

# Preverb Ordering in Mi'gmaq\*

Gretchen McCulloch  
gretchen.mcculloch@mail.mcgill.ca

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## 1 Introduction

- In this talk I look at preverb ordering in Mi'gmaq<sup>1</sup> (Eastern Algonquian, Canada)
- Preverbs attach to the left of a verb stem and can express a variety of meanings, including aspectual, modal, circumstantial, spatial, and relative.

(1) **etl-poqju-newti**-wissugwat-ma-n  
**process-start-alone-cook**.TI-1 SG-PL  
'I am in the process of beginning to cook them by myself'

- Multiple preverbs can attach to the same verb stem, but not all combinations of preverbs on a stem are grammatical.
- What determines whether a sequence of preverbs is possible?

**Slot Hypothesis:** Preverbs occupy arbitrary, fixed slots that determine their order with respect to each other

- Examples: Plains Cree (Wolfart 1967), Severn Ojibwe (Todd 1970), Odawa (Piggot 1974), Sheshâtshû Innu-aimûn (Lees 1979), Nishnaabemwin (Valentine 2001), Menominee (Cook 2003)
- A variant of this is that ordering is a function of a universal modifier hierarchy (Cinque 1999) which includes a detailed inventory of positions and a means of re-ordering items

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<sup>1</sup>Also spelled Mi'kmaq or Micmac. All examples are from the dialect spoken in Listuguj, QC and are written in the Listuguj orthography.

**Scope Hypothesis:** Preverb position is flexible and determined by scope or meaning relationships between items

– Example: Oji-Cree (Slavin 2005)

### Proposal

**Slots:** Not flexible enough.

**Scope:** Too flexible.

In this talk, I introduce new data on preverbs in Mi'gmaq that can best be accounted for by starting with slots (positions) and using a limited re-ordering mechanism.

## Roadmap

### 2. Language Background

1. What is a preverb?
2. How do preverbs co-occur?

### 3. Theories of Preverbs

1. Slot Hypothesis (and Universal Hierarchy)
2. Scope Hypothesis

### 4. Key Mi'gmaq examples

1. Ungrammatical in either order
2. Grammatical in only one order
3. Grammatical in both orders

### 5. Conclusions

## 2 Language Background

### 2.1 What is a preverb?

- Other Algonquian languages: preverbs as morphemes that may only occur between the person agreement prefix and the verb stem (e.g. Shields 2006 for Menominee).

- (2)    nae-kēs-a-hpāēnenew–anohkī-m  
       1-PAST-always-work.AI-1/2  
       'I was always working'

(Menominee, Shields 2006)

- Doesn't work for Mi'gmaq because person is marked on verbs as a suffix only, not a prefix + suffix combination. (In Algonquianist terms, the independent order in this language is derived from the conjunct order in Proto-Algonquian (Dawe-Sheppard 1988))

(3) gi's elugwe-i  
 already work.AI-1SG  
 'I already work'

- Despite the differences in person marking, there does seem to be a category of preverbs in Mi'gmaq that have the same ranges of meaning and distribution as preverbs in other Algonquian languages.

- (4) **etl**-wissugwat-ma-p  
**process**-cook.TI-1SG-PAST  
 'I was in the process of cooking it' (aspectual)
- (5) **getu**-wissugwat-ma-p  
**want**-cook.TI-1SG-PAST  
 'I wanted to cook it' (modal)
- (6) **gim**-wissugwat-ma-p  
**secretively**-cook.TI-1SG-PAST  
 'I cooked it secretively' (manner)
- (7) **tel**-wissugwat-ma-p  
**thus**-cook.TI-1SG-PAST  
 'I cooked it in such a way' (relative)
- (8) **al**-wissugwat-ma-p  
**around**-cook.TI-1SG-PAST  
 'I went around cooking it' (directional)  
 Context: I am a chef who goes around to different people's kitchens and cooks in them.

- Instead of person prefixes, we can use the negative marker *mu*, which occurs before the verb, to tell which modifiers are attached to the stem (preverbs) and which are independent of it (not preverbs)
- By this measure, *nata* 'can, know how to' is a preverb, but *etugjel* 'might, maybe' is not.

- (9) **etugjel** mu **nata**-lugwe-w-g  
**maybe** not **know.how**-work.AI-NEG-3AN  
 'maybe s/he doesn't know how to work, s/he might not be a good worker'
- (10) \*mu **etugjel** **nata**-lugwe-w-g  
 not **maybe** **know.how**-work.AI-NEG-3AN  
 (intended) 'maybe s/he doesn't know how to work, it's not the case that s/he might not be a good worker'

- (11) **\*etugjel nata** mu lugwe-w-g  
**maybe know.how** not work.AI-NEG-3AN  
 (intended) 'maybe s/he doesn't know how to work, s/he might know how to be good at not-working'

- On the right edge, I take preverbs to be those elements that can attach to verbs that are morphologically complete (can be found independently.)<sup>2</sup>
- By this definition, *gimi-* 'secretively' is a preverb in (6) above but is instead part of the verb stem in (12), because *wissugwatmap* 'I cooked it' is grammatical but *\*a'sit* '(intended) s/he goes' is not.

- (12) **gim-a'si-t**  
**secretively-go.AI-3AN**  
 's/he goes secretively'

### Preverbs

- ⇒ Found to the left of the verb stem that they modify
- ⇒ Cannot be separated from verb stem by negation or another element
- ⇒ Attach to verb stems that can be found independently
- ⇒ Base form ends in *-i*, which is sometimes deleted for phonological reasons.
- ⇒ Delisle and Metallic (1976): several hundred preverbs in Mi'gmaq.

## 2.2 How do preverbs co-occur?

It's common to find several preverbs on the same stem. Some examples of multiple preverbs in Mi'gmaq:

- (13) **me'si-poqji-gimi-newti-al-a'si-t**  
**fail-start-secretively-alone-around-go.AI-3AN**  
 's/he has difficulty starting to go around alone secretively'  
 Context: someone who is married to a jealous spouse who won't let them off on their own.
- (14) **getu-poqju-mamuni-espi-inn-uisi-t**  
**want-start-high-level-people-speak.AI-3AN**  
 's/he wants to start to speak the people's language at a very high level'  
 Context: said of an enthusiastic student of Mi'gmaq.

<sup>2</sup>Some cases where the stem appears to be different independently, such as *lugwe-* ~ *elugwe-* 'work' are in fact examples of initial change, which is a phonological process that is beyond the scope of this talk.

### 3 Theories of Preverb Ordering

- There seems to be some sort of normal order in which these preverbs typically co-occur.
- Traditionally, this general ordering has been characterized by grouping preverbs into a set of slots, which are ordered with respect to each other.

**Slot Hypothesis:** Preverbs occupy arbitrary, fixed slots that determine their order with respect to each other, for example: Plains Cree (Wolfart 1967), Severn Ojibwe (Todd 1970), Odawa (Piggott 1974), Sheshâtshû Innu-aimûn (Lees 1979), Nishnaabemwin (Valentine 2001), Menominee (Cook 2003).

- Although this is a good description of much of the preverb data, more recent research has shown that many preverbs can occur in multiple orders with respect to each other and that ordering has effects on meaning.
- It is not very meaningful to propose that most preverbs can occur in most slots.
- Two possible solutions:
  - Mechanism for slot re-ordering: Cinque's Universal Hierarchy
  - Abandon slots: Scope Hypothesis

**Scope Hypothesis:** Preverb position is flexible, determined by scope and has effects on meaning, for example Oji-Cree (Slavin 2005).

- My data suggest that several orders or combinations of preverbs that should be scopally possible remain ungrammatical.
- I therefore suggest a modified slot hypothesis based on Cinque's Universal Hierarchy and that crucially contains mechanisms for re-ordering.

#### 3.1 Slot Hypothesis

- The position of preverbs is fixed and predictable based on category membership.
- Ordering and names of slots may be language-specific

(15) subordinator > tense / mode > directional > relative > aspectual > manner / quality / number (Nishnaabemwin, Valentine 2001)

(16) tense markers > directionals (*pi-* 'forward, hither' *pici-* 'towards speaker', *pimi-* 'along') > qualifiers (*kihci-* 'big', *niisho-* 'two') (Odawa, Piggott 1974)

- Other options are suggested for Plains Cree (Wolfart 1967), Severn Ojibwe (Todd 1970), Sheshâtshû Innu-aimûn (Lees 1979), and Menominee (Cook 2003) using different numbers of categories, names for them, and positions.
- We can create a hierarchy in Mi'gmaq using a slightly different ordering.

## (17) Tentative Hierarchy for Mi'gmaq Preverbs

<b>Position</b>	7	6	5	4	3	2	1
<b>Category</b>	aspect1	modal	aspect2	aspect3	manner	quantity	direction, state

**Examples of preverbs in each slot:**

**Slot 7:** *etli-* 'in the process of', *i-* 'used to', *tali-* 'how', *teli-* 'thus, in such a way'

**Slot 6:** *getui-* 'want to', *me'si-* 'fail, have difficulty', *gisi-* 'can, be able', *natawi-* 'can, know how'

**Slot 5:** *poqji-* 'start', *gaqi-* 'finish'

**Slot 4:** *minui-* 'again, re-', *siewi-* 'continue'

**Slot 3:** *gimi* 'secretively', *jaqali* 'quickly', *gesigewi* 'loudly',

**Slot 2:** *newti* 'alone', *aqat* 'half', *toqi* 'two'

**Slot 1:** *ali-* 'around, in any direction', *weli-* 'good'

**3.1.1 Universal Adverb Hierarchy**

Cinque (1999:106) proposes the following hierarchy, suggesting that while languages may lexicalize only a subset of these adverbs, they are always ordered as follows:

*frankly* Mood<sub>speech act</sub> > *surprisingly* Mood<sub>evaluative</sub> > *allegedly* Mood<sub>evidential</sub> > *probably* Mod<sub>epistemic</sub> > *once* T<sub>past</sub> > *then* T<sub>future</sub> > *perhaps* Mood<sub>(ir)realis</sub> > *necessarily* Mod<sub>necessity</sub> > *possibly* Mod<sub>possibility</sub> > *usually* Asp<sub>habitual</sub> > *again* Asp<sub>repetitive(I)</sub> > *often* Asp<sub>frequentative(I)</sub> > *intentionally* Mod<sub>volitional</sub> > *quickly* Asp<sub>celerative(I)</sub> > *already* T<sub>anterior</sub> > *no longer* Asp<sub>terminative</sub> > *still* Asp<sub>continuative</sub> > *always* Asp<sub>perfect</sub> > *just* Asp<sub>retrospective</sub> > *soon* Asp<sub>proximative</sub> > *briefly* Asp<sub>durative</sub> > *characteristically* Asp<sub>generic/progressive</sub> > *almost* Asp<sub>prospective</sub> > *completely* Asp<sub>(sg)Completive(I)</sub> > *tutto (wholly?)* Asp<sub>plCompletive</sub> > *well* Voice > *fast/early* Asp<sub>celerative(II)</sub> > *again* Asp<sub>repetitive(II)</sub> > *often* Asp<sub>frequentative(II)</sub> > *completely* Asp<sub>sgCompletive(II)</sub>

- Cinque (1999) accounts for apparent exceptions to this hierarchy by suggesting that alternative orders are found only when an adverb modifies another adverb instead of modifying the verb directly.
- This would predict that items that do not interact scopally should remain in a fixed order.
- Cinque's analysis is applied to Menominee by Shields (2006).
- Shields (2006) accounts for exceptions to Cinque's orderings in Menominee by proposing that certain preverbs do not participate in this hierarchy, which she designates as being specified "Obey Hierarchy-off".
- Shields argues that certain preverbs are freely ordered with respect to each other, while other preverbs must be strictly ordered.

### 3.2 Scope Hypothesis

Principles of scope for morpheme ordering in Athapaskan languages from Rice (2000):

- (18) (i) Elements in a fixed scopal relationship occur in a fixed order with respect to each other.  
(ii) Elements in which the scopal relationship can be reversed occur in a variable order, with interpretation related to order.  
(iii) Elements that do not enter into a scopal relationship with each other may occur in different orders. (Rice 2000 p.79)

- Slavin (2005) argues that we can use these principles to determine preverb ordering in Algonquian languages based on the principle that elements take scope over items to their right.
- Whether or not a combination of preverbs is grammatical is based on whether its meaning is semantically interpretable.
- This predicts that preverbs should be able to be found unproblematically in multiple orders when their scopes do not interact.

⇒ **Droppability Test:** If several adverbials are in a scopeless relationship with each other, each of the separate adverbials will be entailed by the whole phrase

⇒ However, if there is a scopal relationship, the individual modifiers will not be entailed by the whole expression (Slavin 2006, Ernst 2000)

⇒ Both hypotheses predict that items that interact scopally should be found in scope-dependent orders; however, Cinque's mechanism predicts that non-interacting items will remain in a fixed order, while Rice's principle predicts that non-interacting items will vary.

## 4 Mi'gmaq examples

### 4.1 Ungrammatical in Either Order

The slot hypothesis predicts that only one member of each slot should be able to occur per verb root. We can see that it is indeed the case that verbs with two of the same preverb are often ungrammatical, as shown in (19), (20), and (21).

- (19) \***minu-minu**-wissugwat-ma-p-n pisgit-l  
**re-re**-cooked.TI-1SG-PAST-PL cookie-PL  
 Context: The cookies weren't fully cooked the first time I took them out of the oven, nor the second time, so I re-re-cooked them (intended) 'I re-re-cooked the cookies'
- (20) \***getu-getu**-lugwe-i  
**want-want**-work.AI-1SG  
 (intended) 'I want to want to work'
- (21) \***gisi-gis**-lugwe-t  
**able-able**-work.AI-3AN  
 (intended) 's/he can be able to work'
- (22) na **tel**-poqju-**tel**-lugwe-t  
 PAR **thus**-start-**thus**-work.AI-3AN  
 'That is how s/he is starting to work in that way'

We might be able to rescue these examples by appealing to semantic incompatibility: for example, perhaps starting and finishing are both events that can only happen at a single point in time (i.e. their aspect cannot be durative), so it is impossible for an event to be both beginning and ending at the same time.

However, there seem to be certain groups where two preverbs in this group cannot co-occur, for example *poqji*- 'start' and *gaqi*- 'finish' as in (23), *minui*- or 're-' and *siewi*- 'continue' as in (24), or any of the modals such as *nata*-, *gisi*-, *me'si*-, and *getu*-, as in (25).

- (23) \***poqji-gaqi**-lugwe-t / \***gaqi-pogji**-lugwe-t  
**start-finish**-work.AI 3AN / **finish-start**-work.AI 3SG  
 (intended) 's/he begins to finish working / finishes starting to work'
- (24) \***siew-minu**-wissugwa-t-ma-p-n pisgit-l / \***minu-siew**-...  
**continue-re**-cooked.TI-1SG-PAST-PL cookie-PL / **re-continue**-...  
 (intended) 'I continued re-cooking the cookies / re-continued...'
- (25) \***nata-gisi**-lugwe-t / \***gisi-nata**-lugwe-t  
**know-want**-work.AI-3AN / **want-know**-work.AI-3SG  
 (intended) 's/he knows how to be able to work' / (intended) 's/he is able to know how...'



## 4.2 Grammatical in Only One Order

**Ordering restrictions:** Certain preverbs are free to co-occur, but are only grammatical in a particular order.

The  $\models$  symbol indicates sentences that are entailed by a particular main sentence, and thus whether a phrase passes the droppability test.

- (26) **etl-poqju-newti**-wissugwat-ma-n  
**process-start-alone**-cook.TI-1 SG-PL  
 'I am in the process of beginning to cook them by myself'  
 $\models$  **etl**-wissugwatman  
 $\models$  **poqju**-wissugwatman  
 $\models$  **newti**-wissugwatman
- (27) \***newti-poqju-etl**-wissugwat-ma-n  
**alone-start-process**-cook.TI-1 SG-PL  
 (intended) 'I am in the process of beginning to cook them by myself'
- (28) \***poqju-newti-etl**-wissugwat-ma-n  
**start-alone-process**-cook.TI-1 SG-PL  
 (intended) 'I am in the process of beginning to cook them by myself'

- Sentence (26) shows that all preverbs in a given ordering can be entailed separately, but as shown in (27) and (28), multiple orderings are not possible.
- This is correctly predicted by a slot hypothesis with Cinque's re-ordering, but not by a scope hypothesis.

## 4.3 Grammatical in Both Orders

- The slot hypothesis without re-ordering predicts that preverbs should generally be found in fixed positions with respect to each other.
  - Where a preverb can occur in multiple possible orders, it must have multiple versions, one for each attested slot.
  - This is fine if not very many preverbs can be found in multiple positions, but is inefficient if re-ordering is common.
- There are many examples of Mi'gmaq preverbs that can reverse their order. Each of the following preverbs belongs to a different hypothesized 'slot'.
  - For example, *me'si-* 'have difficulty with, be unable to, fail to' and *poqji-* 'start' as in (29) and (30)
  - These preverbs take scope over each other: (29) and (30) do not have the same meaning, and the sentences with a single preverb are not entailed.

- (29) **me'si-poqji-lugwe-t**  
**fail-start-work.AI-3AN**  
 's/he has difficulty starting to work'  
 ⊃ ⊨ **me'si-lugwet** 's/he has difficulty working'  
 ⊃ ⊨ **poqji-lugwet** 's/he is starting to work'

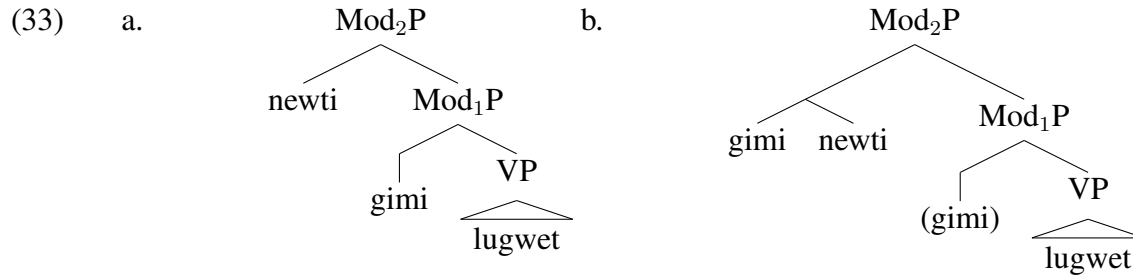
- (30) **poqji-me'si-lugwe-t**  
**start-fail-work.AI-3AN**  
 's/he is starting to have difficulty working'  
 ⊃ ⊨ **m'esi-lugwet** 's/he has difficulty working'  
 ⊃ ⊨ **poqji-lugwet** 's/he is starting to work'

- Partially-scopal example: *gimi-* 'secretively' and *gimi-* 'alone' as in (31) and (32)
- These preverbs do not necessarily take scope over each other: in the (a) examples, (31) and (32) have the same meaning, and the sentences with a single preverb are entailed.
- However, the interpretation in (b) is only available for one of the orderings, and this interpretation does not pass the droppability test

- (31) **gimi-newti-lugwe-t**  
**secretly-alone-work.AI-3AN**  
 a. 's/he is working alone secretly,'  
   ⊨ **gimi-lugwet** 's/he is working secretly'  
   ⊨ **newtu-lugwet** 's/he is working alone'  
 b. 'it is secret that it's alone that she's working'  
   ⊃ ⊨ **gimi-lugwet** 's/he is working secretly'  
   ⊨ **newtu-lugwet** 's/he is working alone'

- (32) **newti-gimi-lugwe-t**  
**alone-secretly-work.AI-3AN**  
 a. 's/he is working secretly alone'  
   ⊨ **gimi-lugwet** 's/he is working secretly'  
   ⊨ **newti-lugwet** 's/he is working alone'  
 b. NOT 'it is secret that it's alone that she's working'

- This suggests that the default position for these preverbs might be that found in (32), as represented by the (simplified) structure in (33)a.



- The other order, in (31), could be explained by having *gimi* raise to modify *newti* but allowing it to be interpreted either in its original location or in the new one (scope reconstruction), as in (33)b.

## 5 Conclusions

Two factors that an analysis needs to account for: why ordering is sometimes flexible and meaningful, and yet sometimes fixed and arbitrary

1. **Slot Hypothesis:** Preverbs occupy particular fixed slots that determine their order with respect to each other e.g. Nishnaabemwin (Valentine 2001).

**Accounts for:** Why certain preverbs cannot co-occur with themselves or each other.  
Why certain orders of preverbs are ungrammatical.

2. **Scope Hypothesis:** Preverb position is flexible and determined by scope, e.g. Oji-Cree (Slavin 2005).

**Accounts for:** Why preverbs can be found in several different orders.

**Slot Hypothesis with re-ordering:** Preverbs are generated in fixed slots but can move when motivated by scope.

**Accounts for:** The situations above, plus:  
Why one ordering can sometimes receive multiple scopal interpretations

### 5.1 Further Questions

- If the modifier hierarchy is indeed universal, why don't we see identical preverb slots for all the Algonquian languages? Possible solution from scope (Rice): variation only between preverbs without a scopal relationship.
- Cinque's hierarchy gives 30 different positions, while most slot hypotheses give less than half a dozen: to what extent can one map onto the other?
- What kinds of restrictions on movement between positions do we need to posit? Where do these elements move to?

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