Event-Semantics Packaging and the Manner/Means Constraint on Algonquian Verbal Stem Structure

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1. Introduction

1.1 Overview

• Since Bloomfield (1927, 1941, 1946, 1957, 1962), Algonquian verbal stem structure has been analyzed in terms of a maximally ternary templatic structure: Initial-(Medial)-Final (IMF)

(1) IMF template analysis

Penobscot (Eastern Algonquian)

Stem: wačkawαpekihl.α- '(animate) swings along in this direction' (PD:1996)

Initial: wačkaw- 'hither'

Medial: -αpek- 'swing; cord'

Final: -hl.α 'NA move, change'

• Previously: degree of iterability, minimal subset of IMF for well-formed stem, how Final element determines the stem's syntactic category (Rhodes 2006, 2003, Goddard 1990, Brittain 2002)

• Here: role of IMF in event-semantics packaging (Talmy 2000a,b, 1985)

General constraint on IMF:

Penobscot intransitive verbal stems of motion (and stance) consistently exclude Path (=Direction)/Result information from morphologization as Finals; this information can only be packaged as Initials

• constraint defined only for and on Finals: Finals restricted to packaging Manner (more precisely, Means) information

→ Finals exist matching English Manner/Means-incorporating verbs: fly, run, paddle, swim, shake

none exist matching Path- (=Direction-)incorporating verbs: come, go, arrive, return, ascend, descend

• Pervasive:

(1) diachronic stability: same in Penobscot, Nishnaabemwin...
(2) productive: holds over stem-derived Finals, despite rich semantics (pick berries, etc.)
(3) extensive: applies to transitive Finals...and in fact accounts for Instrumental Finals

• consistent and constrained semantic packaging in Algonquian verb stems supports view that polysynthetic stem structure is never a lexical-semantic combinatory free-for-all, and instead is subject to principled rules

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2. **IMF structure**

2.1 The IMF structure: form and content

- IMF: maximally tripartite, each part named for its positional distribution
- excepting certain types of Initials, all are bound morphology (cf. Salishan lexical affixes)

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

a. Initial

Stem: \( napi(y)- \) 'water'

Initial: \( napi- \) 'water'

cf. stem: \( napi-w.i- \) 'NI be watery, wet (in the sense of covered or washed by water)'

b. Initial-Final

Stem: \( apako(ss).in- \) '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: \( -(a)hpaskwane- \) 'back'

Final: \( -hs.in \) 'NA lie, be laying'

- in principle, a language could distribute different subtypes of semantics rather freely or randomly across lexical affix categories...

→ not in this system!


- Valentine 2001: detailed, encyclopedic account of IMF lexemes, including overview:

(3) Properties of the IMF pattern (Valentine 2001:333)

<table>
<thead>
<tr>
<th>INITIAL (ROOT)</th>
<th>MEDIAL</th>
<th>FINAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>Nominal</td>
<td>Part of Speech Category / Verb Meanings</td>
</tr>
<tr>
<td>• adjectival</td>
<td>• body part</td>
<td>defines part of speech (abstract final) and may add additional meaning (concrete final)</td>
</tr>
<tr>
<td>• adverbial</td>
<td>• classifier</td>
<td></td>
</tr>
<tr>
<td>Secondary</td>
<td>• goal noun</td>
<td></td>
</tr>
<tr>
<td>• nominal</td>
<td></td>
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<tr>
<td>• verbal</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Initial-Final</th>
<th>Medial Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stem: apako(ss).in-</td>
<td>'NA lie facedown, flat, right-side down; NA lie flat on h/her belly'</td>
</tr>
<tr>
<td>Initial: apak-</td>
<td>'flat'</td>
</tr>
<tr>
<td>Final: -hs.in</td>
<td>'NA lie, be laying'</td>
</tr>
</tbody>
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<th>Initial-Medial-Final</th>
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</tr>
<tr>
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<td>'back'</td>
</tr>
<tr>
<td>Final: -hs.in</td>
<td>'NA lie, be laying'</td>
</tr>
</tbody>
</table>
Rhodes 2006 summarizes and elaborates semantic aspects of (3):

(4) Rhodes (2006:1) on IMF semantics

Initials generally contain modificational information, most commonly information about the resultant state of the notional absolutive. Finals are the “real” verbs, with meanings like ‘walk’, ‘grasp’, ‘see’, ‘think’ and so on.

Illustrating semantic compartmentalization: intransitive motion-verb stems

(5) Valentine 2001:342 on the IMF structure of intransitive motion-verb stems

Motion verbs customarily have a final specifying the nature of the motion, or the means of conveyance. Initials consist of DIRECTIONALS and other specifications of path, RELATIVE ROOTS, and a host of Manner terms

Same in Penobscot:


Stem: nahihl.α- 'NA go downstream'
Initial: nah- 'downstream' = DIRECTION
Final: -hl.α 'NA move, change' = MEANS

Schematized:

(7) Intransitive motion-verb stem schema

Initial- -Final
| DIRECTION- -MEANS |

Nishnaabemwin and Penobscot animate intransitive Motion Finals match up nicely:

(8) Nishnaabemwin (Valentine 2001:374) and Penobscot AI Motion Finals Compared

<table>
<thead>
<tr>
<th>Nishnaabemwin</th>
<th>Penobscot</th>
</tr>
</thead>
<tbody>
<tr>
<td>-aabono 'by boat, floating'</td>
<td>-ak*who.k.e 'float'</td>
</tr>
<tr>
<td>-aaboozo 'float'</td>
<td>-ak*who.k.e 'float'</td>
</tr>
<tr>
<td>-aadagaa 'swim, wade'</td>
<td>-ak*ič.in 'swim'</td>
</tr>
<tr>
<td></td>
<td>-asok.e 'wade'</td>
</tr>
<tr>
<td>-aandwe 'climb'</td>
<td>-ataw.e 'climb'</td>
</tr>
<tr>
<td>-aashi 'be blown, sail'</td>
<td>-slamoso.k.e 'be blown by wind'</td>
</tr>
<tr>
<td>-akawe 'move leaving tracks'</td>
<td>-apt.o 'leave tracks'</td>
</tr>
<tr>
<td>-akozhiwe 'paddle, sail'</td>
<td>-pay.e 'paddle'</td>
</tr>
<tr>
<td>-bagizo 'move quickly, rapidly'</td>
<td>-has.i 'rapid change of state/position'</td>
</tr>
<tr>
<td>-bahigo 'ride on horseback'</td>
<td>-swam.aka.e 'ride on horseback'</td>
</tr>
<tr>
<td>-bahiwe 'flee, running'</td>
<td>-phow.e 'flee'</td>
</tr>
<tr>
<td>-batoo 'run'</td>
<td>[full stem only, no Final]</td>
</tr>
<tr>
<td>-daabaanigo 'by vehicle'</td>
<td>-ack*kaph.ipsAgI 'ride in car'</td>
</tr>
</tbody>
</table>
-daabii 'dragging, by wagon, by sled'
-ahs.i 'drag sled'
-gaa 'dance'
-ak'a 'dance'
-gaashin 'move leaving a trail'
-apt.o 'leave tracks'
-ise 'fly'
-twihla 'fly'
-oo 'crawl'
-k'as.i 'crawl'
-oode 'on horseback'
-swam.aeh 'ride on horseback'
-ose 'walk'
-ohs.e 'walk'
-shimo 'dance'
-aks 'dance'

some: just direct/partial cognates, but...
many: comparable semantics, via completely distinct etymological means—but still Finals

→ such overlap is unexpected if each language is free to distribute semantic components arbitrarily across the set of IMF elements, or to develop own distinct constraints thereon

2.2 Talmyian analysis: lexicalization patterns

- compartmentalization of semantic labor = Talmyian lexicalization patterns (Talmy 2000a, b)

- separate out key semantic components of verbal event structure (Motion, Path, Goal, Manner...)

- see how they "characteristically" manifest as surface lexical elements:

- which semantic components "characteristically" appear as as independent morphemes

- which semantic components "characteristically" appear as as conflated morphemes

- "characteristic" = frequent, colloquial, pervasive lexicalization pattern (Talmy 2000b:27)

- EXAMPLE: boat moves, by floating, ends up inside something

- English: conflate Manner (floating) w/ Motion (moving) into a single element (the verb float), then farm out Path traveled as a separate element (into):

(9) The boat floated into the cave. (adapted from Talmy 2000b:49:(29a))

float
in
MOTION+MANNER PATH

- other languages (Spanish, etc.): conflate Motion with Path into single element (≈ verb like enter), then farm out Manner of that motion separately:

(10) The boat entered the cave floating. (cf. Talmy 2000b:49:(29a))

enter floating
MOTION+PATH MANNER

→ clunkiness of this sentence illustrates its non-"characteristic" nature in English

- Penobscot (and Nishnaabemwin) evidently more of the first type (9)

→ Motion + Manner (more precisely, Means = "instrument"of motion or stance) conflated

= FINALS:
Motion and Manner (Means!) conflation: Penobscot Means of Motion Finals

- ohs.e  'NA walk'
- pay.e  'NA paddle (watercraft)'
- akʷič.in  'NA swim'
- kətah.i  'NA jump'
- ak.α  'NA dance'
- hl.α  'NA move, change'

-ohs.e  'NA walk'
-pay.e  'NA paddle (watercraft)'
-akʷič.in  'NA swim'
-kətah.i  'NA jump'
-ak.α  'NA dance'
-hl.α  'NA move, change'

• correspondingly, Path (Directional) semantics---lexicalized separately

= INITIALS:

Separate lexicalization: Directional Initials

wačkaw-  'to here'
alam-  'away'
awe-  'up'
ponekʷ-  'down'
note-  'out(side)'
pitike-  'inside (a house, building)'
nalam-  'upstream'
nah-  'downstream'

earlier schema (7) for Penobscot and Nishnaabemwin is a Talmyian lexicalization pattern (13):

Intransitive motion-verb stem schema

Initial- -Final

| DIRECTION- | -MEANS |

• can (oversimplifying) loosely say that Penobscot (and Nishnaabemwin) share same lexicalization pattern as English...simply differ in the order in which the separate components appear:

Ordering of separate and conflated components

a. note- -ohs.e  (Penobscot: notesse- 'walk out')
 OUT WALK

b. walk -out  (English: walk out 'walk out')
 WALK OUT

• potent(ial) pedagogical value: brings order, familiarity to what English-based learners generally see as giant polysynthetic monster words

 Penobscot (also Nishnaabemwin?) lexicalization pattern not just characteristic: exceptionless

• not only just rich set of attested motion-verb stems, but also principled lexical gaps

• all Directional semantics rigidly excluded from manifestation via Finals
there are no Finals with any Directional semantics at all

i.e. nothing corresponding to monomorphemic (?) English Direction-incorporating verb stems:

(15) English Direction-incorporating verb stems

come
go (in the sense of go away)
arrive
return
ascend
descend

semantically comparable Penobscot stems require appeal to Initials to express Direction component; end up as bipartite Initial-Final structures (X, X):

(16) Directional Motion verb stems in Penobscot (I): ≈ English go

a. Stem: alamhl.α-
Initial: alam-
Final: -hl.α

b. Stem: alamohs.e-
Initial: alam-
Final: -ohs.e

c. Stem: alamakʷim.i-
Initial: alam-
Final: -akʷim.i

(17) Directional Motion verb stems in Penobscot (II) ≈ English come

a. Stem: pečihl.α-
Initial: pet-
Final: -hl.α

b. Stem: pečohs.e-
Initial: pet-
Final: -ohs.e

c. Stem: petakʷim.i-
Initial: pet-
Final: -akʷim.i

such a consistent pattern is unlikely to be coincidental
constraint looks to be acting as/from a deeply-entrenched principle of the lexicon system

NEXT UP: 3 lines of evidence for a "deep principle"
3. Evidence for a "deep principle"

3.1 Diachronic stability

- constraint is evidently shared between Nishnaabemwin and Penobscot (8)
- present field work (+ antecedents' fine lexicography!): Passamaquoddy-Maliseet, too
- also W. Abenaki, other E. Abenaki dialects; and, tentatively, Munsee (O'Meara 1990)
- still brewing: rest of the Algonquian family? Plains languages and Blackfoot?

→ Penobscot + Nishnaabemwin just by themselves show a substantial degree of diachronic stability
→ argues against constraint being accidental/lang-specific pattern, and for being principled rule

3.2 Language-internal stability/productivity

- language-internal stability: to the extent that derivation of Penobscot Finals is productive, the very same constraint applies

- Finals typically characterized as a closed class (Rhodes 2006:1, Valentine 2001:33, inter alia)
  → but at the same time Algonquianists also note a process deriving Finals from full stems:

- stem-derived Finals (SDFs): take source stem and create an onsetless string from it

  vacuous for vowel-initial stems:

(18) Stem-derived Finals: vowel-initial stems

  a. Free stem: ap.i- 'NA sit'
     Final: -ap.i '[same]' \\
  b. Free stem: akʷič.in- 'NA swim, NA be in the water'
     Final: -akʷič.in '[same]' \\
  c. Free stem: alohk.e- 'NA work'
     Final: -alohk.e '[same]' \\

  • delete any stem-initial sonorant onset consonant:


  Free stem: mawis.i- 'NA gather, pick berries, nuts, or fruit'
  Final: -awis.i '[same]' \\

  • initial obstruent onset (?): Valentine 2001:399: Final -aapi, stem baapi- 'laugh'

  • SDF process evidently rather limited: unknown if it is purely historical, or simply quite limited in synchronic productivity

  • all evident examples of SDFs in Penobscot obey the constraint on simplex Finals

→ this even though Final-deriving stems have Initials!
→ which, in principle, should mean that at least some SDFs could contain Directional, Result-state, or other like semantics strictly found in Initials
Yet none do.

→ SDFs remain within the same semantic ranges already established for simplex Finals (X, X):

(20) Stem-derived Finals: Means of Motion

a. Free stem: ap.i- 'NA sit'
   Final: -ap.i '[same]'
   cf. stem: sankewap.i- 'NA sit peacefully, still'

b. Free stem: akʷič.in- 'NA swim, NA be in the water'
   Final: -akʷič.in '[same]'
   cf. stem: kw(oh)sakakʷič.in- 'NA swim across a body of water'

(21) Stem-derived Finals: Means of Activity

a. Free stem: məkənəss.e- 'NA gather firewood/driftwood [...]'
   Final: -əkən(oh)s.e '[same]'
   cf. stem: natakans.e- 'NA go to get firewood [...]'

b. Free stem: natayel,i- 'NA hunt (for various kinds of game)'
   Final: -atayeli '[same]'
   cf. stem: natatayel,i- 'NA go to hunt'

c. Free stem: wəlk.e- 'NA dig, hollow out, excavate'
   Final: -əl.k.e '[same]'
   cf. stem: kisəlk.e- 'NA have made a cache, have finished burying something'

• full-stem-derivation brings extra level of semantic richness: 'gather firewood', etc.

→ but only within the confines of what is (semantic-categorically) a permissible Final

→ even see cases where contribution of Initial is altered away from typical non-Final semantics:

• first: Initial akʷit- 'immersed or soaked in water' can also function as a Result-state Initial:

(22) akʷit- 'immersed or soaked in water' as a Result-state Initial

Stem: akʷitən.α- 'place NA in water, soak NA in water'

Initial: akʷit- 'immersed' = Result
   Final: -ən.α 'handle.NA' = Causal Means

• second: Initial akʷit- also an element in a stem-derived Final...

...cf. full-stem akʷič.in- 'NA swim, NA be in the water':

(23) Full stem akʷič.in- 'NA swim, NA be in the water'

Initial: akʷit- 'immersed'
Final -.in '[abstract Final]''
Initial \(ak^{\text{\textit{it-}}}\) in full stem is a bit ambiguous as to whether it indicates a Result state or not, but...

in corresponding Final (24), contribution is definitely not of a resultant immersed state—-at best, only an implicit intermediate state—-but simply to name the particular Means of Motion involved

(24) Final \(-ak^{\text{\textit{ic.in}}}\) ‘NA swim [NA be in the water (?)]’

Stem: \(pata\bar{ak}^{\text{\textit{ic.in}}}\) 'NA swim back'
Initial: \(pata\bar{k}-\) 'back, returning'
Final \(-ak^{\text{\textit{ic.in}}}\) 'NA swim'

→ here too constraint has an active effect, limiting possible SDFs

the existence of this constraint may be a significant cause of the relative rarity of stem-derived Finals, as it puts rather severe limits on possible candidate stems

• insofar as derivation of Finals is productive, semantic content of output identically constrained

3.3 Transitive Finals

• constraint extends to transitive stems: transitive Motion stems have the same \([\text{Direction-Means}}\text{of-Motion}]\) pattern as intransitive ones

• Final is rather explicitly the Means by which the Directional motion is carried out:

(25) \([\text{Direction-Means}}\text{of-Motion}]\): transitive stems

Stem: \(awep^{\alpha\cdot}\) 'pull NA up, pull NA up above'
Initial: \(awep-\) 'up(wards)' = DIRECTION
Final: \(-ph^{\alpha}\) 'grab NA' = MEANS

pattern esp. clear if we alternate other transitive Finals against the same Directional Initial:

(26) \([\text{Direction-Means}}\text{of-Motion}]\): transitive Finals

a. Stem: \(awep\alpha\cdot\) 'hold NA up by hand (with arms extended)' = DIRECTION
Initial: \(awep-\) 'up(wards)'
Final: \(-\alpha\cdot\) 'handle NA' = MEANS

b. Stem: \(awepapil.\alpha\cdot\) 'string NA up, hang NA up with a rope' = DIRECTION
Initial: \(awep-\) 'up(wards)'
Final: \(-apil.\alpha\) 'act on NA with cord' = MEANS

c. Stem: \(awep^{kaw.}\) 'push NA up with any body part (except hand)' = DIRECTION
Initial: \(awep-\) 'up(wards)'
Final: \(-\alpha\cdot\) 'apply "other" body part to NA' = MEANS

• transitive Final consistently specifies the Means of Motion, and nothing of the Direction

• same constraint appears to hold generally over transitive Finals as well

Instrumental Causative Finals

(Valentine 2001:438)

the existence of transitive Instrumental Finals is nothing more than the logical outcome of the
very same constraint seen limiting the semantic range of intransitive Finals

4. Conclusion

• fairly modest claim(s):
  • the observation that Finals in intransitive motion-verb stems typically carry Means semantics
  (as against Initials, which carry Direction, etc.) reflects an active constraint:
    1. diachronically stable
    2. synchronically productive (assuming stem-derived Finals are not just fossils)
    3. pervasive: cross-cuts transitivity, creates morphosemantic classes like Instrumental Finals

• this constraint is almost certainly not the fundamental one!

→ Valentine 2001:438: Instrumental Causative Finals

→ i.e. same elements in Cause-Result stems, indicating causal Means:

(27) Instrumental Finals as Causative Means Finals

a. Stem: sakʷəskən.α- 'crack, fracture, break NA into pieces'
   Initial: sakʷəsk- 'into pieces' = RESULT
   Final: -ən.α 'handle NA' = CAUSAL MEANS

• short jump to link the two (from Means of Motion to Means of Causation):

(28) Collapsing construction types: Means

\[(\text{Instrumental Means of Causation}) + [\text{Means of Motion}]\]

→ [Means]

• promising, but difficult to accomplish with precision...

• can intuit links btw [Direction-Means of Motion] and [Result-Means of Causation] constructions

• but can we form a unified account with other stem constructions, e.g. intransitive Cause-Result?

• e.g. can we plausibly collapse transitive Cause-Result structures with intransitive ones?
  (cf. collapsing transitive and intransitive [Direction-Means of Motion]):

(29) Collapsing construction types: transitivity

a. transitive[Result-Cause] + intransitive[Result-Cause]

   → \{transitive + intransitive\}[Result-Cause]

b. transitive[Direction-Means of Motion] + intransitive[Direction-Means of Motion]

   → \{transitive + intransitive\}[Direction-Means of Motion]
having earlier collapsed different roles of Finals as Means, now collapse Result (-State) and Direction?

→ could set up Direction as a sort of "intended" Result (-State)

→ but we clearly need a more precisely constrained approach to this kind of reductive analysis

😊 for now, don't need to go this far: nature of Initial semantic components left as open, elsewhere class

→ reflects semantic (and possibly syntactic) diversity of verb-stem's "Left Edge" (Brittain 2002)

→ keeps focus on the evidently specifically constrained set, i.e. the Finals

→ also predicts: Means semantics not in principle blocked from manifesting as Initials (else no SDF)

• off the hook for now, but still no unified account for all semantically compartmentalizing IMF constructions---including those not even discussed here (plain stative stems, etc.)

• appeal to event-structural macro-roles?

= Ramchand 2006:18: "three sub-event projections are necessary to represent all the possible components of the event structure building processes of natural languages"

= \{\text{cause, process, result}\}

• simple: Finals = \{cause, process\} Initials = \{result\}

• nice: Finals could denote events or processes (+ causes) simply by inheritance from abstract Finals (cf. Rhodes 2006:6)

• but: problems galore...

So: present results still early approximation, far from ideal in terms of a theoretical understanding

❖ but have much promise for pedagogical purposes:

→ this rigid structure-to-semantics compartmentalization might help acquisition of polysynthetic bound-morphology lexicon...

→ i.e. radically narrows the search space for a child seeking to map a meaning to an element that they never even hear in isolation

• this "shortcut" reapplied to second-language learning: knowing the semantic domain that each IMF component is limited to makes learning them easier, and facilitates guessing from context the meanings of new ones, and recalling those of half-remembered ones

• accessibly presented, attention to IMF semantic compartmentalization can disentangle and de-exoticize Algonquian lexicons for second-language learners
5. References

Bloomfield, Leonard.

Brittain, Julie.

Denny, J. Peter.

Goddard, Ives.

Hirose, Tomio.

O'Meara, John.

Rhodes, Richard.

Siebert, Frank T. Jr.

Snow, Dean.

Talmy, Leonard.

Valentine, J. Randolph.

Wolfart, H. Christoph.
Appendix: data sources for stems and Finals cited without full reference

• Siebert 1996 (= PD:page number) gives 3sNA inflected forms as his basic entry; 1s forms, which unambiguously identify the stem-final vowel, were given only secondarily. To save space, we give only his original 3sNA forms, and provide the stem vowel from the 1s form without direct citation.

• The only modifications from the original Siebert 1996 ms. are replacing 'he' and 'it' (and related pronouns) with 'NA' (animate) and 'NI' (inanimate), and separating distinct senses with semicolons rather than numbered subentries.

nápi 'water' (PD:319)
nápoyó 'NI is watery, wet (in the sense of covered or washed by water)' (PD:318)
apákassin 'NA lies facedown, flat, right-side down; NA lies flat on h/her back' (PD:66)
apákípskáñehsin 'NA lies flat on h/her back' (PD:66)
ánlíhile 'NA goes, travels downstream'; nanáhihla '1...' (PD:293)
-akʷáho.k.e pámákʷašoke 'NA floats along' (PD:373)
-akʷíič.in pámákʷičín 'NA swims along, by' (PD:373)
-ások.e óšawasoke 'NA wades diagonally' [N.B. accent questionable] (PD:119)
-atáw.e pámatawé 'NA climbs' [N.B. accent questionable] (PD:374)
-alamso.k.e pómál'moké 'NA/NI is blown along by the wind' (PD:375)
-apt.o pámápto 'NA leaves footprints' (PD:374)
-pay.e pámipayé 'NA paddles along' (PD:376)
-háis čáníhso 'NA is stopped, obstructed; NA stays, tarries' (PD:128)
-áwamakʷ.e napamawamákʷehkha '1 use NA to ride on, 1 ride NA' [= 2dry deriv.] (PD:371)
-Áphow.e 'lee'; pámíphowé 'NA rides' (PD:376)
-áčkip?ípun(to) (PD:427)
-ónaší.pó'mánalsho 'NA pulls, hauls a sled, draws a sled' [N.B. accent questionable] (PD:375)
-ák.a tála 'NA is dancing there, NA is in the act of dancing' (PD:451)
-ápt.o álámápto 'NA makes tracks leading away, NA leaves a trail (PD:44)
-táwiñh.lú álámítawhile 'NA flies away' (PD:46)
-áwmí.length pámíphowe (PD:46)
-ánálhile 'NA goes away' (PD:46)
-ánálhise 'NA walks away, onward' (PD:46)
-ánálmákʷimo 'NA slides off, away into the water' (PD:44)
-péčhile 'NA comes' (PD:361)
-petákʷimo 'NA swims here; NA comes gliding through the water' (PD:366)
-pécohse 'NA arrives, walks hither' (PD:361)
-ápó 'NA sits' (PD:73)
-ákʷícín 'NA swims, NA is in the water' (PD:30)
-álotehe 'NA works' (PD:56)
-ándíwiso 'NA gathers, picks berries, nuts, or fruit' (PD:256)
-ánmínesse 'NA gathers clams/shellfish' (PD:251)
-sámkíwo 'NA sits peacefully, still' (PD:419)
-kʷákʷícín 'NA swims across a body of water' [N.B. /a/ vs. /a/ somewhat uncertain] (PD:241)
-mánaskets 'NA gathers firewood, driftwood (not requiring cutting or chopping)' (PD:273)
-nátækanse 'NA goes to get firewood (that doesn't require cutting)' (PD:304)
-nátayelo 'NA hunts (for various kinds of game)' (PD:297)
-natáyelo 'NA goes to hunt' (PD:304)
-wólíle 'NA digs, hollow outs, excavates' (PD:451)
-kísulke 'NA has made a cache, has finished burying something' (PD:214)
-natákʷítna '1 place NA in water, soak NA in water' (PD:31)
-patákʷícín 'NA swims back' (PD:387)
-natáwepíp'sh '1 pull NA up, pull NA up above' (PD:93)
-nátáwepána '1 hold NA up by hand (with arms extended)' (PD:93)
-nátawepápi '1 string NA up, hang NA up with a rope' (PD:93)
-natáwikawa '1 push NA up with any body part (except hand)' (PD:93)
-násokʷisskana '1 crack, fracture, break NA into pieces' (PD:427)