



- *-asi* has been described as a reflexive (Inglis 1986) and is probably related to a final described as a middle reflexive in other Algonquian languages such as Fox (Goddard 1990)
- Form-wise, I show that the variants of *-asi* can be predicted based on its morphological context
- Meaning-wise, I show that the *-asi* is found with similar types of verbs as MIDDLE VOICE markers in other languages (Kemmer 1993) and has a similar meaning: an action where the subject is both the actor and the one affected by the action.

Overview:

2 Finals in Mi'gmaq

3 *-asi* as a middle marker

4 Discussion

## 2 Finals in Mi'gmaq

- (Abstract) finals indicate or affect the valency of the verb and the animacy of its arguments and for this reason are often analyzed as little *v* (Brittain 2003, Mathieu 2008, Ritter & Rosen 2010, Branigan ms., etc).<sup>2</sup>
- Abstract finals are classified according to two parameters: the transitivity of the verb, either intransitive or transitive (ditransitive verbs pattern with transitives) and the animacy of its absolutive argument (subject of an intransitive; object of a transitive), either animate or inanimate.
- For ease of presentation, instances of the same verb stem (initial and optional other elements) with finals of different categories will be presented in the same 2 x 2 template.

(3) a. Four types of finals:

	Animate	Inanimate
Intransitive		
Transitive		

b. More concisely:

AI	II
TA	TI

### 2.1 Finals on simple stems

Some examples of verb stems with multiple different finals:

<sup>2</sup>There are also 'concrete' finals which have more semantic content than abstract ones like *-am*, *-ap* 'look, visual appearance' or *-isi* 'speak, call' but I will not be discussing them here.

(4)	<i>sewisg-</i> ‘break’ <b>sewisg-ie-t</b> break-AI-3 ‘it.an breaks up’ <hr/> <b>sewisg-a’l-at-l</b> break-TA-3-OBV ‘s/he breaks him/her’	<b>sewisg-ia-q</b> break-II-0 ‘it.in breaks up’ <hr/> <b>sewisg-a’t-oq</b> break-TI-3 ‘s/he breaks it’	(6)	<i>gaqam- ~ qam-</i> ‘stand’ <b>gaqam-i-t</b> stand-AI-3 ‘s/he stands’ <hr/> <b>(ga)qam-a’l-at-l</b> stand-TA-3>4-OBV ‘s/he stands h/ (up)’	<b>gaqam-i-g</b> stand-II-0 ‘it stands’ <hr/> <b>(ga)qam-a’t-oq</b> stand-TI-3 ‘s/he stands it (up)’
(5)	<i>elugw- ~ lugw-</i> ‘do, make, work’ <b>elugw-e-t</b> do-AI-3 ‘s/he works’ <hr/> <b>elugw-al-at-l</b> do-TA-3>4-OBV ‘s/he prepares an.’	<b>elugw-a’s-’g</b> do-II-0 ‘it is fixed’ <hr/> <b>elugw-at-g</b> do-TI-3 ‘s/he prepares in.’	(7)	<i>teluis- ~ teluit-</i> ‘call ___’ <b>tel-uis-i-t</b> thus-call.I-AI-3 ‘s/he is named ___’ <hr/> <b>tel-ui’t-at-l</b> thus-call.T-3>4-OBV ‘s/he calls h/ ___’	<b>tel-uis-i-g</b> thus-call.I-II-0 ‘it is named ___’ <hr/> <b>tel-ui’t-’g</b> thus-call.T-3 ‘s/he calls it ___’

- We can see in the table below the distribution of finals that are found with different animacy/transitivity combinations.

(8) Finals that attach to a root:

	ANIMATE	INANIMATE
INTRANSITIVE	<i>-i, -a, -e, -e’, -ie, -asi, -a’si</i>	<i>-i, -a, -e, -ia</i>
TRANSITIVE	<i>-al, -a’l, -i, -∅</i>	<i>-at+m, -a’t+u, (i)t+u</i>

- Note that there are more similarities between finals of the same transitivity than those of the same animacy: for example, *-i, -a, -e* are found as both AI and II finals, and both TA and TI finals often start with *-a* or *-a’*.
- Similarly, root allomorphy tends to vary based on transitivity, such as *gaqam-* (intransitive)  $\sim$  *qam-* (transitive).
- Transitive Inanimate (TI) finals are nearly always found with an additional morpheme such as *-u* or *-m* which is not quite a final but related to one, and which Inglis (1986) calls a *theme sign* but which I’m not going to address in detail.
- Given a particular animacy/transitivity combination, which final occurs with which root varies based on two factors:
  - The vowel length of the final is determined based on the root itself, and a root that calls for a long vowel with one final will have a long vowel for all finals
  - The vowel quality of the final is also dependent on the root: there seem to be some semantic factors, e.g. Denny (1978) proposes that Ojibwe II finals have situation aspect (states vs. processes vs. events vs spatial activities)
  - In general, stems that contain body-part morphemes often have the AI/II final *-a*, states often have the AI final *-e’*, and movement the AI and II finals *-ie* and *-ia*.

## 2.2 Finals on complex stems

- Finals can also attach to stems that already have another final, especially to form intransitives (e.g. passives, reflexives) from transitives or vice versa (e.g. applicatives).

(9)	<i>nem(i)-</i> ‘see’		(10)	<i>wissugw-</i> ‘cook’	
	<b>nem-it-<u>ege</u>-t</b>	<b>nem-it-<u>as</u>’-g</b>		<b>wissugw-at-<u>ege</u>-t</b>	<b>wissugw-at-<u>as</u>’-g</b>
	see-TI-NONSP-3	see-TI-ASI-0		cook-TI-NONSP-3	cook-TI-ASI-0
	‘s/he sees (is a seer)’	‘it is seen’		‘s/he cooks’	‘it is being cooked’
	<b>nem-i-at-l</b>	<b>nem-it-oq</b>		<b>wissugw-al-at-l</b>	<b>wissugw-at-g</b>
	stand-TA-3>4-OBV	stand-TI-3		cook-TA-3>4-OBV	cook-TI-3
	‘s/he sees him/her’	‘s/he sees it’		‘s/he cooks an.’	‘s/he cooks in.’

### Note on *-ege*:

- Inglis (1986, 2002) says that *-ege* is used to mean a non-specific or indefinite object
- I’m not sure whether the *-ege* in fact introduces a non-specific internal argument (like an incorporated noun) or deletes/absorbs the internal argument (like an antipassive)
- But since incorporated nouns are typically found before finals (as medials) in the verb stem, I’m inclined to say that *-ege* being found after finals (e.g. *-at* below) means that it is more like a final

(11)	<i>gesisp-at-<u>ege</u>-i</i> (*msaqtaqt)	(12)	<i>siw-at-<u>ege</u>-t</i>
	wash-TI-NONSP-1 (floor)		tire-TI-NONSP-3
	‘I’m washing stuff (*the floor)’		‘s/he annoys (people), is tiresome, annoying, a pest’

- Compare the examples above with the examples below, showing the initials *gesisp-* ‘wash’ and *siw-* ‘tire’ without *-ege*:

(13)	<i>gesisp-at-u</i> (msaqtaqt)	(14)	<i>siw-e-’g</i>
	wash-TI-1 (floor)		tire-AI-3
	‘I’m washing it/the floor’		‘s/he is lonely, bored’

- (15) Finals that attach to a stem+final:

	ANIMATE	INANIMATE
INTRANSITIVE	<u>-si, -ege</u>	<u>-a’s’</u>
TRANSITIVE	-	-

## 3 *-asi* as a middle marker

### 3.1 What is the Middle Voice?

- The MIDDLE VOICE contrasts with the ACTIVE and PASSIVE voices:
  - ACTIVE: the subject is the actor
  - PASSIVE: the subject is the one affected by the action
- MIDDLE: the subject is both the actor and the one affected by the action

(Lyons 1969)

- English doesn't have a morphological middle, but common examples are *the door opens* and *these books sell well*.
- Some authors, such as Kemmer, consider the REFLEXIVE a sub-case of the middle: the reflexive must involve an action directly on oneself, while the middle can involve any action that affects the actor somehow, including by affecting one's body posture, mental state, or self-interest
- Kemmer (1993) lists ten situation types in which middle markers are found cross-linguistically:
  - (16) a. Grooming or bodily care (e.g. wash, get dressed, shave)
  - b. Non-translational motion (e.g. stretch, turn, bow)
  - c. Translational motion (e.g. climb up, go away, walk, fly)
  - d. Change in body posture (e.g. sit down, get up, lie down)
  - e. Naturally reciprocal events (e.g. embrace, speak together, wrestle, agree)
  - f. Indirect middle (e.g. acquire, ask, desire)
  - g. Emotion middle (e.g. become frightened, be angry, grieve)
  - h. Emotive speech actions (e.g. complain, lament)
  - i. Cognition middle (e.g. think over, believe, ponder)
  - j. Spontaneous events (e.g. germinate, come to a stop, vanish, recover, occur)<sup>3</sup>

### 3.2 Diagnostics and *-asi*

- The final *-asi* in Mi'gmaq and its variants *-a'si*, *-as'*, *-a's'*, *-si*, and *-o'si* has been described as a reflexive in Inglis (1986) and as a reflexive/middle in Inglis (2002)<sup>4</sup>

<sup>3</sup>Definitions of some of the less intuitive situation type names:

**Non-translational motion:** movement not involving a change of location

**Translational motion:** movement involving a change of location

**Indirect middle:** 'actions that are normally or necessarily for one's own benefit' (Kemmer 1993:78)

**Emotive speech actions:** actions that involve emotion as part of speaking

<sup>4</sup>Another variant of *-asi* is *-ati*, which occurs for some plural subjects, e.g. *enqa'tieg* 'we two (excl.) come to a stop' but *awanta'sieg* 'we two (excl.) forget', but I'm not going to discuss it further here.

- However, there are many initials that *-asi* can occur with that are not particularly reflexive.
- On the other hand, *-asi* can be found with seven of Kemmer's middle situation types:

(17) a. **Grooming or bodily care**

gesisp-*a'l-si*-t  
 wash-TA-ASI-3  
 's/he washes self'

b. **Non-translational motion**

gawasg-*a'si*-t  
 turn-ASI-3  
 's/he turns around'

c. **Translational motion**

ejigl-*a'si*-t  
 away-ASI-3  
 's/he goes away'

d. **Change in body posture**

ep-*a'si*-t  
 sit-ASI-3  
 's/he sits down'

e. **Emotion middle**

jip-*asi*-t  
 fear-ASI-3  
 's/he is afraid'

f. **Cognition middle**

awan-t-*a'si*-t  
 awkward-mind-ASI-3  
 's/he forgets'

g. **Spontaneous events**

enq-*a'si*-t  
 stop-ASI-3  
 's/he comes to a stop'

- Three of Kemmer's middle situation types have at least some examples that are found with a general intransitivity marker *-e* instead of with *-asi*:

(18) a. **Naturally reciprocal events**

maw-*ie-j*-ig  
 together-AI-3-PL  
 'They congregate, gather together'

b. **Indirect middle**

etaw-*e*-t  
 ask-AI-3  
 'S/he asks, makes a request'

c. **Emotive speech actions**

tegtsg-*ewe*-t  
 kick-AI-3  
 'S/he kicks, complains, kicks up a fuss, objects'

- I argue that a reflexive analysis for *-asi* is insufficient given the broad ranges of other contexts in which it is found, many of which resemble Kemmer's middle situation types.
- Given that Kemmer herself notes that not all individual verbs of a particular situation type may have middle morphology, I don't think that the three counter-examples are a problem.

### 3.3 Predictable distribution of variants

→ Variants are formed by either deleting the first vowel in *-asi*, as in *-si*, or by replacing the second one with schwa, as in *-as'*.<sup>5</sup>

#### 'Reflexive' : *-si*

- *-si* attaches to stems that already have a TA final, and creates AI verbs
- Recall: in a middle, the actor is the affected one, which is consistent with a reflexive interpretation

(19) gesisp-al-si-t  
wash-TA-ASI-3  
's/he washes him/herself'

(20) tel-ui't-u-si-t  
thus-call.T-AN.PSV-ASI-3  
's/he calls self \_\_'

- Evidence that *-si* does absorb an argument: the verb without *-si* is grammatical with two overt arguments (21a) but isn't with two overt arguments and *-si* (21b).

(21) a. Mali gesisp-al-at-l mijua'ji'j-l  
Mary wash-TA-3>4-OBV child-OBV  
'Mary washes the child'

b. \*Mali gesisp-al-si-t mijua'ji'j-l  
Mary wash-TA-ASI-3 child-OBV  
'The child is washed by Mary'

#### Inanimate 'Passive' : *-as'*

- *-as'* or *-a's'* attaches to stems that already have a TI final and creates II verbs.
- Often glossed as a passive (absorbing the external argument), but as could actually be a middle (actor is the affected one) constrained by the fact that inanimates can't be actors.<sup>6</sup>

(22) wissugw-at-as'-g  
cook-TI-ASI-0  
'it is cooked'

(23) elugw-at-a's'-g  
do-TI-ASI-0  
'it's being fixed'

- Evidence that *-as'* does absorb an argument: the verb without *-as'* is grammatical with two overt arguments (24a) but isn't with two overt arguments and *-as'* (24b).

<sup>5</sup>The length alternation of the /a/ was already discussed above.

<sup>6</sup>Note that passives of TA verbs have completely different morphology, which I will not discuss here but does not involve any permutation of *-asi*.

- (24) a. Mali wissugw-*at-g* pisgit  
Mary cook-TI-3 cookie  
'Mary cooks the cookie'
- b. \*Mali wissugw-*at-as'*-g pisgit  
Mary cook-TI-**ASI**-3 cookie  
'The cookie is cooked by Mary'

### Inanimate 'Middle' : *-as'*

- The II final *-as'* can also attach directly to roots: in this usage, it contrasts directly with its AI equivalent, *-asi*, as shown below

- (25) sangew-*a's'*-g  
slow-**ASI**-0  
'it goes slow, cruises along'
- (26) al-*a's'*-g  
around-**ASI**-0  
'it goes about, spreads around'

### Animate 'Middle' : *-asi*

- *-asi* and *a'si* attach to stems that do not already have a final, and create AI verbs.
- Most of the verbs noted as belonging to Kemmer's middle situation types above in (17) fall into this class.<sup>7</sup>
- Another variant of *-asi* seems to be *-o'si*, which is also found with verbs of bodily care, like 'comb' and 'shave', as well as motion (e.g. moves up) and bodily function (yawn).

- (27) a. nugwaltuq-*o'si*  
comb-**OSI**  
'I comb my own hair'
- b. pesgutu-*o'si-t*  
shave-**OSI**-3  
's/he shaves self'
- c. igt-*o'si-t*  
yawn-**OSI**-3  
's/he yawns'
- d. guljiewt-*o'si-t*  
cross-**OSI**-3  
's/he makes the sign of the cross,  
crosses self'
- e. wenaqt-*o'si-t*  
up-**OSI**-3  
's/he moves up in the world, lifts  
self up to higher position'

- However, *-asi* and *-osi* aren't completely interchangeable, as shown by this minimal pair:

- (28) a. apaj-*asi-t*  
back-**ASI**-3  
's/he comes back'
- b. apatt-*o'si-t*  
back-**OSI**-3  
's/he wins (stuff) back, breaks  
even'

<sup>7</sup>Kemmer observes that cross-linguistically, reflexive items tend to be phonologically larger than middle ones, but we see the opposite pattern here: the broadly applicable middle *-asi* is longer than the more strictly reflexive *-si*. My suggestion is that this size alternation is for morphophonological reasons, not semantic reasons, so *-si* only seems like a real reflexive because of its position.





- b. La viande **se** cuit  
 the meat self cooks  
 'The meat cooks, is cooked' INANIMATE PASSIVE
- c. La fille (fraise) **se** rougit  
 the girl (strawberry) self reddens  
 'The girl (strawberry) reddens, becomes red, blushes' CHANGE OF STATE

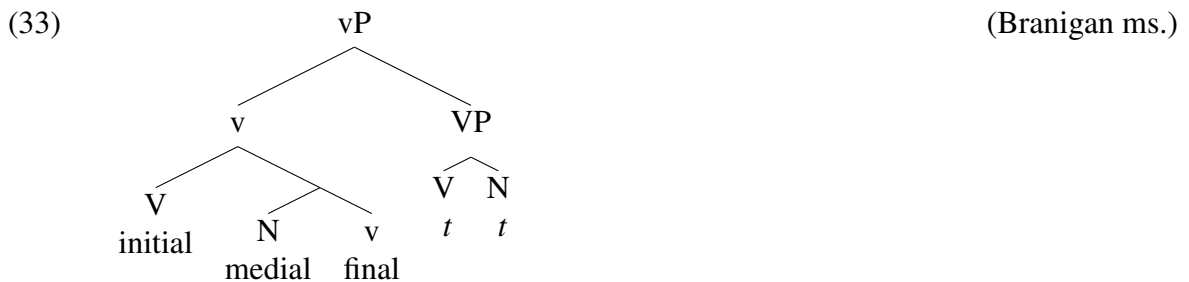
### 3.5 So far...

- There are four main shapes for *-asi*, all of which involve some change in the vowel: *-si*, *-as'*, *-o'si*, and *-asi* itself.
- We can predict which variant occurs based on its morphological context
- All of the variants have meanings that are compatible with the middle voice: the actor is affected by the action
- I propose that these are all variants of the same essential morpheme *-asi*, and the slight differences in meaning can also be explained by the morphological context

## 4 Discussion

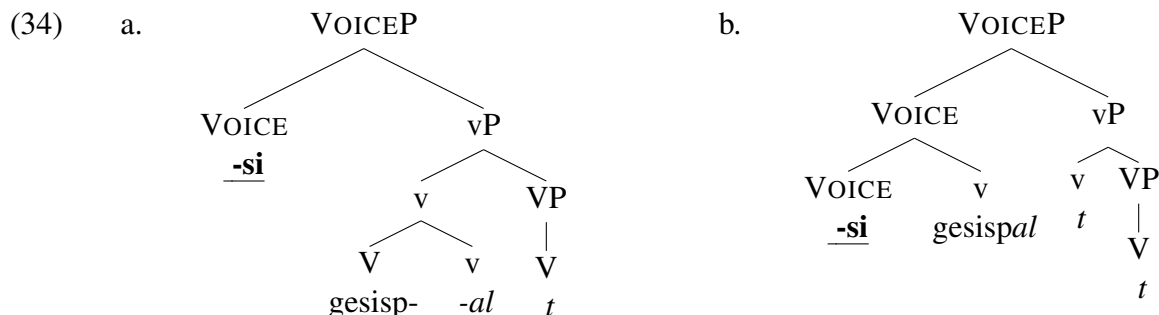
### 4.1 Phase Boundaries

- Branigan's (ms.) proposed structure for Innu-Aimun: initials, medials, and finals are explained by multiple attraction to *v* and other functional heads:



- When you have a second final, it needs to be part of a projection above *v*, as shown in (34a), which I call VOICE on the model of Harley (2012)
- Per Branigan's multiple attraction parameter, VOICE then attracts the lower *v* as a second phase (34b).<sup>9</sup>

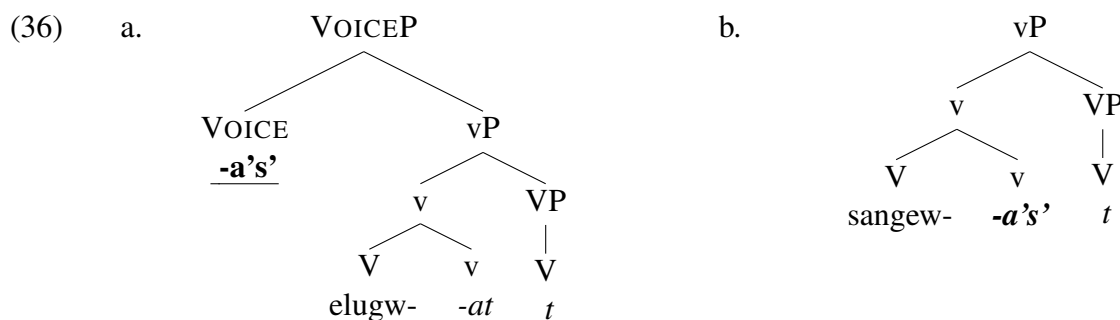
<sup>9</sup>Here I assume that initials are V, although for my purposes nothing changes if initials are category-less roots.



- Compare the tree for *-asi* when attached directly to the root as in (35):



- Compare also *-as'*, which can occur in the same shape in both positions, but with different interpretations, where (36a) is glossed ‘it’s being fixed’, and is a valency reduction like (34a), and (36b) is glossed ‘it goes slow, cruises along’ and is a change of state/position (35).



- I suggest that *-asi* gives us evidence for a phase boundary between vP and VOICEP, on the model of Harley (2012):
  - *-asi* attaches to roots that don’t already have a final, whereas *-si* and *-as'* are visibly preceded by another (TA/TI) final
  - *-asi* has more idiomatic interpretations (e.g. ‘become red’), whereas *-si* and *-as'* are simple valency-reducing operations (e.g. ‘wash oneself’, ‘is fixed’).
  - *-asi* is found in its longer (full) form when attached to a root, whereas *-si* especially is a shorter form.<sup>10</sup>

<sup>10</sup>Brief note on theme signs: Recall how the TI theme signs *-u* and *-m* are found after TI finals. In addition, TA theme signs like *-i'li* and *-ugsi* are found in certain cases after TA finals (Hamilton, this conference, referencing Oxford, to appear).

However, no theme sign of any type occurs when a second final, whether *-si*, *-as'*, or even *-ege* has been added to the verb stem after the TA/TI final, so I think we can fairly straightforwardly say that theme signs and a second final occupy the same VOICE.

## 4.2 Summary

- There is only one *-asi*, and all of its variants are instances of the middle voice and can be explained positionally.
- When *-asi* attaches to the root directly, as little *v*, it acts like any other AI final and contributes an idiosyncratic notion of actor-affectedness (middle) to the verb
- When *-asi* attaches to a root that already has a final at little *v*, and therefore attaches at VOICE, it is straightforward valency reduction, which is consistent with actor-affectedness (middle) but not idiosyncratic

## References

- Arad, Maya. 2003. Locality constraints on the interpretation of roots: The case of Hebrew denominal verbs. *Natural Language & Linguistic Theory*, 21(4), 737-778.
- Bloomfield, Leonard. 1946. 'Algonquian,' in Harry Hoijer (ed.), *Linguistic Structures of Native America*. New York: Viking Fund Publications in Anthropology, 6: 85-129.
- Branigan, Phil. ms. Macroparameter Learnability: An Algonquian Case Study.
- Brittain, Julie. 2003. A distributed morphology account of the syntax of the Algonquian verb. In *Proceedings of the Canadian Linguistics Society*, eds. Stanca Somesfalean and Sophie Burell, 26-41. Département de linguistique et de didactique des langues, Université du Québec à Montréal.
- Harley, Heidi. 2012. External arguments and the Mirror Principle: On the distinctness of Voice and *v*. *Lingua*.
- Inglis, Stephanie. 1986. The Fundamentals of Micmac Word Formation. MA thesis. Memorial University of Newfoundland.
- Inglis, Stephanie. 2002. Mi'kmaw Word Part Dictionary. University College of Cape Breton.
- Kemmer, Suzanne. 1993. Middle Voice, Transitivity and Events in *Voice: Form and Function*. eds. Barbara Fox & Paul Hopper. John Benjamins Publishing.
- Lyons, John. 1969. *Introduction to theoretical Linguistics*. Cambridge: Cambridge University press. [Reprint of 1968 edition.]
- Mathieu, Eric. 2008. The syntax of abstract and concrete finals in Ojibwe. In Emily Elfner & Martin Walkow (eds.), *NELS 37: Proceedings of the 37th Annual Meeting of the North East Linguistic Society*, 101Ð114. Booksurge Publishing.
- Mi'gmaq Talking Dictionary. <http://mikmaqonline.org>
- Ritter, Elizabeth and Sara Thomas Rosen. 2010. Animacy in Blackfoot: Implications for event structure and clause structure. M. Rappaport Hovav [ea](eds.), *Syntax, lexical semantics, and event structure*. Oxford, 124-152.
- Slavin, Tanya. 2012. The Syntax and Semantics of Stem Composition in Ojicree. PhD. dissertation, University of Toronto.