Zero morphemes of categories little *v* and Voice in Mi'kmaq[*]

Dianne Friesen[]
University of Victoria

Yvonne Denny
Eskasoni Band

Abstract: McCulloch (2013) determined that Mi'gmaq requires both Voice and little *v* categories in its structure to accommodate the middle voice, and that both heads can be occupied at the same time. In her analysis, the morpheme *-asi* carries a different meaning when it occurs in little *v* than when it is in Voice. We propose in contrast that Voice and *v* are occupied in all Mi'kmaq verb stems and find that there is a zero morpheme in each category with specific features and functions (cf. Sylliboy et al. (in press)). We describe some of the features and functions of three light verbs of category Voice and four of category little *v*.

Keywords: Mi'kmaq, syntax, Voice, little *v*, Algonquian language

1 Introduction

McCulloch (2013) determined that Mi'gmaq[1] requires both Voice and little *v* categories in its structure to accommodate the middle voice, and that both heads can be occupied at the same time. In her analysis, the morpheme *-asi* carries a different meaning when it occurs in little *v* than when it is in Voice. Example (3) shows McCulloch's (2013:23) analysis of (1) *-asi* as little *v* and (2) *-asi* as Voice.[2]

(1) megw-**a'si**-t
red-ASI-3
'S/he is becoming red.'

(McCulloch 2013:23)

(2) elugw-at-**as'**-g
do-VTI-ASI-0
'It's being fixed.'

(McCulloch 2013:25)

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[] Contact info: friesend@uvic.ca.
[1] 'Mi'kmaq' and 'Mi'gmaq' represent different dialects and orthographies of the same language found in different regions. The orthography used by McCulloch (2013) writes stops as voiced.
[2] Abbreviations include 0 'inanimate', 1 'first person', 2 'second person', 3 'third person', S 'singular', AN 'animate', ASI '-asi variant', DIR 'directional', INAN 'inanimate', VTI 'transitive verb stem with inanimate object'.

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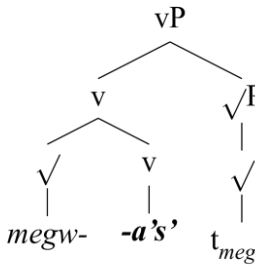
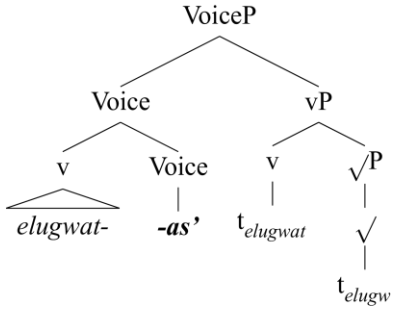
(3) *-asi* in two categories (McCulloch 2013:23):

a.



b.



McCulloch (2013:22) argued that the morpheme *-eke* is a Voice head. Sylliboy et al. (in press) studied *-eke* in transitive and intransitive clauses and proposed a set of Voice morphemes and a separate set of little *v* morphemes, each set including a zero morpheme. The necessity of two morpheme sets can best be seen in the examples in Table 1 (adapted from Sylliboy et al. (in press)). Four stems with the proposed Voice morpheme *-eke* (bolded) are shown in clauses with or without a direct object. When the clause is intransitive, both morphemes are present. Only *-eke* is present in a transitive clause (center column). We analyze a zero little *v* morpheme in these cases.

Table 1: *-eke* in transitive and intransitive clauses

Verb root	Transitive: *-eke* without *-o't*, *-a't*, or *-ut* (direct object is required)	Intransitive: *-eke* with *-o't*, *-a't*, or *-ut* (direct object is ungrammatical)
el- DIR	el-Ø-**eke**-y tu'aqn DIR-*v*-VOICE-1S ball 'I throw the ball.'	el-o't-**eke**-y DIR-*v*-VOICE-1S 'I am throwing hints around.'
kesisp- 'wash'	kesisp-Ø-**eke**-y n-unji wash-*v*-VOICE-1S 1S-head 'I give my head a quick wash.'	kesisp-a't-**eke**-y wash-*v*-VOICE-1S 'I am washing the floor.'
nis- 'down'	nis-Ø-**eke**-y kuntew down-*v*-VOICE-1S rock 'I throw down/drop the rock.'	nis-a't-**eke**-y down-*v*-VOICE-1S 'I put cards down.' (play them in a game)
kaqam- 'stand'	kaqam-Ø-**eke**-y aptu'n stand-*v*-VOICE-1s cane 'I stood up the cane.'	kaqam-ut-**eke**-y stand-*v*-VOICE-1S 'I am tolerant.' (lit. 'I withstand stuff.')

The principle of contrast (Trubetzkoy 1939, Saussure 1967 [1916], as cited in Wiltschko 2014:6ff) dictates that grammatical categories that are functional heads may contain zero morphemes (silent units of language) to mark a complementary value for a feature. Since Voice and *v* are functional heads, Sylliboy et al. (in press) proposed that each of these categories includes a zero morpheme. Essentially, this claim implies that all Mi'kmaq clauses involve VoiceP and *v*P projections. Using Algonquianist terminology, this claim implies that all clauses have secondary derivation, i.e., multiple finals. McCulloch (2013:20) includes zero morphemes in her list of verb finals, but no examples are given.

This paper describes some of the special properties of the proposed zero morphemes, as compared with other proposed *v* and Voice morphemes that distribute in the same manner. Note that the Voice node discussed here is located closer to the root than the Theme sign which Oxford (this volume) classifies as Voice. It may, however, be one of the slots allowed in the fissional analysis he presented.

Section 2 describes the methodology, Sections 3 and 4 show some features of the Voice and little *v* morphemes, respectively, and Section 5 discusses the findings and implications.

2 Methodology

This project was done in the context of language learning in a Master-apprentice program.[3] Yvonne Denny, a fluent speaker of Mi'kmaq is Dianne Friesen's mentor. In the process, we studied about 150 verb roots with some 1000 clauses including stems resulting from the different *v*-Voice combinations that can occur with each root. We paid particular attention to the animacy and person features of the direct object (when present) and which *v*-Voice morphemes occurred.

3 Some Voice heads

Table 2 shows three Voice heads (*-u, -eke,* and a zero morpheme, bolded) each with two different roots (*ik-* 'put' and *nis-* 'down'). Note that the co-occurring little *v* morphemes occur in pairs (Inglis 1986), each reflecting the animacy of the direct object when present (*-a't* indicating inanimate objects and *-a'l* indicating animate objects, see Section 4). Note that the verbal inflections agree with subjects and animate objects only; the inflections show no agreement with singular inanimate objects.

[3] This project was funded by Canadian Heritage and carried out in collaboration with a SSHRC Partnership grant led by Onowa McIvor and Peter Jacobs entitled 'NEJTOLNEW, One mind, one people'. Some information on this program can be found at the Mi'kmaw Kina'matnewey site at http://kinu.ca/news/masterapprentice-program-kicks-its-second-session.

Table 2: Voice heads *-u, -eke, Ø*

Voice	*ik-* 'put'	*nis-* 'down'
-u	ik-a't-**u**-Ø wasuek put-*v*-VOICE-1S flower (INAN) 'I put the flower on something.'	nis-a't-**u**-Ø wasuek down-*v*-VOICE-1S flower (INAN) 'I put the flower down.'
-eke	ik-a't-**eke**-y put-*v*-VOICE-1S 'I am betting.' (putting money down)	nis-a't-**eke**-y down-*v*-VOICE-1S 'I lay my hand of cards down.'
-Ø	ik-a'l-**Ø**-~~i~~k l'mu'j put-*v*-VOICE-1S>3S dog (AN) 'I set the dog down / release the dog.'	nis-a'l-**Ø**-~~i~~k l'mu'j down-*v*-VOICE-1S>3S dog (AN) 'I set the dog down.'

The Voice morphemes select the features of the syntactic direct object, as summarized in Table 3 and illustrated in Tables 4 and 5. The zero morpheme selects only animate objects which can have any person features, in contrast with the other Voice morphemes shown. Verb stems that can occur with objects of either gender have been noted in other Algonquian languages, for example Nishnaabemwin (Valentine 2001:218).

Table 3: Selectional properties of Voice heads *-u, -eke, Ø*

Voice	Animacy of syntactic direct object	Person features of syntactic direct object
-u	only inanimate	third person only
-eke	either animate or inanimate	third person only
-Ø	only animate	any person

Table 4: Selectional properties of Voice heads illustrated: Animacy of selected object

Voice	Inanimate direct object	Animate direct object
-u	tew-a't-**u**-Ø kutputi out-*v*-VOICE-1S chair (INAN) 'I take the chair outside.'	* tew-a'l-**u**-Ø mijua'ji'j out-*v*-VOICE-1S child (AN) Intended: 'I take the child outside.' (need to say *tew-a'l-**Ø**-ik mijua'ji'j*)
-eke	tew-Ø-**eke**-y kutputi out-*v*-VOICE-1S chair (INAN) 'I throw the chair outside.'	tew-Ø-**eke**-y mijua'ji'j out-*v*-VOICE-1S child (AN) 'I throw the child outside.'
-Ø	* tew-a't-**Ø**-ik kutputi out-*v*-VOICE-1Schair (INAN) Intended: 'I take the chair outside.' (need to say *tew-a't-**u**-Ø kutputi*)	tew-a'l-**Ø**-ik mijua'ji'j out-*v*-VOICE-1S>3S child (AN) 'I take the child outside.'

Table 5: Selectional properties of Voice heads illustrated: Person features of selected object

Voice	Third person object	Speech Act Participant object
-u	kesisp-a't-**u**-Ø kutputi wash-*v*-VOICE-1S chair 'I wash the chair.'	* kesisp-a'l-**u**-Ø ki'l wash-*v*-VOICE-1S 2S Intended: 'I wash you.' (have to say *kesisp-a'l-ul*)
-eke	kesisp-Ø-**eke**-y kutputi wash-*v*-VOICE-1S chair 'I quickly wash the chair.'	* kesisp-Ø-**eke**-y ki'l wash-*v*-VOICE-1S 2S Intended: 'I quickly wash you.' (have to say *kesisp-a'l-ul*)
-Ø	kesisp-a'l-**Ø**-ik mijua'ji'j wash-*v*-VOICE-1S>3S child 'I wash the child.'	kesisp-a'l-**Ø**-ul (ki'l) wash-*v*-VOICE-1S>2S 2S 'I wash you.' kesisp-a'l-**Ø**-in (ni'n) wash-*v*-VOICE-2S>1S 1S 'You wash me.' kesisp-a'l-**Ø**-it (ni'n) wash-*v*-VOICE-3S>1S 1S 'He washes me.' kesisp-a'l-**Ø**-isk (ki'l) wash-*v*-VOICE-3S>2S 2S 'He washes you.'

4 Some little *v* heads

It has long been known that many of what we have proposed as little *v* morphemes come in pairs, with one member of each pair indicating an object that is animate and the other indicating an inanimate object (Inglis 1986). The morphemes associated with animate objects usually end in *l, y,*[4] or *m,* while those indicating inanimate objects end in *t*. Table 6 shows animate/inanimate pairs for three different roots. Note that different Voice morphemes must also be employed when the animacy of the object changes and there is verb inflection agreement only with animate objects.

[4] Note that we analyse the sequence *iy* whereas the Mi'kmaq orthography spells *-i'* since other animate little *v* morphemes end in a sonorant.

Table 6: Selectional properties of little *v* pairs: *-al / -at, -wey / -o't, -iy / -it*

Root	Animate direct object	Inanimate direct object
kes- 'like'	kes-**al**-Ø-k n-tue'm like-*v*-VOICE-1S>3S 1S-pet (AN) 'I like my pet.'	kes-**at**-m-Ø n-t-a'kwesn Like-*v*-VOICE-1S 1s-ep-hat (INAN) 'I like my hat.'
ank- 'care for'	ank-**wey**-Ø-aq n-tue'm care-*v*-VOICE-1S>3S 1S-pet (AN) 'I take care of my pet.'	ank-**o't**-m-Ø wasuek care-*v*-VOICE-1S flower (INAN) 'I take care of a flower.'
pew- 'dream about'	pew-**iy**-Ø-k n-tue'm dream-*v*-VOICE-1S>3S 1S-pet (AN) 'I dream about my pet.'	pew-**it**-u-Ø wasuek dream-*v*-VOICE-1S flower (INAN) 'I dream about a flower.'

In addition to indicating the animacy of the object, the *v* morphemes convey some of the classical light verb meanings ('do', 'make'; cf. Inglis 1986, Grimshaw & Mester 1988, Harley 2013, Johns 2007). Table 7 shows four little *v* morphemes (*-a't, -o't, -it*, and *-Ø*, bolded), each (where possible) with two different roots (*tel-* 'thus' and *kesisp-* 'wash'). The same Voice morpheme is used with each root. Note that not every little *v* morpheme can occur with every root. The zero little *v* morpheme does not appear to carry a light verb meaning, but it does allow an object of either animacy.[5] The *-Ø-eke* combination also appears to carry some aspectual features as compared with *-a't-eke* or *-o't-eke*.

Table 7: Features of the little *v* heads *-a't, -o't, -it, -Ø* with the roots *tel-* 'thus' and *kesisp-* 'wash'

v	*tel-* 'thus'	*kesisp-* 'wash'
-a't 'do one'	na tel-**a't**-u-Ø this thus-*v*-VOICE-1S 'This is how I **do** it.' (e.g., math problem or Rubik's cube)	kesisp-**a't**-eke-y wash-*v*-VOICE-1S 'I am washing the floor.'
-o't 'do many'	na tel-**o't**-u-Ø this thus-*v*-VOICE-1S 'This is how I **do** it.' (e.g., braid hair)	kesisp-**o't**-eke-y wash-*v*-VOICE-1S 'I am washing the dishes.'
-it 'make'	na tel-**it**-u-Ø this thus-*v*-VOICE-1S 'This is how I **make** it.'	
-Ø		kesisp-**Ø**-eke-y msaqsaqt/mijua'ji'j wash-*v*-VOICE-1S floor /child 'I am going to quickly wash the floor/child.'

[5] Our research also indicates that zero little *v* occurs with other Voice morphemes even when there is no object (data not shown).

5 Zero morphemes in *v* and Voice

Zero forms can be found in both categories at the same time. Pairs of examples with inanimate and animate objects are shown with each of two roots in (4) to (7). The zero little *v* in all examples allows an object of either animacy; (4) and (6) show an inanimate object, and (5) and (7) an animate object. The zero Voice selects an animate object (which is the only object in (5) and the Recipient in a double object construction in (6) and (7)). In both (6) and (7), the verbal inflections agree with the animate recipient.

(4) kekkun-**Ø**-m-Ø waqn
have-*v*-VOICE-1S knife (INAN)
'I have a knife.'

(5) kekkun-**Ø**-**Ø**-k mijua'ji'j
have-*v*-VOICE-1S>3S child (AN)
'I have a child.'

(6) iknm-**Ø**-**Ø**-aq Helen wenju'su'n
give-*v*-VOICE-1S>3S Helen apple (INAN)
'I am going to give Helen an apple (inanimate).'

(7) iknm-**Ø**-**Ø**-aq-l Helen l'muj-l
give-*v*-VOICE-1S>3S-OBVIATIVE Helen dog(AN)-OBVIATIVE
'I am going to give Helen a dog (animate).'

6 Discussion

We conclude that there are zero little *v* and Voice morphemes which carry specific features. Their presence is demonstrated both by their distinctive features as compared with other little *v* and Voice morphemes and by the fact that the morphemes in each set carry the same kind of transitivity functions.

It is only when there are two overt morphemes that we can know the order of suffixes. Because the zero *v* and Voice morphemes have properties that are parallel to the overt ones, properties that fit them into a paradigm, we know that these two categories must be represented in each Mi'kmaq verb stem (cf. Harley 2013). The Mirror Principle (Baker 1985) supports the view that the order of the two sets of suffixes reflects the hierarchical order of their categories in Mi'kmaq.

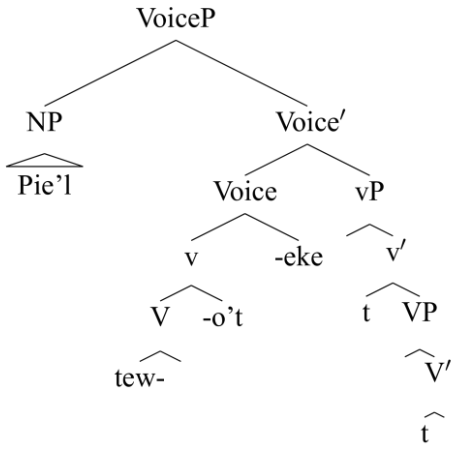
The partial structure is shown in (10), which illustrates (8) and (9) after movement.

(8) Pie'l tew-o't-eke-t
Peter out-*v*-VOICE-3S
'Peter is taking things out on credit.'

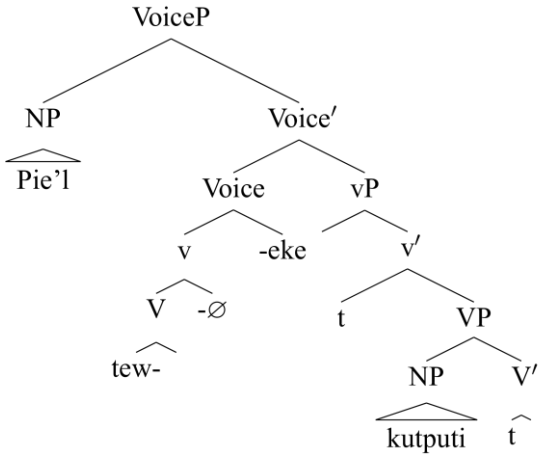
(9) Pie'l tew-Ø-eke-t kutputi
Peter out-*v*-VOICE-3S chair
'Peter is throwing out the chair.'

(10) Structure of (8) and (9) after movement:

a.



b.



Note that the entire set of little *v* and zero Voice morphemes was not illustrated in this paper. However, based on the properties of the chosen Voice heads (*-u*, *-eke*, and *-Ø*) and little *v* heads (*-a’l/-a’t*, *-wey/-o’t*, *-iy/-it*, and *-Ø*), the features for *Ø* little *v* and *Ø* Voice clearly fit into a paradigm, as expected from contrast principles.

Little *v* and Voice have functions beyond the selection of animacy and person features for the object and the light verb meanings of the little *v* morphemes. For example, Voice seems to be involved in argument structure and little *v*-Voice combinations carry aspectual properties. We leave to future research the issues of what other morphemes belong to each of the morpheme sets and the effect of different combinations of the two sets with different roots.

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