

Special characters: š č θ ə â á à ä é è û î î ô σ [] ' λ α σ μ ⊆

Arguments for Multiple Positions of Relative Roots
(in Passamaquoddy, Penobscot, Meskwaki, and East Cree)

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This paper investigates three verb-internal morphemes (Oxford, 2019) in Algonquian languages known as “relative roots” in the Algonquianist literature: *taθ-, *eθ-, and *went-. Relative roots typically occur either in the stem-initial position or to the left of the verb stem as a preverb. In (1), for example, the stem *-očiwen* is formed from the initial *oč-* and the final *-iwen-*; *oč-* is identified as the relative root *went- in its stem-initial form, whereas *-iwen-* is a verb final meaning ‘carry’. In (2), on the other hand, the relative root *taθ- is realized as a preverb in the form of *taši-* and combines with a full verb stem (Dahlstrom 2014).¹

- (1) menes-eki eh-**oči**wen-ekoči.
island-LOC AOR-carry.**from**-3'>3.CJ
‘It carried him from the island.’ (Meskwaki; Dahlstrom 2014:60)

- (2) ayohi ke-ih-**taši**-witamaw-ene.
here 2-FUT-**at**-explain-1>2.IND
‘I will explain it to you here.’ (Meskwaki; Dahlstrom 2014:59)

In both cases, a non-core argument not subcategorized for by the verb is added to the sentence and is indexed on the verbal complex by a relative root. The locative argument *meneseki* ‘island’ is taken

as the spatial source of the carrying event in (1) and the argument *ayohi* ‘here’ is understood as the general location where the event of explaining will take place in (2). This paper uses the terminology following Bruening (2004) and Dahlstrom (2014) in which the argument associated with a relative root is referred to as an “oblique argument”. Others such as Rhodes (2010) and Branigan & Brittain (2016) call such arguments “relative root complements” and distinguish them from true obliques which are viewed as adjuncts in Dahlstrom 2014 (i.e., arguments that are not associated with any overt morpheme in the syntax).

The relative roots may also have a corresponding free-standing form, which is often treated as a preposition-like particle (Bruening, 2001). As shown in (3), the Passamaquoddy relative root *oloq-* ‘that way, in that direction’ occurs either as a preverb or as a separate word in the form of *oloqi-w*, where the final *-w* is identified as marking the syntactic category of particle by Bruening (2001).

- (3) 't-**oloq**-aph-a-l **oloqi-w** qospem-ok.
 3-**that.way**-track-DIR-OBV **that.way**-PTCL lake-LOC
 ‘She tracked him toward the lake.’ (Passamaquoddy; Bruening 2001:169)

In this paper, while the discussion is mostly around preverbal relative roots, there are cases where the stem-initial and the free-standing uses of the relative roots are also involved, especially in the discussion on the rationale use of *went-.

RELATIVE ROOTS AND APPLICATIVES

Previous studies on relative roots often focus on their argument-associated uses and suggest that the

relative roots, in a certain sense, “license” the oblique argument. Bruening (2001) suggests that the oblique argument forms a constituent with its associated relative root and is added to the argument structure of the verb in Passamaquoddy. Dahlstrom (2014) argues for the same in Meskwaki; she suggests that relative roots subcategorize for an oblique argument and specify the thematic role of it. The kind of licensing relation between a relative root and its associated argument is, however, unique, as pointed out by Rhodes (2006): The associated arguments present distinct properties from objects and other adjunct obliques that are (obligatorily or optionally) licensed by the verb with respect to several morphosyntax and syntax patterns in Algonquian, including verb agreement, obviative marking, change of grammatical relations, etc.

Algonquian relative roots are reminiscent of the applicatives in Bantu languages and many other languages, such as Winnebago, Tagalog, etc., wherein an oblique or non-core argument is added to the argument structure of the verb via certain morphemes recognized as applicatives.² Applicatives can be divided into two types, namely thematic applicatives and (athematic) licensing applicatives. With thematic applicatives, it is commonly assumed that the thematic role of the applied argument is assigned by the applicative. Hence, different thematic roles are often associated with different forms of applicatives. In some languages like isiXhosa, however, the same form of the applicative is associated with applied arguments of various thematic roles. If the thematic role is always assigned by the applicative, then all applicative constructions in such languages are predicted to have multiple interpretations. Yet the thematic role of the applied argument is often understood unambiguously and often depends on the meaning of the verb (Jerro 2016). This empirical fact leads to the proposal of the licensing applicative, which only serve to syntactically license the applied argument without assigning a thematic role (Paul and Whitman 2010; Georgala 2012; Nie 2020; Myler and Mali 2021a).

Another feature of the licensing applicative is that it does not always introduce an additional argument. The licensing applicative may function to raise an applied argument introduced by other applicatives (such as the raising applicative proposed by Paul and Whitman (2010) for Mandarin and Nie (2020) for Tagalog). In some other cases, the licensing applicative may function to restrict the interpretation of an argument. Marten (2003) reports that in Swahili, the applicative can be used to index a pragmatically salient information status of the object without introducing a new argument.

Relative roots appear to share properties of both types of applicatives. On the one hand, similar to thematic applicatives, different relative roots are associated with different thematic roles (cf. (1) and (2)). On the other hand, the same relative root can be associated with oblique arguments of various thematic types, and the very same relative root may have athematic uses (similar to licensing applicatives). (The availability of each use of the relative roots varies slightly across the language family.) For instance, the oblique argument licensed by *eθ- can be interpreted as expressing goal of motion in some cases (with motion verbs) as in (4), and as expressing manner in other cases (with non-motion verbs) as in (5).

(4) gii=**izh**-yaa-w ishpimisagw-ing.

PST=**to**-go-3.SBJ upstairs-LOC

‘S/he went (to) upstairs.’ (Ojibwe; Rhodes 2010:317)

(5) māmāhch chiki **ishi**-nākun.

different FUT.3 **thus**-appear.0.IND

‘It(inan.) will look different.’ (East Cree; Branigan and Brittain 2016:6)

Meanwhile, in addition to its locative use in (2), *taθ- can be used to express the progressive aspect without adding any additional argument to the sentence, as shown in (6):

- (6) eh-ayeši-keh-mani aškotewi-**taši**-aniwešeniki.
 AOR-still-but-now fire-**PROG**-burn.vigorously
 ‘But the fire was still going strong.’ (Meswaki; Dahlstrom 1996:137)

PROPOSAL

The similarities between relative roots and applicatives motivate an applicative-like analysis of relative roots. In this paper, I pursue this road and provide a unified analysis of the relative roots that can account for both their valency-increasing uses and their other syntactic functions. In particular, I identify both a lower and a higher position where the relative roots can merge similar to the Low/High and Super High positions of applicatives following Pykkänen (2008), Myler & Mali (2021a), a.o. The relative roots may have their position at the edge of vP, taking an oblique argument as their complement; this accounts for their non-sentential thematic uses. On the other hand, the aspectual and sentential uses are tied to a rather high position above VoiceP, in contradistinction to the lower vP-level position of the relative roots. To keep in line with the tradition in the applicative literature, the vP-level relative roots are referred to as the High Relative Roots (RR_{high}) and the above-Voice relative roots as the Super High Relative Roots (RR_{superhigh}).

- (7) RR_{superhigh} > Voice > RR_{high} > v
 {aspectual; sentential} {thematic}

To account for the various (non-sentential) thematic uses of the same relative root, I suggest further that the interpretation of a High relative root is determined by the semantic class of the verb (e.g., motion vs. non-motion), akin to Kratzer's (1996) treatment of various interpretations of Voice, as exemplified below with the High *eθ- for its goal and manner uses.

(8) a. $[[*e\theta-]] = \lambda x. \lambda e_s . \text{GOAL}(e, x) / \text{---}(\text{motion event})$

b. $[[*e\theta-]] = \lambda x. \lambda e_s . \text{MANNER}(e, x) / \text{---}(\text{non-motion event})$

Here I use the GOAL and MANNER functions in the semantic entries as shorthand for the purpose of illustration. Notice that the first argument that this relative root takes should be type-neutral (at least for the manner use) since the oblique argument expressing manner can be various syntactic categories, including clauses, adverbs, NPs etc. or even implicit (Dahlstrom 2014). A similar account can be given to the High *went- which, in addition to having the path-related source use, is found to be associated with path-unrelated roles such as instrumentals in languages like Plains Cree (Cook 2008) or benefactives in Eastern Algonquian languages (Quinn, personal communication). But such uses are almost entirely associated with *went- in its free-standing adposition form.

The proposed analysis straightforwardly accounts for (i) the aspectual use of the relative roots (e.g. *taθ- for progressive) as well as two other properties that are under-explored in the literature, including (ii) relative roots with a sentential interpretation (e.g. the rationale *went- and the sentential complementizer *eθ-) prefer a left-peripheral position, and (iii) multiple relative roots can stack together within one verbal complex. In the remainder of this paper, I go through the properties

of the relative roots one by one and demonstrate how the proposed analysis accounts for them. Before we delve into the details of the analysis, it is important to note that this study is based on published examples only, focusing on data from four languages, namely Passamaquoddy, Penobscot, Meskwaki, and East Cree. It does not assert the universality of these properties in the whole language family, and variations are indeed expected. The textual sources used in paper mainly come from Dahlstrom (1996, 2014, 2015) for Meskwaki, Bruening (2001, 2004, 2006) for Passamaquoddy, Quinn (2017) for Penobscot, and Branigan and Brittain (2016) for East Cree. It also incorporates examples from Objive (Rhodes 2006, 2010) and Plains Cree (Cook 2008).

ATHEMATIC USES OF SUPER HIGH RRS

Compare the Meskwaki examples below, repeated from (2) and (6). While the relative root **taθ-* functions as the introducer of the general location in (9a), **taθ-* is used to mark the progressive aspect in (9b). The same morpheme *taši-* is attached to the verb stem *aniwešeniki* ‘vigorously burn’, yet there is no general location being added to the sentence. Instead, the sentence is reported to have a progressive reading that “the fire is (was) burning” (Dahlstrom 1996).

- (9) a. Ayohi ke-ih-**taši**-witamaw-ene.
 here 2-FUT-**at**-explain-1>2.IND
 ‘I will explain it to you here.’ (Meskwaki; Dahlstrom 2014:59)
- b. Eh-ayeši-keh-mani aškotewi-**taši**-aniwešeniki.
 AOR-still-but-now fire-**PROG**-burn.vigorously
 ‘But the fire was still going strong.’ (Meskwaki; Dahlstrom 1996:137)

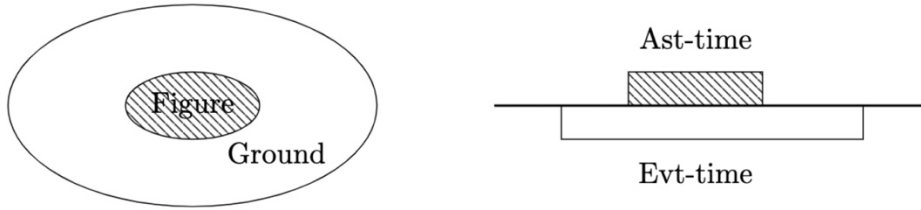
Below is another pair of examples of the two uses of *(en)taθ- in Passamaquoddy. While the occurrence of *etoli-* in (10a) is associated with the locative use, the occurrence of *totoli-* in (10b) gives rise to a progressive reading.

- (10) a. **Etoli**-mskuw-at nicalku-l utene-k.
IC.**at**-find-3.CJ 3.uncle-OBV town-LOC
'He found his uncle in the town.' (Passamaquoddy; Bruening 2001:169)
- b. Mecote **totoli**-ye Lula utapakonum.
still **PROG**-move Lula 3.car
'Lawrence's car is still running.' (Passamaquoddy; Francis et al. 2008)

In addition to Meskwaki and Passamaquoddy, this dual function of *taθ- is found across the language family—at least among Eastern Algonquian languages, including Penobscot and Mikmaq (Quinn 2017), as well as Ojibwe.

It is not rare cross-linguistically that items functioning as locative adpositions are also used in expressing the progressive aspect in the language (cf. Mandarin *zài*, Tunisian Arabic *fī*, Basque *-n*, Dutch *aan*, etc.). Demirdache and Uribe-Etxebarria (2000) posit that syntactic aspects can be understood as a type of relative relations that are calculated in the same way as calculating the relative relation between the FIGURE and the GROUND. For instance, the English locative preposition *in* in a sentence like *the cat is in the box* denotes a WITHIN relation in the spatial sense: The spatial stretch of the figure (e.g., *the cat*) is contained within the spatial stretch of the ground (e.g., *the box*)

as illustrated by the picture on the left in Figure 1.



Similarly, the progressive aspect can be understood as a WITHIN relation in the temporal realm. As shown in Figure 1 on the right, the assertion time, namely the time for which an assertion is made (Klein 1995), can be viewed as the temporal figure that is contained within the event time, which can be understood as the temporal ground. Hence, the progressive interpretation in a sentence like *John is reading a book* is derived from the sense that the time interval visible to the semantic interpretation (i.e., the assertion time) is a subpart of the event of John reading a book that includes neither its initial nor final endpoint (Demirdache and Uribe-Etxebarria 2000).

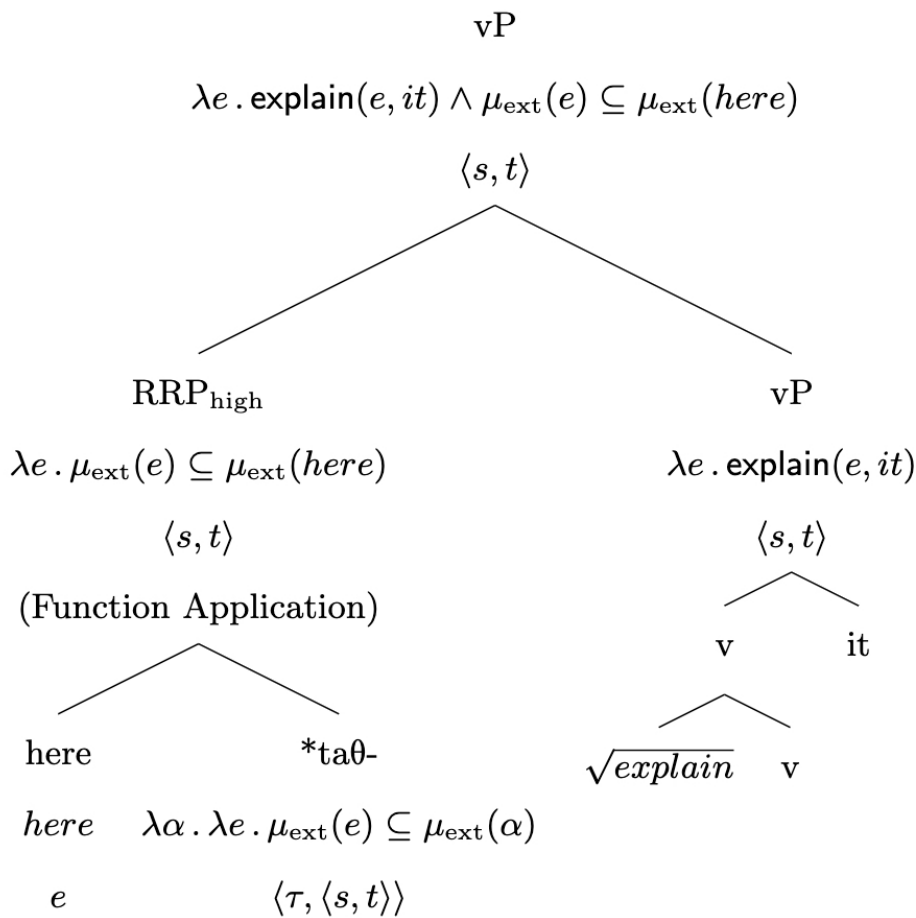
Given the analogy between the spatial and temporal WITHIN relation, a similar treatment can be implemented to the two uses of **taθ-*. I propose a unified semantics of **taθ-*, as in (11).

$$(11) \quad \llbracket *ta\theta- \rrbracket = \lambda\alpha_\sigma . \lambda e_s . \mu_{\text{ext}}(e) \subseteq \mu_{\text{ext}}(\alpha)$$

Let μ_{ext} be a measure function that relates individuals (type e) or events (type s) to their spatiotemporal extent. The relative **taθ-* denotes a two-place predicate which takes an argument α and an event argument e and asserts that the spatiotemporal extent of e is within that of α . The semantic type of the argument α is marked as σ , meaning that the argument is underspecified

between individuals and events. Differing from Demirdache and Uribe-Etxebarria's (2000) analysis, in which two temporal arguments are introduced in the syntax as the external argument of Aspect Phrases, in this study, the temporal relation is calculated using the μ_{ext} function.

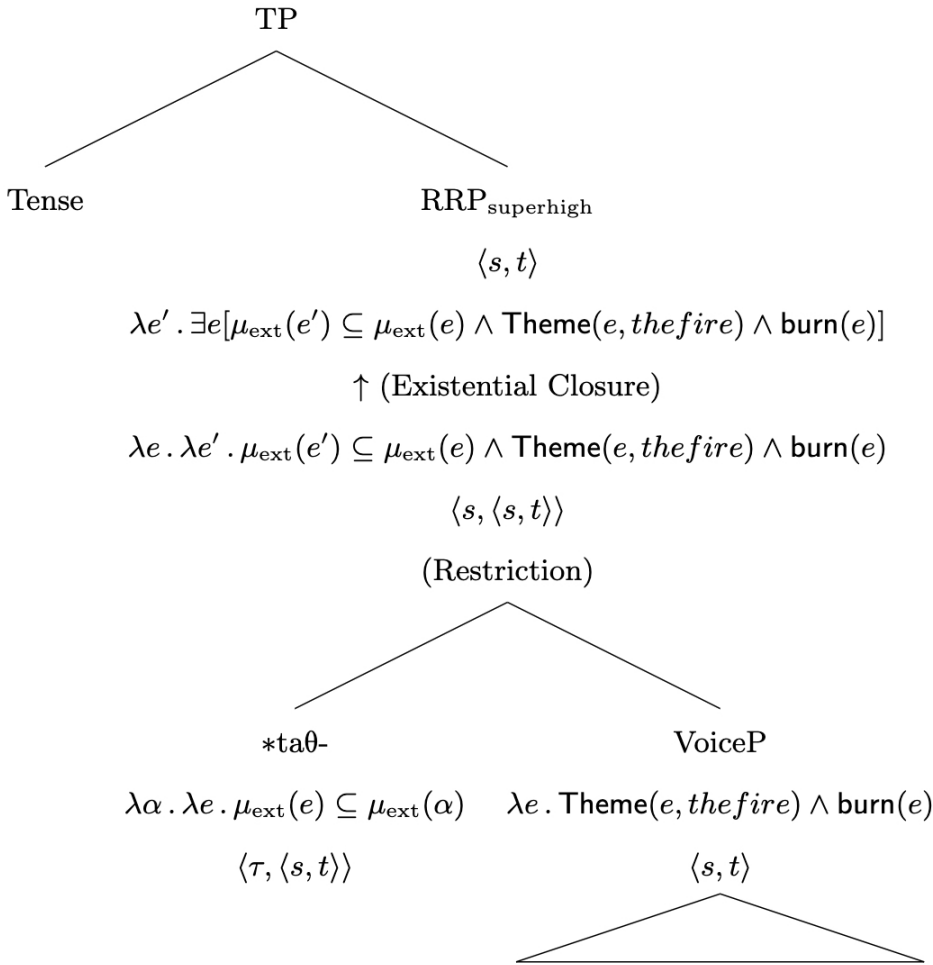
The general location of the event is expressed in the sense that the spatiotemporal extent of the event is within the spatiotemporal extent of the place. The derivation of (9a) is illustrated in Tree 1.



When the locative argument of type e appears, $*ta\theta-$ combines with the argument via Function Application, taking it as the (locative) ground. The resulting event predicate further combines with

the event predicate denoted by vP through Predicate Modification. Sentence (9a) can be hence interpreted as follows: There is an event of explaining such that the agent is “I”, the theme is “it”, and the spatiotemporal extent of the event is within the spatiotemporal extent of “here”.

The progressive use of *taθ- can be accounted for in a similar fashion but with *taθ- composing with the event predicate (type $\langle e, t \rangle$) denoted at the VoiceP directly. This composition can be done via a single process similar to Restriction plus a following Existential Closure (Diesing 1992, Chung and Ladusaw 2004). The derivation of the progressive sentence in (9b) is given in Tree 2. Notice that while in the locative use, the understood ground is a certain place, for the progressive use, it is the (spatio)temporal extent of an event that contributes to the (temporal) ground.



Here, the event predicate of type $\langle s, t \rangle$ can compose with *taθ- (type $\langle \sigma, \langle s, t \rangle \rangle$) in the same vein as bare NPs (type $\langle e, t \rangle$) composing with transitive verbs (type $\langle e, \langle e, t \rangle \rangle$). In this way, it gives at the top node of the Super High Relative Root Phrase (RRP_{superhigh}) a set of events whose spatiotemporal extent is contained by the fire-burning event described by the verb, giving rise to the progressive reading.³

Dahlstrom (2014) discusses constructions where multiple oblique arguments occur (either overtly or covertly) like the following:

- (12) ini=čahi **weči-** ‘ke-ih-nakwa’-inenani
that=so IC.**from-** 2-FUT-leave.2.IND-say.(thus).to.1>2.PART/OBL.HEAD
‘So that is why I said to you, “You should leave.”’ (Meskwaki; Dahlstrom 2014:66)

It is worth noting that the multiple oblique arguments constructions discussed by Dahlstrom (2014) all involve the relative root *went- with a rationale-related interpretation. Although the source-related interpretation of *went- in such constructions may result in a sensible reading (e.g. ‘That is (the place) from where I said to you, “You should leave”’), such readings are not reported to be available by Dahlstrom (2014). Dahlstrom (2014) also notes that the rationale *went- in these constructions is always found to be separated from the remainder of the rest of the verbal complex: *went- often occurs at the left-edge of the verbal complex and is separated from the verb-stem by other items such as the oblique argument of the quoting verb.

I take these empirical facts to be indicative of a higher position of the rationale relative root *went-, which is distinct from the lower source *went-. In particular, I recognize the rationale use of *went- as a sentential use and suggest that the rationale *went- is base-generated in the super high position. Hence, the preference for separating the rationale *went- from the remainder of the verbal complex can be viewed as a way of disambiguating between the rationale use and the other non-sentential semantic uses *went- (e.g. the source use). This above VoiceP position for a rationale-related item is not without precedent. There have been proposed similar analyses of the rationale applicative in

isiXhosa *why*-questions (Myler & Mali, 2021b) and English *why*-stripping constructions (e.g. *John ate natto. Why natto?*) (Yoshida et al., 2013).

The data from East Cree provides another argument for the left-peripheral position of the rationale *went-. Consider the following examples:

(13) a. Julie nit-**isi**-nihkâsun.

Julie 1-**thus**-be.named.3.IND

‘My name is Julie.’ (East Cree; Branigan and Brittain 2016:6)

b. mâmâhch chiki **ishi**-nâkun.

Different FUT.3 **thus**-appear.0.IND

‘It(inan.) will look different.’ (East Cree; Branigan and Brittain 2016:6)

In both examples, the oblique argument associated with the manner relative root *isi-/ishi-*, namely *Julie* in (13a) and *mâmâhch* ‘different’ in (13b), occurs to the left of the verbal complex. Moreover, in (13b), the oblique argument and the verbal complex are intervened by the tense morpheme *chiki* ‘FUT.3’.

However, when an additional relative root occurs, namely the rationale *went-, the manner oblique argument appears to occur postverbally instead of preverbally. As shown in (14), the manner oblique argument *hotdogs* is placed at the end of the sentence, despite that (14) involves the free-standing form of the relative root (i.e., *wâhchi*).

(14) Châkwân **wâhchi** **ishi-nihkâtâ-hch** û-hî hotdogs?
 what **from** **thus-be.named-0.PL.CJ** DEM-0.PL hotdogs

‘Why are these called *hotdogs*?’ (East Cree; Branigan and Brittain 2016:12)

Branigan and Brittain (2016) also report that *hotdogs* is not just preferred in a postverbal position, in fact, it is disallowed in preverbal positions including the pre-*wh* position as in (15a) and the pre-*wâhchi* position as in (15b).

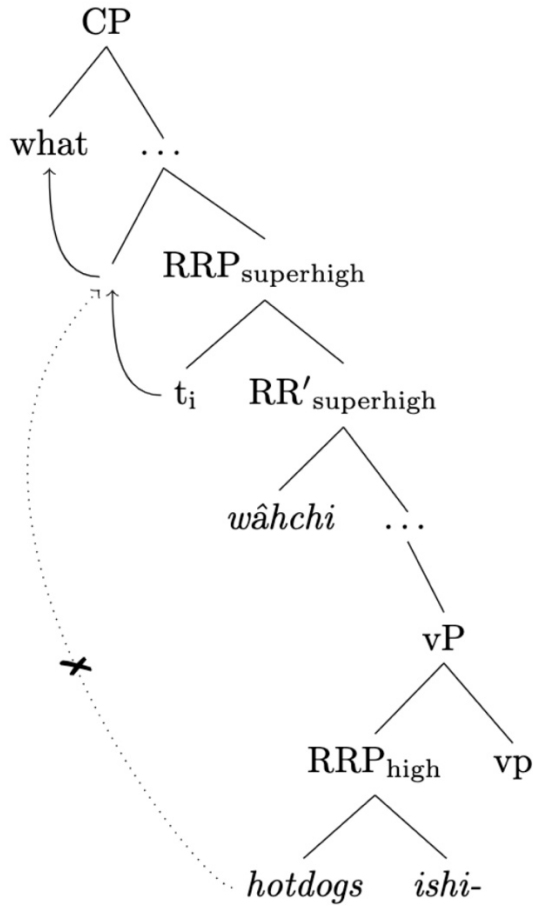
(15) a. *hotdogs châkwân wâhchi ishi-nihkâtâ-hch û-hî?

b. *châkwân hotdogs wâhchi ishi-nihkâtâ-hch û-hî? (East Cree; Branigan and Brittain 2016:12)

From a descriptive perspective, the distinct behaviors of the manner oblique arguments in (13) and (14) allow for the following generalizations: (i) non-sentential oblique arguments are allowed in both preverbal and postverbal positions, (ii) a preverbal non-sentential oblique argument and its associated relative root can be interrupted by certain morphemes, and (iii) the intervening morpheme cannot be sentential relative roots like the rationale *wâhchi*.

This pattern can be accounted for straightforwardly with the assumption that the rationale *went- occupies a super high position. In particular, assume that the rationale relative root *wâhchi*, together with its associated *wh*-phrase, is at the superhigh position, whereas *hotdogs* is base-generated lower under the RRP_{high} projected by the manner relative root *ishi-*. As the *wh*-phrase would move to Spec-CP from the specifier position of the $RRP_{superhigh}$, it follows that *hotdogs* cannot be fronted to any

position above *wâhchi*, for such a higher position would be occupied by the *wh*-phrase or the trace it leaves, as shown below:



In other words, the ungrammaticality of (15a) and (15b) is precisely because fronting a lower NP to a position preceding the superhigh rationale relative root is disallowed.

The proposed analysis only bans non-sentential oblique arguments from preceding the sentential relative root in interrogative sentences. It does not rule out cases where the oblique argument occurs in a preverbal position that is after the sentential relative root. However, it is suggested by an

audience member at the 54th Algonquian Conference that such an order is actually unacceptable in East Cree, as shown in (16).

(16) *châkwân wâhchi hotdogs ishi-nihkâtâ-hch û-hî?

The ungrammaticality of (16), however, does not provide a negative argument against the proposed analysis. In fact, there is room for doubt whether the ungrammaticality in (16) as well as in (15) is due to the fact that the rationale relative root in such cases is used in its free-standing form. Hence, if there exists a rule banning oblique arguments from occurring preverbally in the presence of a free-standing relative root in East Cree, it follows that the surface order in (15) and (16) should be bad. It is worth noting that such a word order is suggested to be permissible in Meskwaki and Passamaquoddy by some other audience members at the conference, providing evidence in favor of this account. The ungrammaticality of (16) then may exemplify an instance of language variation between East Cree and Meskwaki/Passamaquoddy.

On the other hand, this analysis does not posit the same restrictions on non-interrogative sentences: Without the *wh*-phrase occupying the preverbal positions, the non-sentential oblique argument should be allowed to land in such positions. Hence, a more flexible order between a non-sentential oblique argument and the rationale *went- is expected in non-interrogative sentences. Regardless of language variations, this prediction is borne out in Meskwaki. Compare (17) with example (12), repeated below in (18).

(17) ini 'hawo' weči- in-aki.
that all.right IC.from- say.(thus).to-1>3.PART/OBL.HEAD

‘That is why I said, “All right,” to him.’ (Meskwaki; Dahlstrom 2014:66)

- (18) ini=čahi **węci-** ‘ke-ih-nakwa’ -inenani
that=so IC.**from-** 2-FUT-leave.2.IND -say.(thus).to.1>2.PART/OBL.HEAD
‘So that is why I said to you, “You should leave.”’ (Meskwaki; Dahlstrom 2014:66)

The above two examples both involve a “non-sentential” oblique argument—the direct quote in both cases—that is selected by the verb (Dahlstrom 2014). It shows that the non-sentential oblique argument can occur either preverbally before the rationale *went-, being separated from the verbal complex as in (17) or as part of the verbal complex after the rationale relative root as in (18).

STACKED RRS

Another potential piece of evidence for the Super High Relative Roots comes from cases where multiple relative roots are found within the same verbal complex. Consider the Penobscot example in (19) where two relative roots are stacked together to the left of the verb stem *kəlosəya* ‘speak’—one being *went-, in its reflex *węci-*, and the other being *eθ-, in its reflex *ali-*. The sentence is interpreted as meaning “that is why I speak thus” where *went- receives a rationale interpretation, and *eθ- receives a manner interpretation.

- (19) Ni **węci-ali-**kəlosəya.
that IC.**from-thus-**speak.1.CJ
‘That is why I speak thus.’ (Penobscot; Quinn 2017:13)

In Penobscot, the relative *went- has the basic source-related use, as shown in (20a), and *eθ- can function as the sentential complement marker, similar to the English complementizer *that*, as in (20b) (Quinn, 2017).

- (20) a. tən wéč-ohs-an?
 which IC.**from**-walk-2.CJ
 ‘Where do you walk from?’ (Penobscot; Quinn 2017:18)
- b. nə-wew-élətam-ən eli-kámáč-wəssak-alaməy-an.
 1-know-by.mind-N IC.**that**-very-bitter-be.hungry-2.CJ
 ‘I know that you are very distressingly hungry.’ (Penobscot; Quinn 2017:11)

If the sentential uses of the relative roots are not associated with a higher position, it is then predicted that (19) should have a reading where the outer *went- is associated with the source use and the inner *eθ- with the sentential, complementizer use (e.g. ‘that I speak from (some place)’). Contrary to fact, such a reading is unavailable (Quinn, personal communication). The proposed analysis provides a straightforward explanation for the lack of the ‘that...from’ interpretation in (19): It is impossible to move the source *went-, which is base-generated in the high position to a position higher than the sentential *eθ- in the superhigh position.

If fact, the “that...from” interpretation is likely to be associated with the reversed *eθ-*went- order, as illustrated by the following example. I use a question mark in parentheses to indicate that the grammaticality of the example is not confirmed by native speakers.

(21) (?)**eli-**'**ci-**kolusi n-ikon-uk.

that-from-speak.1.CJ 1-house-LOC

'That I speak from our house.' (Passamaquoddy; constructed example courtesy Conor Quinn, Personal Communication)

If it turns out to be true that different orders of the relative roots are associated with a different interpretation, as suggested by (19) and (20). It will provide a strong piece of evidence in favor of the proposed analysis.

CONCLUDING REMARKS

This study has investigated three relative roots in a group of Algonquian languages, aiming to gain some understanding of their syntax and semantics. It has been argued that there are at least two possible positions where the relative roots can merge: a superhigh position above VoiceP, responsible for the aspectual and sentential uses (e.g., the progressive use of *taθ-, the rationale use of *went-), and a vP-level high position associated with the basic thematic uses (e.g., the locative use of *taθ-, the source use of *went-, and the goal/manner use of *eθ-).

The proposed analysis makes several predictions that require further confirmation. First, this analysis suggests that the aspectual and sentential uses are linked to the superhigh position above VoiceP. This predicts that relative roots with such uses should not be realized as initials. Counterexamples to this prediction, where an initial relative root receives an aspectual or sentential interpretation, will challenge the analysis.

Second, the analysis predicts that multiple relative roots constructions should be productive, although only a very limited number of such examples are found in the textual sources this study covers. It is also worth noting that this analysis only rules out interpretations where the outer relative root receives a non-sentential interpretation, but the inner one receives an aspectual/sentential interpretation. The analysis does not posit any restriction on stacking the same relative root, as long as each occurrence of the relative root is associated with a different use (e.g. one aspectual/sentential and one thematic). In addition, the analysis does not rule out cases where three or more non-sentential thematic relative roots are stacked in the same verbal complex. I leave it to future research to examine this prediction and explore how the final spell-out may interact with other linguistic rules, such as Haplology and the Obligatory Contour Principle effect.

This study also has some limitations. First, it only focuses on a small set of relative roots and some of their uses. Many other identified relative roots, including those associated with degrees and amounts as discussed in Dahlstrom (2015), are not covered. On the other hand, many other observed uses of the three relative roots are not discussed in this paper. For example, Quinn (2017) suggests that *eθ- and *went-, in addition to *taθ-, also have aspectual uses, although such aspectual uses are mostly restricted to motion-verb aspect. Bruening (2004, 2006) reports that in Passamaquoddy, a “dummy” relative root, often the *eθ-, is obligatorily added to the matrix verb in *wh*-constructions that inquire about the oblique argument of the embedded verb. The “dummy” relative root may function to license the long-distance movement of the embedded *wh*-phrase (Bruening 2004), or it may be the spell-out of the higher copy of the relative root (Bruening 2006). Either way, the “dummy” relative root does not serve to introduce any additional argument or express grammatical aspects. Future research could expand the scope of this study by how the proposed analysis can be extended to account for a larger set of relative roots and their uses that are not included in this paper.

Second, the analysis relies on the hierarchy positions of relative roots to disambiguate their aspectual/sentential and non-sentential thematic interpretations. This dependence on syntax may pose challenges when extending a similar analysis to other Algonquian languages that exhibit significantly different syntactic features. An audience member at the 54th Algonquian conference suggests that the proposed analysis could be framed alternatively in terms of different scope takings instead of hierarchy positions. Future investigations might explore this alternative framework to deepen our understanding of relative roots across the language family.

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¹ List of Abbreviations: 0 = inanimate (in verb agreement), 3' = obviative, AOR = aorist (prefix), CJ = conjunct, DEM

= demonstrative, FUT = future; IC = initial change (ablaut); IND = independent indicative; LOC = locative; OBV = obviative third person; OBL = oblique; PST = past; PART = participle; PTCL = particle; PL = plural; SG = singular, “>” separates subject and object features. Verbs in relative clauses are inflected in the participle paradigm and bear an additional suffix agreeing with the head of the relative clause, indicated after a slash.

² Rhodes (2006) recognizes a type of constructions as “applicative constructions” where the applicative suffix *-amaw* is obligatorily used to introduce beneficiaries or recipients. Notice that in what Rhodes (2006) calls Algonquian applicative constructions, the original grammatical relation is changed: The original object shows the syntax of a secondary object, whereas the applied argument surfaces as the primary object and shows full verbal agreement (hence beneficiaries and recipients are added as the primary object, i.e., a core argument). In contrast, in relative root constructions, the new argument is not indexed by agreement on the verb, leaving the original grammatical relation unchanged. Hence, while I propose an applicative-like analysis of relative roots, I assume that the Algonquian relative root construction and the Algonquian applicative construction are two distinct constructions with few interactions.

³ One reviewer wonders whether a lexical ambiguous account where the high and superhigh *taθ- have different but related semantics is possible, especially given that the high *taθ- is likely to be of type <e, <s, t>> in most cases and the superhigh *taθ- of type <s, <s, t>>. A lexical ambiguous account indeed works just fine as a unified semantics account here. I am unaware of any evidence necessitating the unified account. I defer to other independent evidence for this issue.