Medials in the Northeast

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1.   Introduction

• Algonquian stems: *tripartite* templatic structure: [*Initial-Medial-Final*]. (Bloomfield 1927 et seq.)
• Medial, Final: non-initial position, constrained class membership,dozens of similar lexemes...
• ...so can we collapse them into "non-Initial"? No, apparently: bc distinct morphology, syntactic distribution, range of possible semantics. (cf. Goddard 1990)

Goal: Streamline the set of basic categories underlying Algonquian stem structure by deriving the differences between Medials and Finals from morphosyntactic *structure*, instead of stipulating a fundamental *categorical* distinction.

Tools:
• Boeckx 2008: syntactic projection always **maximally tripartite**: structure beyond this is *iteration.*
• Apply *maximal triparticity* to stem level and subcomponent (Initial, Medial, Final) levels:
  stem: at most: *I-M-F*
  IMF subcomponents: at most: *lexical Root*, *light element (n/v),+ one secondarily merged element.*

• Account for attested patterns just with maximally tripartite binary branching (cf. Brittain 2003).
• Predict [PA *-w : ø] in related [Final : Medial] pairs (via indpd'tly attested nominalizer in PA *-w).

• Postmedial PA *-ak paralleled in N. Iroq noun incorporation "nominalizer" (Baker 1997); so...
• nP complex, rather than a bare lexical Root, needed for noun incorporation into a verbal stem.
• Readily observable bc Alg and N. Iroq langs systematically wear their Root-to-stem-deriving syntax right on their morphological sleeves.

Results:
• Eliminate *pre*-structural distinction btw Medial and Finals: emergent from maximal triparticity.
• Reduce bound/affixal lexeme types to minimal possible set: prefixal vs. suffixal head-parameterizations of morphophonological dependency (= Initials and non-Initials).
• Apply this within the light noun/verb-based maximal triparticity analysis, show that further Medial~Final contrasts to reduce to morphosyntactic structure; w/that account both for surface alternations and distributional and semantic differences between the two.
• Now set up to observe parallel with N. Iroquoian noun incorporation, with potential applicability to noun incorporation models in general.

Structure: *italicized sections will be touched on only briefly or in part*
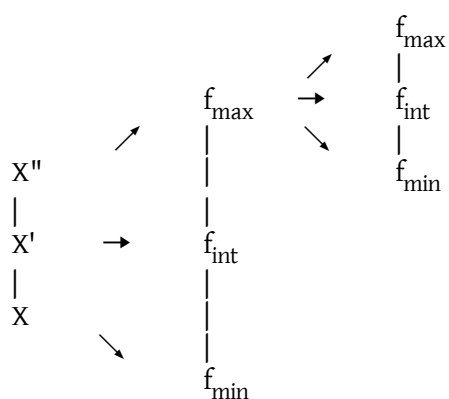
N.B.: morpheme-structural terms Initial, Medial, and Final captialized to highlight their analytical status, and also to retain the lower-case equivalents more clearly and strictly as terms referring to position in the wordform.

2.   Maximal triparticity and the fractal nature of syntax (= Boeckx 2008:ch. 4)

- Boeckx 2008:159: well-formed projections of an element X project at most three, nested elements.

- I am now suggesting a term for this: ***maximal triparticity***

- Emergent from binary merge (p. 124); hence the triparticity of X-bar syntax, among others.

- This tripartite hierarchial organization is *fractal*: it pervades narrow syntax, reappearing at all levels/scales of projection. (p. 129)

(1)   Maximal triparticity of a well-formed projection representation   (Boeckx 2008:59)

$$
\begin{array}{ccccc}
 & & & & f_{max} \\
 & & & \nearrow & | \\
 & & f_{max} & \rightarrow & f_{int} \\
 & \nearrow & | & \searrow & | \\
X'' & & | & & f_{min} \\
| & & | & & \\
X' & \rightarrow & f_{int} & & \\
| & & | & & \\
X & & | & & \\
 & \searrow & | & & \\
 & & f_{min} & &
\end{array}
$$

Proposal: Extend this to Algonquian stem structure.

Requirements: Evidence for maximal triparticity in Algonquian stem structure?

Yes, lots: starting basically from Bloomfield (1927, et seq.), and especially Goddard 1990.

Specifically: Stem structure is maximally tripartite: Initial, Medial, Final

Stem structure subcomponents are then themselves maximally tripartite:

Initials: maximally tripartite when derived from tripartite stems
Medials: Premedial-Medial-Postmedial
Finals: Prefinal-Concrete Final-Abstract Final   [= Prefinal-Final-Postfinal]

Main requirements of maximal triparticity to watch out for:

- Maximal triparticity means that anything with more than three pieces must have some degree of syntactic-structural iteration within it.

3.   **Standard model of Algonquian stem structure**

3.1   Initials, Medials, and Finals: brief sketch

Initials: open/elsewhere class; can be bound Roots or bound Stems; Initial "slot" = position for stems recycled into primary and secondary derivation

Medials: (very coarsely) = incorporated nouns

Finals: ultimate determiners of the stem's syntactic category/argument structure (nominal, verbal, transitivity); often carry substantially rich semantics themselves

3.2   Primary stem derivation

•   Algonquianist literature on stem structure distinguishes between *primary* and *secondary stem derivation* (Bloomfield 1927 et seq., subsequently refined by Goddard 1990; also examined extensively in O'Meara 1990.

•   Goddard 1990:451: *primary derivation* stems can consist simply of an Initial (2a), or of an Initial plus a Final (2b), or maximally of an Initial plus a Medial plus a Final (2c).

(2)   Primary stem derivation structures   (Penobscot; following Goddard 1990:451)

a.   Initial

Stem: *nəpi(y)-*   'water'

Initial: nəpi-   'water'
cf. stem: *nəpi-w.i-*   'NI is watery, wet (in the sense of covered or washed by water)'

b.   Initial-Final

Stem: *apakəss.in-*   'NA lie facedown, flat, right-side down; NA lie flat on h/her belly'

Initial: apak-   'flat'
Final: -hs.in   'NA lie, be laying'

c.   Initial-Medial-Final

Stem: *apakihpskʷanehs.in-*   'NA lie flat on h/her back'

Initial: apak-   'flat'
Medial: -(ə)hpəskʷan.e-   'back'
Final: -hs.in   'NA lie, be laying'

❖   Primary stem derivation gives at most a ternary structure, *I-M-F*. This is maximal triparticity at the stem level.

3.3   Other stem derivation types: NMIs versus SSIs; Initial-Medial stems

•   Rhodes 2003 contrasts the construction in (2c), which he terms *stem-internal incorporation* (SII), with *non-medial incorporation* (NMI).

•   In NMI constructions, the nominal element (underlined in (3b) always follows a stem formed with a transitive Final (3a), and is always the notional primary object of that stem. *[cf. Hirose 2003]*

(3)   Non-medial incorporation   Ojibwe, Rhodes 2003:3:(6)

a.   *ningii- oninaa*   'I got him ready.'   *[transitive stem]*
       nin - gii - onin - aa
       1 SUBJ - PAST - **make ready** - 3AN OBJ
       stem: **on- in -**
               ready - grasp -

b.   *ningii- oninasabii*   'I prepared my nets.'   *[NMI stem]*
       nin - gii - oninasabii
       1 SUBJ - PAST - **make nets ready**
       stem: **on- in-**   <u>*asabii*</u>
               ready - grasp -   **net**

•   SIIs are less constrained: can be intransitive as well as transitive, with their Medial incorporants able to occur not only as notional primary objects, but also as classifiers thereof, or as notional obliques (especially instrumentals) or notional absolutes of unaccusatives. (Rhodes 2003:4)

•   Rhodes argues for a third construction, stems consisting of an Initial plus a Medial but without a Final (4'b), identifying these as a subtype of SII because they share the same structural and semantic freedoms that distinguish SIIs from NMIs.

(4')   Initial-Medial stem   Ojibwe, after Rhodes 2003:5:(10)

a.   *nabagaa*   'It is flat.'   *[Initial-Final stem]*
       nabagaa - w
       be flat - 3 SUBJ
       stem: ***nabag - yaa***
               flat - INAN

b.   *ninabagijaane*   'I have a flat nose.'   *[Initial-Medial stem]*
       ni - **nabagijaane**
       1 SUBJ - be flat-nosed
       stem: ***nabag- (i)jaane***
               flat - nose

•   (4b)-type construction appears to be strongly productive in most Algonquian languages, forming stems describing states of body parts. A comparable stem is easily found in Penobscot:

(4")   Initial-Medial stem   Penobscot

       sekáskihtane   sekask-ihtan.α-[w]
       'he has a flat or depressed nose' (PD:422)   flat-nose.LV[NA]-W

- Two alternative analyses:

(a) I-M stems are actually I-M-F stems with a morphosyntactically real but zero Final.
(b) The stem-final -*e* in Ojibwe (-*α* in Penobscot), implicitly analyzed as a Postmedial in the Rhodes 2003 account, is in fact an abstract Final, making these stems structurally *I-M-abstractF*.

❖ No decisive evidence offered here; structure argued for can accommodate either.

3.4 Secondary stem derivation

- Goddard 1990: secondary stem derivation distinguished by a reduced set of forms and functions:

(a) Secondary stems only "have the form Stem + Final or Theme + Final" (Goddard 1990:471)

Stem-Final
Theme-Final   for "Theme", see Goddard 1990:450ft6 and Quinn 2006:ch2

(b) Primary and secondary stem derivation both can take primary stems as input (= Initial), but secondary stem derivation adds only Finals, never Medials.

(c) Secondary stem-forming Finals semantically abstract, mostly category-changing (G...1990:471)

- Secondary derivational Finals thus look more functional-structural in nature, i.e. the topmost layer of event-and-argument-structure-building morphosyntax.

- But: Rhodes 2003:14 asserts that the semantically rich NMIs are secondary stem derivation.

(5) Secondary stem derivation: examples

a. primary derivation

wəlítəhαso	[wəl	-təh.α-	-əs.i]	-[w]
'he is happy' (PD:472)	[good-	-heart.LN-	-rflx.LV^{NA}]	-W
	[Initial-	-Medial-	-Final]	-Idp_3

b. secondary derivation: intransitive to causative

nolitəhάsihkhα	nə [wəl-təh.α-əs.i]-	-hkVh.º.α	-[w]
'I make him happy' (PD:464)	1-[good-heart.LN-rflx.LV^{NA}]-	-caus.LV^{d}.DIR	-W
	[Initial]-	-Final/Theme	-Idp_3

c. secondary derivation: intransitive (verbal) to nominal

wəlitəhάsəwαkan	[wəl-təh.α-əs.i-]-W-	-αk.an
'happiness' (A.D.:Lonesome Song)	[good-heart.LN-rflx.LV^{NA}]-W-	-NOM.LN
	[Initial]-W-	-Final

- Why is primary stem derivation maximally ternary at each level of derivation, while secondary stem derivation is maximally binary?
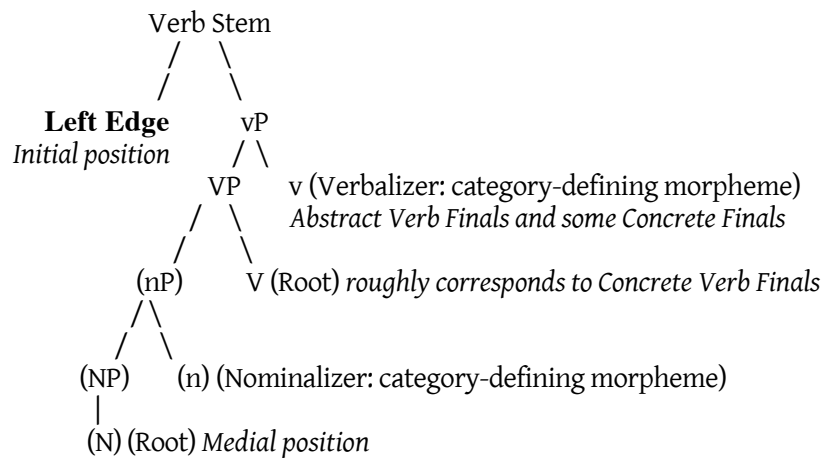
❖ No answer here, just a model that can accommodate these facts.

4. Proposal: binary branching for maximally tripartite stem and subcomponent structure

4.1   Brittain 2003 model of Algonquian verb stem structure

•   Brittain 2003 recasts Goddard 1990 analysis in an explicitly binary branching model.

•   Maximally ternary structure is not flat: built out of asymmetrical binary branching.

•   ***Structurally*** establishes a fundamental contrast between Initials and "non-Initials" in taking the Medial and Final as elements forming as a vP constituent together against the *Left Edge*.

(6)   Verb Stem Template (Brittain 2003:2:(4))

```
                      Verb Stem
                      /    \
                     /      \
            Left Edge        vP
          Initial position   / \
                          VP      v (Verbalizer: category-defining morpheme)
                          / \     Abstract Verb Finals and some Concrete Finals
                         /   \
                     (nP)      V (Root) roughly corresponds to Concrete Verb Finals
                     / \
                    /   \
                (NP)     (n) (Nominalizer: category-defining morpheme)
                 |
               (N) (Root) Medial position
```

Left Edge: = Initial; consists of an element, itself potentially internally complex, that "lacks a category-defining morpheme and thus is categoryless" (Brittain 2003:3)

•   Left Edge is *adjoined* to a vP constituent headed by [Root-VP+light verb] complex (=Final), whose *Root* may take a bare nP complement consisting of a [Root-NP+ light noun] complex (=Medial).

In short: an open, categoryless component (the Initial/Left Edge)...plus one verbal and (optional) nominal component, each formed by combination of a functional-structural light element with a precategorical Root (cf. Marantz 1997, inter alia)

(7)   I-M-F structure, per Brittain 2003

        Initial: open   (adjoined to vP)

        Medial: [N(P)]n   (complement of V)
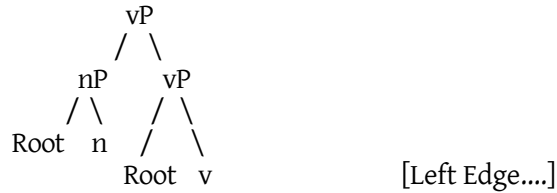
        Final: [V(P)]v   (with Left Edge adjoined to it)

•   As the dominating node, vP sets the syntactic category of the complex as verbal: this creates the verbal stem.

•   Brittain 2003:2 notes specifically that "[t]he [Left] Edge Position is always present and must always be filled, no matter how extensively the template is expanded"; also claims that the Left Edge position is to be filled by *movement*.

4.2   Proposed new model

4.2.1   Model and motivations: a stripped-down verb stem template

(8)   Verb Stem Template (new)

[Left Edge....]
```
                        vP
                       /  \
                    nP      vP
                   /  \    /  \
               Root   n   /    \
                        Root    v          [Left Edge....]
```

(a)   No particular evidence driving a need to represent NP and VP levels in the Medial and Final
        collocations; purely precategorical bare Roots plus light elements already needed and sufficient.

(b)   No need to claim that the Left Edge is filled by movement in the narrow syntactic sense. Can be
        better accounted for as a morphophonological property of Medials and Finals.

(c)   Left Edge material is not all adjuncts; resultative complements also appear in Left Edge. So need
        a structure where vP can take a Left-Edge event-structural complement along with Medial.

4.2.2   Representational economy

•   Omit NP, VP levels: keep only minimal structure that's morphologically reflected on the surface.

•   Already---and only---need notion of precategorical bare Roots collocated with their respective
        light elements, with the latter introducing syntactic categorization (Marantz 1997, Arad 2003,
        Kihm 2005) and event-and-argument structure (Ramchand 2008).

•   Maintains tight theoretical claim: only light elements can introduce arguments, while
        precategorical Roots cannot---i.e. V/Root does *not* take the Medial nP as its complement.

(9)   I-M-F structure, simplified

        (Initial: Root; or stem (=[...]n/v)
        Medial: [Root]n
        Final: [Root]v

•   Key parameter of Algonquian morphosyntax: light elements are in the vast majority of cases
        morphologically overt.

        • Many Medials do not evince a visible segmentable light n, but many do: the Postmedial.

        • Finals nearly all have a visible segmentable light v (=abstract Final); exceptions are much rarer.

❖   An Algonquian stem generally wears its precategorical-to-functional morphosyntactic structure
        on its morphophonological sleeve.

Methodology: take the visible cases to attest the underlying system; take cases where such elements are
                not visible as either direct categorization or zero morphology for the light element.

4.2.3   Left Edge is not filled by narrow-syntactic movement

•   Brittain 2003:2 Left Edge must be present; can be filled by movement to adjoin to vP.

Claim: Attribute Left Edge effect strictly to morphophonological features of the Medial and Final.

•   Left Edge surface structure results simply from the fact that Medial and Final components are, evidently and eminently learnably, morphophonologically suffixal.

•   Left Edge requirement due not to any special syntactic property/status of Left Edge material, but simply because, being suffixal, the *-(Medial)-Final* complex demands a prosodic-phonologically valid host; they cannot stand alone as a well-formed phonological word.

Advantages:

(a)   Already have to learn that Medials and Finals are morphophonologically non-initial.
(b)   Predicts heterogeneity in Left Edge material, which is attested:

        • Left Edge constraint can be satisfied either by a bound prefixal lexeme or a freestanding stem.

        • Brittain notes Initials (= Left Edge) manifest rich range of functions: adjectival, adverbial, quantificational, verbal, prepositional (adpositional), and nominal.

        • This suggests a negatively-defined elsewhere class, rather than a positively-defined one.

(c)   If movement here were taken in the narrow-syntactic sense of feature-driven movement, then motivating movement would require an entirely stipulative formal feature on all Left Edge material, since this material is otherwise quite syntactically and semantically heterogenous.

❖   Much more efficient, then, to attribute the observed effect to some property of the Medials and Finals, as these are demonstrably much more constrained classes, both in form and especially in syntax and semantics (see Quinn 2008, Rhodes 2005, Valentine 2001:333, and O'Meara 1990).

•   Purely morphophonological nature: evidence from Goddard 1990, cited in Brittain 2003.

(a)   When the Left Edge is filled, any additional Initials surface as a Preverbs, components that are phonologically independent in a number of ways (Goddard 1990:478), but are part of the verbal complex in hosting pronominal clitics and Initial Change.

•   Whether an Initial surfaces as a Preverb or as a bound part of the stem simply depends on whether or not the Left Edge is alread filled. Hence in (9), the stem *men.o-* 'NA drink' already has its Left Edge filled with an Initial *men-*; an added aspectual Initial *ki·š-* 'finish' thus can only surface as a Preverb (10b).

(10)   Left Edge filled: Initial to Preverb   Meskwaki (Fox), adapted from Goddard 1990:478:(146)

a.   menowa   men.o-[w]-a
        'he drinks'   drink.LV[NA]-W-NA

b.   ki·ši-menowa   ki·š-meno-[w]-a
        'he has finished drinking'   finish-[drink.LV[NA]]-W-NA

- Contrast (11b): here the Left Edge is open, due to the availability of a Final -i·seny.e· 'NA eat'--- evidently derived from the full stem seen in (11a)--- the result is that the Initial *ki·š*- 'finish' now surfaces as an Initial, completely phonologically bound into the stem.

(11)   Left Edge open: Initial stays Initial   Meskwaki (Fox), adapted from Goddard 1990:478:(147)

a.   wi·seniwa   wi·sen.i-[w]-a
      'he eats'   eat.LV^{NA}-W-NA

b.   ki·ši·senye·wa   ki·š-i·seny.e·-[w]-a
      'he has finished eating'   finish-eat.LV^{NA}-W-NA

- Evidence that this pattern is purely morphological: Passamaquoddy-Maliseet does have in its lexicon a Final -*hsəm.i* meaning 'NA drink'. So an Initial-Final construction corresponding to the Preverb-Stem construction in (10b) above is possible: the Final -*hsomi* can collocate directly with Initial *kis*- 'finish', creating a "surface stem" *kisossomi*-, glossable as 'NA have been drinking'.

(12)   Left Edge open: Initial stays Initial   Passamaquoddy-Maliseet

        kisossomi(`)t   kis-hsom.i-t-(V?)
        'when he has been drinking'   PERF/finish-drink.LV^{NA}-NACj-(absentative?)
        (PMD:<pqalokiqe>)

- Indeed, when both a full stem (13a) and a Final are available, near-synonymous doublets of Preverb-Stem (13b) and Initial-Final (13c) arise.

(13)   Full stem and Final doublets   Penobscot

        stem: mits.i-   'NA eat'
        Final   -hp.i   'NA eat'

a.   mìtso   mits.i-[w]
      'he eats' (PD:282)   eat.LV^{NA}-W

b.   kisí-mitso   kis-mits.i-[w]
      '1) he can eat, 2) he did eat' (PD:216)   PERF/finish-eat.LV^{NA}-W

c.   kísihpo   kis-hp.i-[w]
      '1) he can eat, 2) he has eaten,   PERF/finish-eat.LV^{NA}-W
      3) he finishes eating' (PD:217)

- (13b) vs. (13c) contrast unclear; major senses of the components are the same---taken together with the previous examples, Left Edge effects evidently driven entirely by the presence/absence of an unhosted non-Initial...and nothing more.

(b)   Scopal effects show that Left Edge status does not reflect a single syntax. Goddard 1990:479-480 argues that the scope reading of the the Preverb *ki·ši*- 'finish' over the whole stem (14b) is inappropriate to the wordform's context. The appropriate reading is that in (14c), with Preverb narrowly scoping together with stem-derived Initial *ki·ke·no-w*- 'NA have a clan feast', before attaching the TA Final -*e·nem* 'think about NA' (i.e. -*e·nemaki* 'when I thought ... about them').

(14)   Narrow scope of Left Edge material   Meskwaki (Fox), adapted from G...1990:479-480:(149)

a.   ki·ši-ki·ke·nowe·nemaki   'when I thought they were finished with the clan feast'
b.   *ki·ši-[ki·ke·now-e·nemaki]   *'after I thought they were celebrating a clan feast'
c.   [ki·ši-ki·ke·no]w-e·nemaki   'when I thought they were finished with the clan feast'

❖   The Left Edge effect violates interpretational constituency and seems not to be associated with

any clear semantic effect, nor does it show a formal regularity that a purely feature-driven
narrow-syntactic movement would exhibit (assuming such things even exist). It is better
understood as a simple outcome of the suffixal morphophonology of Medials and Finals.

4.2.4   Left Edge material can be complements as well as adjuncts

•   Assume depictives are adjuncts of vP and resultatives are complements (Ramchand 2008).
•   Brittain 2003 model suggests that all Left Edge material enters the derivation as an adjunct to vP.
•   But resultatives (15a) and depictives (15b) both systematically also appear as Left Edge elements.

(15)   Left Edge resultatives and depictives

a. *resultative*   nəsəkʷə́skamα   nə-səkʷəsk-am.α-[w]
                     'I chew him into pieces,   1-fragmented-by_mouth.DIR-W
                     masticate him' (PD:426)

b. *depictive*   amehsakəsítesse   amehsak-əsit.e-wəhs.e-[w]
                     'he walks barefooted' (PD:61)   naked-foot.LN-walk.LV^{NA}-W

•   Expected if the Left Edge effect is non-syntactic, being simply forced by the suffixal nature of
      Medials and Finals: elements in either an adjunct or a complement relationship to the vP
      Medial-Final complex could both act as morphophonological hosts to the surface-suffixal vP;
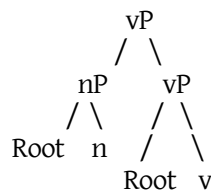   the "movement" required for this would thus have no semantic effect.

❖   Left Edge status says little about syntactic relationship to the Medial-Final complex.

5.   Review

•   With Initial/Left Edge status as essentially syntactically meaningless...
•   I offer an alternative, stripped-down verb stem template, based on maximal triparticity.
•   Noun stems explicitly claimed to parallel structure in (16).

(16)   Verb Stem Template

```
[Left Edge....]                    vP
                                  / \
                                nP     vP
                               / \    / \
                           Root   n  /   \
                                  Root  v          [Left Edge....]
```

•   Template does not include the Left Edge at all, because the Left Edge is simply an
      epiphenomenon to a feature shared by Medials and Finals, namely, their suffixal
      morphophonology.

- Left Edge content syntactically merges either above or below this structure, but always morphophonologizes to the Left Edge.

- Maintains maximal triparticity in that structure is a minimal binary interface domain, consisting maximally of three components, with two organized around the single core light element head.

- Makes it clear that the dominating node is the projection of that same core light element head; here = vP, which captures the syntactic behavior of such collocations as verbs.

- Specifically, the core head (light v) maxes out its phase/locality in merge-hosting first its own Root and then a possible merged nP/vP. Anything more involves iterations of phasal structure.

- Translation to Algonquianist tradition:

Root.n	=	(nominal) Medial
Root.v	=	verbal Final

- Roots merge directly with light elements, adjoining with them to form a light element phrase. No explicit phrasal complement syntax needed.

- Being iteratable/fractal syntax, this structure offers an escape hatch into additional phases of structure in three major directions:

(a)   The last-merged cophasal element can have internal structure (as seen in Medials), and

(b)   Overall structure can occupy same slot again: i.e., 2ndary deriv. = this vP merged w/in another vP

(c)   Roots themselves can adjoin directly to other Roots

Q: How does a *-Medial-Final* complex take an xP complement (= resultative)? Isn't it maxed out?
A: Whole component is still a vP (w/ nP adjoined to Root.v complex), so can take a complement vP, but only at the cost of building a multiple-event-argument structure. Which is what we get in a resultative construction. Similarly when this structure is itself embedded in a vP: this gives rise to mono- and ditransitives.

Key: Core head (= light v) can support no more structure than this, with first merge [Root v] and then second merge [nP[Root v]]. No more than that: hence *-Medial-Final* complexes travel as Finals, but nothing more.

- Surface triparticity of stems arises bc minimally bipartite *-M-F* collocation is suffixal, requiring some coincidentally costructural third component to satisfy its morphophonological needs: this is the Left Edge.

Preview: internal maximal triparticity of I-M-F subcomponents

(17)   Traditional descriptive triparticity of the Medial and Final subcomponents:

  Medial =   Premedial-Concrete_Medial-Postmedial   = *Premedial-Medial-Postmedial*

  Final   =   Prefinal-Concrete_Final-Abstract_Final   = *Prefinal-Final-Postfinal*

Q: Initials also tripartite?
A: Yes, but only bc many Initials are recycled tripartite stems: to show their triparticity is moot.

6. Roots and light elements: the internal maximal tripartictiy of I-M-F elements

6.1   Overview

•   Analyzing *I-M-F* elements to be maximally tripartite in their internal structure clarifies cases of surface ambiguities and other similarities btw Medials and Finals; and also predicts attested tendency for the "Post-..." elements to trigger contextual allomorphy in the Roots they host.

6.2   Surface ambiguities: related Medials and Finals

•   Given how roots can enter the structure here, it is quite likely that a Root found in a Medial will also be found in a Final. This is because both components have a common minimal merge structure: simply Root plus light element, i.e. [Root.x].   *v = LV, n = LN in morpheme glosses*

(18)   Common minimal merge structure of Medials and Finals

```
         xP
        /  \
     ...    xP
           /  \
        Root   x
```
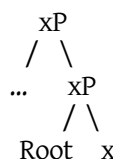
•   This is what we find, and quite often: namely, collocations of [Root.n] for a Medial and [Root.v] for a verbal Final, with both having the same Root.

(19)   [Root.n] Medial and [Root.v] Final pairs: Root -əč(i) 'excrement'

Medial: -əč.ak   'SOFT STICKY MASS'
Final: -əč.α   'NA have... excrement'

a.   pəməčákohse   pəm-əč.ak-wəhs.e-[w]
      'he walks in mud' (PD:374)   along-excrement.LN-walk.DO[NA]-W

      cf.   pə̀mohse   pəm-wəhs.e-[w]
             'he walks along, by' (PD:377)   along-walk.DO[NA]-W

b.   mὰskəče   mask-əč.α-[w]
   'he has malodorous feces' (PD:252)   stinky-excrement.LV[NA]-W

•   Notice that the semantic differences between the respective Medial and Final collocations can quite substantial: (19a) being a classificational abstraction, and (19b) being quite concrete.

❖   Reflects the fact that each is a simple merging of a Root with a light element, with no intervening functional structure to "fix" stable/consistent interpretations of the Root. (Arad 2003, Borer 2005ab)

6.3   Surface ambiguities: Root vs. Medial complex

•   When the Final lacks a Root of its own (i.e. is only a light element), the distinction between a Root and a Medial complex can be seen...

•   ...provided the Medial has an overt light noun, e.g. the Postmedial -*.ak.*
•   Then we see a surface stacking with the form *Root.LN.LV*

(20)   Verbal Final from a Medial

```
              vP
             /  \
          nP     \
         /  \     \
     Root    n     v

     -aht   -.ak   -.at
```
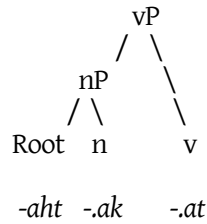
a.   Medial: -aht.ak-   'CORD'
       Final: -aht.ak-.at   'NI be … cordlike object'

       atəpahtákənike   atəp-aht.ak-ən.k.e-[w]
       'he winds, does winding' (PD:85)   wind-cord.LN-by_hand.gnrc_obj.DO[NA]-W

       kíntakat~kináhtakat   kin-aht.ak.at-[w]
       'it is a large string, rope, hair' (PD:211)   big-cord.LN.LV[NI]-W

b.   Medial: -əp.ek-   'LIQUID' (-əp.ek- < PA *-epy.ak-)
       Final: -əp.ek-.at   'NI be … liquid/water'

       mɑtəpékəlɑmsən   mɑt-əpek-əlɑm.Vhs.ən-[w]
       'the water is agitated by the wind' (PD:262)   moved-water.LN-wind.wind.LV[NI]-W

       kínəpekat   kin-əp.ek.at-[w]
       'it is a great expanse of water' (PD:209)   big-water.LN.LV[NI]-W

• Many Medials build a corresponding nominal Final by apparently "stacking" the *Postmedial* light noun -.ak with a *Final* light noun in -.w, cognate to the familiar PA *-w creating deverbal nouns (Quinn 2006:198-200, Goddard 1974:324-325).

• Stacking: first-merge -.ak-headed Medial complex to the light n element heading Final complex:

(21)   Nominal Final from Medial

```
              nP
             /  \
          nP     \
         /  \     \
     Root    n     n

      -p    -.ak   -.w
```
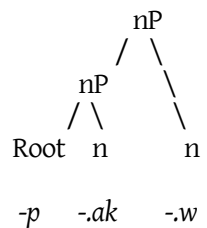
       Medial   -p.ak-   'leaf'   (cf. *mìpi* NI 'leaf' (PD:281))
       Nominal Final   -p.ak.w-   'leaf'

a.   sekatepákahte   sekate-p.ak-aht.e-[w]
       'the leaf is placed in flattened position, depressed'   flattened-leaf.LN-seated.LV[NI]-W
       (S:23:44)

b.   sekátepakʷ   sekate-p.ak.w
       'Rugel's Plantain [CQ: *gloss not certain*]' (S:23:44)   flattened-leaf.LN.LN

- Needless to say, there are also nominal Finals formed by merging Roots directly with the light noun element, giving nominal Finals in [Root.n] matching verbal Finals in [Root.v].

(22)   [Root.v] and [Root.n] Final pairs

```
            xP
          /   \
       ...    xP
            /  \
        Root   x        [x = v, x = n]
```
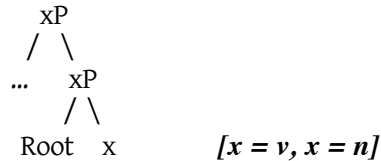
a.   v-Final: -atən.e-   'NI be ... mountain'
      n-Final: -atən.w-   'mountain'

      ktàtənok   kəht-atən.w-ək
      'at/on the large mountain' [Mt. Katahdin] (PD:225)   great-mountain.LN-LOC

      pə̀matəne   pəm-atən.e-[w]
      '1) the hill/mountain extends;   along-mountain.LV^{NI}-W
      2) there is an extent of hills/mountains' (PD:373)

b.   v-Final: -ahkamik.e-   'NI be ... land'
      n-Final: -ahkamik.w-   'land'

      niwahkámike   niw-ahkamik.e-[w]
      'it is a dry land, it is an arid country' (PD:329)   dry-land.LV^{NI}-W

      niwáhkamikʷ   niw-ahkamik.w
      NI 'desert' (PD:329)   dry-land.LN

6.4   Contextual allomorphy

- While the [Root.x] collocation is formal-syntactic in structure, whether or not a given Root actually combines with either of these specific light elements is a strongly lexical matter. Indeed, some Roots show contextual allomorphy in such collocations.

(23)   [Root.v] contextual allomorphy

.   NAv-Final: -əs.i-   'NA be ... heated'
     NIv-Final: -ət.e-   'NA be ... heated'

     pə̀kihkəso   pəkihk-əS.i-[w]
     'he (bread, etc.) is baked, scorched, he is cooked dry   scorched-heat.LV^{NA}-W
     by water evaporation, is over-cooked or burned' (PD:369)

     pə̀kihkəte   pəkihk-əS.e-[w]
     '1) it is baked; 2) it is overcooked, cooked   scorched-heat.LV^{NI}-W
     dry, burned dry by water evaporation' (PD:369)

- Contrast this with Medial-Final collocations, which rarely if ever show such effects. Given that we assert that [Root.x] reflects the closest and earliest possible merge of purely lexical material with functional elements, more contextual allomorphy for [Root.x] and less for [Medial-Final] is not surprising.

❖ Here again the maximal triparticity model constrains relations between subcomponents of Medials and Finals in precisely the directions we find attested, while doing same for relations between Medials and Finals themselves.

7.   Sneaking more structure in: Premedials and Prefinals

7.1   Overview

•   So far we have seen that the model readily accounts for most simple collocations of Medial and Final, and helps parse out surface-ambiguous collocations thereof.

•   Here we will see how it deals with the initial components of Medials and Finals: the Prefinals and Premedials, and also with related cases of structures that appear to violate maximal triparticity.

7.2   Prefinals

•   How do we deal with a seemingly quadripartite *-Medial-Prefinal-Root-LV* structure?

(24)   Prefinal *-əhte* 'striking' in apparently quadripartite collocation

a.   *-əhte-ah.*[o]   'strike NA'   Prefinal-Root.LV[d]

     nətəmíhtəhα   'I cut him in half with an axe, blow' (PD:c.465)

b.   *-kʷ.e-əhte-ah.*[o]   'chop NA's head off'   Medial-Prefinal-Root.LV[d]

     nətəmikʷéhtəhα   '[...] I cut off his head with a blow' (PD:c.465)

•   Cannot palm Medial off to the Initial since we rarely see [Initial+BodyPartMedial] as recurrent Initials; would also block comparing these patterns to evidently similar possessor-raising noun incorporation constructions in other languages.

•   Instead can sneak Prefinal into the first-merged Root, leaving the ultimate v-organized structure still able to host the Medial, and still conform to maximal triparticity.

(25)   Prefinals as Root-adjunct to first-merged Root

```
              vP
             /  \
           nP    vP
          / \   /  \
      Root  n  /    \
              /\     v
         Prefinal  Root
```
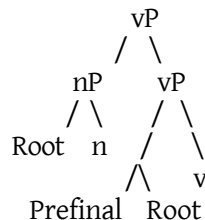
•   I.e. the solution is to go *down* a fractal scale, adjoining at the Root level.

•   Seems like the road to infinite regression, but one point makes it solid: as this structure suggests, Prefinals typically *do* have a very close lexical-selectional relationship with the first-merged Root, and virtually never collocate directly with the light verbs:

(26)   Prefinals: close lexical-selectional relationship with the first-merged Root

a.   Prefinal *-əhte*   'striking'

-əhte-hs.in	'NA fall'	-hs.in 'NA be prone'
-əhte-əl.aw	'strike NA w/projectile'	-əl.aw 'fire projectile at NA'
-əhte-əhk.aw	'collide bodily with/kick NA'	-əhk.aw 'act on NA with body'

b.   Prefinal *-αčkʷ*   'dragging'

-αčkʷ-h.al	'drag NA'	-h.al	'change NA (in state, position)'
-αčkʷ-pVh.º	'drag NA (?sharply)'	-pVh.º	'grab NA (sharply [*bleached*])'

c.   Prefinal *-ahkase* 'burning'

-ahkase-əs.º	'burn NA'	-əs.º	'act on NA with heat'
-ahkase-əs.i	'NA burn [middle/anticaus]'	-əs.i	'NA be in heated state/process'
-ahkase-ət.e	'NI burn [middle/anticaus]'	-ət.e	'NI be in heated state/process'

• Prefinals are in fact strikingly unproductive, each only associating with a handful of Roots at most: this makes sense if they are fundamentally structurally dependent on those Roots.

• Only one of these Prefinal Roots in fact attests outside of these Prefinal collocations: *-ahkase*. Derived---by common loss of initial sonorant and alternation of weak vowels /ə a/---from Root *məhkase-* 'coal, ember, black':

(27)   Root *məhkase-* 'coal, ember, black'

a.   mkàse   məhkase.w
        NA: 'live coal, ember'; NI: 'burnt out coal' (PD:282)   Root.LN

        mkàses   məhkase.s
        NI 'ember, small coal, small live coal' (PD:282)   Root.LN_DIM

        mkàsehs   məhkase.əhs
        NI 'charcoal, dead coal' (PD:282)   Root.LN_AUG

        mkàsess   məhkase.w.əhs
        NA 'crow (*Corvus brachyrhynchos brachyrhynchos*)' (PD:282)   Root.LN.LN_AUG

b.   derived Initial *məhkase.w-* 'black'

        mkaséwihle   məhkase.w-hl.α-[w]
        'he turns black' (PD:283)   Root.LN-go.LV^NA-W

• Derived Initial *məhkase-w-*: only attested meaning is 'black':again predicted here, as light noun *-.w* structures a maximal domain (= Spellout/Encyclopedia interface) that "fixes" the semantics specifically to 'black', and no other meaning of the Root; cf. Arad 2003, Borer 2005ab.

❖ The maximal triparticity structure predicts precisely the kinds of Prefinals that are attested.

7.3   Premedials

•   Premedials: even more limited set: only cited Premedial is PA *-*a·* element (Goddard 1990:466 ft41, Denny and Mailhot 1976), found in Medials like Pb -*α.təp.e*- 'head' (28b); cf. stem in (28a).

•   But this PA *-*a·* is evidently not distinctive to Medials: -*α.təp* also occurs as a nominal Final (28c).

(28)   Noun Final and Medial

a.   noun stem -*təp*

        nə̀təp   nə-təp
        'my head'   1-head

b.   Medial -*α.təp.e*-

        kʷaskʷα̲t̲ə̲p̲ehtəhα-   kʷaskʷ-<u>α.təp.e</u>-əhte.ah.°.α-
        'strike NA on the head to death'   to_death-<u>PrM.head.LN</u>-striking-by_tool.LVᵈ.DIR

c.   nominal Final -*α.təp*

        wasákαtəp   wasak-α.təp
        'skull' (PD:475)   empty-PrM.head

•   Premedial *-*a·* needs to be set up as a Prefinal as well; i.e. as an adjunct to the first-merged Root.

•   Seems likely as a "Pre-"-element: close lexical association to the first-merged Root, and lacks a clear classificational or incorporated-element relationship with the overall Medial complex.

•   Predicted: Premedial-carrying Medials can host a third element. No evidence, however, that *any* Medial can host a third element. Nominal rather than verbal nature of the Medial light element may relevant here.

8.   Light elements: Postmedials and Postfinals

8.1   Overview

•   Terminal subcomponents of Medials and Finals: the light elements.

•   Give category and event-and-argument structure to Roots; or, conversely, Roots add semantic richness to the functional structures realized by the light elements.

•   Here: Postmedial = abstract Final analytically, being light n and light v/n respectively.

•   Thus relabel *abstract Final* as *Postfinal*. And take all "Post-..."s as light elements.

Evidence:

(a)   Both types of "Post-..." subcomponent share not only morphophonological properties, i.e. minimal prosodic weight and terminal edge position...

(b)   ...but also the crucial property of determining basic syntactic category. (Rhodes 2006, 1980)

(c)   That the verbal Postfinals also contrast some features of internal aspect (see esp. Denny 1980 et seq., Rhodes 2005) further suggests a light-element analysis, as light verbs often comorphologize with the narrower, more internal types of aspect.

•   For Finals, that these elements contrastively determine syntactic category should be clear from all the examples cited so far.

•   How light verbs realize notional transitivity contrasts is a bit more complex than traditionally believed: derived via specific configurations of argument-introducing light verbs, and not just simple concatenation of [±transitive] components. (Quinn 2006:ch2)

•   Postfinals thus assumed to be light verbs or light nouns, and not discussed further.

8.2   Postmedials: in search of a noun

•   Harder to show that the Postmedial element is a light noun, bc Medials necessarily do not form the category-determining component of the overall stem: how are we to know that a Medial is a noun (nP) and not simply a complex Root?

•   Three points of evidence:

(a)   Limited but suggestive hint of Postmedial -.*ak* directly nominalizing a precategorical Root. *= §8.3*

(b)   A substantial set of Medials acts as a shape-classifiers, a category typically drawn from and associated with nominals crosslinguistically. *= §8.4*

(c)   An equally substantial set of Medials carries out crosslinguistically typically noun-based functions: both obliques and notional objects. *= §8.5*

8.3   Precategorical Root *(w)αl-* 'concave, hollow, hole' meets Postmedial -.*ak*

•   The precategorical Root *(w)αl-* 'concave, hollow, hole' is well-attested in Penobscot:

(29)   Precategorical Root *(w)αl-* 'concave, hollow, hole'

wαlahkámike   wαl-ahkamik.e-[w]
'there is a valley' (PD:450)   hollow-land.LV[NI]-W

wαláhkamikʷ   wαl-ahkamik.w
NI 'valley, hollow, doles' (PD:450)   hollow-land.LN

wάlate   wαl-ate
NA 'dish, plate' (PD:450)   hollow-belly

wάličo   wαl-čo
NA 'birch bark or wooden container,   hollow-container
hollow dish' (PD:450)

wὰlke   wαl-əhk.e-[w]
'he digs, hollows out, excavates' (PD:451)   hollow-do.DO[NA]-W

kísαlke   kis-αl-əhk.e-[w]
'he has made a cache, has finished   finish-hollow-do.DO[NA]-W

burying something' (PD:214)

- When *(w)αl-* collocates with Postmedial *-.ak*, resulting semantics are "fixed" to the entity sense of 'hole'. This is the source of the classificational Medial *-αl.ak-* 'HOLE', attested as an clear Medial in (30a, b), and as a Medial collocated into light verb Final in (30c):

(30)   Precategorical Root *(w)αl-* 'concave, hollow, hole' plus Postmedial *-.ak* = 'hole'

a.   nəkəp<u>αl</u>ák<u>ak</u>əhα   nə-kəp-<u>αl.ak</u>-ah.º.α-[w]
'I close the opening of him, close the hole   1-blocked-<u>hollow.LN</u>-by_tool.LV^d.DIR-W
in him' (PD:190)

cf. nək<u>ə</u>pahα 'I close him' (PD:191)

b.   nətasik^w<u>αl</u>ák<u>ak</u>əhα   nə-asik^w-<u>αl.ak</u>-ah.º.α-[w]
'I ream him' (PD:77)   1-reamed-<u>hollow.LN</u>-by_tool.LV^d.DIR-W

cf. nətásik^whα 'I plunge something through him' (PD:77)

c.   kín<u>αl</u>akat   kin-<u>αl.ak</u>.at-[w]
'it has a large hole, there is a large   big-<u>hollow.LN</u>.LV^NI-W
hole in it' (PD:208)

- Equally telling is the existence of a noun stem meaning 'hole' that is derived from little more than *(w)αl-* 'concave, hollow, hole' plus Postmedial *-.ak* = 'hole'.

wὰlak^w   wαl.ak.w
NI 'natural hole in ground or tree, rock   hollow.LN.LN
(not in clothes), hole of animal burrow (PD:453)

- Ultimate nominal status of stem *wαl.ak.w-* is no doubt due to light noun Final *-.w*,
- ...but: structural parallel with other *-.w*-derived stems:

wαl-ahkamik.w-   'valley [...]'   (cf. (29) above)
wαl-αhpəsk.w-   'hollow stone' (cf. *wαláhpəsk^w* NI 'a concave, hollowed out stone' (PD:453))

❖   ...suggests that *-.ak* is at least a nominal-type Root in origin, parallel to Roots *-ahkamik* 'land, earth' and *-αhpəsk* 'rock, stone'.

- Assuming that light functional elements generally develop from lexical Roots, this is expected.

8.2   Medials as shape-classifiers

- A subset of Medials act as shape-classifiers, a category crosslinguistically derived from nominals.

- Algonquian classificatory Medials show the same distinctions of shape-classification known familiarly from East/SE Asian-areal languages such as Mandarin, Hmong Daw, and Thai.

- Alg shape-classifying Medials are morphologically separate from verbal Roots of handling / stance, unlike in Athabaskan languages, even as they form much the same lexical collocations.

- Hence we find classificatory Medials contrasting the same basic features of dimensional rigidity

(STICK vs. CORD vs. SHEET vs. LUMP/ROUND OBJECT), as well as negative dimensionality (HOLE) and textural manifestation (GRANULAR vs. SOFT/STICKY MASS vs. LIQUID).

(31)   Classificatory (shape-classifier) Medials

-ɑhkʷ- '1D RIGID OBJECT' (< 'tree, stick')   cf. Md 枝 zhī, HmD tus
-aht.ak- '1D NON-RIGID OBJECT' (< 'cord, string')   cf. Md 條 tiáo, HmD txoj
-ek-   '2D NON-RIGID OBJECT' (< 'skin, hide')   cf. Md 張 zhāng, HmD daim
-ɑhpəsk- 3D/ROUND OBJECT/LUMP' (< 'rock')   cf. Thai ลูก lûuk
-ɑl.ak- 'HOLE' (< 'hole')   cf. HmD qhov
-ɑmk-   'GRANULAR MASS' (< 'sand, gravel')
-əč.ak- 'SOFT/STICKY MASS' (< 'excrement')
-əp.ek- 'LIQUID' (< 'water')   cf. Thai น้ำ náam

(32)   Classificatory Medials: examples

a.   *-ɑhkʷ-* '1D RIGID OBJECT' (< 'tree, stick')

nətés<u>ahkʷ</u>təhɑ   'I pierce him, run him through with a spear'   (PD:453)
kin<u>ahkʷ</u>álane   'he (bird) has a long tail'   (PD:207)

b.   *-aht.ak-* '1D NON-RIGID OBJECT' (< 'cord, string')

sɑkh<u>ahták</u>ihle   'he (snake, worm) squirms, wriggles into view'   (PD:417)
mate<u>htak</u>íhtehsən   'there is the sound of throbbing (as when a bowstring flutters)' (PD:255)
cf.   matéhtehsən   'it makes the sound of an impact'   (PD:255)

c.   *-ek-*   '2D NON-RIGID OBJECT' (< 'skin, hide')

mɑt<u>ék</u>əlɑmsən   'it (fabric, sheet, hide, tent) is moved by the wind' (PD:262)
cf.   mɑ́tələɑmsən   'it (a solid object, stick, twig, door) is moved by the wind' (PD:262)

(33)   *-ɑl.ak-* 'HOLE' (< 'hole')

nəkəp<u>ɑlák</u>əhɑ   'I close the opening of him, close the hole in him' (PD:190)
cf.   nəkɑ̀pahɑ   'I close him'   (PD:191)

(34)   *-ɑhpəsk-* '3D/ROUND OBJECT/LUMP' (< 'rock')

wəsɑkh<u>áhpsk</u>ohsən   'she came waddling forth (Sbd)'   (k&p:4)
kin<u>áhpsk</u>ɑtəpe   'he has a big round head'   (PD:207)

(35)   *-ɑmk-* 'GRANULAR MASS' (< 'sand, gravel')

kətəw<u>ɑ́mk</u>ihpo   'he eats with a sandy or grinding noise'   (PD:201)
pəm<u>ɑ́mk</u>ihle   'II: it is a stretch, an extent of sandy, gravelly beach; (PD:374)
                          AI: he goes along the beach, proceeds along the beach'

(36)   *-əč.ak-* 'SOFT/STICKY MASS' (< 'excrement')

kəlamə<u>čák</u>ihle   'he/it is sticky, viscous'   (PD:187)
cf.   kəlámihle   'he/it is adhesive, clinging, adherent'   (PD:187)
mate<u>ćák</u>ihpo   'he makes an unpleasant noise in eating'   (PD:255)

(37)   *-əp.ek-*   'LIQUID' (< 'water')

nəmɑtəpékənəmən	'I stir it (water)'	(PD:262)
cf. nəmátənəmən	'1) I fight it, 2) I move my hand, I move it with my hand'	(PD:262)
matepékələmsən	'there is rippling of the water by the wind (audible)'	(PD:255)
aləpektáhike	'he splashes (so)'	(PD:47)

❖   East/SE Asian-areal classifiers uncontroversially nominal: asserting otherwise for semantically and functionally parallel Algonquian classifiers would require positive motivating evidence.

8.3   Medials as instrumental and other oblique incorporants

•   A subset of Medials carry semantics typically realized as oblique nominals in other languages.
•   These include Medials naming the instrument involved in the verbal event structure:

(38)   Medials: instrument-naming

nəməlakʷámkəhɑ	'I cover him with <u>earth, soil</u>'	(PD:274)
nəməlakʷipákəhɑ	'I cover him with <u>leaves</u>'	(PD:274)
nəməlakʷipisákəhɑ	'I cover him with <u>bushes</u>'	(PD:274)
məlakʷaskihkəwáhoke	'he lies covered with <u>grass</u>'	(PD:274)
məlakʷékhoso	'he pulls the <u>covers</u> over himself '	(PD:274)
nəkəpáhkehkawɑ	'I block/obstruct his passage with <u>earth, dirt</u>'	(PD:190)
nənɑ̀či-kàlapkéhtɑhɑ	'I go frighten them out' [CQ: by hitting the <u>ground</u>]	(S:30:..986.jpg)
cf. nəkaláptɑhɑ [*sic*]	'I (purposely) frighten an animal away.' [*sic*: I...him]	(S:30:..985.jpg)

•   ...and Medials naming other oblique-nominal notions like embedding medium:

(39)   Medials: embedding medium

nəketɑləyákhamən	'I remove <u>snow</u> from it, I uncover it from <u>snow</u>'	(PD:183)
wəčkawɑləyákhoso	'he approaches through the <u>snow</u>'	(PD:461)
ketɑlə́kʷhike	'he removes something, things from the <u>ice</u>'	(S:30:..985.jpg)

•   ...and Medials extending "instrument" naming means/medium through which event manifests:

(40)   Medials: extended instrumentals

wəsɑ̀khi-kə̀təwáləkʷihlɑn	'he came into view in the sound of crackling <u>ice</u>'	(S:30:..988.jpg)
matéləkʷihle	'the <u>ice</u> makes a noise in moving or cracking, the <u>ice</u> sounds, there is a sound of moving ice'	(PD:255)
matéləkʷihtan	'the <u>ice</u> roars in the current, there is a sound of <u>ice</u> flowing in the water'	(PD:255)
mɑtkamikíhpote	'the <u>earth</u> trembles, there is an <u>earth</u>quake'	(PD:262)
alihkəwákihle	'he/it <u>bleeds</u>'	(PD:50)

•   ...and Medials naming the notional object being acted upon, the object that names the activity:

(41)   Medials: notional object of activity

| talahkəlosənáhike | 'he is making a <u>fence</u>, <u>stockade</u>' | (PD: 449) |
| alahkáhike | '1) he tills, cultivates the <u>soil</u>, 2) he hoes' | (PD:32) |

| alaskə́sɑwe | 'he mows, cuts grass' | (PD:35) |
| alihkʷekátike | 'he chews gum, pitch' | (PD:50) |

- These stems epitomize Mithun 1984:848's name-worthiness criterion for noun incorporation, with the Medials' contribution matching that seen in incorporated nouns in other languages (cf. Baker 1988, 1996).

- Extensive, high-frequency set of Medials names involved body parts: further suggests a nominal analysis for all Medials, as this is a common class of nominal incorporant (Mithun 1984:858).

(42)   Medials as incorporated body-part nominals

a.   Body-part Medials: transitive: part-whole relations with core argument

| wəkʷaskʷɑtəpéhtəhɑn | 'he struck him dead on the head (Sbd)' [CQ gloss] | (késihlɑtGD:24) |
| cf.   nəkʷáskʷtəhɑ | 'I kill him with a blow (by axe, club, etc.)' | (PD:231) |

| nəkələtonépilɑ | 'I tie his mouth (with string, cord, thong)' | (PD:186) |
| cf.   nəkəlápilɑ | 'I tie him, tie him up, tether him' | (PD:186) |

| nəməsálɑwephɑ | 'I catch him quickly by the tail, I grab him by the tail' | (PD:275) |
| cf.   nəmɛ̀siphɑ | 'I catch him' | *[ms.: nəməsálɑwephpɑ]* | (PD:275) |

b.   Body-part Medials: intransitive: part-whole relations with core argument

mɑtɑləwéhposo	'he wags his tail'	(PD:262)
pilsəsítehle	'his foot is numb, becomes numb'	(PD:396)
milihptinétotam	'he gestures, talks with his hands'	(PD:281)
sehsɑlakikʷelámsoke	'the wind makes his eyes water, his eyes water from the wind' (PD:422)

- These classes of Medials strongly suggest that Medials are more than just underspecified Roots, and are instead light-noun headed collocations, bound w/in stem structure as non-individuated quasi-arguments.

- Following general claims of most accounts of noun incorporation (Baker 1988, 1996 et al.) and of bare noun + light verb constructions (Grimshaw and Mester 1988, Öztürk 2005), in taking Medial incorporants to be syntactically minimal nouns, i.e. *nP* elements.

- Following the Marantz 1997 tradition, to claim syntactic object is an nP is to assert that its precise structure is of a Root plus a light noun: [Root.n].

❖   In Algonquian languages, this can be seen first and foremost in the frequent presence of overt light noun morphology at the terminal edge of the Medial complex, i.e. Postmedials.

Q: What about the other Postmedial, the Pb -.*e* element (PA *-*e·*)?
A: Evidence less clear: there is a lightish nominal PA *-*ay~-e·* available (cf. Munsee *nhákay* NID 'my body (O'Meara 1996:64) and Pb NID *nhɑ̀ke* 'my body [...]' (PD:7)). But just as likely a light verb, since a number of NA and NI light verbs have this PA *-*e·* form. Single lone vowel = hard to prove.

Q: Why must an incorporant be an nP and not just a Root?
A: Don't know for sure: perhaps a vP can only second-merge with a fellow xP, not a bare Root; or the light noun component is crucial to an entity interpretation...either way, the same pattern is also found in genetically unrelated areal neighbors: the Northern Iroquoian languages.

9. The Northern Iroquoian connection

• Northern Iroquoian languages too often add an element typically glossed as a *nominalizer* onto an incorporated noun (Hopkins 1988, Baker 1997, Abbott 2006, inter alia).

• H88:195 re Mohawk: a nominalizer or "increment" *-hser/tsher* forms deverbal noun stems:

(43) Nominalizer *-hser/tsher*

a. kahyatú<u>hser</u>a   ka-hyatu-<u>hser</u>-aʔ
   'book' (H88:195:(3.171))   ZA-write-<u>nom</u>-nsf

b. khyatons [CQ: = khyá:tus]   k-hyatu-s
   'I write' (Maracle 1993:37)   1A-write-hab

• [*-nom-nsf*] stacking of two nominalizers exactly parallels light nouns stacking to form *-ak.w* (21).

• A further class of deverbal noun stems does not need *-hser/tsher* in forming a freestanding noun stem, but does require it when incorporated:

(44) Incorporation requiring use of nominalizer *-hser/tsher*

a. stem *atyaʔtawi-* 'jacket'

   yotyaʔtawi<u>hser</u>ỳ:tv   [*sic*]   yo-at-yaʔt-a-wi-<u>tsher</u>-vʔt-v
   'a jacket is hanging' (H88:197:(3.182))   ZP-srf-body-J-be in a cylinder-<u>nom</u>-be hanging-stat

   atyà:tawi   (w)-at-yaʔt-a-wi-
   'jacket' (H88:196:(3.179))   ZA-srf-body-J-be in a cylinder

b. stem *atekhwahra-* 'table'

   áhsv naʔtkatekhwahra<u>tsher</u>atá:seʔ

   ahsv   n-a-aʔ-t-k-ate-khw-a-hra-<u>tsher</u>-a-tase-ʔ
   three   part-fact-H-du-1A-srf-food-J-put on-<u>nom</u>-J-go around-punc

   'I went around the table three times.' (H88:7:(1.12))

   atekhwà:ra   (w)-ate-khw-a-hra
   'table' (H88:196:(3.177))   ZA-srf-food-J-put on

c. stem *anitskwahra-* 'chair'

   Ro-anitskwa[h]ra-<u>tsher</u>-a-hniru.   NS/MSGO-chair-<u>NOM</u>-ø-be.hard
   'His chair is hard.' (Baker 1997:283)

   anitskwà:ra   (w)-an-itskw-a-hra
   'chair' (H88:196:(3.178))   ZA-srf-thigh-J-put on

• Nominalizer *-hser/tsher* tracks Postmedial *-.ak* in incorporation, and in light element stacking.
• N. Iroquoian languages share with Algonquian languages the (frequently) overt realization of light noun morphology in incorporants; this suggests a broad syntactic principle at work.

10.   Abbreviations

1	1st person	nom, NOM	nominalizer
1A	1st person agent	NS/MSGO	≈ masculine gender patient
2	2nd person	nsf	noun suffix
3	3rd person	OBJ	object
AI	animate intransitive	obv	obviative
AI+O	AI taking Secondary Object	OTI	TI taking no object
Cj	Conjunct	°	diacritic rounding on weak vowels
DIR	Direct light verb	part	partitive
du	dualic	PERF	perfective
fact	factual	Pb	Penobscot
H	hinge	PrM	Premedial
hab	habitual	punc	punctual
HmD	Hmong Daw	Sbd	Subordinative
II	inanimate intransitive	srf	semireflexive
J	joiner	stat	stative
LOC	locative	SUBJ	subject
LV	= v, in morpheme glosses	TA	transitive animate
LV^d	dative-hosting light verb	TI	transitive inanimate
LV^{NA}	light verb taking NA arg	W	W-ending (clause-type marker)
LV^{NI}	light verb taking NI arg	v	light verb
LN	= n, in morpheme glosses	ZA	neuter-zoic gender agent
Md	Mandarin	ZP	neuter-zoic gender patient
n	light noun		
NA	NA gender class ("animate") = INAN	NI	NI gender class ("inanimate") = AN

11.   References

Abbott, Clifford. 2006. *Oneida teaching grammar*. Ms, University of Wisconsin-Green Bay. Retrieved from www.uwgb.edu/Oneida/Grammar.html, 20070417

Apt, M., D. Francis, and R. Leavitt. 2008. *Maliseet-Passamquoddy dictionary*. Rt www.lib.unb.ca/Texts/Maliseet/dictionary, 20081015.   cited as *PMD:<headword>*

Arad, Maya. 2003. Locality constraints on the interpretation of roots: the case of Hebrew denominal verbs. *NLLT* 21: 737-778.

Baker, Mark C. 1997. Complex predicates and agreement in polysynthetic languages. In A. Alsina, J. Bresnan, P. Sells, eds., *Complex predicates*. 247-288.

1996. *The polysynthesis parameter.* New York: Oxford University Press.

1988. *Incorporation: a theory of grammatical function-changing.* Chicago: University of Chicago Press.

Bloomfield, Leonard. 1962. The Menomini language. Charles F. Hockett, ed. New Haven, CT: Yale University Press.

1957. Eastern Ojibwa. Ann Arbor: University of Michigan Press.

1946. Algonquian. In Linguistic structures of native America. Harry Hoijer et al., eds. Viking Fund Publications in Anthropology 6. New York: Wenner-Gren Foundation for Anthropological Research. 85-129.

1941. Proto-Algonquian -*i-t-* 'fellow'. *Language* 17:292-297.

1927. The word-stems of Central Algonquian. Festschrift Meinhof. Hamburg: L. Fiedrichsen. 393-402.

Boeckx, Cedric. 2008. *Bare syntax.* Oxford: Oxford University Press.

Borer, Hagit. 2005a. *In name only. Structuring sense, volume I.* Oxford: Oxford University Press.

2005b. *The normal course of events. Structuring sense, volume. II.* Oxford: Oxford University Press.

Brittain, Julie. 2002. A verb stem template for Algonquian. Paper presented at the 34th Algonquian Conference, Queen'sUniversity, Kingston, OT, 27 Oct. 2002.

Denny, J. Peter. 1989. The nature of polysynthesis in Algonquian and Eskimo. In D. B. Gerdts and K. Michelson, eds., *Theoretical perspectives on Native American languages.* Albany: State University of New York Press. 203-258.

1984. Semantic classes and abstract finals. In William Cowan, ed., *Papers of the 15th Algonquian Conference.* Ottawa: Carleton Unversity. 241-71.

1983. Semantics of abstract finals in Algonquian transitive inanimate verbs. *Canadian Journal of Linguistics* 28: 133-48.

1981. Algonquian word structure from the viewpoint of logical semantics. *Montréal Working Papers in Linguistics* 16: 21-29.

1978a. The semantic roles of medials within Algonquian verbs. *IJAL* 44: 153-155.

1978b. Verb class meanings of the abstract finals in Ojibway inanimate intransitive verbs. *IJAL* 44: 294-322.

Denny, J. P. and J. Mailhot. 1976. The semantics of certain abstract elements in the Algonquian verb. *IJAL* 42:2:91-98.

Goddard, Ives. 1990. Primary and secondary stem-derivation in Algonquian. *IJAL* 56:4: 449-483.   cited as *G90:page#*

Grimshaw, J. and A. Mester 1988. Light verbs and theta marking. *Linguistic Inquiry* 19:205-232.

Hicks, Nitana. 2006. A list of initials and finals in Wôpanâak. M.A. thesis, MIT.

Hopkins, Alice. 1988. Topics in Mohawk grammar. Ph. D. thesis, City University of New York.   cited as *H88:page#*

Hirose, Tomio. 2003. *Origins of predicates: evidence from Plains Cree.* New York: Routledge.

Kihm, Alain. 2005. Noun class, gender, and the lexicon-syntax-morphology interfaces: a comparative study of Niger-Congo and Romance languages. In G. Chierchia, ed., *The Oxford handbook of comparative syntax.* 459-512.

Maracle, David Kanatawakhon. 1993. *Kanien'keha tewatati - Let's speak Mohawk.* Guilford, CT: Audio-Forum.

Marantz, Alec. 1997. No escape from syntax: don't try morphological analysis in the privacy of your own lexicon. In A. Dimitriadis, L. Siegel, et al., eds., *University of Pennsylvania Working Papers in Linguistics, Vol. 4.2. Proceedings of the 21st Annual Penn Linguistics Colloquium.* 201-225.

Mithun, Marianne. 1984. The evolution of noun incorporation. *Language* 60:4:847-894.

O'Meara, John. 1996. *Delaware-English / English-Delaware dictionary.* Toronto: University of Toronto Press.

1990. Delaware stem morphology. Ph.D. thesis, McGill University.

Öztürk, Balkız. 2005. *Case, referentiality and phrase structure.* New York: John Benjamins.

Ramchand, Gillian. 2008. *Verb meaning and the lexicon: a first phase syntax.* Cambridge: Cambridge University Press.

Quinn, Conor. 2008. Event-Semantics packaging and the Manner/Means constraint on Algonquian verbal stem structure. Harvard Theory Group presentation, Harvard University, 10 March 2008, Cambridge, MA.

2006. Referential-access dependency in Penobscot. Ph.D. thesis, Harvard University.

Rhodes, Richard. 2006. Ojibwe abstract finals revisited. Ms., UC-Berkeley, Berkeley, CA.

2003. Non-medial incorporation in Ojibwe. Paper presented at 41st CAIL-2, LSA, Atlanta, GA, 2 Jan. 1980.

1980. On the semantics of the instrumental finals in Ojibwa. In William Cowan, ed., *Papers of the 11th Algonquian Conference.* Ottawa: Carleton University. 183-197.

Siebert, Frank T. Jr. n.d. Field notes. Philadelphia: American Philosophical Society collection.   cited as *notebook number:abbrev JPG number*

1998a. *Penobscot legends (vols. 1 and 2).* Ms, Old Town, Maine.   cited as *text name:¶ #*

1998b. *Penobscot dictionary.* Ms, Old Town, Maine.   cited as *PD:page#*

Snow, Dean. 1968. Recording of Dean Snow, Theodore Mitchell, Arthur Neptune, and Andrew Dana. Indian Island, Maine.

Valentine, J. Randolph. 2001. *Nishnaabemwin reference grammar.* Toronto: University of Toronto Press.