Path in Spontaneous Motion Events in Yuhup

Ana María Ospina-Bozzi

Universidad Nacional de Colombia - sede Bogotá

Abstract

This paper presents path expression in constructions describing spontaneous translational motion events in Yuhup (Naduhup family), with the aim of contributing to the typology of the expression of motion events. It focuses on the specific resources available in Yuhup for expressing such spontaneous translational motion events, pointing to the prevalence of path expression in a rich system of simple and compound verbs (and not in complements), as well as giving an overall vision of the syntactic constructions they head.

1 Introduction

This paper presents an account of path expression in constructions describing spontaneous translational motion events in Yuhup (Naduhup family, aka Makú), a little known and endangered Amazonian language, with the aim of contributing to the typology of the expression of motion events. We describe the specific resources available in Yuhup for expressing translational motion events, pointing to the prevalence of path expression in verbs, as well as giving an overall vision of the syntactic constructions they head. The paper is organized as follows: The first section frames the study by presenting the Yuhup people and some typological features of the language, as well as the conceptual, typological and methodological approach we adopt. The next sections are devoted to the description of the constructions that express motion in Yuhup. Section 2 offers a description of the basic motion clause. Section 3 presents a typological profile of path expression in this language. Section 4 deals with complements of motion verbs, giving a typological profile of them and describing their phrasal structure to show that they do not encode path prevalently, while section 5 is devoted to the analysis of spontaneous translational simple and compound verbs, which are the main locus of path encoding. Conclusions and research perspectives are given in the final section.

This introduction intends to frame the study in terms of, first, a brief description of the Yuhup people and some typological characteristics of the language in §1.1. Then, since our analysis is mainly based on Talmy's (2003) definition of the domain and on his proposal of motion events conceptual components, we outline some of these main concepts in §1.2. The typological approach to motion event expression adopted here is then explained in §1.3 and the methodological approach used to gather the data of this analysis is described next in §1.4.

1.1 The Yuhup people and language

The Yuhup are around five hundred people who inhabit territories at the border between Colombia and Brazil. In Colombia, around two hundred Yuhup live in the south of the Vaupés Department, along the Apaporis River and some of its tributaries. They are part of the cultural and linguistic complex of people with nomadic tradition of the Northwest Amazon region. Nowadays they are sedentary and share their territory with groups of speakers of Eastern Tukanoan and Arawakan languages.

The Yuhup is an endangered language that has been classified, together with Nadeb, Hup, and Dâw in the Eastern branch of the family called Makú (Martins, V. 2005) or Makú-puinave (Landaburu 2000), which also has a Western branch formed by the Nukak and Kakua languages. According to Epps and Bolaños (2017) only the former set of languages can be grouped together in a family they name Naduhup.

Some of the relevant grammatical traits of the Yuhup language are the following:

a) *Phonological traits:* It may be considered as a pitch-accent language, because of the restricted set of tonal patterns for words. Tone function depends on the lexical class: while verbal tones have a grammatical value, nominal tones have a lexical one.

b) *Morpho-syntactic characteristics:* The major syntactic classes are verbs, nouns, and adjectives. While the basic constituent order is SOV, this order is flexible, and changes in it have pragmatic functions. Nominal phrases are head-final; possession is dependent-marked. Modality, aspect, and tense particles, with scope over the clause, are postposed to nominal and verbal constituents. The language has a nominative-accusative grammatical relation alignment encoded by case.

c) *Nominal morphology*: There is only one nominal direct case morpheme, the dative (which marks indirect objects and only animate definite objects) and two oblique case morphemes (one used with locative and instrumental function, other with comitative function). In contrast, there is a rich locative system which specifies orientation and distance. Number marking on animate referring nouns is optional and pragmatically conditioned. A class term type of classification system is productively used in nominal compounding, as well as in qualifying and quantifying constructions.

d) *Verbal morphology:* Verbs have no agreement markers, and they only express the grammatical categories of predication, tense, and aspect. Tense has a tonal manifestation in the verbal word and marks the opposition between a concomitant and a non-concomitant state of affairs with a temporal reference point. Aspectual values in verbs are derived from the combination of a small set of predicative suffixes and tense suprafixes (suprasegmental affixes); other aspectual values are expressed by a set of suffixes.

Verbal compounding is very productive in Yuhup and can be described as verbal serialization[1] of a contiguous, incorporating, and nuclear type, as can be seen in example (1)[2], where the verbal chain is not interrupted by constituents representing arguments, but constitutes a single phonological word with one word tonal pattern, and it is located in the syntactic nuclear layer of the clause.

(1)   Contiguous, incorporating, and nuclear serial verb
     ɟɨ́h   dòʔɟàpdóʔ   **˜dòh-tùʔ-˜hábm**-í
     that   baby   **fall-immerge-go.**CONC-P1
     'That baby falls immerging (into the water) (thither).' {MAC_3.244}

---

[1] Following Kroeger (2004), Durie (1997), Senft (2004), Aikhenvald (2006), serial verb constructions are constructions where a single clause contains two or more verbs, none of which is an auxiliary. Serial verbs describe one scene conceptualized as a single event and are equivalent to simple predicates since there are no embedding or complementation relations between the verbal elements that form them. Serial verbs may be identified by formal properties such as an intonational pattern comparable to that of simple predicates, or the fact that the verbal elements share TAM/polarity values and one or more argument. The parameters proposed for a typology of serial verbs are: +/-phonological incorporation of verbal elements into one phonological word, +/-contiguity of verbal elements, +/-nuclearity of the predicate in the syntactic structure, and +/-symmetry in the class of verbal components (open/closed).

[2] Transcription conventions: ˜ precedes nasal morphemes; ̥ precedes creaky voiced morphemes; ˜̥ precedes nasal-creaky voiced morphemes. Information in brackets identify examples in the data base: narrative data {speaker_corpus identification number}; elicited data {speaker_video scene identification_corpus identification number}.

From this point on, verbs in the examples do not have segmentations and glosses for tense, predication and aspect morphemes; only lexical roots are segmented and glossed. A High or a Low tone on the root of a simple verb or on the last root of a compound verb marks CONCOMITANT or NOT CONCOMITANT tense; a Low-High tone on the root of a simple verb or on the last root of a compound verb marks the IMPERATIVE mood (e.g., example ~dĕdn come.IMP 'come!' in 17a). Almost all examples show verbs with a final -í which is the predicative morpheme PREDICATIVE1; the few others that have final predicative and aspectual morphemes are segmented for the sake of clarity (e.g., hàbm-pát-í go.NOCONC-UNACC-P1 'wandered' in 15a and ̥báj-á return.CONC-P2 'is returning' in 20a).

In this paper we show examples of serial verbs expressing motion events, but this device is also productively used in Yuhup to express event manner, sequence of events, modalized events, and causative events.[3]

1.2 Conceptual approach

According to Talmy (2003), a **motion event** is a situation where an object moves or is located[4] in relation to another object. A **spontaneous translational motion event** is a situation where an object or person moves autonomously (self-agentive, without intervention of a causer) in relation with other(s) object(s) or person(s), following a trajectory from one location to another, as illustrated in Figure 1.
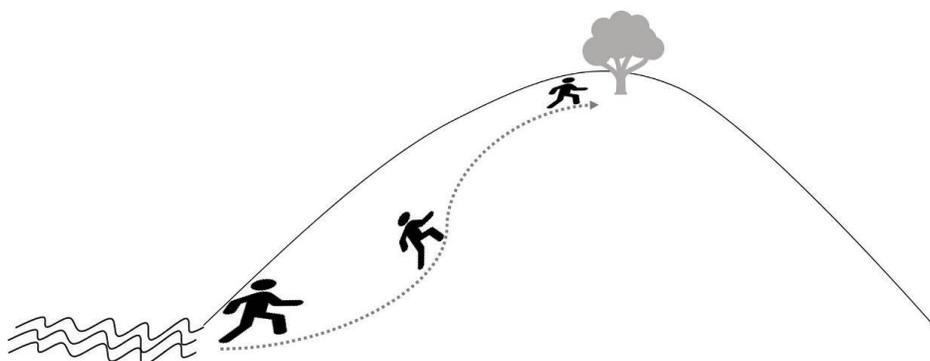

Figure 1: Translational motion event.
Note: In the picture the same person is represented at different moments in time.

Typological studies on the expression of motion events have shown that languages vary in how they codify and distribute the semantic components of motion events (see below) in syntactic constructions with several morpho-syntactic units such as nominals, relational elements (e.g. adpositions, case marks, preverbs) and predicates (Grinevald 2011).

The following examples in (2) show descriptions in English (2a), Spanish (2b) and Yuhup (2c) of the scene depicted in Figure 1.

> (2)   a.   **English**
>   *A person **goes up** the hill.*
>   b.   **Spanish**
>   *Una persona **sube** por la loma.*
>   c.   **Yuhup**
>   *ɨ̃dn*   ***còp-ʰ̃ábmí***
>   1PL   move.uphill-go
>   'We go uphill (thither).' {CEC_17.b}

While English encodes the movement and its direction with the verb and particle *go up* (2a), Spanish only uses the verb *sube* (2b) and Yuhup uses the verbal compound *còpʰ̃ábmí*. Then, while all three languages codify the notion of movement in the predicate (*sube*, *walks*, *còpʰ̃ábmí*), the down-up direction in which the movement is done is encoded differently: in English it is encoded in the particle *up*, in Spanish it is encoded in the verb *sube*, and in Yuhup it is encoded in *cop* 'move uphill', the first verbal

---

[3] For further development on this subject, see section 5.2 below, and Ospina Bozzi (2009), Ospina Bozzi and Gomez-Imbert (2013), Ospina Bozzi and Cita Triana (2021).

[4] As the focus of our analysis is movement, we leave aside definitions related to location. For Yuhup locative events expression, see Ospina Bozzi (2010, 2013).

root of the compound. Also, these examples show differences on how the three languages refer to where the movement takes place: while Spanish refers to it with the prepositional phrase *por la loma*, English uses the noun phrase *the hill*, and Yuhup does not need to refer explicitly to it since *cop* 'move uphill' (initial verbal root in the compound) encodes, in addition to down-up direction, a movement on an inclined surface such as a hill.

Talmy (2003) developed a set of conceptual tools for the analysis of motion events. According to him, a motion event has four internal semantic components and two external ones. The four internal components are illustrated below in Figure 2, using the same scene depicted in Figure 1, and are: the **FIGURE**[5] (person moving), the **GROUND** (the hill used as a point of reference for the movement of the figure), the **MOVEMENT** relation which follows a **PATH** (or trajectory).
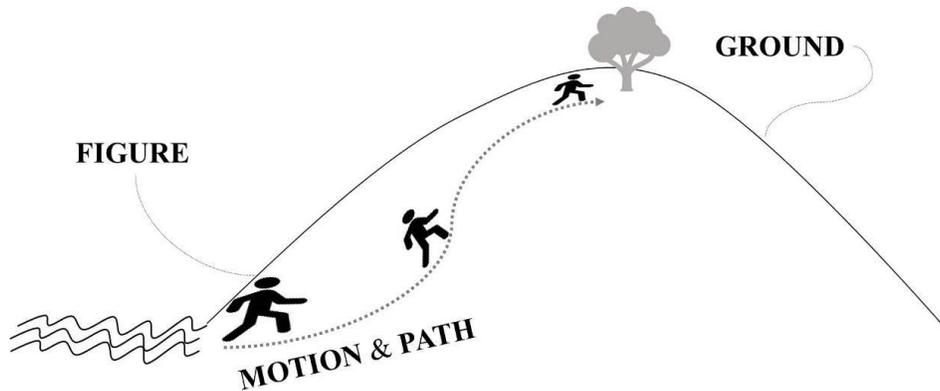

Figure 2: Internal semantic components in a motion event

There are also two external components or co-events possible: **MANNER** (e.g., speed of motion: *run/walk*) and **CAUSE** (movement with the intervention of a causer: e.g., *put/take*)[6]. We synthesize the semantic components of motion events in Figure 3.
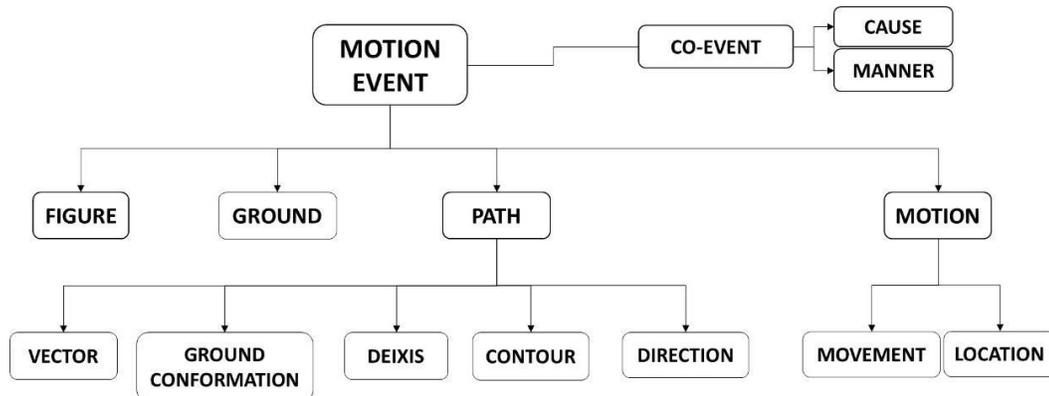
Figure 3: Motion Event Semantic Components. (Following Talmy 2003)

Figures 3 and 4 show that PATH is the most complex semantic component in Talmy's proposal. It has several sub-components:

---

[5] We use capital letters for motion components to outline the semantic dimension we are addressing here.

[6] We will not talk about this component since, by definition, spontaneous translational motion events are auto-agentive, so they do not have a CAUSE component.

VECTOR. It is the trajectory line followed, with its points of departure, its trajectory, and its point of arrival. Grinevald defines vector as "consisting of a line in space that is continuous, delimited by two points and oriented between those points" (2011:55).

GROUND-CONFORMATION. The object used as reference point of the movement, or GROUND, can be conceptualized in diverse ways: as a point in space, as a horizontal/vertical surface, or as a bounded/unbounded space with limits and/or volume (it can also be conceptualized on the basis of its matter, e.g. liquid or solid).

DEIXIS. The orientation of the movement depends on the point of view chosen by the speaker (the speaker's or one assigned by the speaker), describing movements from or towards the location chosen as point of reference.

CONTOUR. The form of the trajectory line followed by the FIGURE may be straight or have any number of shapes, like corresponding to a circle, etc.

DIRECTION (or ORIENTATION). The trajectory line can be conceived in different manners also, depending on possible reference points: it can be seen, for instance, as oriented upwards or downwards, frontwards or backwards, rightwards or leftwards.
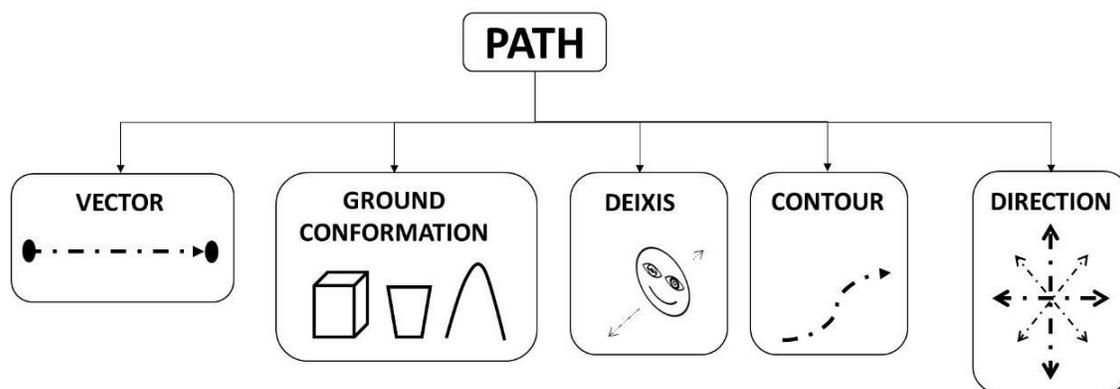

Figure 4: Path Semantic Components. (Following Talmy 2003)

Interestingly, Grinevald also sees PATH as a complex notion, but one not only limited to motion. She views PATH as a "super category" that she defines as follows:

"This super category includes the notion of a line, with possible marked contour, conceived following some direction, calculated between the spatial entities of figure and ground placed at different points of the line, with the ground possibly being considered as bounded, and the whole PATH schema being calculated spatially with respect to a deictic anchoring point. In addition, this super category of PATH is known to be associated with a number of other concepts, not only manner of motion, if motion there is, but also information on the configuration of the ground or the posture of the figure." (Grinevald 2011:57-58).

1.3 Typological approach

The typological approach adopted here basically adheres to the typology of path expression developed in the *Trajectoire* research program (Fortis et al. 2011; Grinevald 2011; Fortis and Vittrant 2011, 2016; Kopecka and Ishibashi 2011; Papahagi 2011, Vuillermet and Kopecka 2019; inter alia), while taking into account other typological approaches regarding syntactic and lexical patterns related to motion (Creissels 2006, Pantcheva 2010, Nikitina 2009, Wilkins and Hill 1995).

Typological research has shown there is variation in languages regarding: i) the constructions used for motion expression; ii) the morpho-syntactic units used to codify motion semantics; iii) the distribution of

such information in the clause; and iv) the explicit expression of such information (Talmy 2003, Fortis et al. 2011, Levinson and Wilkins 2006).

As will be seen in section 3, the varied strategies used in Yuhup for motion expression are better captured within Fortis and Vittrant's (2011, 2016) construction types proposal than within traditional typologies[7] (Talmy's 2003 verb-framed vs. satellite-framed languages[8]; Slobin's 2004 equipollently-framed languages[9]) with which Yuhup should be characterized as a mixed language (verb-framed and equipollently-framed). Instead, we prefer the view that the "typological status of a language is defined by the constructions available to the language" (Fortis and Vittrant 2016:358) and path encoding constructions are labeled "according to the locus or loci where path is encoded" (Fortis and Vittrant 2016:359-360). Therefore, we do not ascribe Yuhup to a single or mixed type, but we point to the construction types found in the language for the expression of motion and, particularly, of path.

As mentioned before, languages are typologically distinguished by the explicit morpho-syntactic units used to codify motion semantics and their distribution in the clause. Thus, depending on the number and nature of adnominals[10] marking the complements that may be around the predicate, languages present more or less complex systems (Papahagi, 2011); as will be described in section 4, the Yuhup language presents a minimal system of adnominal elements with static locative semantics to mark the complements representing the GROUND, and it only has a scarcely used postposition marking a constituent representing the initial point of a movement (see examples 7 in §3 and 13a in §4). Thus, even if the contribution of the Yuhup adnominal system to the codification of the distinction between the semantic roles of Location (L), Source (S) and Goal (G) is minimal, as will be analyzed in §4.1, Yuhup falls into two of the crosslinguistic main patterns identified by Creissels (2006), Pantcheva (2010) and Nikitina (2009)[11]: a) L=S=G where all semantic roles are expressed by the same adnominal element, and b) [L=G]≠S, where the semantic roles of Location and Goal are marked by the same adnominal elements but the Source role is marked differently.

The clause in example (3), which describes a scene where a person comes out of a cave, passes by the speakers' location, and continues walking away from it, shows many of the typological characteristics above mentioned for Yuhup.

(3)   **GROUND**   **FIGURE**   **MOVEMENT + PATH**
      pâjhtŏdn-ót   *dóʔɟăp*   *wàj-wàh- h̃ámí*
      cave-LOC   boy   exit-pass-go
      'A boy exits the cave and passes by (thither).' {LEO_tr028_249}

As the example indicates, while the noun in the complement representing the GROUND is marked by a general locative case *pâjhtŏdn-ót* 'cave-LOC', it is the verb that shows prevalence of motion expression. The verbal compound *wàjwàh h̃ámí* 'exit, pass and go' is made of three roots that encode various path

---

[7] For problems and criticism on these typologies, see Fortis and Vittrant (2011, 2016), Beavers et al. (2010), Croft et al. (2010), Grinevald (2011), Levinson and Wilkins (2006), inter alia.

[8] Talmy's path expression typology (2003) is based on different 'lexicalization patterns' found in languages. Since 'lexicalization' is the direct association of certain semantic components with a particular morpheme, and there is a regular and systematic association in every language, a typology of 'lexicalization patterns' of motion events consists then in finding language types depending on how languages associate certain semantic components of motion with certain morphemes. Focusing on the morphosyntactic locus (a verb or a "satellite") for the expression of PATH, Talmy claims there are diverse types of languages, the most usual ones being 'verb-framed' and 'satellite-framed' languages. The first are languages that codify PATH in verbs and MANNER in 'satellites', and the second are those that codify PATH in 'satellites' and MANNER in verbs (2003:117-118). I will not use the notion of 'satellite' in subsequent discussion, but the reader may look up Talmy's definition (2003:102) and its modification by Fortis and Vittrant (2016:359).

[9] Slobin proposes the type of equipollently-framed languages "to include serial-verb languages and other types of languages in which both MANNER and PATH are expressed by "equipollent" elements—that is, elements that are equal in formal linguistic terms, and appear to be equal in force or significance." (2004:9).

[10] Following Papahagi, the functional category of 'adnominals' includes "all elements that introduce a noun referring to an entity, to make it a Ground for the trajectory: locative nouns, adpositions (simple and complex) and case affixes" (2011:119).

[11] For the sake of clarity we do not use the exact terminology of the authors cited, but we keep the main ideas on the subject.

components (DIRECTION, VECTOR, GROUND CONFORMATION and DEIXIS): a) *waj* 'go out' encodes outwards direction from a closed space; b) *wah* 'pass' encodes a movement passing by a point or extent, and c) *˜habm* 'go' encodes a movement made from the speaker's location.

This paper responds to Grinevald (2011)'s call to build a 'working typology' focused on the multiple ways path is expressed in languages, by contributing an in-depth description of the Yuhup language-specific resources available for path expression (types of constructions and lexical/grammatical categories) which focuses on how the semantic components of motion are codified and distributed in Yuhup clauses (§2-4), and in particular on how detailed path information is encoded and distributed in verbs (§5).

The last two sections of this introduction were devoted to explain the conceptual tools and the typological approach that are used for this study. Next, we will present the sources of the data analyzed.

1.4 Methodological approach

The data presented in this paper were collected while doing fieldwork in the Yuhup settlement of Bocas de Ugá (Vaupés, Colombia).

It is originally the richness of motion data found in texts (such as traditional stories, trip journey accounts and life stories) collected from several Yuhup speakers by me throughout the years (1993-2016) that sparked my interest in studying the expression of movement and location in Yuhup. However, the bulk of the examples used in this paper comes from elicited data collected in 2011 and 2012, that are occasionally complemented by textual data.

Elicited data was obtained using two different tools. The first one, known under the name of *Trajectoire* is a dynamic visual elicitation tool designed by Ishibashi, Kopecka and Vuillermet (2006) within the *Trajectoire* research program and detailed in Vuillermet and Kopecka (2019). The purpose of this tool is to elicit descriptions of motion scenes from speakers of varied languages, to obtain systematic and comparable corpora from typologically and genetically different languages, with the view to feed a 'working typology of path' (see 1.3). The tool consists of a set of seventy-six video-clips stimuli[12] and protocols with instructions for data elicitation and data coding and analysis. Fifty-five video-clips show scenes depicting different motion events that vary systematically, according to, on one hand, the type of FIGURE (individual man, woman, child vs. group) and type of GROUND (places, objects, humans), and on the other, the orientation of PATH (horizontal vs. vertical) and its complexity (with presence/absence of boundary crossing[13]), and finally the MANNER of motion (e.g. walk, run, jump) and DEIXIS (towards, away or traversing the speaker's location). So, for instance, three video-clips that vary in the Deixis parameter show: a) a woman walking from a tree towards the observer location, b) a woman walking away from the observer location towards a tree, c) a woman walking from left to right passing in front of a tree (and the observer). The complete set of video-clips is shown, one by one, to speakers who are then asked: "What happened in this clip?". (Vuillermet and Kopecka 2019).

Thus, the rationale underlining the systematicity of this tool comes from the typological approach of the *Trajectoire* program, which aims to find language specific ways of expressing motion semantics and their distribution in constructions and morpho-syntactic units. While revealing language specific variations on the relation between semantics and morpho-syntax, it pays particular attention also to the density of encoding and variations in the encoding of source-goal (a-)symmetries[14] (Grinevald 2011).

---

[12] "The Trajectoire material comprises 76 video-clips consisting of 2 training clips, 55 target clips and 19 fillers, and it includes 3 distinct versions ordering the clips differently to minimize possible routine effects. The 55 target clips vary for several parameters, namely Figure, Ground, the different portions of Path, Deixis, and less systematically, Manner." (Vuillermet and Kopecka 2019:97)

[13] When GROUND objects are seen as bounded, the vector may also include the notion of "boundary crossing, in or out of the ground" (Grinevald 2011:57).

[14] See for example Kopecka and Ishibashi (2011), Kopecka et al. (2021) and Ospina Bozzi and Cita (2021).

This tool was used to elicit data from six fluent speakers of Yuhup (three women and three men) and facilitated the collection of a total of 343 utterances: 281 clauses, sixteen complex sentences and forty-six discarded items (for reasons such as speaker's hesitation, stammering, etc.). The data was registered in audio, transcribed in phonological writing, and then processed following the protocol for data coding and analysis prepared by Ishibashi et al. (2006) and other participants in the *Trajectoire* project.

It is worth noting in passing that the use of this tool in the field was challenging and provided interesting insights for future eliciting tool design. At that time (2012), the Yuhup were not used to seeing images on a screen, so for them it was difficult to depict verbally the scenes they were looking at, and they had to watch them several times to understand them. Even if the video scenes happened in "natural" contexts, some referents were not recognizable by the Yuhup (e.g., bridge, cave, road, corn field); nevertheless, they finally managed to interpret the road as a beach, the cave as a hollow stone, and the corn field as bush. Another interesting matter was their confusion about the lack of context of the scenes, making them ask questions such as: "What was he doing in the forest? Why was that basket in the cave? Is he sleeping? What was she doing standing beside the tree?". There were also technical challenges since the Yuhup settlement where fieldwork was conducted had no electricity and we depended on the scarce sunny days to use the solar panel charger which gave power to our computer; or weather challenges when torrential rains frequently interrupted work sessions, given our rudimentary lodging where water easily entered.

We also tried to use another well-known tool for the study of motion events, the illustrated book *Frog, where are you?* (a story by Meyer 1969) originally used by Slobin (2004). This tool is a static visual elicitation tool which consists of a sequence of drawn scenes that depict the journey followed by a boy to find his lost frog. The sequence of drawings is shown to speakers who are then asked to retell the story. We presented this tool to three speakers (one woman and two men, who also participated in the video-clips tool sessions), but to the extent that they were not used to read line designs, all of them found it very difficult to depict verbally the story or even a single scene: they did not recognize most of the referents (e.g. bed, boot, window), but mostly did not understand that the pictures consisted of a sequence of scenes depicting movement. Thus, the elicited constructions did not express translational motion but an interesting mixture of static location (being in posture, getting in posture), self-contained movement (e.g. oscillation, rotation) and causative translational motion (e.g. put, take). Therefore only one example in this paper comes from this source of data.

2 Basic motion clause: constituent order and explicit constituents

The basic motion clause in Yuhup consists of three constituents: the Subject, that encodes the FIGURE (S_{FIG}); the Verb (V_{MOT}) that encodes MOTION and other semantic components such as PATH and/or MANNER of motion (cf. §6); and the verb Complement that encodes the GROUND (C_{GR}), as example (4) shows:

(4) **S_{FIG}**   **V_{MOT}**   **C_{GR}**
      ˜ăjjăp   *hì-˜dédní*   *càgtĕgn-ét*
      woman   descend-come   stairs-LOC
      'A woman descends (hither) the stairs.'   {MAC_ tr022_51}

Furthermore, motion clauses vary in constituent order and in the number of explicit constituents present in them. Table 1 shows figures for constituent order in 281 clauses[15]. The basic constituent order in Yuhup (SV) is also the one preferred in motion clauses (75.4%), although there are also VS motion

---

[15] From a total of 343 collected sentences using the video tool. The remaining 62 items include 16 complex sentences and other 46 items discarded for varied reasons (e.g. speaker's hesitation, stammering, etc.).

clauses (20.7%). And since certain contexts allow non-verbal constituent omission, there are also a few motion clauses with no S (3.9%).

Constituent Order	# of sentences	%
SV	212	75.4
VS	58	20.7
V	11	3.9
TOTAL	281	100

Table 1: Number and percentage of sentences by constituent order

As mentioned before, there is also variation in motion clauses with respect to the number of explicit constituents. Table 2 shows figures for percentage of motion clauses with different explicit constituent configuration: in 48.8% of them, all constituents are explicit; among them, the most representative orders are SVC, SCV and CSV, as can be seen in rows **a** of Table 2. Clauses with no complement are also very frequent (47.3%), as shown in rows **b**, while those with no subject or without subject and complement are rare, as rows **c** and **d** show.

	Explicit constituents	Constituent order	%	
a	All constituents	S_{FIG}-V_{MOT}-C_{GR}	24.2	
		S_{FIG}-C_{GR}-V_{MOT}	11.4	
		C_{GR}-S_{FIG}-V_{MOT}	7.8	48.8
		C_{GR}-V_{MOT}-S_{FIG}	2.5	
		V_{MOT}-S_{FIG}-C_{GR}	2.5	
		V_{MOT}-C_{GR}-S_{FIG}	0.4	
b	No Complement	S_{FIG}-V_{MOT}	32.0	47.3
		V_{MOT}-S_{FIG}	15.3	
c	No Subject	C_{GR}-V_{MOT}	0.4	1.8
		V_{MOT}-C_{GR}	1.4	
d	No Subject, no Complement	V_{MOT}		2.1
		Total	**100**	

Table 2. Percentage of sentences by explicit constituents and constituent order

Examples (5) illustrate the most frequent configurations of clauses with respect to explicit constituents and their order: SVC in (5a), SCV in (5b), CVS in (5c), SV in (5d) and VS in (5e):

(5) a. **S_{FIG}**　　　　**V_{MOT}**　　　　**C_{GR}**
　　　　tə̀ɹíʔ　　　　*˜hábmí*　　　　*tîw-ít*
　　　　man　　　　go　　　　path-LOC
　　　　'A man goes in the path.' {PAT_tr065_3}

　　b. **S_{FIG}**　　　　**C_{GR}**　　　　**V_{MOT}**
　　　　˜ăjjăp　　　　*tîw-ít*　　　　*˜hábmí*
　　　　woman　　　　path-LOC　　　　go
　　　　'A woman goes in the path.' {PAT_tr070_9}

c. **C**_{GR}　　　　　**V**_{MOT}　　　　**S**_{FIG}
   tîw-ít　　　　*˜hábmí*　　　*ɟùhúp*
   path-LOC　　　go　　　　　person
   'A person goes in the path.' {OM_tr065_1}

d. **S**_{FIG}　　　　**V**_{MOT}
   ˜ăjɟăp　　　　*˜hábmí*
   woman　　　　go
   'A woman goes.' {OM_tr071_13}

e. **V**_{MOT}　　　　**S**_{FIG}
   ˜hábmí　　　*ɟùhúp*
   go　　　　　person
   'A person goes.' {OM_tr065_340}

As can be seen, complements of motion verbs are not obligatory; but, when they are explicit, they encode the search domain where the figure can be found in relation to the ground (Levinson 1991:11), as detailed in section 4.

3 Typological profile of path expression

Appealing to 'traditional' typologies of path and manner encoding, i.e. verb-framed vs. satellite-framed (Talmy 2003) vs. equipollent-framed (Slobin 2004), Yuhup is a language that may be characterized mainly as a system where a verbal-framed strategy coexists with an equipollent-framed one: i.e., in sentences with simple verbs (one root in the verbal base) path is mainly encoded in the single verbal root and manner needs not be expressed, as in (6a); otherwise, in sentences with compound verbs (several roots in the verbal base) the first root encodes manner, while the others encode path, as in (6b); an additional manner adverb may also appear, as in (6c).

(6) a. **C**_{GR}　　　　　　　　　　　**S**_{FIG}　**V**_{MOT}
        pádè　*˜bĭ-ít*　　*˜àbm*　*˜ĭdn*　**híí**　　　　　　　*˜àbm*
        Pareyacá river-LOC　D.PAST　1PL　**go.down**　　　　D.PAST
        'We descended by the Pareyacá river, long time ago.' {MAC_2.26}

     b. **C**_{GR}　　　　　**S**_{FIG}　　**V**_{MOT}
        déh-ét　　　　*ɟâp*　　**ʈɔ̀h-˜dòh-tùʔ-˜hábm**
        water-LOC　　　3SG　　**run-fall-immerge-go**
        'He runs and falls immerging (thither) into the water.' {MAT_tr059_178}

        S_{FIG}　　　　　**V**_{MOT}
     c. *ɟíʔɟâp*　　　　　　**ʈɔ̀h-wàhpù-˜habmí**　　　　　**tɔ̀pĭbm**
        man　　　　　　　**run**-pass-go　　　　　　　**strong**
        'A man runs passing by (thither), quickly.' {MAT_tr037_22}

But in Yuhup there are also constructions, although rare, where path is encoded in the verb and in a postposition which marks a nominal phrase with source semantic role, as in (7):

(7) a. **C**_{GR-source}　　　　　　　　**S**_{FIG}　　**V**_{MOT}
        ˜ajɟâp　*ɟét ˜băh*　　*ûj*　　*tɔ̀ɟíʔ*　*˜dédní*
        woman lie　PR.DIST　**from**　man　**come**
        'A man comes from besides the lying woman.' {MAC_tr035_74}

	C_GR-source	S_FIG	V_MOT		C_GR-goal
b.	*wêgnɟɔ́h-ɔ́t*	*ûj*	*dóʔɟâp*	*cɔ̀k-˜dòh-tùʔ-˜hàbmí*	*déh-ét*
	beach-LOC	**from**	boy	jump-fall-submerge-go	water-LOC

'A boy jumped submerging (thither) from the beach into the water.' {LEO_tr059_179}

As Fortis and Vittrant (2011) point out, several objections arise when trying to ascribe a language to 'traditional' types, some of which apply to the analysis of Yuhup: mixed systems do not fit well in the typology and would better be characterized in terms of construction types. On one hand, the restrictive notion of satellite does not apply to adnominals, while a typology would need to take them into account; on the other, there is no place in the typology for the description of multiple path expression (in the verb and elsewhere). Considering these problems, the solutions and the typological proposal offered by Fortis and Vittrant (2011), particularly in terms of the identification of constructions and path loci expression, capture better the strategies used by Yuhup for path expression.

In Yuhup path is mainly expressed by a single-framed construction, (i.e., a construction where an element of a single category carries path expression). The element expressing path is the sentence head, a verb; thus, the main construction in Yuhup is a head-framed one. Within this type, there are two sub-types: one where the head has a single verbal root, as shown by example (6a), and another where the head has several (up to four) verbal roots, as in (6b).

Nevertheless, as mentioned before, there is also a multiple-framed construction type, (i.e., a construction where several elements of distinct categories carry path expression), even if not frequent and optional. In this construction type, the elements expressing path are the sentence head (a verb) and an adnominal (a directional source postposition), as illustrated by examples (7). And here again, within this type, there are two sub-types: one where the head is a single verbal root (7a), and another where the head is a compound verb (7b).

Finally, there are also complex motion sentences which reveal a multi-clausal strategy for the expression of path (Fortis and Vittrant 2011; Kopecka and Ishibashi 2011). These are of two types:

1) Chained clauses. These complex sentences are not frequent (only sixteen sentences in the elicited corpus) and are used when speakers conceptualize the scene as a complex event constituted by two sequential sub-events. These are presented iconically in the chronological order they happen: the dependent clause (CL1) in initial position, marked by the sequential marker *ɟɔ́ʔ* 'on'[16], presents the first sub-event; the main clause, in final position, presents the second one. There are three sub-types of such complex events according to the kind of sequence of events, illustrated by the examples in (8):

a. A static location event (CL1) the location of which is understood as the source of the following movement (CL2), as in (8a).
b. A movement (CL1) followed by a static location event (CL2) the location of which is the implicit goal of the preceding movement, as in (8b).
c. A sequence of movements: a movement (CL1) followed by another movement (CL2), as in (8c).

It is worth noting that all scenes depicted by sentences of types **a** and **b** show a figure in a standing posture before or after the movement is done.

(8) a. **STATIC LOCATION CL1**   **MOVEMENT CL2**

	têgngúh	*˜băh*	*ˌkét*	*ɟɔ́ʔ*	*˜ăjɟăp*	*˜dédní*
	tree	PR.DIST	stand	on[sequence]	woman	come

'Having stood besides the tree, the woman comes.' {MAR_tr032_64}

---

[16] Interestingly, the conjunction in the dependent clause which marks the sequence is the locative relational noun *ɟɔ́ʔ* 'on' that describes an internal region. Other locative relational nouns also work as temporal conjunctions: *˜bĭʔ* 'under' marks simultaneity of events, *kòdnʔáh* 'front' marks a preceding event, and *ˌcòʔ-báh* 'back' marks a subsequent event.

b. **MOVEMENT CL1**   **ST. LOC. CL2**

dóʔɟăp	*pâjh tŏdn-ót*	*wàj-˜dédn*	*ɟ̂ʔ*	*dìdnbàb-ʞétí*
boy	cave-LOC	go.out-come	on[sequence]	chat-stand

'The boy having exited (hither) the cave, he stands chatting.' {LEO_tr030_261}

c. **MOVEMENT CL1**   **MOVEMENT CL2**

tə̀ɟíʔ	*wèɟ-ɟ̣àk-˜dédn*	*ɟ̂ʔ*	*ɟ̣ɔ̀h-˜dédní*
man	exit.bush-adhere-come	on[sequence]	run-come

'The man having exited the bush (hither), he runs (hither).' {PAT_tr037_24}

2) Relative clauses. These complex sentences are only used by speakers to describe scenes where the ground was a place occupied by a human being in a certain posture. As can be seen in (9), the complement is headed by the noun *húd* 'place', preceded by a dependent clause depicting a man in activity and posture.

(9)

S$_{FIG}$	V$_{MOT}$	C$_{GR}$		
˜ăjɟăp	*wàhpù-˜hábmí*	[*ɟíʔɟăp*	*kèɟ-ʞété*]	*húd*
woman	pass-go	**man**	**see-stand**	**place**

'A woman passes by (thither) the place where a man stands looking.' {MAR_tr047_284}

In conclusion, the preceding description of Yuhup fits within the inventory of construction types found by Fortis and Vittrant (2011) in their language survey and offers further examples of the use of the multi-clausal strategy mentioned by them and by Kopecka and Ishibashi (2011). In summary, Yuhup exhibits:

    a) a single-framed construction with path expressed in the head (in their terms *Head-Framed*):

        - just one verbal root, with or without a complement which is not directionally marked, as in Swahili.

        - several verbal roots (some encoding manner and others path), with or without a complement which is not directionally marked, as in Mandarin and Klamath.

    b) a multiple-framed construction with path expressed in the head and in an adposition (in their terms *Head Adposition-Framed*); but Yuhup has the particularity that there is only one adposition encoding a source ground which is optional and infrequent:

        - just one verbal root, with a complement directionally marked, as in English and Ancient Greek.

        - several verbal roots (some encoding manner and others path), with a complement directionally marked, as in Japanese.

    c) a multiple-clausal strategy: relative clauses as Japanese, Polish and Ese Ejja; and clause chaining as in Ye'kwana.

The next section examines complements of motion verbs, giving a typological profile of them and describing their phrasal structure to show that they do not encode path prevalently.

4 Complements of motion verbs

Languages are distinguished not only by the type of loci where path is expressed, but also by the number and nature of locative complements that may gravitate around the predicate (Fortis and Vittrant 2011); this section discusses some of their typological features and describe the phrasal structure of these complements in Yuhup.

4.1 Typological profile

As has been shown in the preceding section, in Yuhup motion verbs may have: no explicit complement, as in examples (5d) and (5e); one complement, as in examples (5a-c), (6a, b), (7a) and (9); or two complements, as in example (7b).

As to the nature of complements of motion verbs, when they are explicit, it is the case that most of them are indifferent to direction encoding and encode information about static locative relations between figure and ground, using the same adnominal[17] resources used for static location. The coincidence in location between figure and ground is expressed by a locative case suffix, topological relations are encoded by relational nouns that describe internal regions, while orientational and geometric relations (Aurnague 1996) are encoded by relational nouns and particles that describe external regions and relative distance.[18]

Thus, the main locus of path expression is indeed the verbal predicate. Therefore, the ground is mainly conceptualized as a 'specified place' and precise information on source, medium or goal is to be found in the verbal predicates and also be provided by contextual information. As already mentioned, there are also a few clauses where complements do encode information on path using an optional directional postposition (*ûj* 'from') that specifies the source of motion; nevertheless, it is always postposed to a NP marked by a locative element, as in examples (7) above.

Taking into account the fact that the most frequent complements in our corpus are marked by a case suffix, within the three systems identified by Papahagi (2011) in terms of the number and nature of the inventory of adnominal elements (minimal, medium or maximal systems), the Yuhup could be characterized as having a minimal system in which the case suffix would have the only role of tagging the ground function of the nominal. But differently from the languages explored by Papahagi (2011), in Yuhup there are also other relational elements postposed to the nominal (with the case suffix present or absent) which give further information on the ground configuration in terms of their topological, orientational or distance features. The only directional adposition (*ûj* 'from') that marks some complements encodes the source ground, marking the initial point of the directed movement.

Concerning the contribution of adnominal systems to the codification of the distinction between the semantic roles of Location (L), Source (S) and Goal (G), there are five possible patterns (Creissels 2006, Pantcheva 2010, Nikitina 2009) [19]: i) All semantic roles are marked by a distinct adnominal element: L≠S≠G. ii) All semantic roles are expressed by the same adnominal element: L=S=G. iii) The semantic roles of Location and Goal are marked by the same adnominal elements but the Source role is marked differently: [L=G]≠S. iv) The semantic roles of Location and Source are marked by the same adnominal elements and the Goal role is marked differently: [L=S]≠G. v) The semantic roles of Goal and Source are marked with the same adnominal element, while the semantic role of Location is expressed by a different one: L≠[G=S]. According to all authors cited above, the first three patterns (L≠S≠G, L=S=G, [L=G]≠S) are well attested in languages. Concerning the fourth pattern ([L=S]≠G) while Creissels (2006) and Nikitina (2009) consider it rare, Pantcheva (2010) considers it as unattested. Finally, while Nikitina considers the fifth pattern very "uncommon and perhaps exceptional" (2009:1116), for Creissels (2006) and Pantcheva (2010) it is not attested in any language.

Thus, Yuhup falls into two of the crosslinguistic main patterns:

ii) L=S=G, also found in Tswana (Bantu), Wan (Mande), Yukatec Maya (Mayan), Nahuatl (Uto-Aztecan), Mapundungun (isolated), Lahu (Lolo-Burmese), 'Ala'ala (Oceanic).

iv) [L=G]≠S, also found in French, Breton, many Tibeto-Burman languages (e.g., Cogtse Gyarong, Meithei), and some Australian languages.

---

[17] In this paper the term 'adnominal' covers adpositions, relational nouns and case affixes, following Fortis and Vittrant (2011) and Papahagi (2011).

[18] See a full description of the system in Ospina Bozzi (2010).

[19] For the sake of clarity we do not use the exact terminology than Creissels and Pancheva, but we keep the main ideas on the subject.

Interestingly, while the L=S=G pattern is less attested crosslinguistically than the [L=G]≠S pattern, in Yuhup it is the former which is the preferred one.

4.2 Phrasal structure of motion verbs complements

As already stated, explicit complements of motion verbs exhibit a variety of phrasal structures. They vary with respect to their morphosyntactic composition:
  (i) an NP marked by the locative case suffix, as in examples (10) and (13b), and in examples (4), (5a-c), (6a-b), (7b).
  (ii) an NP marked by the locative case and/or locative relational elements, as in examples (11) and (13c).
  (iii) an unmarked NP, as in example (12).
  (iv) an NP marked by the locative case or a locative relational element and a directional source postposition, as in examples (13a) and (7).

This structural variety is not correlated with constituent order, nor with the semantic role of the ground, as can be seen in examples below. It is important to consider that out of context some of these sentences might be interpreted ambiguously: (11b) 'A person comes **from/towards** under the tree.'; (11c) 'A person runs (thither) **from/towards** the tree.'; (11d) 'A boy crosses (thither) **over/from/towards** the stream.'

(i) NP + locative case
     The most common complement structure is an NP marked by the locative case suffix (55% of sentences with explicit complement), as can be seen in (10):

(10) S_{FIG} V_{MOT} **C_{GR}**
      ɟùhúp   *wàj-˜dédní*   **pɔ̂-ɔ́t**
      person   go.out-come   **bush-LOC**
      'A person comes out from the bush.'   {MAR_tr038_113}

(ii) NP + locative case and/or locative relational element
     Less usual, but well represented in the corpus (35% of sentences with explicit complement), are structures marked by the locative case and/or other locative relational elements. Examples (11) show some of these: a noun (without or with locative case) postposed by a noun that describes a lower internal region (11a, b), a noun followed by a distance particle (11c), and a noun (with locative case) postposed by a noun describing an external region and relative distance[20] (11d):

(11) a. S_{FIG} V_{MOT} **C_{GR}**
          tə̀ɟíʔ   *wàj-˜dédní*   **pɔ̂**   **˜bĭʔ**
          man   go.out-come   **bush**   **under**
          'A man comes out from under the bush.' {PAT_tr055_115}
      b. S_{FIG} V_{MOT} **C_{GR}**
          ɟùhúp   *˜dédní*   **têgngúh-út**   **˜bĭʔ**
          person   come   **tree-LOC**   **under**
          'A person comes from under the tree.' {MAR_tr038_113}

---

[20] External region nouns are bound forms always linked to distance morphemes (Ospina Bozzi 2010:221-228).

c.   S_{FIG}   V_{MOT}   **C_{GR}**
     ɟùhúp   *ʈɔ̀h-˜hábmí*   **têgngúh**   **˜bǎh**
     person   run-go   **tree**   **PR.DIST**
     'A person runs (thither) towards the tree.' {MAR_tr044_216}

d.   S_{FIG}   V_{MOT}   **C_{GR}**
     dóʔɟǎp *ɟèh-˜hábmí*   **ʈɔ̀h˜bìhtɛ́h-ɛ́t** **pò-ʔáh**
     boy   cross-go   **stream-LOC**   **over-MED.DIST**
     'A boy crosses (thither) over the stream.' {MAC_tr050_230}

(iii) NP

Even less common are unmarked constituents (10% of sentences with explicit complement), as in (12):

(12)   S_{FIG}   **C_{GR}**   V_{MOT}
       ˜ǎɟɟǎp   **pɔ̂**   *wèɟ- ̩dàk- ˜dédní*
       woman   **bush**   exhit.bush-adhere-come
       'A woman comes out from the bush.' {PAT_tr027_93}

(iv) NP + locative case or locative relational element + directional source postposition

The less common structures (5% of clauses with explicit complement) show an optional directional postposition which encodes a source ground, always postposed to an NP with a locative marker (case or relational locative element), as illustrated in (13a).

The comparison of clauses in (13a) and (13b), both elicited with the same stimulus, shows the optional character of the directional adposition. An interesting fact is that the complement containing such directional postposition is placed before the verb in all the attested sentences of this type; nevertheless, it is not this position which determines a source interpretation, since the same slot may be occupied by a complement that does not carry the directional marker and that has a via interpretation, as can be seen in (13c).

(13)   a.   S_{FIG}   **C_{GR-Source}**   V_{MOT}
            dóʔɟǎp   **déh-ɛ́t**   **ûj**   *ʈɔ̀h-còp-˜dédní*
            boy   **water-LOC**   **from**   run-approach-come
            'A boy runs approaching (hither) from the water.' {LEO_tr031_105}

       b.   S_{FIG}   **C_{GR}**   V_{MOT}
            dóʔɟǎp   **déh-ɛ́t**   *còp-˜dédní*
            boy   **water-LOC**   approach-come
            'A boy approaches (hither) from the water.' {MAC_tr031_106}

       c.   **C_{GR}**   S_{FIG}   V_{MOT}
            têgngú ˜bǎh   *ɟùhúp*   *wàhpu-˜hábmí*
            tree   PR.DIST   person   pass-go
            'A person passes (thither) besides the tree.' {MAR_tr039_197}

5 Spontaneous motion verbs

The preceding sections have shown that in Yuhup path expression is only found in some complements; thus, the main locus of path expression is within the verbal predicates.

Motion predicates in Yuhup are formed by simple or complex bases: the former is constitued by one single root, as in (14a, b), and the latter are compounds formed by up to four roots, as in (14c-e):

(14) a. *cag*   'climb'
      b. *˜pe*   'ascend.river'
      c. *cag-˜habm*   'climb (thither)'
          climb-go
      d. *wahpu-˜pe-˜habm*   'pass ascending the river (thither)'
          pass-ascend.river-go
      e. *cək-˜doh-tuʔ-˜habm*   'jump and fall immersing (thither)'
          jump-fall-immerse-go

Noticeably, while in natural speech the latter are more frequently used than the former, in the elicited corpus there is a balance between both types, but compound verbs are still prevalent as the following figures in Table 3 show: in a trip narrative with 67 clauses expressing motion, 42 of them have compound verbs and 25 simple ones; and in 281 elicited motion sentences, 149 have compound verbs and 132 simple ones. Thus, compound verbs are preferred by speakers to depict motion events.

	Compound verbs	Simple verbs
Narrative	63%	37%
Elicited sentences	53%	47%

Table 3: Percentage of compound and simple verbs in narratives and elicited sentences

Nevertheless, if a simple verb is chosen, in both natural and elicited speech, the most frequent will be the basic movement root *˜habm* 'go, travel', and the deictic movement root *˜dedn* 'come'.

5.1 Simple spontaneous translational motion verbs: inventory and semantics

Verbal spontaneous translational motion roots in Yuhup fall into the two main semantic groups found in many languages: movement[21] roots and manner of motion roots. Movement roots, in turn, are sub-divided into basic movement roots (that only encode motion) and directed movement roots (that encode semantic path components).

Basic movement roots: *˜habm* 'go' and *˜dedn* 'come'. The root *˜habm* 'go, move, travel' encodes a basic general movement of the figure which is not necessarily directed away from the speaker's location, as can be seen in Figure 5, where the speaker's location is represented by a dot and the movement of the figure is represented by arrows. Thus, since this root codifies not only the a) movements in Figure 5, but also those in b), it cannot be characterized as deictic. Although, as will be discussed in section 5.2, when this root is used in final position of compound verbs, it does get a deictic interpretation: 'from the speakers' location'.
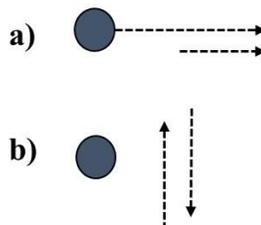

Figure 5: Movements expressed by *˜habm* 'go, move, travel'

---

[21] Hereafter 'movement' refers specifically to spontaneous translational motion.

Examples in (15), extracted from narratives, show how this root is used to describe a general movement of the figure. The clause in (15a) describes the motion of the tapir without giving any information on its orientation. The one in (15b) shows a typical description of a movement with purpose, where motion is encoded by *ˉhabm* 'go' and purpose by the nominalized verb *hôp ⸜dájʔ ⸌âp* 'fishing'.

(15) a. *tâh*   *ˉhàbm-pát-í*   *ˉbàhápí*   *ăgn*   *ˉhô tɔ́h*
          tapir   go.NOCONC-UNACC-P1   near   fruit ripen period
          'The tapir wandered nearby, [it was] the period fruits ripen.' {MAC_1.3}

      b. *⸜căbm*   *ˉhôp ⸜dájʔ ⸌âp*   *ˉhábmí*   *ˉùbértò*   *kûj*
          yesterday   fish to.fish SG   go   Humberto   COM
          'Yesterday, I went fishing with Humberto.' {MAC_2.1}

Examples in (16), from the elicited corpus, depict movements towards a place that is not where the speaker is located (16a), and movements from and towards a different place where the speaker is located[22] (16b-c). Example (16d) is interesting in that, although the figure moves facing the speaker, it is not interpreted as if it was moving towards him.[23]

(16) a. *Scene 056_Path_M_walk_into_bush_back*
          tɔ̀kɔ̌ʔ   *tîw-ít*   *⸌âp*   *ˉhábmí*
          overgrown.bush   path   3SG   go
          'He goes in the bush path.' {LEO_tr056_158}

      b. *Scene 040_Path_F_walk_front_tree_sideRL*
          ˉăjⱼăp   *ˉhábmí*   *têgngŭh*   *ˉⱼàhtɔ̌ʔ*
          woman   go   tree   behind
          'A woman goes behind the tree.' {PAT_tr040_205}

      c. *Scene 050_Path_C_cross_water_sideRL*
          ⱼùhúp   *ˉhábmí*   *tîw-ít*
          person   go   path
          'A person goes in the path.' {MAR_tr050_231}

      d. *Scene 041_Path_3_walk_under_branch _behind_tree_front*
          ˉăj⸜děh   *ˉhábmí*   *tîw-ít*
          women   go   path
          'Women go in the path.' {MAC_tr041_268}

The root *ˉdedn* 'come' cannot be characterized either as fully "deictic" since when it is used in simple stems it does not always describe movements towards the speaker's location of the kind shown in a) in Figure 6, but it can also describe movements shown in b).
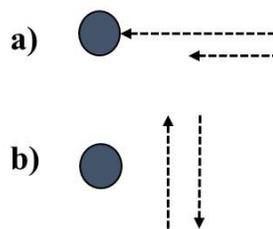

Figure 6: Movements expressed by *ˉdedn* 'come'

---

[22] We assume that the speaker's location or point of view is the camera's location in the video clip stimuli used for elicitation.

[23] The first line in each example gives the number and schematic description of the scene depicted by the video used as stimulus, as given by Ishibashi et al. (2006): Scene number _Scene type_ Figure_ manner_ trajectory1 _ground1 _trajectory2 _ground2 _point of view.

In narratives, the root *˜dedn* 'come' , contrary to the basic movement root *˜habm* 'go', is always used to refer to a movement of the figure directed towards the place where the speaker is located (or nearby), or towards a location the speaker establishes as reference point. Example (17a) shows this verbal root in a clause extracted from a narrative: the main character seduces a woman by asking her to 'come' later by his side; so, he takes as deictic reference point the location where he will be. Example (17b) comes from the elicited corpus and describes a scene where it is clear that the figure moves towards the speaker's location.

(17)   a.   *˜tâdn*   *˜ăh ˜băh*   *˜dĕdn*   *˜tâdn*
           later   1SG PR.DIST   **come**   later
           'Come besides me, later!' {MAC_3.28}
       b.   *Scene 032_Path_F_walk_awayfrom_tree_front*
           têgngŭh   *˜băh*   *˜dédní*   *ɟâp*
           tree   PR.DIST   **come**   3SG
           'He comes from besides the tree.' {MAT_tr032_62}

Examples (18) show that speakers can describe the figure's movement with *˜dedn* 'come' in scenes where a person comes out of the woods (18a) or comes out of the cornfield (18b), but is not facing the speaker or coming towards him. Nevertheless, as will be discussed in section 5.2, when this root is used in final position of compound verbs, it always gets the deictic interpretation of 'towards the speakers' location'.

(18)   a.   *Scene 027_Path_F_walk_outof_woods_sideRL*
           têgngúh-ú   *˜bĭ?*   *ɟùhúp*   *˜dédní*
           tree-LOC   under   person   come
           'A person comes from under the tree.' {MAR_tr027_97}
       b.   *Scene 038_Path_F_walk_outof_field_sideRL*
           ˜ăɟɟăp   *˜dèdníwe*
           woman   come
           'A woman came.' {OMA_tr038_108}

Interestingly, examples (19) show that other speakers depicted the same scenes using the verb *˜habm* 'go'.

(19)   a.   *Scene 027_Path_F_walk_outof_woods_sideRL*
           ˜ăɟɟăp   *˜hábmí*   *hâj*
           woman   go   forest
           'A woman wanders in the forest.' {OMA_tr027_92}
       b.   *Scene 038_Path_F_walk_outof_field_sideRL*
           ˜ăɟɟăp   *˜hàbmí*
           woman   go
           'A woman wandered.' {MAC_tr038_112}

So, if the same scenes can be depicted with either verbs, it would seem that the basic semantics of those verbs does not involve a deictic meaning. However, it will be necessary to corroborate these facts with more data from natural discourse, since speakers might be changing their reference points depending on factors that we have not yet identified.

In the elicited corpus there are some major differences in terms of frequency between the verbs *˜habm* 'go' and *˜dedn* 'come' that show that even if generally both have non deictic semantics, this is especially true of *˜habm* 'go'. As can be seen in Table 4, when used in a simple stem, *˜habm* 'go' is more frequently

used to depict movements away from the speaker, while ˜*dedn* 'come' is used to describe movements to(wards) the speaker. From 89 clauses with ˜*habm* 'go' used as a simple stem, 45 describe scenes where the figure is moving away from the speaker's location and 44 describe scenes where the figure is moving from or towards a place different from the speaker's location. And, from 41 clauses with ˜*dedn* 'come' used as a simple stem, 36 describe scenes where the figure is moving to(wards) the speaker's location and only 5 describe scenes where the figure is moving from and towards a place different from the speaker's location.

Therefore, while ˜*habm* 'go' never describes movements towards the speaker and ˜*dedn* 'come' never describes movements away from the speaker, ˜*habm* 'go' is much more used than ˜*dedn* 'come' to describe movements away from or towards a place different from the speaker's location.

	Clauses	Figure moving away from the speaker's location	Figure moving away from or towards a place different from the speaker's location	Figure moving towards the speaker's location
˜*habm* 'go'	89	51%	49%	
˜*dedn* 'come'	41		12%	82%

Table 4: Percentage of clauses depicting movements away/towards the speaker's location or a place different from the speaker's location

The preceding analysis strongly supports Wilkins and Hill's (1995) claim that not all languages have deictic verbs GO and COME, and that if they are used deictically, it is because of a pragmatic interpretation and not because deixis is part of its lexical semantics. We will return to this subject in section 5.2.

Directed movement roots. Directed movement roots encode the following path components: vector, deixis, contour, direction, boundary crossing and ground configuration (Grinevald 2011). Besides encoding vector, some roots conflate several semantic components, as can be seen in Table 4, where the inventory of roots is classified by their semantic components.[24]

The most frequently used directional root in natural speech and in elicitation is ˜*dedn* 'come'; all of the others are mostly found in compounds: in the elicited data only two were used as simple verbs by two speakers, each in just one sentence: *cop* 'go uphill' and *waj* 'go out'; in narratives where more of these roots are found, they are still very scarce out of compounds.

Interestingly, there are also roots that conflate other semantic components besides vector, boundary crossing and ground configuration: *bəg* 'go out from a closed space' seems to encode also a manner component that involves force; *pə* 'go in carrying ritual elements' and *koʔ* 'wander, travel hunting and gathering' seems to encode much more culturally related manner content.

Some examples of directional roots found in elicitation and texts are given in (20). In (20a) the speaker places the deictic center at the place from where the character departed and where he returns. Clauses in (20b, c) describe downstream and upstream movements via the river. Example (20d) is extracted from the elicited corpus and describes a scene where a woman goes uphill facing the camera; in this case the directed uphill movement is more salient than deixis for the speaker.

---

[24] The roots ˍ*kokod* 'go around' and *wahpu* 'pass' are the only ones that have more than one syllable. Although they frequently become monosyllabic, mostly when they are in compounds, the former turning into ˍ*kod* and the latter into *wah* or *puh*.

VECTOR + DEIXIS	from and towards a deictic reference point[25]	*ʙaj*	'return'
VECTOR + CONTOUR	circle	*kokod*	'go around'
VECTOR + **DIRECTION +** **CONFIGURATION**	downwards, vertical extent / river	*hi*	'go down / go downstream'
	upwards, river	*~pe*	'go upstream'
	upwards, vertical extent / tree	*cag*	'go up / climb'[26]
	upwards, hill	*cop*	'go uphill'[27]
	downwards, hill	*ʙobm*	'go downhill'
VECTOR + **BOUNDARY CROSSING +** **CONFIGURATION**	outwards, enclosure	*waj*	'go out'
	inwards, enclosure	*ɟe*	'go in'
	outwards, bush, river, path	*weɟ*	'go out from bush/river/path'
	inwards, bush, river, path	*caɟn*	'go into bush/river/path'
VECTOR + **BOUNDARY CROSSING**	pass by	*wahpuh*	'pass'
VECTOR **CONFIGURATION** +	from-to, river	*ʙeh*	'cross a river'
	from-to, path	*ʙcab*	'cross a path'

Table 5: Directional roots inventory classified by path components

(20) a. *tûgí ˜bà ˜àbm   ɟâp   ʙbáj-á*
early CIT FP   3SG   **return.**CONC-P2
'They say, a longtime ago, he is returning early.' {MAC_3.30}

b. *pádè   ˜bǐ-ít   ˜àbm ˜ǐdn   híí   ˜àbm*
Pareyacá river-LOC FP   1PL   **go.downstreem** FP
'A longtime ago, we descended by the Pareyacá river.' {MAC_2.26}

c. *˜ǐdn-˜də̀h wǎh ʙděh   ˜péí   déh ˜bǐ-ít*
1PL-GEN   adult PL   **go.upstream** water river-LOC
'Our elders went upstream by the river.' {MAC_1.36}

d. *˜ǎɟɟǎp   cópí*
woman   **go.uphill**
'A woman goes uphill.' {OM_tr074_29}

e. *hôdn ʙkôdn-ót   bîʔ   wájí*
hole concavity-LOC   mouse   **go.out**
'A mouse exits from the hole.' {MAR_frog.10c}

f. *ɟùhúpí ˜ʙdî   ɟéí   ˜bàh*
as a person   **go.in**   CIT
'He entered as a person, they say.' {R_12.101}

Manner of movement roots. As it is usual in some languages that encode path in verbal roots, manner of movement roots are scarce in Yuhup. We offer a (possibly incomplete) inventory of them in (21):

(21) a. *˜doh*   'fall'
b. *ʙtɔh*   'run'
c. *cək*   'jump'
d. *˜wodn*   'run after'
e. *hɨhɨg*   'crawl' (as a serpent)
f. *doj*   'crawl' (as a baby)

---

[25] The root *ʙaj* 'return', when used in compounds looses its deictic value and occupies the same position as the other directed movement roots.

[26] The root *cag* 'go up, climb' implies close contact between figure and ground, but not necessarily in a grasping manner.

[27] The root *cop* 'go uphill', in some contexts, also has the meaning of reaching a boundary.

And while they are somewhat used in natural daily speech, it is noticeable that they are only found in compounds, both in the elicited corpus and in narratives (with the exception of example (22) which comes from a narrative).

(22) *càdíʔ ɟâp*   *cə́kí*
       animal   jump
       'The animal jumped.' {MAC_1.14}

Entering in posture/position roots. Yuhup has an inventory of eight posture and position roots. Those that do not have just a stative meaning but also an agentive and/or inchoative one are presented in (23). The interest of mentioning them here is that, in verbal compounds (discussed in section 5.2 below) they contribute with their own path components to the semantic content of translational movement verbs, interacting with the other roots described in previous sections. The first set of roots (23a) encode whole body contact with a medium and containment/inclusion relations; in addition, *ˌdak* 'be.adhered / adhere' also encodes support/contact relations. The second set (23b) of roots encodes the body disposition of the figure, such as the relations of support/contact of body parts with a horizontal surface. (For further detail on the semantics of the whole posture and position roots system see Ospina Bozzi 2010, 2013.)

(23) a. **Stative and inchoative**
          i   *tuʔ*   'be immersed / immerse'
          ii   *ˌdak*   'be adhered / adhere'
      b. **Stative, inchoative and agentive**
          i   *wobm*   'be seated / sit down / sit'
          ii   *ˌɟet*   'be lying / lie down / lay'

The classification of roots presented above does not imply that these are formal classes with special morphosyntactic properties, as those mentioned by Levinson and Wilkins (2006) in their language survey. Rather it seems that all of the roots described above can form classes that must occupy a fixed slot in compounds, following the patterns described in the next section.

5.2 Compound spontaneous translational motion verbs: formal and semantic structure

Verbal and nominal compounding is very productive in Yuhup. The criteria that allow the identification of verbal compounds as morphosyntactic units are phonological (more than two syllables, word tonal patterns, word internal morphophonological processes), morphological (same flexional affixes as simple verbs), syntactical (same syntactic distribution as simple verbs) and semantic (they refer to a complex event conceptualized as a whole). As already noted, compounds may be characterized as serial verbs of a contiguous, incorporating, and nuclear type (see section 1.1.).

Verbal compounds can express event manner, sequence of events, modalized events, causative events, and motion events. Those that express motion events may encode translational spontaneous movement, translational caused movement, simultaneity of activity and movement, sequence of activity (cause) and movement (effect), simultaneity of activity and posture/position, movement that causes posture/position, action that causes posture/position, accomplished movement, and movement initial phase. (Ospina Bozzi 2002, 2009, 2013; Ospina Bozzi and Gomez-Imbert 2013; Ospina Bozzi and Cita Triana. 2021).

This section focuses strictly on verbal compounds that convey translational spontaneous movements. These may be divided into two main groups if, besides path, they encode manner. Of those, the first group of compounds expresses a complex directed motion (24a), while the second expresses manner of directed

motion (24b); most of them have two components (24a.i, 24b.i), although some have three (24a.ii, 24b.ii), and only those that express manner have four components (24b.iii).

(24) a. **Directed motion**
    i *hi-˜dedn*   'descend (hither)'
       descend-come
    ii *ɟeh-wahpu-˜habm*   'enter and pass by (thither)'
       go.in-pass-go
  b. **Manner of directed motion**
    i *ɟɔh-˜cop*   'run up the hill'
       run-go.uphill
    ii *cək- wahpu-˜dedn*   'jump and pass by (hither)'
       jump-pass-come
    iii *cək- ɟokod-wahpu-˜habm* 'jump around and pass by (thither)'
       jump-go.around-pass-go

Table 6 captures the distribution of the semantic content in these compounds. The semantic content of those that convey directed motion is distributed across two main slots: the first one encoding non deictic path, which can be occupied by up to three roots; the second one, only occupied by the roots *˜dedn* 'come' or *˜habm* 'go, travel', both with deictic value in this position. Compounds that express manner of directed motion add one more slot, at the leftmost edge of the structure, for manner encoding; this slot may be occupied by up to two roots.[28]

Table 6 shows the distribution of semantic content across compounds: Slot **I** for manner, Slot **II** for path, and within it: Slot **i** for not deictic path and Slot **ii** for deictic path. The last row shows the number of possible roots for each slot, where M stands for **M**anner, NDP for **N**on **D**eictic **P**ath, and DP for **D**eictic **P**ath.[29]

I	II		
	PATH		
	i		**ii**
	NO DEIXIS		**DEIXIS**
MANNER	CONTOUR, DIRECTION, BOUNDARY CROSSING, GROUND CONFIGURATION, POSTURE/POSITION		
M1 M2	NDP1 NDP2 NDP3		DP1

Table 6: Distributions of semantic and morphological components in translational spontaneous movement compounds

There are no compounds with more than four roots, so not all slots proposed in the last row of Table 6 are always occupied. The eight actual combinations found in our corpus are schematized in Table 7, where they are classified in the two main groups of directed movement and manner of directed movement. Within each group, they are ordered from the most frequent to the less frequent. The right column shows the numbers corresponding to examples in this paper containing compounds which illustrate each structure.

---

[28] It is important to note that compounds that express simultaneity of activity and movement, or sequence of activity (cause) and movement (effect), exhibit a remarkably similar structure, the difference being that in the slot occupied by manner roots there will be a single root that conveys activity. (Ospina Bozzi and Gomez-Imbert 2013)

[29] Interestingly, the semantic distribution just described is similar to motion serial verb constructions in Mandarin Chinese (Huang and Tanangkingsing 2005).

The non deictic path slot may be empty, or occupied by up to three roots, but only if manner is not specified. In addition, if manner is specified, there will only be up to two path roots (non deictic and/or deictic). Examples (25) and (26) show clauses with verbal compounds having the structures presented in Table 7.

As stated before, and as shown by examples (6b), (6c), (7b), (9b), (11c), (11d), (13c) above, and (25a), (26d), (26e) below, the root *h̃abm* 'go' acquires a deictic value when in final position of compounds. All compound verbs with this root in final position depict movements away from the speaker's location or from a reference point chosen by the speaker as a deictic center. As Wilkins and Hill (1995) prove in their study of Arrernte and Longgu, a deictic sense may be attributed to a verb 'go' that is not inherently deictic, through a systematic opposition with the uses of a verb 'come'. This is what happens in Yuhup, where the systematic opposition between 'go' and 'come' in compound final position allows a deictic interpretation of 'go' and 'come'.

As can be seen in (25), those compounds that convey directed movement describe a translocation following a path which is directed towards or from the deictic center, as in (25a) where the figure moves downhill from the deictic center. Examples (25b) and (25c) also show the expression of a composite path with an iconic arrangement of the non deictic path roots. In (25b) the figure first moves into the cave and then passes through it; both movements are directed towards the deictic center. In (25c) an additional path is included: after entering and passing, the figure goes out of the cave; again, all these movements are directed towards the deictic center.

Directed movement

NON DEICTIC PATH			DEICTIC PATH	Examples
NDP			DP	(4), (8b), (9), (10), (11a), (11d), (13b), (13c), (14c), (23ai), (24a)
NDP1	NDP2		DP	(8c), (12), (14d), (24ai), (25b)
NDP1	NDP2	NDP3	DP	(25c)

Manner of directed movement

MANNER		NON DEICTIC PATH		DEICTIC PATH	Examples
M				DP	(8c), (11c), (26c)
M		NDP		DP	(6c), (13a), (24bii), (26d)
M		NDP			(24bi), (26a)
M		NDP	NDP	DP	(24biii), (26e)
M1	M2	NDP		DP	(6b), (7b), (14e)
M1	M2	NDP			(26b)

Table 7: Structures for translational spontaneous movement compounds

(25)   **Directed movement**

a.   *h̃ăjjăp*   **d̪òbm-h̃ábmí**   *déh-ét*
        woman   **go.downhill-go**   water-LOC
        'A woman goes downhill (thither) to the water.' {LEO_073_tr55}

b.   *h̃ăjjăp*   *pâjh tŏdn-ót*   **ɟèh-wahpùh-d̃édní**
        woman   stone hollow.log-LOC   **go.in-pass-come**
        'A woman enters and passes by (hither) the cave.' {LEO_054_tr148}

c.   *h̃ăjjăp*   *pâjh tŏdn-ót*   **ɟèh-wàhpù-wàj-d̃édní**
        woman   stone hollow.log-LOC   **go.in-pass-go.out-come**
        'A woman enters, passes by and exits (hither) the cave.' {LEO_022_tr52}

Examples (26) illustrate compounds that convey manner of directed motion: while the first two (26a,b) only depict manner of motion following a path, the rest (26c-e) describe manner of motion following a path which is directed towards or from the deictic center. Again, the arrangement of roots describes complex manner and path iconically: in (26b) the figure jumps and then falls immersing itself into the water, in (26e) the figure jumps while going around and passing from one place to another. The clause in (22), above, shows that a clause with a manner simple verb like *cǝk* 'jump' does not convey any path; for path expression it absolutely needs to be compounded with another root with a path component, as examples (26d, e) illustrate.

(26) **Manner of directed movement**
    a. *ɟùhúp*   ***ʈɔ̀h-cópí***
       person   **run-go.uphill**
      'A person runs uphill.' {MAR_031_107}
    b. *ɟùhúp*   ***cǝk-̃dòh-túʔí***   *pâjh-át*   *ûj*   *ʗ̠két* *ɟɔ̂ʔ*
       person   **jump-fall-immerse**   stone-LOC from   stand on
      'A person jumps falling and immersing from the stone where he stood.' {MAR_064_tr300}
    c. *dóʔɟâp*   *déh-ét*   ***ʈɔ̀h-̃dédní***
       boy   water-LOC   **run-come**
      'A boy runs (hither) from the water.' {PAT_031_tr103}
    d. *tǝ̀cát pò-ʔá*   *ɟíʔɟâp*   ***cǝk-wàh-̃hábmí***
       log over-MED.DIST man   **jump-pass-go**
      'A man jumps and passes (thither) over the log.' {MAT_072_tr221}
    e. *̃càh ˜bǎh*   ***cǝk-ʗ̠òd-wàh-̃hábm***   *ɟɔ̂ʔ*   ...
       other P.DIST   **jump-go.around-pass-go** on[lkr-sequence]
      'Once [they] jumped around passing by (thither)...[they hit the jaguar with a club.]' {R_12.112}

The previous examples show that compound verbs may have, or not, a complement constituent. Complements present in examples (25) and (26c) are all marked by the locative case, regardless of the fact that motion might be directed towards a goal, from a source and/or via a ground. This is also true for the complement in (26d), marked by a relational locative element. Besides, all these complements are not obligatory. The only complement which is encoded as a source is the one in (26b), but even there the clause would be grammatical without it. Thus, the interpretation of complements as initial, medium and/or final points of the trajectory followed by the figure does not depend on their marking or even on their presence. As Nikitina (2009) points out, the interpretation of the semantic role of ground constituents is therefore related to contextual information and to inferences drawn from the lexical semantics of the verbs and that of the locational elements present in complements.

6 Conclusion

In terms of the strategies Yuhup uses for path and manner encoding, it is a language that can be better classified within a typology of path loci and construction types. Thus, instead of talking about a language that has a mixture of verb-framed and equipollent-framed strategies, we prefer to analyze it, following Fortis and Vittrant (2011) as a language that has two main construction types, the first one being the most characteristic and the second one being marginal: a) a single-framed construction type with path expressed in the head (a simple or a compound verb); b) a multiple-framed construction type, with path expressed in the head and in an adposition. On the other hand, Yuhup speakers also use a multi-clausal strategy for the expression of path. It will be interesting to inquire about the speakers' motivations for

choosing one or another type of construction, since it appears that all are equally accessible for the description of the same type of motion events.

Concerning the structure of basic motion clauses in Yuhup, the great variability in terms of constituent order is not surprising given that this flexibility is a common pattern related to informational structure encoding in the language; although, the question remains of what the driving forces are that make speakers give salience to one or another constituent while describing motion events.

As for the number of explicit constituents present in basic motion clauses, it is interesting to note that the elicited corpus shows a balanced frequency among clauses with a verb complement (51%) and clauses without it (49%). This evidence, together with the preferred static locative marking of explicit complements, points to the fact that in this language the presence and marking of complements do not take part in the semantic encoding of the roles of source, goal and via; even the few complements marked by an (optional) directional adposition are not obligatory for obtaining grammatically well-formed motion clauses.

Thus, even when complements are explicit, the interpretation of the semantic role of the ground does not depends on the presence or marking of a complement, but on contextual information and on inferences drawn from the lexical semantics of the verb (which is the main locus for path expression) and of ground nominal phrases, what is typologically expected in languages where such ambiguity takes place, as Nikitina (2006) points out. More research must be done on the semantic clues given by the Yuhup verbs for such an interpretation; nevertheless, as far as we can tell, Nikitina's predictions, about the relevance of contextual information and of inherent asymmetries between source and goal in the lexical semantics of verbs for semantic role interpretation of the ground, apply to Yuhup motion clauses.

In their description of spontaneous translational motion events, Yuhup speakers rely for path encoding on simple (one root) and mostly compound (up to four roots) verbs. As in many languages, motion roots fall into three categories: a) A basic motion root 'go, travel', that cannot be characterized as deictic, supporting Wilkins and Hill (1995) claim on non deictic universal GO forms. b) A set of directed motion roots that encode path components: beyond vector, two encode deixis, and the rest encode one or several semantic components (contour, direction, boundary crossing, and ground configuration). c) A small set of manner of motion roots. Interestingly, some directed movement roots also encode semantic content related to medium, force and other culturally relevant components, reinforcing observations on the need for a better understanding of the underlying components of motion conceptualization (Levinson and Wilkins 2006).

All the previously mentioned roots, as well as some inchoative postural and positional roots, combine in compounds which express complex motion events. The compound spontaneous translational verbs (that convey directed movements and manner of directed movement) distribute their semantic components, and the roots that encode them, across three slots: manner, non deictic path and deictic path. In this context, the root 'go' obtains a deictic value in a compound final position when it is in systematic opposition with the root 'come', as predicted by Wilkins and Hill (1995) for languages that have a GO form without deictic value. Noticeably, when there is more than one root in one of the two first slots, those components convey complex manner and complex path, revealing iconically the complexity of the depicted event through their root ordering.

Although further investigation on the semantic and syntactic typological features of motion event expression in Yuhup is still needed, this paper has presented its main characteristics. Hopefully, this analysis will contribute to the growing knowledge that nourishes the typology of motion events, which has considered so far only a few Amazonian languages.

7 Acknowledgements

8 Abbreviations

1	first person
3	third person
C	complement
CIT	citation
COM	commitative
CONC	concomitant
D.PAST	distant past
DP	deictic path
FIG	figure
GEN	genitive
GR	ground
lkr	linker
LOC	locative
M	manner
MED.DIST	medium distance
MOT	motion
NDP	not deictic path
NOCONC	not concomitant
NP	noun phrase
P1	predicative 1
P2	predicative 2
PL	plural
PR.DIST	proximate distance
S	subject
SG	singular
UNACC	unaccomplished
V	verb

9 References

Aurnague, Michel. 1996. Petit dictionnaire raisonné des Noms de Localisation Interne du Basque, *Cahiers de Grammaire*, 21:1-44

Beavers John, Beth Levin and Tham Shiao Wei. 2010. The Typology of motion Expressions revisited. *Journal of Linguistics* 46(2): 331-377.

Croft William, Jóhanna Barðdal, Willem Hollmann, Violeta Sotirova, and Chiaki Taoka. 2010. Revising Talmy's typological Classification of complex Events. In Hans C. Boas (ed.), *Contrastive Construction Grammar,* pp. 201-235. Amsterdam: John Benjamins Publishing Company.

Creissels, Denis. 2006. Encoding the distinction between location, source and destination: a typological study. In Maya Hickmann and Stéphane Robert (eds.). *Space in languages: Linguistic systems and cognitive categories*, pp. 19-28. Amsterdam: John Benjamins.

Epps, Patience. 2008. *A grammar of Hup.* Berlin: Mouton de Gruyter.

Epps, Patience and Katherine Bolaños. 2017. Reconsidering the "Makú" Language Family of Northwest Amazonia. *International Journal of American Linguistics*, 83(3):467-507. https://doi.org/10.1086/691586

Fortis, Jean-Michel and Alice Vittrant. 2011. L'organisation syntaxique de l'expression de la trajectoire : vers une typologie des constructions. *Les Cahiers de Faits de Langues. Dossier: La trajectoire.* 3:71-98. Paris: Ophrys.

Fortis, Jean-Michel and Alice Vittrant. 2016. On the morpho-syntax of path-expressing constructions: toward a typology. *Language Typology and Universals, STUF.* 69(3):341-374.

Fortis, Jean-Michel, Colette Grinevald, Anetta Kopecka and Alice Vittrant. 2011. L'expression de la trajectoire : perspectives typologiques. *Les Cahiers de Faits de Langues. Dossier: La trajectoire.* 3:33-41. Paris: Ophrys.

Grinevald, Colette. 2011. On constructing a working typology of the expression of path. *Les Cahiers de Faits de Langues. Dossier: La trajectoire.* 3:43-70. Paris: Ophrys.

Huang, Shuanfan and Michael Tanangkingsing. 2005. Reference to Motion Events in Six Western Austronesian Languages: Toward a Semantic Typology. *Oceanic Linguistics.* 44(2):307-340.

Ishibashi, Miyuki, Anetta Kopecka and Marine Vuillermet. 2006. *Trajectoire. Matériel visuel pour élicitation des données linguistiques.* Laboratoire Dynamique du Langage, CNRS, Université de Lyon 2. Projet de Fédération de recherche en Typologie et Universaux Linguistiques. http://tulquest.huma-num.fr/fr/node/132.

Kopecka, Anetta and Miyuki Ishibashi. 2011. L'(a-)symétrie dans l'expression de la Source et du But: perspective translinguistique. *Les Cahiers de Faits de Langues. Dossier: La trajectoire.* 3:131-149. Paris: Ophrys.

Landaburu, Jon. 2000. Clasificación de las lenguas indígenas de Colombia. In: María Stella González de Pérez and María Luisa Rodríguez de Montes (Eds.). *Lenguas Indígenas de Colombia. Una visión descriptiva*, pp. 25-48. Bogotá: Instituto Caro y Cuervo.

Levinson, Stephen. 1991. Primer for the field investigation of spatial description and conception. *Pragmatics.* 2(1):5-47.

Levinson, Stephen and David Wilkins. 2006. Patterns in the data: towards a semantic typology of spatial description. In: Stephen Levinson and David Wilkins (eds.). *Grammars of Space. Explorations in Cognitive Diversity*, pp. 512-552. Cambridge: Cambridge University Press.

Martins, Valteir. 2005. *Reconstrução Fonológica do Protomaku Oriental.* Doctoral dissertation. Amsterdam: Vrije Universiteit, LOT.

Mayer, Mercer. 1969. *Frog, where are you?.* New York: Dial Press.

Nikitina, Tatiana. 2009. Subcategorization pattern and lexical meaning of motion verbs: a study of the source/goal ambiguity. *Linguistics* 47(5):1113-1141.

Ospina Bozzi, Ana María. 2002. *Les structures élémentaires du yuhup makú, langue de l'Amazonie colombienne : morphologie et syntaxe.* Doctoral dissertation. Paris: Université de Paris VII.

Ospina Bozzi, Ana María. 2009. Productivité et intégration des prédicats complexes en Yuhup, langue de l'Amazonie Colombienne. *Les Cahiers de Faits de Langues.* 1:161-179. Paris: Ophrys.

Ospina Bozzi, Ana María. 2010. Localización estática en yuhup. In: Gabriel Cabrera (ed.). *Viviendo en el bosque. Un siglo de investigaciones sobre los makú del Noroeste amazónico,* pp. 189-231. Medellín: Facultad de Ciencias Humanas y Económicas, Universidad Nacional de Colombia.

Ospina Bozzi, Ana María. 2013. Localización estática y prefijos locativos en yuhup. In: Ospina Bozzi, Ana María (ed.) *Expresión de nociones espaciales en lenguas amazónicas.* Bogotá: Instituto Caro y Cuervo, Universidad Nacional de Colombia.

Ospina Bozzi, Ana María and Caterine Cita Triana. 2012. "Trayectoria Yuhup: movimiento espontáneo y movimiento causado" [grabaciones de audio, transcripciones]. Semántica y morfosintaxis de los verbos de desplazamiento en Yuhup. Trabajo de campo. Bocas de Ugá, La Pedrera, Colombia. Universidad Nacional de Colombia.

Ospina Bozzi, Ana María and Nadia Caterine Cita Triana. 2021. Exploring Asymmetries in Spontaneous and caused motion expression in Yuhup. *Studies in Language* 45(1):172-202. https://doi.org/10.1075/sl.00015.osp

Ospina Bozzi, Ana María and Elsa Gomez-Imbert. 2013. Predicados complejos en el Noroeste Amazónico: el caso del Yuhup, el Tatuyo y el Barasana. In: Patience Epps and Kristine Stenzel,

(eds.). *Upper Rio Negro. Cultural and Linguistic Interaction in Northwestern Amazonia,* pp. 309-351. Rio de Janeiro: Museu Nacional, Museu do Índio, Funai.

Pantcheva, Marina. 2010. The syntactic structure of Locations, Goals, and Sources. *Linguistics* 48(5):1043-1081.

Papahagi, Cristiana. 2011. Pour une typologie des systèmes d'adnominaux de la trajectoire. In: L'expression de la trajectoire : perspectives typologiques. *Les Cahiers de Faits de Langues. Dossier: La trajectoire.* 3:71-98. Paris: Ophrys.

Slobin Dan I. 2004. The Many Ways to Search for a Frog. Linguistic Typology and the Expression of Motion Events. In Sven Strömqvist and Ludo Verhoeven (eds.). *Relating events in narratives (vol. 2): typological and contextual perspectives*, pp. 219-257. Mahwah, New Jersey: Lawrence Erlbaum Associates Inc., Publishers.

Talmy, Leonard. 2003. Lexicalization Patterns. In *Toward a Cognitive Semantics. Volume II: Typology and Process in Concept Structuring*, pp.21-146. Cambridge: The MIT Press.

Vuillermet, Marine and Anetta Kopecka. 2019. Trajectoire: a methodological tool for eliciting Path of motion. Methodological tools for linguistic description and typology, *Special issue of Language, Documentation and Conservation*, 16, pp. 97-124.

Wilkins, David and Deborah Hill. 1995. When "go" means "come": Questioning the basicness of basic motion verbs. *Cognitive Linguistics* 6(2/3):209-259.