

# A DISTRIBUTED MORPHOLOGY ACCOUNT OF THE SYNTAX OF THE ALGONQUIAN VERB

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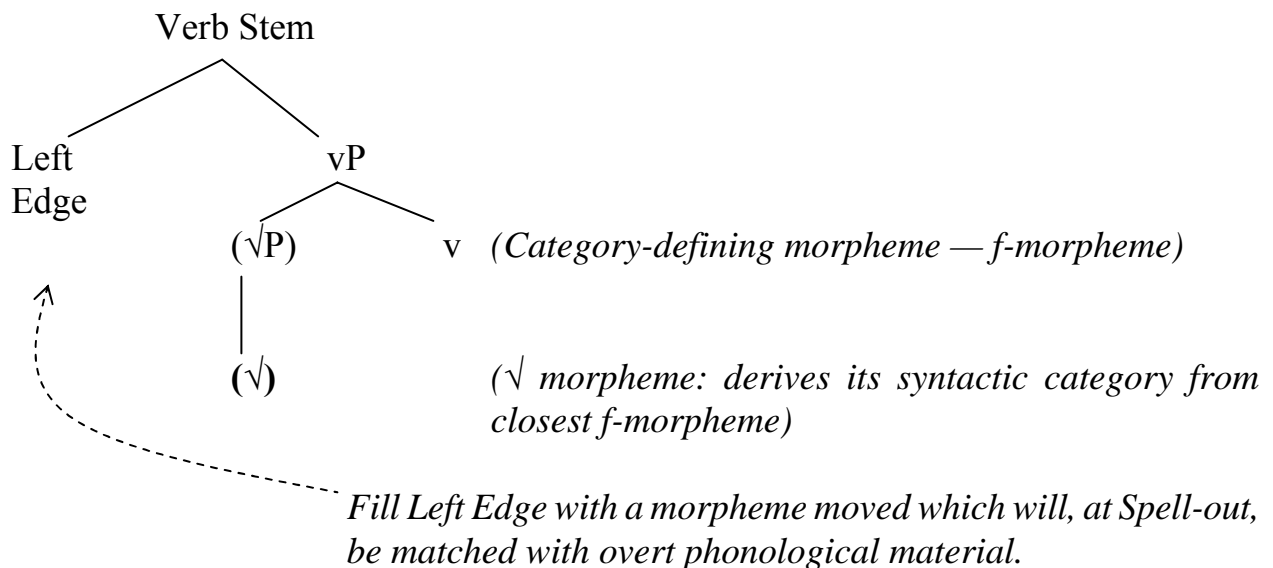
## 1. Introduction

This paper seeks to recast in theoretical terms a number of important generalizations described in the traditional literature of Algonquian linguistics (e.g., Bloomfield 1946; Wolfart 1973; Goddard 1988, 1990) vis-à-vis the organization of morphology in the Algonquian verb. The relevant facts are viewed from the perspective of the Distributed Morphology (DM) model of grammar (see, for example, Halle and Marantz 1993, 1994). The aim of this paper is to provide a unitary account of three previously unrelated facts. These are:

- (1) i. Allomorphy within the verb stem.
- ii. Certain morphemes occur either within the verb stem, or in “preverb position” (to the left of the verb stem).
- iii. In certain contexts, normal scopal relations within the verb stem are reversed.

All three phenomena will be accounted for by arguing that verbal morphology is organized by the verb stem “template” shown in (2). The Left Edge of the template must be filled via movement of morphology from elsewhere on the template.

### (2) Verb Stem Template



Certain conditions hold of the Left Edge:

- (3) – The Left Edge must be filled by an overt phonological string at least by the level of Spell-out.
- The morpheme which moves to fill the Left Edge brings its categorial status with it. (The position is not associated with a particular syntactic category.)

## 2. Traditional Algonquian linguistics: classifications and terms

Minimally, the Algonquian verb is comprised of the verb stem and a variety of inflectional suffixes, as illustrated in (4), (6) and (7) below. As example (4) illustrates, Algonquian verbs agree with the grammatical animacy of their arguments.

### (4) Western Naskapi<sup>1</sup>

wâpim	-â	-w	-ch
see(TA)	IIN.dir	nonSAP.an	3.an.PL
STEM	INFLECTION		

“They see him/her/them (obv).”

The Algonquian Person/Gender Hierarchy determines the agreement relations for transitive animate verbs.<sup>2</sup>

### (5) Algonquian Person/Gender Hierarchy

2nd > 1st > Animate 3rd > Obviative (Animate) 3rd > Inanimate

Thus in (4), the direct theme sign signals agreement which “respects” the hierarchy, and in (6) the inverse theme sign indicates agreement “in violation” of the hierarchy.

### (6) Western Naskapi

wâpim	-ik <sup>w</sup>	-w	-ch
see(TA)	IIN.inv	nonSAP.an	3.an.PL
STEM	INFLECTION		

“S/he/they (obv) see(s) them.”

If first or second person participants are involved, pronominal proclitics mark agreement with the highest argument on the hierarchy.

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<sup>1</sup> Abbreviations: 12.pl=inclusive plural; 1=1st person; 3=3rd person; S=singular; AI=Animate Intransitive; DI=derives initial; IIN=Independent Indicative Neutral; TA=Transitive Animate; TI=Transitive Inanimate; an=animate; cause=causative; cond=conditional; dim=diminutive; dir=direct theme sign; excl=exclusive; inan=inanimate; incept=inceptive; inv=inverse theme sign; nonSAP=non Speech Act Participant (3rd person or animate obviative argument); obv=obviative; PL=plural; pron=pronoun; reflx=reflexive; SAP=Speech Act Participant.

<sup>2</sup> Brittain 2001 provides an alternative account of the Algonquian Person/Gender hierarchy.

(7) Western Naskapi

a.	ni-	wâpim	-â	-nân	-ich	b.	chi-	wâpim	-i	-n
	1	see(TA)	IIN.dir	1.PL	3.PL		2	see(TA)	IIN.dir	SAP
	pron	STEM	INFLECTION				pron	STEM	INFLECTION	
	“We (excl) see them.”						“You.sg see me.”			

One or more preverbs may be contained in the verb complex. Preverbal morphemes may be functional or lexical. Example (8) illustrates the preverb *wî-*, which indicates volition.

(8) Western Naskapi

ni-	wî#	nipâ	-n
1	want	sleep(AI)	IIN.SAP
Pron	PREVERB	STEM	INFLECTION
“I want to sleep.”			

Morphologically, the “compound verb” (preverb + verb stem) is a single word; as (8) shows, however, the phonologically it is two words—there is a word boundary between the preverb and the verb stem. This word boundary is a salient feature to speakers of Algonquian languages.<sup>3</sup> Preverbs may also be stacked.

(9) Fox

weepi-	pyeeči#	teteposeewa	
incept	from.there	walk.in.circle(IIN.3S)	
PREVERB	PREVERB	STEM(INFLECTION)	
“He begins to approach, walking in a circle.”			(Bloomfield 1946:103)

Free morphemes may also be incorporated into the verb complex and accommodated in preverb position.

(10) Western Naskapi

ni-	tâpitu#	nipânânuw
pron.1	together	sleep(AI.IIN.12.PL)
PREVERB	STEM(INFLECTION)	
“We all slept together.”		

The table in (11) summarizes the possible complexity of the Algonquian verb to the extent relevant to the present discussion.

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<sup>3</sup> Many orthographic conventions represent the preverb and verb stem as separate words.

(11) The Algonquian Verb # (word boundary)

(Pronominal clitics)	(Preverb position)	Verb Stem	Inflection
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The verb stem itself is potentially tripartite, consisting of an “initial,” “medial” and “final.” (e.g., Bloomfield 1946). Although more than one morpheme may occupy each position, in the interests of maintaining clarity, this paper focuses on morphologically simple verbs. Morphemes in initial position can belong to any syntactic category. Medial and final position are associated with a specific syntactic category. Minimally, the verb stem is comprised of a final and an initial.<sup>4</sup> If a medial is present, it is nominal, or classificatory. This is the position occupied by incorporated nouns. Morphemes occupying final position are verbal or adverbial in nature.

(12)	INITIAL	MEDIAL	FINAL	INFLECTION
	Any syntactic category	N	V	

The stem in (4), (6) and (7) (shown in (13)) is comprised of an initial and a final.

(13)	wâp-	-im (see)
	light-	-do.by.means.of.facial.activity
	INITIAL-	-FINAL

In (14a), all three positions are filled; (14b) lacks a medial position morpheme.

(14)	a. <u>Western Naskapi</u>	b. <u>Fox</u> <sup>5</sup>
	mw -min -â -w	ki.š -etone.mo -wa
	eat berry	finish talk
	INITIAL MEDIAL FINAL.AI INFLECTION	INITIAL FINAL.AI INFLECTION
	“S/he eats berries.”	“S/he finished talking.”
		(Goddard 2002)

The data in (14) illustrate the two kinds of finals distinguished in the traditional literature. In (14a), the final is “abstract,” and in (14b) the final is “concrete.” In general, “abstract finals” are semantically underspecified, whereas “concrete finals” are semantically robust. Many abstract finals correspond well to the characterization in generative literature of light verbs. Following Harley 2001, I take light verbs to be

<sup>4</sup> There are examples which seem to consist only of an initial. In such cases I assume the presence of a phonologically null light verb (a null final).

<sup>5</sup> I assume in (14b) that there is also a phonologically null light verb which provides the concrete final (the root verb *-etone.mo*) with its categorial status.

verbal elements exclusive of the lexical component, the root ( $\sqrt{\quad}$ ).<sup>6</sup> Recast in the context of a DM framework, I tentatively classify at least some abstract finals as light verbs, i.e., category-defining f-morphemes.<sup>7</sup> The concrete finals of traditional Algonquian linguistics can be equated with root verbs.

### 3. Data

#### 3.1. Allomorphy

Depending on which position within the verb stem a morpheme occupies, its formal properties may differ. Example (15) illustrates a case of allomorphy within the verb stem, between initial and final position, for the lexeme SING.

(15) Fox

- |    |                          |               |        |    |                          |                |        |
|----|--------------------------|---------------|--------|----|--------------------------|----------------|--------|
| a. | ki.š <i>i</i> #          | <b>nakamo</b> | -wa    | b. | ki.š                     | <b>-ina.ke</b> | -wa    |
|    | finish                   | sing          |        |    | finish                   | sing           |        |
|    | PREVERB                  | INITIAL       | IIN.3S |    | INITIAL                  | FINAL.AI       | IIN.3S |
|    | “S/he finished singing.” |               |        |    | “S/he finished singing.” |                |        |

(Goddard 2002)

Example (16) illustrates allomorphy occurring between initial and medial position:

(16) Western Naskapi

- |    |                |            |          |    |                                   |            |            |          |
|----|----------------|------------|----------|----|-----------------------------------|------------|------------|----------|
| a. | <b>wâp</b>     | -im        | -âw      | b. | nâh                               | <b>-âp</b> | -im        | -âw      |
|    | light          | do/by.face |          |    | good                              | light      | do/by.face |          |
|    | INITIAL        | FINAL.TA   | IIN.3S>4 |    | INITIAL                           | MEDIAL     | FINAL.TA   | IIN.3S>4 |
|    | “He sees her.” |            |          |    | “She has good eye-sight for him.” |            |            |          |
|    |                |            |          |    | (“She sees him well.”)            |            |            |          |

Examples of allomorphic alternation within the verb stem are not difficult to find in Algonquian languages. Discussion of the phenomenon appears throughout the literature of Algonquian linguistics (e.g., Wolfart 1973).

#### 3.2. Variable positioning of certain morphemes

The data in (15) illustrate the fact that certain morphemes can occupy more than one position within the compound verb. In (15a), the aspectual preverb *ki.š(i)-* occurs in preverb position, and in (15b) it occupies initial position. This phenomenon is widely attested; see, for example, Bloomfield (1946) for central Algonquian; Goddard (1988,

<sup>6</sup> Johns (manuscript) assumes this definition of light verbs in a study which predicts the distribution of noun incorporation in Inuktitut.

<sup>7</sup> Minimally, the verb complex must contain a light verb. This need not, however, be phonologically overt.

1990) for Fox; Dahlstrom (1991) for Plains Cree; Valentine (2002) for Ojibwe. Goddard 1988 and 1990 uses the term “preverb bumping” to refer to what is presumed to be a leftward displacement of *ki.š-* from initial position in (15b) to preverb position in (15a). I will argue that the difference between (15a) and (15b) should be attributed to rightward movement, from preverb position to initial position, and thus regard data like (15b) as “preverb lowering.” (17) provides a further example of this phenomenon.

(17) Fox

a.	pemi#	we.p	-ose.	-wa	b.	pem	-ose.	-wa
	along	begin	walk		along	walk		
	PREVERB	INITIAL	FINAL.AI	IIN.3S	INITIAL	FINAL.AI	IIN.3S	
	“S/he begins walking along.”				“S/he walks along.” (Goddard 1990)			

### 3.3. Reversal of normal scopal relations

There is general agreement that in the Algonquian verb stem scope operates in a leftward direction (among others, Goddard 1988 & 1990, Dahlstrom 1991, and Valentine 2002). In Plains Cree example (18) the rightmost final, for example, “to be in the habit of doing something” has scope over “pretend.”

(18)a.	<pre>       XP      /  \     YP   X           Y           </pre>	b. <u>Plains Cree</u>
		sa.kih -iso -si -hka.so -ski -w
		love reflx dim pretend be.in.habit.of
		INITIAL FINAL FINAL FINAL FINAL IIN.3s
		“He’s in the habit of pretending to love himself a little bit.”
		(Dahlstrom 1991:135)

The examples in (19) illustrate subject-to-subject raising constructions in which the raising predicate occurs to the right of the sentential complement.

(19) Fox: Subject-to-subject raising

a.	mi:shitepe:	-w	-a:pata:ni	-wa
	he.has.a.fuzzy.crest.on.his.head	seem		
	INITIAL	DI	FINAL.AI	IIN.3S
	“He (a bird) seems to have a fuzzy crest on his head.”			
b.	sha:kwe:nemo	-w	-ina:kwat	-wi
	be.unwilling	appear.so		
	INITIAL	DI	FINAL.II	IIN.3S
	“It looks as if they were unwilling.” (Goddard 1988:70)			

However, in certain contexts, normal scopal relations within the verb stem are reversed and rightward scope pertains. This is the case in (14a).<sup>8</sup> This pattern is, in fact, common. Here are some more examples:

(20) Western Naskapi

- |                           |          |          |        |                                       |        |             |          |        |
|---------------------------|----------|----------|--------|---------------------------------------|--------|-------------|----------|--------|
| a. nitû                   | -tîhkw   | -â       | -w     | b. pikistuw                           | -âp    | -îht        | -â       | -w     |
| hunt                      | caribou  |          |        | drop                                  | water  | caus        |          |        |
| INITIAL                   | MEDIAL   | FINAL.AI | IIN.3S | INITIAL                               | MEDIAL | FINAL       | FINAL.AI | IIN.3S |
| “S/he hunts caribou.”     |          |          |        | “S/he drops it(inan) into water.”     |        |             |          |        |
|                           |          |          |        |                                       |        |             |          |        |
| c. pûst                   | -âsâm    | -â       | -w     | d. pâhkun                             | -âpu   | -swâ        |          | -w     |
| put.on                    | snowshoe |          |        | skin                                  | rabbit | do.by.blade |          |        |
| INITIAL                   | MEDIAL   | FINAL.AI | IIN.3S | INITIAL                               | MEDIAL | FINAL.AI    |          | IIN.3S |
| “S/he puts on snowshoes.” |          |          |        | “S/he skins a rabbit (with a knife).” |        |             |          |        |

The data in (18) and (19) provide evidence of leftward scopal relations holding within the verb stem while the data in (14a) and (20) indicate that scope is rightward. Logically, we must conclude that in one case there is movement within the verb stem, which causes a reversal of scopal relations. We must thus determine whether scope is leftward or rightward prior to movement, and under what circumstances movement occurs within the verb stem. In the following section I argue that normal scopal relations are indeed leftward, and that these relations are reversed only in the case that the nominal complement of a transitive verb is incorporated within the verb stem.

#### 4. Analysis

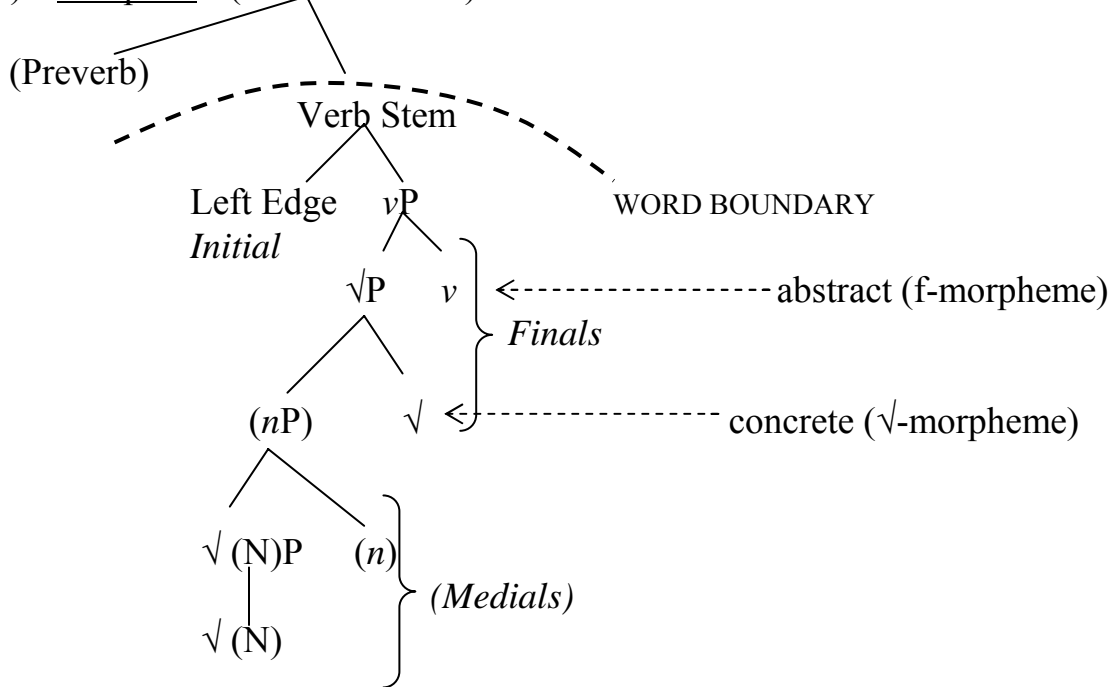
##### 4.1. The template in more detail

The structure in (21) includes an additional level to accommodate preverbs.<sup>9</sup>

<sup>8</sup> Example (14b) illustrates a case of preverb lowering.

<sup>9</sup> The reader is referred to the following literature for discussion of the ordering of preverbs within what I am calling the Preverb Phrase: Wolfart 1973; Jancewicz and MacKenzie 1998. While it is clearly relevant, it is outside the scope of this paper to pursue discussion of the ordering of preverbs.

(21) Template (Preverb Phrase)



The template expands as required to accommodate layers of derivational morphology, with the head of the structure (little-*v*, or little-*v* plus root-*v*) selecting complements in a leftward direction. I assume that *vP* dominates only binary branching structures; the Left Edge provides the third position (initial position).<sup>10</sup> The template minimally consists of a light verb (the head of the structure), a root of some type (not necessarily *V*), and the Left Edge position. Incorporated nouns can be accommodated as complement to a subset of logically transitive verbs. Complements are selected in a leftward direction. The Left Edge position is at the word boundary that separates preverbs from the stem. The data in (22) illustrate that the Left Edge may be occupied by morphemes corresponding to a variety of syntactic categories.

(22) Various syntactic categories occupy Initial position (the Left Edge)<sup>11</sup>

a. Quantifier Initial

mîhchâtw	-s	-im
many	do.by.blade	
INITIAL	FINAL.TI	IIN.3
“S/he cuts it in many pieces.”		

b. Verbal Initial

mîchi	-su	-w
eat		
INITIAL	FINAL.AI	IIN.3S
“S/he eats.”		

<sup>10</sup> Valentine (2002:96) observes of Ojibwe that, “while primary derivation involves a ternary structure, secondary derivation is invariably binary.”

<sup>11</sup> Data in (22a–c) are Western Naskapi and example (22d) is East Cree.



c. Prepositional Initial  
 pîhch -â -w  
 inside  
 INITIAL FINAL.AI IIN.3S  
 “S/he went inside.”

d. Nominal Initial  
 ninâpeu -mu Ø  
 (redup)man talk.in.manner.of  
 INITIAL FINAL.AI IIN.3S  
 “S/he talks like a man.”

Adger (2000) argues that in Old Irish a syntactically diverse set of morphemes compete to occupy the position at the Left Edge of the verb. Thus, in both Old Irish and Algonquian, the left edge of the verb is a syntactic free-for-all. Adger proposes that movement to the Left Edge in Old Irish is required to align overt syntactic and prosodic representations. I assume a similar requirement holds of the Algonquian template: The Left Edge must be filled by phonologically overt material by the stage in the grammar when alignment of syntactic and prosodic representations is required. Morphemes move to the Left Edge with their categorial features having already been determined configurationally elsewhere on the structure.

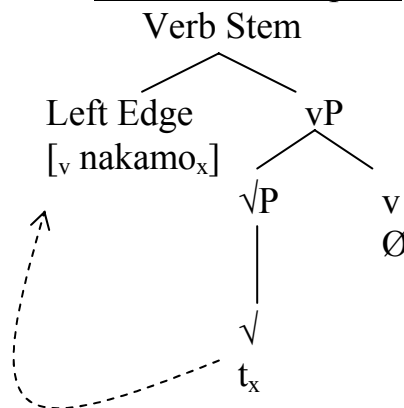
As noted earlier, there are verbs which appear to be comprised only of an initial (see (23a)). Does (23a) counter the claim that, minimally, the template consists of a light verb, a root and the Left Edge? This seems to be too much structure for a verb which only has an initial. I assume the head to be a phonologically null light verb (see (23b)). The root verb moves to satisfy the Left Edge requirements.

(23) Initial only (Fox)

a. nakamo -wa  
 sing  
 INITIAL IIN.3S  
 “S/he sings.”

(Data from Goddard 2002)

b. Verb Stem Template



Under this analysis, there are no Algonquian verbs lacking a final.

The template as I have described it thus far accounts for the variety of syntactic categories found in initial position. The proposal that this verb stem template underlies the organization of Algonquian verbal morphology is also consistent with the allomorphy evidenced within the verb stem (see (15) and (16)).

**4.2. Allomorphy**

Example (15), together with two more examples of allomorphic variation between initial and final position, are provided in (24).

(24) <u>Movement analysis consistent with cases of allomorphy within the Verb Stem</u>			
	<u>Initial (Left Edge)</u>	<u>Final (Non-Left Edge)</u>	<u>Lexeme</u> <u>Language</u>
a.	[ <sub>v</sub> <i>wi.seni-</i> ]	<i>-isenye.</i>	EAT      Fox
b.	[ <sub>v</sub> <i>pâhpi-</i> ]	<i>-âhpi</i>	LAUGH      WNaskapi
c.	[ <sub>v</sub> <i>nakamo-</i> ]	<i>-ina.ke</i>	SING      Fox
		√V	

In descriptive terms, the morphemes in (24) may occur as either “initials” or “concrete finals.” Recast in the terms of the present analysis, these are root-verbs which have the option of remaining in situ (within VP), or of moving to fill the Left Edge. The morphemes in (24) vary formally depending on whether or not they occupy the Left Edge so that there is a Left Edge form and a non-Left-Edge form. In (24a–c), the truncated form is the non-Left Edge form. Notice also that in (24a–b) the Left-edge form is consonant-initial, and that the form of the consonant is not predictable (i.e., it is not an epenthetic form). It is beyond the scope of the present paper to consider the formal properties of allomorphy in further detail.

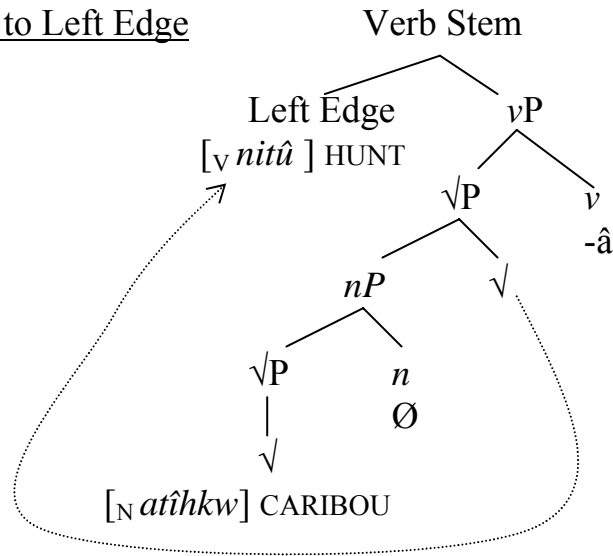
Judging from the semantic robustness of the morphemes shown in (24), these are root verbs. In my research to date I have not found any evidence of allomorphic variation of the so-called abstract finals (light verbs); that is to say, no morphology corresponding to an abstract final is ever found in initial position. There appears to be a restriction of the following nature: A root verb may move to fill the left edge, but a light verb may not. Why this restriction might hold is a matter for future investigation.

We'll now consider the issue of the reversal of normal scopal relations, then we'll take a closer look at preverb bumping.

### 4.3. Reversal of normal scopal relations

The data in (14a) and (20) show what I take to be a root verb positioned to the left of what seems to be the nominal complement of the verb. This morpheme order is normal for morphologically simple verbs of this type; generally-speaking, if a logically transitive lexical verb has an overt complement within the verb complex, the complement is positioned to the right of the verb. The simplest way to account for these data is to propose that the root verb (in (20a), *nitû* “hunt”) moves to fill the Left Edge, as shown in (25).

(25) Raise root verb to Left Edge



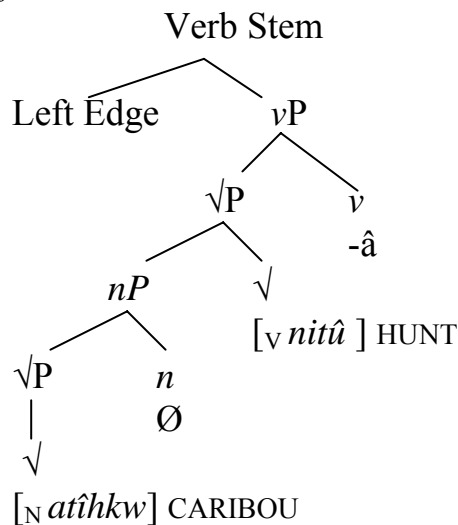
The problem with this solution is that, although it yields the correct surface form, the requirement to fill the Left Edge is not syntactically driven. The Left Edge is blind to category—it is a syntactic free-for-all position. Thus, the requirement must be something like “move the closest morpheme which at Spell-out will be matched with a phonologically overt string.” This ought to be the incorporated noun, “caribou.” Moving “caribou,” however, yields the wrong surface form.

(26) (20a): \*atîhkw<sub>x</sub>- t<sub>x</sub> nitû-âw (Should be *nitû-atîhkw-âw*)

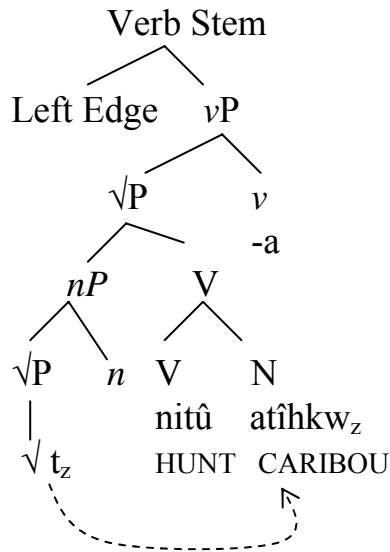
In (27a–c) I show a third solution. The noun incorporates into the verb and subsequently the verb/noun complex move to the Left Edge. For the moment I assume that the noun incorporates to prevent the verb and complement from being separated.

(27) Structure for (20a)

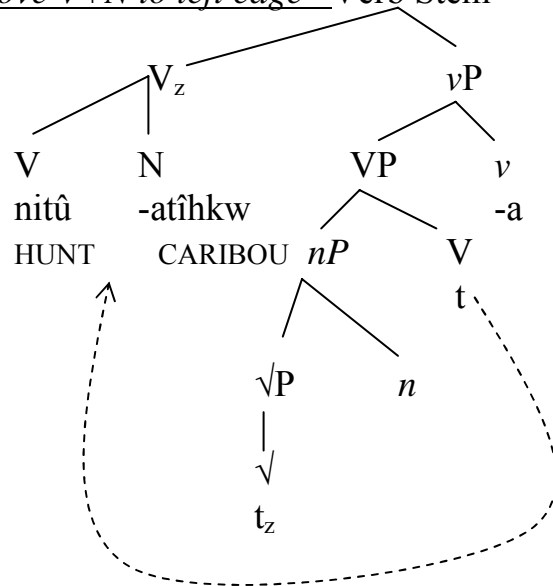
a. Before movement



b. Incorporate N into V



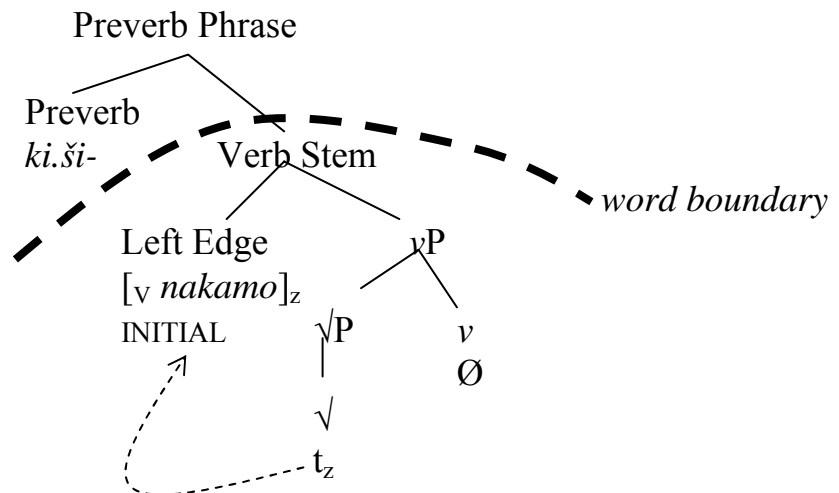
c. Move V+N to left edge Verb Stem

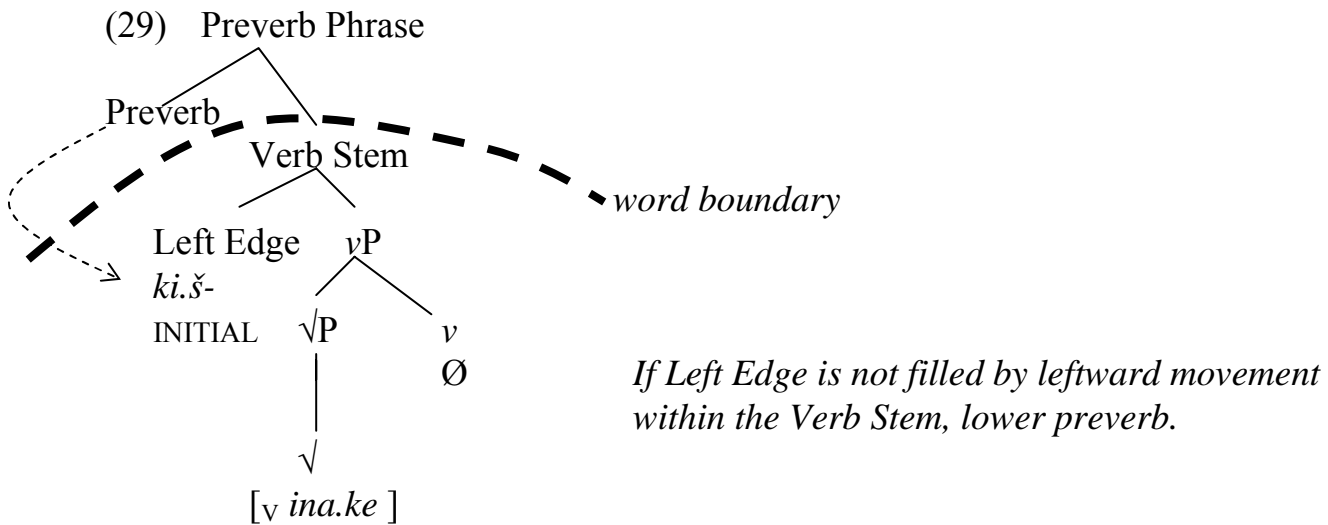


#### 4.4. Preverb bumping

Let us now consider the phenomenon referred to as “preverb bumping” as it provides further evidence in support of the verb stem template I propose here. We have already seen examples of preverb bumping in the pair of sentences in (15) and in (17). Morphemes which encode grammatical concepts such as aspect, tense and mood are referred to as “preverbs.” The choice of terminology reflects the fact that their default position is left of the word boundary. Consider (15a) and (15b) again. It is (15a) rather than (15b) that shows *ki.ši-* occupying its normal position. Thus I assume that in (15b) preverb lowering has taken place. Structure (28) shows (15a) and (29) shows (15b), the case of preverb lowering.

(28)





Goddard (2002) reports that (15a), the form with *ki.š-* in preverb position (*ki.š-*), is statistically less common than (15b), the form with *ki.š-* lowered to initial position.<sup>12</sup> At least in the case of this combination of morphemes, preverb lowering seems to be a more desirable option. The verb stem template hypothesis at it stands at present forces us to conclude that some formal property of the root verb determines the choice (of (15a) or (15b)). The root verb SING preferentially remains within VP (in final position). The fact that speakers prefer (15b) over (15a) could be captured by proposing that movement of SING to the Left Edge occurs at a cost, and is consequently less desirable. Preferentially, the Left Edge is filled by lowering a preverb, if one is present (otherwise, SING has no choice but to raise, as (23) shows).

Some root verbs only ever occur as an initial, which is to say they must move to the Left Edge. Others only ever occur as finals, which is to say they do not have the option of moving out of VP. The morpheme DRINK, shown in (30), must move out of VP. I have marked it with a feature showing that it is required to move (must move = ⇐). DRINK always occupies initial position.

(30) Fox

- |                     |        |                           |                  |                |
|---------------------|--------|---------------------------|------------------|----------------|
| a. <i>meno</i> (AI) | -wa    | b. <i>ki.ši#</i>          | <i>meno</i> (AI) | -wa            |
| drink               |        | finish                    | drink            |                |
| INITIAL             | IIN.3S | PREVERB                   | INITIAL          | IIN.3S         |
| “S/he drinks.”      |        | “S/he finished drinking.” |                  | (Goddard 1990) |

The data in (17) illustrate the root verb *ose*. WALK, which only ever occurs as a final. The morphemes *pem* (“along”) and *we.p* (“begin”) are both classified as preverbs. Either preverb can occur in initial position: in (17a), *we.p* is the initial and in (17b) it is *pem*.<sup>13</sup> Data such as (15), (17) and (30) suggest that the properties of individual heads determine whether a pair of morphemes will combine as initial and

<sup>12</sup> There doesn't appear to be a semantic difference between (15a) and (15b).

<sup>13</sup> Note that preverbs occur in strict linear ordering: *pem-* is positioned left of *we.p*.

preverb or as final and initial. The table in (31) summarizes the information about the movement restrictions imposed by individual heads.

(31)

	V $\Leftarrow$ = must move	V $\Leftarrow$ ⊠ = must not move
	<b>PREVERB</b>	<b>INITIAL</b> <b>FINAL</b>
		<i>meno</i> $\Leftarrow$ (DRINK)
(30b)	<i>ki.ši-</i>	<i>meno-</i> $\leftarrow$ [v t]
(17b) lower [P <sub>vbp</sub> t]	$\longrightarrow$	<i>pem-</i> <i>-ose.</i> ⊠ (WALK)
(17a) [P <sub>vbp</sub> <i>pemi-</i> t] lower	$\longrightarrow$	<i>we.p-</i> <i>-ose.</i> ⊠ (WALK)
If a verb is not marked $\Leftarrow$ or ⊠, only move as last resort.		
(15b) lower [P <sub>vbp</sub> t]	$\longrightarrow$	<i>ki.š-</i> <i>ina.ke</i> (SING)
(23a) Last Resort applies:		<i>nakamo</i> $\leftarrow$ [v t]
(15a) Violates “Move V as Last Resort”:		<i>ki.ši-</i> <i>nakamo</i> $\leftarrow$ [v t]

I assume that verbs like SING are not specified for any movement feature and do not move unless required to do so. Thus, the unmarked construction will be the most common statistically, (15b), where the preverb lowers to fill the left edge. In (23a), there is no preverb available for lowering, and, as a last resort, the root verb raises to fill the left edge. (15a) is the less-preferred construction, perhaps because the default “don't move” option has been violated.<sup>14</sup>

## 5. Concluding remarks

In summary, the verb stem template is a right-headed structure, which captures the fact that normal scopal relations within the verb stem are leftward. The Left Edge of the structure is filled via movement, accounting for the fact that initial position is not associated with a specific syntactic category. If this position is not filled by leftward movement within the verb stem itself, a morpheme may be lowered across the word boundary from preverb position. Leftward movement within the verb stem appears to be subject to the individual requirements of the root verbs. The template accounts for the fact that the same morpheme can alternate between preverb and initial position, or

<sup>14</sup> The issue of allowing lowering remains an outstanding issue to be addressed in this analysis.

between final and initial position. In some cases allomorphic variation is evident. Finally, the template provides the motivation to reconsider the traditional distinction between abstract and concrete finals in terms of light versus root verbs.

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