground’ can be retained to the exclusion of any postural sense. This meaning contrasts with the ‘height’ meaning that can be expressed by the ‘standing’ form. It is exemplified by the two examples in (56), which come from a traditional story that explains why the sun has a different speed and trajectory in the sky depending on the season. In August, which is midwinter in the southern hemisphere, the sun is fast and low on the horizon because it is carried by the spider monkey: this could justify the use of the ‘lying/bending’ marker in (56a). By contrast, at other times of the year, the sun is much slower and higher in the sky, because it is carried by the sloth: this could justify the use of the default imperfective marker in (56b).<sup>24</sup>

- (56) a. *Da=putsu tipei-da e-tsua-sa id'eti.*  
 this=TMP fast-ASF CIRC-go\_up-IPFV.LYING/BENDING sun  
 ‘This is why the sun climbs very fast (in August, because it is carried by a  
 spider monkey).’ so008
- b. *Tueda mimisai-da e-tsua-ni id'eti.*  
 that slow-ASF CIRC-go\_up-IPFV.DFLT sun  
 ‘(In May, in the southern fall,) the sun climbs very slowly (because it is  
 carried by the sloth).’ so006

### 6.3 *e-...-bade* ‘IPFV.HANGING’

The AP imperfective circumfix, *e-...-bade* ‘IPFV.HANGING’, is the least frequent of all AP circumfixes, with 22 occurrences in my text corpus (as compared to the 111 occurrences of the ‘lying/bending’ circumfix and the 41 occurrences of the ‘standing’ circumfixes; see Figure 1). In most instances, it expresses a hanging posture of the subject of the verb, which extends to configurations where an entity is at least not touching the ground. It does not appear to manifest the types of non-spatial extensions that are characteristic of the ‘standing’ and ‘lying/bending’ circumfix. As will be discussed in Section 9, the grammaticalization of the notion of ‘hanging’ within the domain of tense-aspect, or at least the possible presence of a ‘hanging’ verb among the class of basic posture verbs, are rarely reported in the grammaticalization literature. From a regional perspective, however, these are well-documented phenomena in languages from Amazonia and neighboring lowland regions of Latin America.

<sup>24</sup> In (56b), we might have anticipated the ‘standing’ marker here instead, unless the narrator's intended contrast is between explicitly low (in August) and unspecified (the rest of the year).

The circumfix *e-...-bade* is typically used in contexts where humans perform activities up in a tree, as in the following examples. Compare ‘playing in a tree’ marked with the ‘hanging’ form in (57c) with ‘playing on the ground’ marked with the ‘lying/bending’ form in (53a). See also *e-wiru-ta-bade* in (52b) above, employed in reference to the action of picking fruits while standing up in a tree.

- (57) a. *Daja=pa e-jeje-bade ebake=su.*  
 thus=QUOT CIRC-shout-IPFV.HANGING top=LOC  
 ‘He was shouting (for help) up there (on a branch of *cumaru* tree).’ ch044
- b. *Daja yama e-chama-bade=su mitsu-ta-idha ema*  
 thus 1SG.ERG CIRC-watch-IPFV.HANGING=TMP talk\_to-3A-REM.PST 1SG  
*einid'u=ja.*  
 spirit=ERG  
 ‘(I was sitting up high in a *bibosi* tree, waiting for deer to hunt when I saw a spirit on the ground coming towards me.) As I was watching him, the spirit talked to me.’ du017
- c. *Ema=mu e-situ-ti-bade aki echa=kwana=je...*  
 1SG=CNTR CIRC-play-MID-IPFV.HANGING tree branch=PL=PERL  
*Etsedhada=je e-tsua-bade epuné=chidi=putsu.*  
 tree\_fork=PERL CIRC-go\_up-IPFV.HANGING young\_lady=DIM=TMP  
 ‘I was playing in the branches of the tree... I was climbing up in the tree forks, as I was a very small girl.’ ci099-ci100

In (57c), note again the “echo construction”, here between two subsequent verbs marked with *e-...-bade*.

Similar examples now portraying animals performing activities in trees are given next.

- (58) a. *Tueda=da beu jida ja=kwana=pa ba-ta-iti-a edid'i=su*  
 3SG=PTCPTC that macaw=PL=QUOT see-3A-TDM-PST path=LOC  
*e-dia~dia-ta-bade.*  
 CIRC-eat~eat-3S.PL-IPFV.HANGING  
 ‘He saw the macaw birds on his way, they were eating (in the trees).’ lo007
- b. *Chama-ke biwa e-sikwa-bade.*  
 watch-IMP spider\_monkey CIRC-climb-IPFV.HANGING  
 ‘Look at the spider monkey climbing (in a tree).’  
 (Ottaviano & Ottaviano 1989: 9)

Further examples of ongoing activities performed by actors not touching the ground but in locations other than trees are shown below. Example (59a) is a short dialog (question and answer) triggered by a real situation that took place during a working session with my consultant Leonardo Marupa in his yard. Seeing his nephew climbing on a ladder leaning against a nearby coconut tree, I asked Leonardo in Tacana *Ai=da e-pu-ani?*, using the default

imperfective form *e-...-ani*. He answered *Coco jemi-ute e-pu-bade*, using the ‘hanging’ circumfix, and told me that the ‘hanging’ circumfix could have been appropriate as well in my question, as transcribed in (59a).

- (59) a. *Ai=da e-pu-bade?* *Coco jemi-ute*  
do\_what=PTC CIRC-be/do-IPFV.HANGING coconut.SPL remove-go\_down  
*e-pu-bade.*  
CIRC-be/do-IPFV.HANGING  
A: ‘What is (your nephew) doing (climbing on this ladder against the coconut tree)?’ B: ‘He is picking coconuts (for us to drink).’  
n4.0164 (participant observation)

- b. ... *tusa chawi emasu beju e-tid'e=pa*  
3SG.GEN hammock under PTC ENP-ember=QUOT  
*bererea-ta-iti-a beju. Daja pu, “Iiiii”.*  
scatter-3A-TDM-PST PTC thus be/do INTJ  
*E-tsiatsia-bade=pa, “Ai! Kwaja=da ema e-pu?”*  
CIRC-shout-IPFV.HANGING=QUOT INTJ how=PTC 1SG EVP-be/do  
‘So they spread the embers under his hammock (where he was lying). [...] (Feeling pain,) he went “Eeeee!”’. As he was shouting, (he was saying:) “What am I going to do?”.’  
rn051\_ott, rn056\_ott, rn057\_ott (Ottaviano 1980: 14-15)

The circumfix *e-...-bade* is also used with inanimate subjects, as in (60), which features the complaint of an old woman when she realizes that her lazy son-in-law has not harvested the plantains in his field.

- (60) *Nasa=mu madha-da e-pu-bade.*  
plantain=CNTR many-ASF CIRC-be/do-IPFV.HANGING  
‘There are many (ripe) plantains (in the plantain trees, which should be harvested soon lest they spoil).’ gu030

Finally, an interesting semantic extension of *e-...-bade* is found in contexts where entities are falling down from an elevated location, such as a tree in (61a,b) or the sky in (61c). This meaning presumably derives from the sense of ‘hanging in the air’.

- (61) a. *E-uru-bade=we jida bina=kwana.*  
CIRC-fall-IPFV.HANGING=RESTR that bat=PL  
‘The bats kept falling down (from the burning tree).’ mc075

- b. *Jida du=kwana=sa ami e-pu-bade,*  
 that howler\_monkey=PL=GEN blood CIRC-be/do-IPFV.HANGING  
*ebake=su y-a-ta-bade.*  
 top=LOC CIRC-do-3A-IPFV.HANGING  
 ‘The howler monkeys’ blood was dripping, it was wetting them (the hunters)  
 from above (from the trees, where the monkeys had been hit to death with  
 sticks).’ ma043\_ott, ma044\_ott (Ottaviano 1980: 32-33)
- c. *Be me-kwayu-ji, nai tsu’u*  
 IMP.NEG IMP.PL-go\_back-IMP.NEG rain\_on STILL  
*y-a-ta-bade, e-tsabia-ta=da mikwana.*  
 CIRC-do-3A-IPFV.HANGING EVP-wet-3A=PTC 2PL  
 ‘Don’t go back yet, the rain will fall on you and will get you wet.’  
 n2.0143 (elicited)

In (61b), note again the “echo construction” between two subsequent verbs marked with the same *e-...-bade* ‘IPFV.HANGING’ marker.

## 7 Absence of spatial semantics in the default imperfective circumfix *e-...-(a)ni / e-...-inia* ‘IPFV.DFLT’

This section summarizes the evidence in favor of my claim that the imperfective circumfix *e-...-(a)ni / e-...-inia* ‘IPFV.DFLT’ does not encode any postural or any other spatial meanings. This discussion is advisable because, on one hand, the suffixal allomorphs *-(a)ni* and *-inia* are transparently related to the lexical verb *ani* which can mean ‘sit’ in at least some of its uses (see details in Section 9). On the other hand, earlier descriptions of Tacana by Ottaviano & Ottaviano suggested that the meaning of ‘sitting’ was generally associated with this marker’s meanings (see details in Section 8).

The first piece of evidence in favor of my analysis is that there are many examples in the corpus where *e-...-(a)ni / e-...-inia* is used in situations where the context shows unambiguously that the subject referent is not sitting, but in another posture, including standing, lying or hanging. Such is the case, for instance, in (62), where we know from the preceding sentences that the person who is drinking is lying on the ground.

- (62) *Ema e-id’i-ti-ani=su beu, moto yama*  
 1SG CIRC-drink-MID-IPFV.DFLT=TMP PTC motorcycle.SPL 1SG.ERG  
*id’aba-na beu.*  
 hear-REC.PST PTC  
 ‘While I was drinking (lying down with an injured ankle), I heard a  
 motorcycle.’ lp102

In controlled elicitation, consultants confirm that the subject of a verb marked by *e-...-(a)ni / e-...-inia* can be in any posture. For instance, Leonardo Marupa commented explicitly that (63) could be used whatever the posture of the person who is waiting.

- (63) *Yama=da e-id'ua-inia jida wirakucha...*  
 1SG.ERG=PTC CIRC-wait\_for-IPFV.DFLT.1/2A that gentleman  
 'I'm waiting for that gentleman...' n2.0231 (elicited)

The second piece of evidence is that there are also many instances in the corpus of verbs marked by *e-...-(a)ni / e-...-inia* and with human or higher animate subjects in situations where a sitting posture of the verb subject is inconceivable. Such is the case, for example, when the subject is performing a motion, as in (64), with motion verbs. See also (15a), where there is no motion verb, but a context that suggests that the subject performs the action while in motion.

- (64) *Tuche-da yanana=chidi, y-ase-ni, e-jududu-ani*  
 strong-ASF child=DIM CIR-walk-IPFV.DFLT CIRC-run-IPFV.DFLT  
*yanana sai-da.*  
 child well-ASF  
 'The (breastfed) baby is strong, s/he walks, s/he runs well.' pa126-127

Such is also the case when the subject is not in motion, but in a posture that is explicitly not that of sitting. In (65), for instance, *e-...-(a)ni / e-...-inia* is used with the posture verb *bade* 'hang', which is the etymological source of the suffixal part of the posture circumfix *e-...-bade* 'IPFV.HANGING'.

- (65) *Beu=pa beta tsine, e-bade-ni.*  
 PTC=QUOT two day CIRC-hang-IPFV.DFLT  
 '(The jaguar) had been staying (lit. hanging) for two days (in the hole).' bu045

Finally, we can recall that *e-...-(a)ni / e-...-inia* is overwhelmingly more frequent in discourse than any of the AM or AP imperfective markers, accounting for 71% of the total number of occurrences of inflectional imperfective circumfixes in my corpus (see Section 4.4). This strongly unbalanced distribution in discourse is fully in line with the more general semantic content of *e-...-(a)ni / e-...-ini*, and gives it an unmarked status within the inflectional paradigm of imperfective markers: speakers make use of it whenever the posture (or the motion) of the verb subject is not deemed relevant.

## 8 Previous analyses of AM, AP and default imperfective markers

Ottaviano & Ottaviano's (1965, 1967, 1989) elements of grammatical description of Tacana already documented part of the system of imperfective markers of the language. Ottaviano & Ottaviano's description of these markers suffers from a few issues, however.

From a morphological perspective, their inventory, reproduced in Table 3, was incomplete. The prefixal part *e-* is missing, i.e., these markers are reported as if they were autonomous suffixes. Also unreported are the three suffixal parts *-buyu* 'IPFV.GOING\_BACK', *-beyu* 'IPFV.COMING\_BACK' and *-niuneti(a)* 'IPFV.WANDERING', as well as the allomorphs

*-inia* of the default imperfective marker *-ani* ‘IPFV.DFLT’ and *-netia* and *-eti* of the default AP imperfective marker *-neti* ‘IPFV.STANDING’. Note, however, that all these elements (prefixed part *e-*, missing suffixal parts and allomorphs) are attested in Ottaviano & Ottaviano’s textual data.

**Table 3.** Inventory of inflectional imperfective markers according to Ottaviano & Ottaviano (1967: 193; 1989).

Morphemes	Glosses/definition
<i>-ʔu</i>	‘direction away’ <sup>a</sup>
<i>-siu</i>	‘direction toward’, ‘move towards the speaker’ <sup>b</sup>
<i>-neti</i>	‘state of standing’, ‘continue the action in a vertical or standing position’ <sup>c</sup>
<i>-sa</i>	‘state of lying’, ‘continue the action (in a horizontal position)’ <sup>d</sup>
<i>-bade</i>	‘state of hanging’, ‘continue the action (in a suspended position)’ <sup>e</sup>
<i>-ani/-ni</i>	‘state of sitting’, ‘continue the action (generally in a sitting position)’ <sup>f</sup>

a. This marker is not listed in Ottaviano & Ottaviano (1989).

b. ‘*moverse hacia él [sic] que habla*’ (Ottaviano & Ottaviano 1989: 106).

c. ‘*seguir acción en posición vertical o parado*’ (Ottaviano & Ottaviano 1989: 86).

d. ‘*seguir acción (en posición horizontal)*’ (Ottaviano & Ottaviano 1989: 103).

e. ‘*seguir acción (en posición suspendida)*’ (Ottaviano & Ottaviano 1989: 9).

f. ‘*seguir acción (generalmente en posición de sentado)*’ (Ottaviano & Ottaviano 1989: 5).

Semantically, Ottaviano & Ottaviano’s glosses or definitions reported in Table 3 properly account for the progressive function of at least the AP and default imperfective forms (‘continue the action’). They also correctly report the deictic contrast (itive versus ventive) that distinguishes the AM form *-u* from *-siu*, the motional (i.e., AM) function of *-siu* and the postural (i.e., AP) semantics of *-neti* (‘standing’), *-sa* (‘lying’) and *-bade* (‘hanging’). On the other hand, they do not mention the possible ‘bending’ meaning of the ‘lying’ form *-sa*. Also, as already commented in Section 7, they inaccurately attribute ‘sitting’ semantics to *-ani/-ni* (my *e-...-(a)ni / e-...-inia* ‘IPFV.DFLT’).

## 9 Lexical counterparts and diachrony

A transparent lexical counterpart can be found to the suffixal part of each of the three AP circumfixes and the default imperfective circumfix in contemporary Tacana, specifically the posture verbs *neti* ‘stand.INTR’, *netia* ‘stand.TR’, *sa* ‘lie’, *bade* ‘hang’ and *ani* ‘sit’. By contrast, none of the suffixal elements of the AM circumfixes has an easily detectable lexical counterpart, and neither does the prefixal part *e-* of the whole set of circumfixes.

The lexical posture verbs, or their proto-Takanan ancestors, are obvious etymological sources. A thorough exploration of their possible meanings and uses would be necessary in order to reconstruct the historical development of the AP and default imperfective circumfixes, as well as of the AM imperfective circumfixes, which pattern in a similar way and are therefore likely to have followed a parallel development. Such an enterprise will not be undertaken here and only a brief (and necessarily incomplete) description and illustration

will be provided.<sup>25</sup> The presentation of these posture verbs will serve the purpose of outlining the wider synchronic and diachronic contexts of use of the AP and default imperfective circumfixes, and will anticipate the discussion regarding the grammatical status of these markers in Section 10.

The correspondences between the suffixal part of the AP and default imperfective circumfixes and their allomorphs and lexical verbs of posture are shown in Table 4. This table additionally shows that the lexical verbs of posture of Tacana can be traced back to Proto-Takanan, as they have lexical cognates in all five Takanan languages.

**Table 4.** Correspondences between the suffixal part of the Tacana AP and default imperfective circumfixes, lexical posture verbs and their reconstructed forms in Proto-Takanan.

Suffixal parts of Tacana imperfective circumfixes	Corresponding Tacana verbs	Reconstructed Proto-Takanan verbs
-(n)eti	<i>neti</i> ‘stand, stop moving’	*neti <sup>a</sup>
-netia	<i>netia</i> ‘stand O’	—
-sa	<i>sa</i> ‘lie’ <sup>b</sup>	*sa <sup>c</sup>
-bade	<i>bade</i> ‘hang, float, be stranded in an enclosure’	*bade <sup>d</sup>
-(a)ni	<i>ani</i> ‘sit, stay, live, be’	*ani <sup>e</sup>
-inia	—	—

a. (Girard 1971: 106).

b. Note that the lexical posture verb *sa* ‘lie’, unlike the AP imperfective circumfix *e-...-sa* ‘IPFV.LYING/BENDING’, never features a ‘bending’ meaning.

c. (Girard 1971: 116); note that \**sara* is a more likely etymon, considering the shape of the reflexes in Cavineña (*jara* [hala]) and Ese Ejja (*jaa* [haa]).

d. (Girard 1971: 59).

e. (Girard 1971: 50).

The meanings and uses of the Tacana posture verbs are fairly wide. Strictly speaking, only four of them refer to cardinal bodily postures of humans or higher animates: ‘stand’, ‘stand O’, ‘lie’ and ‘sit’. The meaning of the fifth, ‘hang’, is more about absence of contact with the surface of the ground than about any specific body configuration. The presence of a ‘hanging’ term in the set of basic posture verbs (and in the set of AP imperfective circumfixes) is a fact of typological interest rarely reported in the grammaticalization literature (for instance, “hanging” verbs are not mentioned in Kuteva 1999, 2001; Heine & Kuteva 2002; Newman 2002b). From a regional perspective, however, it is a well documented phenomenon in languages from Amazonia and neighboring lowland regions of Latin America (Grinevald 2006).

The postural meanings of the four intransitive posture verbs under discussion can be either dynamic/inchoative (get into the posture) or stative (be, stay, live in the posture, be located somewhere in the posture, exist in the posture). Examples of both options are given in (66) to (69), where the examples in a. have an inchoative meaning and those in b. have a

<sup>25</sup> For a detailed study of the meanings and uses of the cognates of the Tacana posture verbs in the Takanan language Ese Ejja, see Vuillermet (2009, 2012: chap. 14, 2022).

stative meaning. Stative examples with locative meaning in (66b) and (68b) further show that the subject of these verbs can be inanimate.

- (66) ‘stand’
- a. *Dapia=we neti-ke!*  
 there=RESTR stand.INTR-IMP  
 ‘Stand over there!’ ch068
- b. *Chutupu=da bue=kwana e-neti-ta.*  
 further\_away=PTC wild\_sugarcane=PL EVP-stand.INTR-S3.PL  
 ‘Further away, there were wild sugarcane plants standing.’ ba040
- (67) ‘lie’
- a. *Beu enekita sa-ti-ana ekwanaju erere=su beu.*  
 PTC really lie-GO&DO-REC.PST 1PL.EXCL cabin=LOC PTC  
 ‘We went to sleep (lit. lie) in the cabin.’ ba137
- b. *Ue dukei e-sa.*  
 here deer EVP-lie  
 ‘Here is a deer lying.’ du051
- (68) ‘hang’
- a. *Me-bade=we upia e-rajaja=teje da etse upia e-bade.*  
 HORT.DL-hang=RESTR here EVP-lower=UNTILPTC 1DL here EVP-hang  
 ‘Let’s just stay hanging here (in the moriche palm). We’ll stay hanging here  
 until the water goes down.’ in045\_ott (Ottaviano 1980: 61, 72)
- b. *Dada ye aki=je junu e-bade.*  
 there this tree=PERL liana EVP-hang  
 ‘There is a liana hanging there from this tree.’ lo014
- (69) ‘sit’
- a. *Jade, ani-ute-ke! Tu=y-ani=su=pa beju yawikwase=neje*  
 let's\_see sit-go\_down-IMP 3SG=EVP-sit=TMP=QUOT PTC hot\_drink=ASSC  
*napa-piru-ta-iti-a.*  
 water-START-3A-TDM-PST  
 ‘‘Well, sit down!’’ (she said to him). Once he had sat (down), she started to  
 bathe him with hot water.’ es060\_ott, es061\_ott (Ottaviano 1980: 46-47)
- b. *Kepia mike kwara y-ani mike tata?*  
 where 2SG.GEN mother EVP-sit 2SG.GEN father  
 ‘Where is your mother? (And where is) your father?’ au045

Interestingly, when assuming a stative reading, *ani* ‘sit’ sometimes loses its postural meaning, as in (69b), to be contrasted with (69a) where *ani* retains its postural meaning in both of its occurrences.

An example of the transitive posture verb *netia* ‘stand O’, which is the lexical counterpart of the suffixal part of the *a*-ending allomorph of the ‘standing’ imperfective circumfix (see Section 4.2), is provided in (70). No such lexical counterpart exists for the suffixal part of the *a*-ending allomorph of the default imperfective circumfix.

- (70) ‘stand O’  
*Mesa te=su deja=ja d’ije e-sa netia-ta-iti-a.*  
 3SG.GEN garden=LOC man=ERG corn EVP-lie stand.TR-3A-TDM-PST  
 ‘In his garden, the man raised up the corn plants that were lying.’  
 (Ottaviano & Ottaviano 1989: 86)

The fact that the intransitive posture verbs feature a fairly wide range of meanings and uses, and can be employed in particular as stative locative or existential predicates, is compatible with their involvement in grammaticalization processes. These types of predicates are widely attested sources of progressive markers, which can in turn be further generalized into imperfective markers (Bybee et al. 1994: Ch. 5; Kuteva 1999, 2001: 30-36 among others). In addition, the fact that *ani* ‘sit’ can be used as a locative or existential predicate unspecified for posture is consistent with its grammaticalization into a default imperfective marker unspecified for posture. These observations point to a likely scenario where the diachronic source construction for the rise of the AP (and AM) imperfective circumfixes consisted in a locative construction made of a non-finite verb marked by *e-* followed by a finite verb of posture (or motion). The full reconstruction will also have to account for the development of the *a*-ending allomorphs of the suffixal parts of the ‘standing’ and default imperfective circumfixes in the specific context of their use with transitive verbs with a 1<sup>st</sup> or 2<sup>nd</sup> person subject.

## 10 Grammatical status of the AM and AP imperfective circumfixes

This section provides a summary of the evidence supporting my position that the imperfective circumfixes are all at a very advanced stage of grammaticalization, regardless of their semantic content and whether or not they have recognizable lexical etymological counterparts in contemporary Tacana. Such a discussion is warranted for at least two reasons. First, my position contradicts a common assumption of many linguistic theories that motion and posture semantics are not grammaticalizable notions and are normally lost in grammaticalization processes (see more on this assumption in Section 12). Second, in the case of the suffixal parts of the Tacana AP imperfective circumfixes, my position could be further contested on the basis of their link with formally and semantically related lexical verbs of posture (see Section 9). By being etymologically transparent, these parts of the AP imperfective circumfixes would lack what is considered an important feature of grammaticalization by some scholars. Slobin (1997: 277), for instance, states that prototypical grammatical morphemes “are affixed to content words, are general in meaning,

phonologically reduced, and **not etymologically transparent**” (emphasis is mine). Etymological transparency could suggest an alternative analysis in terms of a single lexical category of posture manifested by forms that can be used in different constructions.

Three distinct pieces of evidence not only serve to clearly distinguish the suffixal components of all imperfective circumfixes from their lexical counterparts but also yield positive responses to standard diagnostics for advanced grammaticalization status. The first piece of evidence, discussed in Section 4, pertains to their formal properties, including: (1) their fixed position in the verbal predicate structure; (2) their lack of independent stress; (3) their obligatory combination with *e-*; and (4) their ability to pattern with inflectional markers lacking a lexical counterpart. Additionally, further formal properties are specific to individual markers, such as the existence of several allomorphs in the case of the ‘standing’ form. The second piece of evidence, respectively discussed in Sections 4.5 and 6, relates to their imperfective meanings and the semantic extensions that uniquely characterize certain AP imperfective markers. For example, the ‘lying’ form can be employed to convey a ‘bending’ sense, while the ‘standing’ form can express ‘seriousness or intensity’ even in non-standing contexts. The third piece of evidence, discussed in Sections 5 and 6, is discourse-based and revolves around their backgrounding function. This function becomes evident in the infrequency with which Tacana speakers explicitly mention postural specifications when translating sentences containing AP-marked verbs into Spanish. It is also notable in the frequent usage of both AM and AP markers in “echo constructions”. Examples of “echo constructions” with AM were given in (16a) and (17a), while examples with AP can be found in (41a), (42), (43b) (‘standing’ form), (49b), (51), (52b) (‘lying/bending’ form), and (57c) and (61b) (‘hanging’ form). If we assume the perspective that grammaticalization is first and foremost a kind of change that gives rise to expressions that by linguistic convention are ancillary and as such discursively secondary (i.e., backgrounded) in relation to other linguistic expressions (Boye & Harder 2012: 6-7), the backgrounding function of AM and AP imperfective circumfixes is another very strong argument in favor of their very advanced stage of grammaticalization.

## 11 AM and AP in Ese Ejja

Ese Ejja, from the Chamik branch, is the only other Takanan language for which we have an extensive description of both AM and AP. Of particular interest in this language is a set of inflectional (i.e., obligatory) suffixes, listed in (71a) and exemplified in (72a), that combine the expression of present tense with that of AP. The Ese Ejja AP suffixes have the same etymological sources as the suffixal part of the Tacana default and AP circumfixes, namely the cognate posture verbs *ani* ‘sit’, *neki* ‘stand’, *jaa* ‘lie’ and *ba'e* ‘hang, float’. Just like the Tacana inflectional AM and AP imperfective circumfixes, the Ese Ejja AP present tense suffixes stand in paradigmatic opposition with one another and with other TAM markers, such as those listed in (71b) and the one exemplified in (72b).

Ese Ejja (Takanan)

(71) a. present & AP

-*ani~aña* ‘PRS(.SITTING)’  
-(*e*)*ki* ‘PRS.STANDING’  
-*jaa* ‘PRS.LYING’  
-*ba’e* ‘PRS.HANGING/FLOATING’

b. non-spatial TAM

-*naje* ‘PST’  
-*a=pwa* ‘REM.PST’  
-*je* ‘FUT’  
-*kwe* ‘IMP’  
etc.

(Vuillermet & Grinevald 2016; Vuillermet 2017a)

Ese Ejja (Takanan)

(72) a. *Besa-ki*.

bathe-PRS.STANDING  
‘I am bathing (standing).’  
(Vuillermet 2012: 635)

b. *Majoya besa-naje oya.*

then bathe-PST 3ABS  
‘Then they bathed.’  
(Vuillermet 2012: 521)

Unlike in Tacana, there is no inflectional expression of AM in Ese Ejja, AM in this language being exclusively realized by way of non-inflectional suffixes. In other words, AM in Ese Ejja is expressed independently from AP. Furthermore, the TAM content of the Ese Ejja inflectional AP suffixes, which have specialized in the expression of present tense, is different from that of Tacana’s inflectional AP circumfixes. Whether the system of Ese Ejja inflectional AP suffixes is semantically richer than Tacana, with a member for the ‘sitting’ posture, is unclear. Vuillermet (2022) discusses that in many cases the ‘sitting’ form is semantically neutral.

## 12 Summary and discussion of the relevance of the Tacana AM and AP imperfective markers for linguistic theory

This paper has presented the first detailed description of the Tacana nine-member system of verbal inflections expressing imperfective aspect (progressive, iterative, habitual, etc.). It has shown that in five of these inflections, imperfective aspect is coupled with motional meanings (‘going’, ‘coming’, ‘going back’, ‘coming back’, ‘wandering’) and in three of them with postural meanings (‘standing’, ‘lying/bending’, ‘hanging’). These spatial meanings and the forms that express them in Tacana are of particular interest to various branches of linguistic research.

From the perspective of cognitive semantics, psycholinguistics and grammaticalization theory, the Tacana data on motion and posture challenge approaches that consider motion and posture as non-grammatical(izable) notions. In the cognitive semantic literature, Talmy contends that motion (“fact-of-motion”) “always appears [in the verb root]” (Talmy 1985: 113-14, repeated in 2007: 153). A similar preconception is prevalent in much of the literature on the grammaticalization of lexical verbs of motion or posture into TAM markers, which assumes that there is a necessary correlation between grammaticalization and loss (“bleaching”) of motion or posture semantics. In major references on grammaticalization, standard examples of grammaticalization feature unambiguous loss of motion or posture meanings. See for instance the oft-cited cases of the grammaticalization of English (*be*) *going*

to into the future marker *gonna* or the grammaticalization of Latin *stare* ‘stand’ into progressive/durative auxiliaries *stare* in Italian and *estar* Spanish (Bybee et al. 1994: 5-6; Hopper & Traugott 2003: 1-3; Kuteva 2001: 117-21; Heine & Kuteva 2002: 280-81). Aligned with this view, in many linguistic works on grammaticalization, the retention of motion or posture meanings is considered strongly problematic in recognizing forms as properly grammaticalized. This stance is evident, for instance, in the literature on the posture verb constructions that express progressive aspect and postural semantics in European languages mentioned in Section 2 (see, among others, Kuteva 1999: 193, 2001: Ch. 3; Lemmens 2005; Ross & Lødrup 2017; Lødrup 2019). Finally, also consistent with the common view that motion and posture are not grammatical(izable) notions is the fact that, until recently, in linguistic typology, studies of motion and posture semantics have primarily focused on their expression through verbal roots. Regarding motion, this is notably evident in the numerous investigations inspired by Talmy’s (1985, 2000, 2007) “verb-framed versus satellite-framed” motion event typology.

From a typological perspective, the Tacana imperfective circumfixes instantiate the grammatical categories of associated motion (AM) and what I have called associated posture (AP), by analogy with the concept of associated motion. From the specific perspective of the typology of AM (Guillaume & Koch 2021a, 2021b), the Tacana AM imperfective markers display a crosslinguistically rare type of AM system expressed as part of an inflectional (i.e., obligatory) paradigm. They can additionally exhibit a meaning never documented in AM systems so far, namely that of prior motion-with-purpose where the imperfective reading only applies to the motion component (‘be on one’s way to do’).

The Tacana AP imperfective markers, with their strong support for a new comparative concept of AP in linguistics, open up research avenues for exploring spatial grammar in languages of South America and beyond. Under a shared label and definition, grammatical morphemes (affixes, clitics, particles and auxiliaries) that are associated with the verb and that have among their possible functions the encoding of postural meanings should be added to the list of possible verbal categories along with tense, aspect, mood, modality, evidentiality, AM, directionals, etc. As discussed in Section 2, they should be studied for themselves and not only as part of other related linguistic domains such as the grammaticalization of posture verbs into TAM auxiliaries or classifier systems. The data on the Ese Ejja posture suffixes in Section 11 also show that AP can be expressed independently from AM. Such markers and the systems in which they take part should be systematically compared crosslinguistically so as to identify the parameters and values relevant to their formal realization, semantic contents, discursive functions, etymologies, etc. One major parameter is obviously the type of postural distinctions made in AP systems: are there AP systems with postures other than ‘stand’, ‘lie/bend’ and ‘hang’, as in Tacana, and ‘sit’, ‘stand’ and ‘lie’, as in Dutch (see Section 2)? Drawing a parallel with the typology of AM systems, one can wonder if there are AP systems with markers that relate to a non-subject argument, such as the object of transitive verbs. One can also imagine that in some AP systems, the posture component is not temporally concurrent with the verb event, but prior or subsequent. One can surmise that in some systems, the AP meanings are combined with grammatical meanings from verbal categories other than the imperfective in Tacana, the progressive in Dutch or the present tense in Ese Ejja. There might even be languages where AP is the sole semantic content of the AP morphemes, i.e., where the AP meanings are not co-expressed

with meanings from any other verbal category. One can finally expect to find AP systems with members lacking etymological transparency, that is, lacking a lexical counterpart. A survey of AP systems in four non-Takanan South American languages (Guajá, Namtrik, Sikvani and Trumai) from different linguistic families (Tupian, Barbacoan, Guahiban and isolate) and geographical regions (Northeastern Amazonia, Northern Andes, Orinoco basin and Southern Amazonia) suggests that all these parameters are relevant for their description and comparison (Guillaume 2023, in preparation for publication).

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## Abbreviations

1, 2, 3	first, second, third person	INTR	intransitive
A	subject of transitive verb	IPFV	imperfective
ABL	ablative	LOC	locative
AM	associated motion	MID	middle
AP	associated posture	NEG	negation
ASF	adjective suffix (semantically empty)	NSG	non singular
ASSC	associative	O	object of transitive verb
CIRC	circumfix	PERL	perlative
CNTR	contrastive	PL	plural
COMPAS	compassion	POT	potential
DAT	dative	PROH	prohibitive
DEPR	depreciative	PROP	proprietary
DESID	desiderative	PRS	present
DFLT	default	PST	past
DIM	diminutive	PTC	discourse particle (exact meaning and/or function unknown)
DIR	(pure) directional	PURP	purposive
DU	dual	QUOT	quotative
DUBIT	dubitative	REC	recent (past)
ENP	(semantically) empty noun prefix	REITR	reiterative
ERG	ergative	REM	remote (past)
EVP	(semantically) empty verb prefix	RESTR	restrictive
EXCL	exclusive	S	subject of intransitive verb
EXT	extended (hortative)	SG	singular
FUT	future	SIL	Summer Institute of Linguistics
GEN	genitive	SIMLR	similar
HAB	habitual (past)	SPL	Spanish loan
HORT	hortative	TAM	tense aspect mode
IMP	imperative	TDM	temporal distance marker
INF	infinitive	TMP	temporal adverbial clause
INTENS	intensifier	TR	transitive
INTJ	interjection		

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