

# The Evolution of Algic Verbal Stem Structure: New Evidence from Yurok

ANDREW GARRETT

*University of California, Berkeley*

1. The Algic language family consists of the Algonquian language family and its relatives Wiyot and Yurok, two native languages of northwestern California.<sup>1</sup> In this paper, I will use internal reconstruction to propose an account of the evolution of verbal stem structure in the early prehistory of Yurok; the earliest stages in this development probably occurred in Proto-Algic. Thus, while the evidence adduced here is exclusively from Yurok, I will suggest that the account has ramifications for our understanding of the Algonquian languages (and Wiyot).

I begin with a brief description of Algonquian word structure. Algonquian words contain “initials” (roots) as well as “medial” and “final” suffixes, described as follows by Bloomfield (1946: 104): “*Final* suffixes appear at the end of the stem; ... we can distinguish between *abstract* finals, which merely determine the form-class ..., and *concrete* finals, which add some more palpable meaning ... [T]he final suffix is often preceded by a *medial* suffix ... Medial suffixes have concrete meaning.” Given in (1) is the scheme of Nishnaabemwin word structure, along the same lines, presented by Valentine (2001: 333).

(1)	<u>INITIAL (ROOT)</u>	<u>MEDIAL</u>	<u>FINAL</u>
	Primary	Nominal	Part of Speech Category / Verbal Meanings
	• adjectival	• body part	defines part of speech (abstract final) and may
	• adverbial	• classifier	add additional meaning (concrete final)
	Secondary	• goal noun	
	• nominal		
	• verbal		

Verb forms are traditionally grouped into five Proto-Algonquian “orders”: the in-

---

<sup>1</sup> Wiyot has no native speakers, Yurok fewer than a dozen. The two languages are collectively called “Ritwan”, sometimes seen as a subgroup; I will cast my discussion as if it is not a subgroup, but my proposals are consistent with the alternative view.

For discussion and comments, thanks to Juliette Blevins, Ives Goddard, Paul Kiparsky, Rich Rhodes (none of whom necessarily agrees with me), and audiences at BLS, Michigan, Oxford, and Stanford. I cite otherwise unattributed Yurok data from Robins (1958), Berman (1982), Proulx (1985), and the fieldwork of the Berkeley Yurok project (<http://linguistics.berkeley.edu/~yurok/>), which is partly supported by NSF grant BCS-0004081 to the University of California, Berkeley.

dependent, conjunct, imperative, prohibitive, and interrogative (Bloomfield 1946: 97-103). In most orders all inflectional affixes are suffixes, but forms of the independent order have prefixes and suffixes. A standard view (Goddard 1967, 1974), which I will follow, is that the independent order is a relatively young category within Proto-Algonquian, having supplanted the conjunct in the function of expressing independent assertions. Less attention has been paid to the origin of the tripartite (initial + medial + final) stem structure of Algonquian, an omission I seek to rectify in what follows.

Yurok has the phonemes listed in (2), as well as postglottalized oral obstruents (C') and preglottalized sonorant consonants ('C).

(2)	p	t	ch [tʃ]	k	kw [kʷ]	' [ʔ]	i, ii [i:]	u, uu [u:]
		hl [ʎ]	s [ʂ]	sh [ʃ]	x, g [ɣ]	h	e [ɛ ~ e]	o [ɔ], oo [ɔ:]
	m	n, l	r [ɹ]	y [j]	w		r [ɻ], rr [ɻ:]	a, aa [a:]

Regularly inflecting Yurok verbs belong to four stem classes: *e*-stems, *aa*-stems, *o*-stems, and *oo*-stems. Singular indicative unipersonal forms of representative verbs belonging to each of these classes are given in (3).

(3)		<u>E-STEM</u>	<u>AA-STEM</u>	<u>O-STEM</u>	<u>OO-STEM</u>
	1 sg.	nepek'	chewip'ak'	ko'moyok'	sootok'
	2 sg.	nepe'm	chewip'aa'm	ko'moyo'm	sootoo'm
	3 sg.	nep'	chewip'a'	ko'mo'y	sootok'w
		'eat'	'tidy'	'hear'	'go'

Four modal categories are illustrated in (4) with singular unipersonal forms of the *e*-stem "eat": indicative, subordinative (called "pronominal-prefix" verbs by Robins (1958)), attributive, and imperative.

(4)		<u>INDICATIVE</u>	<u>SUBORDINATIVE</u>	<u>ATTRIBUTIVE</u>	<u>IMPERATIVE</u>
	1 sg.	nepek'	'ne-nepek'	nepoh	—
	2 sg.	nepe'm	k'e-nepek'	nepom	nep's
	3 sg.	nep'	'we-nepek'	nepin	—

Examples of the indicative, subordinative (marking certain subordinate clauses), and attributive (marking the equivalent of relative clauses) are given in (5).

- (5) a. Indicative      Ho nepek'      ku 'rplrs.  
                          PAST eat.INDIC.1SG the apple(s)  
                          "I ate the apple(s)."
- b. Subordinative      Ho newook'      ke'l k'e-nepek'      ku 'rplrs.  
                          PAST see.INDIC.1SG you 2-eat.SUBORD.SG the apple(s)  
                          "I saw you eat the apple(s)."
- c. Attributive      ku 'rplrs      ku k'e-ch'ishah      nepin  
                          the apple(s) the 2-dog eat.ATTRIB.3SG  
                          "the apple(s) your dog ate"

## *Algonquian and Yurok Stem Structure*

I will assume that the Yurok subordinative and (as noted above) the Algonquian independent order are independent post-Algic innovations. In particular, I will assume that all inflected verbs in Proto-Algic were suffixed.<sup>2</sup>

Yurok has a further verbal category dubbed “noninflected” by Robins (1958), who writes that noninflected verbs “may be used as the syntactical equivalents for all persons of any of the categories of the verb ... Many Yurok verbs have both an inflected and a noninflected stem. This latter is usually identical with the first part of the inflected stem” (p. 31). For three typical verbs I give, in (6), noninflected forms together with singular unipersonal indicative forms.

(6)	1 sg.	hohkumek’	skewoksimek’	ko’moyok’
	2 sg.	hohkume’m	skewoksime’m	ko’moyo’m
	3 sg.	hohku’m	skewoksi’m	ko’mo’y
	<b>Noninflected</b>	<b>hoh</b> ‘do, make’	<b>skewok</b> ‘like, want’	<b>ko’m</b> ‘hear’

Robins (1958) cites such verbs as *hoh(kum-)*, *skewok(sim-)*, *ko’m(oy-)*, and so on, implying that the noninflected verb is somehow derived by truncation from the inflected stem.

2. Goddard (1975) first noted that Yurok (and Wiyot) stem structure is generally comparable with that of Algonquian languages, as discussed above, and Proulx (1985) offers a classification of many Yurok morphemes along Algonquian lines. His analysis, distinguishing for example concrete and abstract finals, is useful and has had a major influence on my analysis, but in my view different principles best serve the needs of Yurok morphology. In particular, I treat the Yurok functional counterparts of Algonquian concrete finals as medials. I define as medials those suffixes that need not occur with inflection (they may occur in noninflected verb forms), whereas final suffixes always occur with inflection (never in noninflected verb forms). For simplicity, in what follows, I represent the thematic vowel (*e*, *o*, *aa*, *oo*) as part of the final suffix.

Given these analytic principles, Yurok medial suffixes are of three main types. First, as in Algonquian, some medial suffixes serve as subject classifiers, marking salient categories of shape and the like. A few examples are given in (7).

- (7) Representative Yurok medial suffixes: Subject classifiers
- a. **-e’r-** “trees, sticks, etc.”:  
*lo’og-e’r-ono-* “be charred” (trees, sticks, etc.) (initial *lo’og-* “black”)
  - b. **-op-** “water”:  
*kaam-op-e-* “be rough water” (initial *kaam-* “bad”)  
*skew-op-e-* “be calm water” (initial *skew-* “good”)
  - c. **-oyk-** “long flexible object”:  
*che’l-oyk-e-* “be dry” (long flexible object) (initial *che’l-* “dry”)

---

<sup>2</sup> This assumption simplifies the analysis to be presented at the end of the paper; a more elaborated analysis could dispense with this simplifying assumption.

Andrew Garrett

Second, also as in Algonquian, some medial suffixes refer to body parts or their metaphorical extensions. Two examples are given in (8).

- (8) Representative Yurok medial suffixes: Body parts
- a. **-ehlk-** “body, earth”:  
*him-ehlk-epe-* “crawl fast” (initial *him-* “fast”, final *-epe-* “self-oriented activity”)  
*kaam-ehlk-ese-* “be dirty, rough” (initial *kaam-* “bad”, stative final *-ese-*)
  - b. **-e'wey-** “face”:  
*mewol-e'wey-e-* “wipe one’s eyes” (initial *mewol-* “wipe clean”)  
*s'oop-e'wey-ete-* “hit (someone) in the face” (initial *s'oop-* “be hit”, trans. final *-ete-*)

Finally, typically corresponding in function to Algonquian concrete finals, some Yurok medial suffixes identify the basic type of verbal event. As shown in (9), these are often the translation equivalents of English main verbs in complex forms whose initials may express manner or goal meanings.

- (9) Representative Yurok medial suffixes: Verbal event
- a. **-oks-** “think”  
*kaam-oks-ime-* “dislike” (initial *kaam-* “bad”, final *-ime-* “animate object”)
  - b. **-o'r-** “run”  
*him-o'r-epe-* “run quickly” (initial *him-* “fast”, final *-epe-* “self-oriented activity”)  
*raay-o'r-epe-* “run past” (initial *raay-* “along, past”, final *-epe-* “self-oriented activity”)
  - c. **-oot-** “throw”  
*kwomhl-oot-e-* “throw back” (initial *kwomhl-* “back”)  
*l-oot-e-* “throw” (default initial *l-*)

Yurok medials like those in (9) must be classified as medials, not finals, as I will show below, because they appear in noninflected as well as inflected verb forms.

Final suffixes fall into two broad classes in Yurok, either expressing aktionsart meanings or affecting lexical and argument structure. Some examples of the first broad class are given in (10), with suggestive rather than definitive suffix glosses.

- (10) Representative Yurok final suffixes: Aktionsart meanings, etc.
- a. **-epe-** “self-oriented activity”  
*chwink-epe-* “speak” (initial *chwink-* “speak”)  
*him-o'r-epe-* “run quickly” (initial *him-* “fast”, medial *-o'r-* “run”)  
*skuy-k-epe-* “get dressed” (initial *skuy-* “good”, suffix *-(e)k-* “do, treat”)
  - b. **-emoye-** “be (covered with), have the appearance of”  
*chaalk-emoye-* “be sandy” (*chaalk-* “sand”)  
*kwur-uhl-emoye-* “have a pointed snout” (initial *kwur-* “sharp”, medial *-uhl-* “nose”)  
*hlkoolonk-emoye-* “be muddy” (*hlkoolonk-* “mud”)
  - c. **-owo-** “be or act in a certain way”  
*chpur-owo-* “menstruate” (initial *chpur-* “careful”)  
*hlmey-owo-* “be mean” (initial *hlmey-* “mean”)  
*kaam-un-owo-* “grow badly” (initial *kaam-* “bad”, medial *-un-* “grow”)  
*son-owo-* “be a certain way” (initial *son-* “thus”)

### *Algonquian and Yurok Stem Structure*

Robins (1958), who did not treat stem-internal morphology, erroneously classified several final suffixes of this type as markers of inflectional categories. He called *-epe-* in (10a) “reflexive”, for example, though its actual distribution is broader.

A few final suffixes that affect argument structure are illustrated in (11).

- (11) Representative Yurok final suffixes: Valence-changing
- |  |                                |            |                          |
|--|--------------------------------|------------|--------------------------|
| a. <b>-ete-</b> “transitive/causative” |                                |            |                          |
| chiwey- <b>ete-</b>                    | “crave”                        | chiwey-e-  | “be hungry”              |
| kaam-ew- <b>ete-</b>                   | “dislike (something’s taste)”  | kaam-ew-e- | “taste bad”              |
| myooley- <b>ete-</b>                   | “shove, stick (something)”     | myooleye-  | “be fixed in the ground” |
| skuuw- <b>ete-</b>                     | “like (something’s taste)”     | skuuw-e-   | “taste good”             |
| tek-un- <b>ete-</b>                    | “stick (things) together”      | tek-un-e   | “be stuck together”      |
| tk-ohp- <b>ete-</b>                    | “thicken (something liquid)”   | tk-ohp-e-  | “be thick” (of liquid)   |
| b. <b>-ine-</b> “causative”            |                                |            |                          |
| k’nrk- <b>ine-</b>                     | “let (something) wilt”         | k’nrk-r-   | “wilt”                   |
| l-ohp- <b>ine-</b>                     | “scrape out”                   | l-ohp-e-   | “molt, come in lumps”    |
| s’rrk- <b>ine-</b>                     | “pull (something) apart”       | s’rrk-r-   | “come apart”             |
| c. <b>-ume-</b> “animate object”       |                                |            |                          |
| kwry- <b>ume-</b>                      | “whistle at (someone)”         | kwyr-rwr-  | “whistle”                |
| spry- <b>ume-</b>                      | “blow a whistle at (someone)”  | spry-rr-   | “blow a whistle”         |
| telog- <b>ume-</b>                     | “be in pain, resent (someone)” | telog-e-   | “be ill”                 |
| ’rp-ry- <b>ume-</b>                    | “tell (someone)”               | ’rp-r-     | “tell (something)”       |

Full details of these suffixes’ usage remain to be established. For instance, while *-ine-* in (11b) is clearly causative (the object of an *-ine-* verb is the subject of the corresponding intransitive without *-ine-*), *-ete-* shows several patterns in (11a). The *-ume-* suffix in (11c) is one of several (applicative-like) suffixes that license an added argument with a beneficiary, recipient, or similar role.<sup>3</sup>

**3.** At this point, armed with a basic account of Yurok stem-internal morphology, it is possible to examine the morphological structure of noninflected verbs. I will use the term “VN-stem” to refer to a morphological constituent consisting of the initial together with any medial suffixes; an inflected verb consists of a VN-stem, one or more final suffixes, and inflection.<sup>4</sup> Noninflected verbs are simply bare VN-stems, subject to the morphologically conditioned phonological process in (12): a final nonsyllabic segment is deleted if preceded by a nonsyllabic segment.<sup>5</sup>

- (12) In noninflected verbs: [-syll] → ∅ / [-syll] \_\_\_ #

<sup>3</sup> Note for the record that many medial suffixes select particular final suffixes (in some cases known only in that context); e.g. medial *-o’r-* “run” takes final *-epe-*.

<sup>4</sup> Recall that I treat the thematic vowel as part of the final suffix.

<sup>5</sup> Morphologically, this analysis may seem circular: medial suffixes were defined as those that can occur in noninflected verbs, while final suffixes do not occur in noninflected verbs; and so noninflected verbs are naturally bare VN-stems. The real point is that Yurok has several classes of suffixes, which can be characterized semantically (as above) and also fall into two morphological groups, those that occur in noninflected verbs and those that occur only in inflected verbs.

Andrew Garrett

As a synchronic effect, the deletion in (12) applies only in noninflected verbs and in no other contexts. Inflected verbs routinely escape (12), for example, as seen in (13) for *e*-stem and *o*-stem third-person singular forms (marked by stem-vowel deletion and glottalization).

- |      |              |                        |                             |
|------|--------------|------------------------|-----------------------------|
| (13) | hookwche-    | → hook <b>wch</b> '    | “(s/he, it) gambles”        |
|      | hlkyorkwe-   | → hlkyork <b>w</b> '   | “(s/he, it) watches”        |
|      | lehlkeloype- | → lehlkeloy <b>p</b> ' | “(s/he, it) crawls”         |
|      | mr'wrmryke-  | → mr'wrmry <b>k</b> '  | “(it) has as headwaters”    |
|      | tenoowokse-  | → tenoowok' <b>s</b>   | “(s/he) is very wise, rich” |

From the historical point of view, forms like those in (13) escape (12) because the stem vowel originally intervened between the stem and the glottal-stop ending; at that time, the process in (12) would not have been expected to apply.

Surface exceptions to (12) are also common in other parts of speech. As seen in the noninflected verbs in (14), deletion affects final stop + *s* and *rC* sequences, but such sequences do surface in nouns (e.g. *chaanuks* “baby”, *chekws* “heart”) and elsewhere (e.g. *chkwa'rk'* “near”).

- |      |  |
|------|--|
| (14) | /tenoowoks/ → <i>tenoowok</i> “be very wise, rich” (inflected <i>tenoowokse-</i> ) |
|      | /hlkyorkw/ → <i>hlkyor</i> “look at” (inflected <i>hlkyorkwe-</i> )                |
|      | /pegark/ → <i>pegar</i> “dwell, inhabit” (inflected <i>pegarkoo-</i> )             |

The data in (15) show that noninflected verb forms lack final suffixes (they are bare VN-stems) and undergo the deletion process in (12). Inflecting stems are in the left-hand column, with final suffixes printed in boldface; the right-columns show the derivation of corresponding noninflected forms, without final suffixes and, in (15b), with deletion as per (12).

- |      |                        |                              |                       |
|------|------------------------|------------------------------|-----------------------|
| (15) | Inflecting verb stems  |                              | Noninflected verbs    |
| a.   | cheyk-e'r- <b>ono-</b> | “be small” (trees, etc.)     | /cheyke'r/ → cheyka'r |
|      | ko'm- <b>oyo-</b>      | “hear”                       | /ko'm/ → ko'm         |
|      | pus-oo'm- <b>ele-</b>  | “smell of musk”              | /pusoo'm/ → pusoo'm   |
|      | son- <b>owo-</b>       | “be a certain way”           | /son/ → son           |
| b.   | chprw-rks- <b>imr-</b> | “miss, remember”             | /chprwrks/ → chprwrk  |
|      | ho'yk'- <b>ete-</b>    | “lose”                       | /ho'yk'/ → ho'y       |
|      | komch- <b>ume-</b>     | “know”                       | /komch/ → kom         |
|      | sleko hp- <b>ine-</b>  | “pull out (something stuck)” | /sleko hp/ → slekoh   |

The ordinary historical cause of morphologically restricted word-final deletion rules (as in the famous case of French masculine adjectives) is that a former suffix protected forms from a regular deletion sound change where it appeared. Where the suffix did not appear, deletion occurred regularly; a morphologically restricted effect was later created when the protecting suffix disappeared. For Yurok, it is relevant that all Proto-Algonquian nouns ended with a vowel-final suffix expressing gender, number, and obviation status. Yurok does not mark these categories on nouns, and word-final vowel loss is reconstructible for the history of the lan-

*Algonquian and Yurok Stem Structure*

guage, as shown by the representative data in (16), cited from Garrett (2001).

(16)	Proto-Algonquian		Yurok forms with final vowel loss
	*aθwi	“arrow”	horew “object with pointed end”
	*kiila	“you (sg.)”	ke’l “you (sg.)”
	*miina	“berry”	menomen “juneberries”
	*pemyi		pemey “grease”
	*penkwi-	“ashes, powder”	penkw “acorn flour”
	*takwa	“it exists”	’ok’w “there is”

The chronology underlying these developments is as follows: the final deletion in (12) occurred as a regular sound change; and then final vowel loss (in nouns and elsewhere) rendered the deletion in (12) opaque, producing the synchronic pattern where deletion is seen only in noninflected verbs. A few representative historical derivations are shown in (17).

(17)		*hlkyorkw	*hlkyorkwe’	*penkwi
	Final [-syll] deletion as in 12	*hlkyor	*hlkyorkwe’	*penkwi
	Final vowel loss	hlkyor	hlkyorkw’	penkw
		“look at” (noninflected)	“s/he looks at”	“acorn flour”

As implied by the evolution of *hlkyorkw’* in (17), the loss of the stem vowel *e* or *o* in third-person singular verb forms was presumably part of final vowel loss.

4. Two synchronic analyses can be contemplated for the formation of Yurok non-inflected verbs. On one analysis (implicit in Robins’ practice, as noted above), they are formed from inflected forms (or inflectable stems) by truncation of final suffixes (and inflection). On an alternative analysis, they are just forms to which no final suffixes or inflection have been added; morphologically, they are bare VN-stems. On either analysis, noninflected verbs are subject to the rule in (12). In this section I will offer three arguments against the truncation analysis. The three arguments are from typology, argument structure, and discourse function. If these arguments (with the discussion above) are convincing, then noninflected verbs are simply bare VN-stems to which no final suffixes have been added.

In the typology of truncation systems (Weeda 1992, Bat-El 2002), two typical patterns are found. The first is “subtractive” truncation, in which the truncatum (what is truncated) is uniform. For example, as recounted by Bat-El (2002), some Tohono O’odham perfective verbs are derived from imperfectives by deletion of a final consonant. Examples appear in (18a), with the truncatum underlined; two perfectives based on vowel-final imperfectives (no truncation) are shown in (18b).

(18)a.	hi:n <u>k</u>	→ hi:n	“to bark”
	pi:s <u>l</u> t	→ pi:sal	“to weigh”
	ga:twi <u>d</u>	→ ga:twi	“to shoot”
	he?e <u>d</u> ka:d	→ he?edka	“to smile”
b.	ci:cwi	→ ci:cwi	“to play”
	wa:cwi	→ wa:cwi	“to bathe”

Note that the deletion process in (12) is a subtractive truncation of this type; but the issue at hand is the analysis of the formation of noninflected stems prior to (or independent of) this deletion.

In the other common truncation type, used in the formation of hypocoristics in numerous languages, the target (the result of truncation) is uniform and is usually defined prosodically. For example, in a nominal truncation process described for Yurok by Blevins (2003), nouns of any length are truncated to a uniform C<sub>0</sub>VX template. Examples are shown in (19); the (non-uniform) truncatum is underlined in each example.

(19)a.	haal <u>op</u>	→ haa	“clear pitch”
	wen <u>chokws</u>	→ wen	“woman”
	woom <u>ehl</u>	→ woo	“acorn”
b.	ru <u>rowoo</u>	→ rur	“song”
	’wes <u>kweloy</u>	→ ’wes	“life”
c.	chin <u>omewes</u>	→ chin	“young man”
	tekw <u>onekws</u>	→ tekw	“box”

The formation of Yurok noninflected verbs resembles neither well-attested truncation pattern. Some additional examples are shown in (20): the noninflected forms themselves are on the right; the inflecting stems they would putatively be derived from are on the left.

(20)a.	hlkyor <u>kwe-</u>	→ hlkyor	“watch”
	hoh <u>kume-</u>	→ hoh	“do, make”
b.	nii’ <u>nowo-</u>	→ nii’n	“look (for)”
	riik <u>omoye-</u>	→ riik	“be full”
c.	skewok <u>sime-</u>	→ skewok	“like, want”
	tahtish <u>kemoye-</u>	→ tahtish	“smell rancid”
d.	lehlkeloy <u>pe-</u>	→ lehlkeloy	“crawl”
	megetohl <u>kwoo-</u>	→ megetohl	“look after, take care of, own”
e.	chechomeyo’ <u>repe-</u>	→ chechomeyo’r	“trot”
	mrwrksishon <u>owo-</u>	→ mrwrksishon	“be clean, pure”

No phonological generalization fully explains the formation of noninflected verbs as in (14), (15), and (20). The pattern is instead partly morphological, as discussed above; if truncation alone is involved, it is a typologically anomalous truncation pattern.

A second argument against the truncation analysis comes from the syntax of noninflected verbs. This argument is tentative, since the data are still incomplete, but insofar as systematic patterns can be determined it appears that noninflected verbs lack the additional valence contributions of “missing” valence-adding suffixes. If noninflected verbs are derived from inflected forms or inflectable stems, then the argument structure contributions of final suffixes should be present also in the output of truncation. This seems not to be the case, as shown in (21) for the



*Algonquian and Yurok Stem Structure*

transitive and causative suffixes.<sup>6</sup>

(21) a. <i>-ete-</i> “transitive/causative”			
ch(y)uup’ry	“comb oneself” (intr.)	ch(y)uup’ry-rtr-	“comb (hair)” (trans.)
mewp-ew	“be strangled”	mewp-ew-ete-	“strangle”
pkw-ek-omey	“be brought out”	pkw-ek-omey-ete-	“bring out treasures”
srm	“be beaten, killed”	srm-rtr-	“beat, kill”
s’oop-e’wey	“be hit in the mouth”	s’oop-e’wey-ete-	“hit (s.o.) in the face”
toor-a’r	“be horizontal”	toor-e’r-ete-	“lay across (s.t.)”
wey-ew	“be woven, finished”	wey-ew-ete-	“weave, finish (a basket)”
b. <i>-ine-, -ene-</i> “causative”			
kik-rhl	“be dislocated”	kik-rhlk-ine-	“dislocate (s.t.)”
mekw-ehl	“be in a heap”	mekw-ehlk-ene-	“pile (s.t.) up”
men-ehl	“go out” (of a fire)	men-ehlk-ene-	“extinguish (a fire)”
s’rks’rrp-rhl	“be hit in the mouth”	s’rks’rrp-rhlk-ine-	“hit in the mouth”

In each case in (21), a noninflected verb appears on the left and the inflected stem from which it is supposedly derived on the right. The noninflected forms regularly lack the additional arguments licensed by final suffixes. A minimal sentence pair from Trull (2003) is given in (22), where the imperative verb in (22a) has the final suffix *-ete-* (in its partially harmonic form *-rte-* plus imperative glottalization).

(22) a.	Nu	chuup’ryrt’es	k’e-’lep!
	GO	comb.IMPV.SG	2-hair
		“Go comb your hair!”	
b.	Nu	chuup’ry!	
	GO	comb.NONINFL.	
		“Go comb (your hair)!”	

A third and final argument against the truncation analysis comes from the discourse function of noninflected verbs. Just as the valence-changing effects of final suffixes should be absent in noninflected verbs if they are bare VN-stems, so the modal effects of inflectional suffixes should also be absent. That is, verbs with no (surface, underlying, or historical) inflectional morphology should make no modal contribution to sentence meaning.

The precise consequences of this prediction are hard to assess, but I suggest, following Kiparsky’s (1968, 2003) analysis of the Vedic Sanskrit injunctive, that

---

<sup>6</sup> Robins (1958: 31) writes that noninflected verbs “are formally neither transitive nor intransitive, though in translation and syntactic employment some correspond to inflected transitive verbs and others to intransitive verbs.” His views in this area are perhaps murky because he had not analyzed stem-internal morphology and did not recognize the transitivity suffixes in (21). The transitive verbs whose apparent noninflected counterparts are also transitive are those whose transitivity is not due to a final suffix; if a final suffix transitivity suffixes an intransitive, the noninflected counterpart is apparently intransitive as a rule.

It is harder at present to discern general patterns with applicative-like suffixes of the sort shown in (11c), because their general valence patterns remain somewhat unclear (the typical complexity of psychological verbs).

noninflected verbs should appear in two discourse contexts. First, they should appear where a modal meaning is supplied by context, for example in the scope of inflected verbs or in close coordination with them. Second, if the modal semantics of the Yurok indicative is in fact assertive, noninflected verbs might be expected to appear in presuppositional or backgrounded contexts.

Again, conclusions must be tentative until a larger dossier of texts is analyzed, but both predictions seem to explain a range of data. Many noninflected verbs in Yurok texts occur in examples like (23), where an indicative verb *ge'wehl'* "woke up" is asyndetically coordinated with two noninflected verbs, *new* "see" and *negii'n* "look".

- (23) Kohchi 'o **ge'wehl'** ku chines, 'ap **new**, temaloh **negii'n** ku 'u-ka'ar.  
 once PVB **woke.up.3SG** the young.man PVB **see** in.vain **look** the his pet  
 "Once the young man **woke up, looked around**, in vain **he looked** for his pet."  
 (Florence Shaughnessy, "The Young Man from Serper", 1951 (Robins 1958: 164-67))

Larger discourse units must be studied to evaluate the second prediction, about presuppositional or backgrounded contexts, but here too preliminary data seem to support the prediction. To illustrate, in (24) I give an English translation of Florence Shaughnessy's short Yurok story "The Mourning Dove". Inflected verbs are underlined ("ATTR" = attributive, "IND" = indicative, "SUB" = subordinative), non-inflected verbs ("VN") are underlined and in boldface, and I have divided the story into four episodes.

- (24) Florence Shaughnessy, "The Mourning Dove", 1951 (Robins 1958: 155-157), translated
- a. Once those who inhabit (ATTR) the world all **were gambling** (VN), and the dove too was gambling (IND). He had (IND) a grandfather.
  - b. There **ran up** (VN) **a messenger** (VN), saying (SUB), *The old man is going to die* (IND). The dove said (IND), *I will gamble* (IND) *again*, for he was winning (IND).
  - c. And again **he ran up** (VN) telling (SUB) him, *Well, hurry* (IMPV)! *Your grandfather is going to die* (IND). The dove said (IND), *I will gamble* (IND) *again*; and if I find (IND) that *already he is dead* (SUB), *this is what I will do* (IND): *so long as the heavens endure* (IND), *then I will mourn* (IND).
  - d. And today that is just what he is doing (IND). If somewhere you hear (IND) the dove as **he sits** (VN) there, you will hear (IND) him as it were mourning (IND). Very well he says (IND), *Wee poo poo poo*. And so it is (IND) that still **he is mourning** (VN) today.

The contrast between noninflected and indicative verbs is of particular interest. In (24a) the background is that everybody is gambling (expressed via a noninflected verb), and the narrative involves the dove. In (24b-c) the main narrative involves the conversation of the dove and the messenger; the fact that the messenger ran up is as it were off stage. In (24d) the first noninflected verb appears in a sentence "if you hear the dove as he sits there", where the sitting (noninflected) is background; the second appears in the last sentence in the equivalent of a cleft construction, in a context that must therefore be presuppositional: "that is why he is mourning."

## *Algonquian and Yurok Stem Structure*

To summarize, while the arguments from syntax and semantics are tentative until a fuller range of data is available and analyzed, a range of evidence suggests that the Yurok noninflected verbs are probably not synchronically and were surely not diachronically derived solely via truncation from inflected verbs or inflecting stems.

5. I turn finally to the historical implications of the analysis developed above. To reiterate, ignoring the phonological change in (12), Yurok noninflected verbs are bare VN-stems (initials with any medial suffixes), while inflected verbs consist of VN-stems as well as final suffixes and inflection. If noninflected verbs did not originate via truncation of inflected verbs, then *inflected verbs must be the newer formation*, based historically on noninflected verbs or their ancestors. Using the term “generic verb” for the ancestor of the final suffix + inflection complex (a formation expressing aktionsart, argument structure, and agreement), the origin of inflected verbs can be schematized as in (25).

(25) Bare VN-stem + generic verb > inflected verb with tripartite stem structure

The tripartite (initial + medial + final) stem structure is pan-Algic, and though my argument has been based on Yurok internal reconstruction, it stands to reason that the agglutinative change in (25) would have happened in Algic, not in the internal history of Yurok. The results of (25) would have been inherited by Algonquian and the Ritwan languages, with the more archaic noninflected verb formation lost in Algonquian and (as far as we know) in Wiyot.<sup>7</sup>

Further evidence that bare VN-stems were once the complements of generic verbs is that Yurok noninflected verbs can still be used as nouns, as shown with a few representative examples in (26). The pattern is extremely common.

(26)	<u>Noun</u>	<u>Noninflected verb</u>	<u>Comparandum</u>
herikw	“a cough”	“to cough”	herikw-one- “cough”
hool-ehl	“seed, garden”	“to sow, plant”	
hool-uul	“baggage”	“to carry a load”	hool-uul-ese- “carry a load”
kaap’	“leaf, greenery”	“to gather greenery”	
kep’ehl	“housepit”	“there is a housepit”	
nekom-uy	“ability”	“to know how”	nekom-ur-e- “swim well”
po’oh	“scar”	“to get well, heal”	
prkw-rh	“beak”	“to peck”	prkw-rhs-rr- “peck, knock”
toor-a’r	“bar”	“to be horizontal”	toor-e’r-ete- “lay across”

On the analysis I propose, the phrasal ancestor of inflected verbs was a syntagm in which a generic verb was construed with a bare VN-stem as its complement, in the manner of light verbs and their complements. Presumably the bare VN-stems were in origin syntactically nominal.

<sup>7</sup> Needless to say, if this scenario is correct, it should be possible to find supporting evidence in Algonquian (and Wiyot). Until such evidence is presented, it is reasonable to regard my proposals (at least in their Algic dimension) as conjectural.

Light verb constructions in general may serve as a typological parallel, but a more precise parallel comes from those languages of northern Australia where inflecting verbs are a closed class and the translation equivalent of ordinary verbs is formed with an open class of noninflecting words serving as the complements of the inflecting verbs. Two such languages are described in the following summary by Schulze-Berndt (2000: 69, 532):

[I]n Jaminjung and Ngaliwurru the function of “verbs” in many other languages is fulfilled by members of two distinct parts of speech. The term “verb” (or “generic verb”) is reserved here for members of a closed class of lexemes which obligatorily take verbal inflections. In addition, there is an open class of uninflecting lexemes which translate into languages like English or German as either verbs or adverbs ... Members of this class will be termed “coverbs” here ... Complex verbs of the type described [here] ... constitute an areal feature in Northern Australia.

I have taken the term “generic verb” from this tradition of research; “coverbs” are comparable to the bare VN-stems of my discussion. Important recent studies of Australian coverb + generic verb constructions include those of Schulze-Berndt (2000), Wilson (1999), and Bower (2004). Examples from Wagiman (Wilson 1999) are given in (27), with coverbs in boldface and generic verbs underlined.

- (27) a. **Liri-ma**    nga-ya-nggi    munyaban.  
          **swim-ASP**   1SG-go-PAST    other side  
          “I swam to the other side.”
- b. Jahan-gu    mahan    **dilk-ga**    ginggu-nanda-n-ngana?  
          what-DAT   here    **stare-ASP**    2SG/1PL-see-PRES-INCL  
          “Why are you staring at us here?”
- c. **Wal**            yaha-ny                    lagiyi.  
          **grow.PFV**    3SG.become-PPFV    body  
          “Her body has grown.”

As the glosses in (27) suggest, generic verbs contribute general meanings (“go”, “see”, “become”), sometimes involving aspect or aktionsart; coverbs supply more specific meanings (“swim”, “stare”, “grow”). The comparison with Algonquian generic verbs and VN-stems respectively is striking. Moreover, across a range of north Australian languages surveyed by Schulze-Berndt (2000: 532-538), coverb + generic verb constructions have evolved into inflected preverb-verb compounds, with varying degrees of morphological cohesion in various languages. In short, the reconstructed change in (25) is precisely what we see in living languages.

As a coda, it seems reasonable to assess these proposals areally. Is a VN-stem + generic verb construction plausible in the areal context where Proto-Algonquian was spoken? It is now generally assumed, following the archaeological and linguistic studies of Denny (1991) and Goddard (1994), that Proto-Algonquian was located at the western periphery of present-day Algonquian territory, and that Proto-Algonquian may have been spoken in the general Plateau area where present-day Washington, Oregon, and Idaho meet. As Foster (1996: 98) puts it, “A middle Columbia River

*Algonquian and Yurok Stem Structure*

homeland for Wiyot and Yurok is most consistent with the idea of an intermediate homeland location for Proto-Algic.”

In this northwestern areal context, the VN-stem + generic verb construction would be entirely at home. Famously, Chinookan languages have “a characteristic use in many cases of invariable particles accompanied by auxiliary verbs instead of the use of verb-stems to express the main idea” (Sapir 1907: 534); Boas (1911: 647) adds that “[p]article verbs [comparable to VN-stems or coverbs] always precede their auxiliary verb [comparable to generic verbs].” Wishram (Upper Chinook) examples are cited in (28) from Sapir (1911); in each example the verb root is *-x-* “do, make” (underlined and boldface) and the particle verb is printed in boldface.

- (28) a. aga kwô'pt **La x** gali'xôx  
 now then **in sight** he made it  
 “Then he became visible.”
- b. yagô'mEnil **qwxôL** iki'ax  
 his heart **hanging** it is  
 “... his heart is hanging.”
- c. aga kwô'pt **Lq!ô'p** gatci'ux **Lq!ô'p** gali'xôx ite!E'x̣yan yagô'mEnil  
 now then **cut** he made it **cut** it made itself Merman his heart  
 “Then he cut it. Merman’s heart was cut.”
- d. qxi'dau **°Ẹx̣** gatci'ux isk!u'lya ite!E'x̣yan  
 thus **exercising supernatural power** he did to him Coyote Merman  
 “Thus Coyote exercised supernatural power on Merman.”
- e. kwô'pt a'ga ite!E'x̣yan **p!a'1'** amxu'xwa  
 then now Merman **being quiet** you will make yourself  
 “Now, Merman, you will be quiet.”

Similar structures are found in Kootenai (Morgan 1991: 281-83), perhaps closer geographically to the location of Proto-Algic. Such comparisons cannot prove that Proto-Algic had light verb constructions of the proposed type, of course, but they lend credence to a reconstruction based on purely internal considerations.

6. To summarize: Underlying the tripartite stem structure of Algonquian, Wiyot, and Yurok was a verbal construction with an uninflected word (the ancestor of the Yurok noninflected verb) that contributed most of the lexical meaning and an inflected verb contributing aspect, aktionsart, and inflectional meanings. Already in Proto-Algic this construction was grammaticalized as a tripartite verb, but the uninflected form survived in Proto-Algic and survives to this day in Yurok, whose noninflected verb forms are thus a precious relic of Algic prehistory.

References

Bat-El, Outi. 2002. True truncation in colloquial Hebrew imperatives. *Language*

- 78: 651-683.
- Berman, Howard. 1982. A supplement to Robins's Yurok-English lexicon. *International Journal of American Linguistics* 48: 197-241.
- Blevins, Juliette. 2003. Yurok syllable weight. *International Journal of American Linguistics* 69: 4-24.
- Bloomfield, Leonard. 1946. Algonquian. *Linguistic structures of native America*, ed. by Cornelius Osgood, pp. 85-129. (Viking Fund Publications in Anthropology, 6.) New York.
- Boas, Franz. 1911. Chinook. *Handbook of American Indian languages*, ed. by Franz Boas, Part 1, pp. 559-672. (Smithsonian Institution, Bureau of American Ethnology, Bulletin 40.) Washington: Government Printing Office.
- Bowern, Claire Louise. 2004. *Bardi verb morphology in historical perspective*. Ph.D. dissertation, Harvard University.
- Denny, J. Peter. 1991. The Algonquian migration from Plateau to Midwest: Linguistics and archaeology. *Papers of the 22nd Algonquian Conference*, pp. 103-124.
- Foster, Michael K. 1996. Language and the culture history of North America. *Handbook of North American Indians*, vol. 17, *Languages*, ed. by Ives Goddard, pp. 64-110. Washington: Smithsonian Institution.
- Garrett, Andrew. 2001. Reduplication and infixation in Yurok: Morphology, semantics, and diachrony. *International Journal of American Linguistics* 67: 264-312.
- Goddard, Ives. 1967. The Algonquian independent indicative. *National Museum of Canada Bulletin* 214: 66-106.
- Goddard, Ives. 1974. Remarks on the Algonquian independent indicative. *International Journal of American Linguistics* 40: 317-327.
- Goddard, Ives. 1975. Algonquian, Wiyot, and Yurok: Proving a distant genetic relationship. *Linguistics and anthropology: In honor of C. F. Voegelin*, ed. by M. Dale Kinkade, Kenneth L. Hale, and Oswald Werner, pp. 249-62. Lisse: Peter de Ridder.
- Goddard, Ives. 1994. The west-to-east cline in Algonquian dialectology. *Actes du vingt-cinquième Congrès des algonquinistes*, ed. by William Cowan, pp. 187-211. Ottawa: Carleton University.
- Kiparsky, Paul. 1968. Tense and mood in Indo-European syntax. *Foundations of Language* 4: 30-57.
- Kiparsky, Paul. 2003. Blocking, paradigms, and periphrasis. Unpublished paper (lecture handout), Stanford University.
- Morgan, Lawrence Richard. 1991. *A description of the Kutenai language*. Ph.D. dissertation, University of California, Berkeley.
- Proulx, Paul. 1985. Notes on Yurok derivation. *Kansas Working Papers in Linguistics* 10/2: 101-143.
- Robins, R. H. 1958. *The Yurok language: Grammar, texts, lexicon*. (University of California Publications in Linguistics, 15.) Berkeley: University of California Press.

*Algonquian and Yurok Stem Structure*

- Sapir, Edward. 1907. Preliminary report on the language and mythology of the Upper Chinook. *American Anthropologist* N.S. 9: 533-544.
- Sapir, Edward. 1911. Wishram text. *Handbook of American Indian languages*, ed. by Franz Boas, Part 1, pp. 673-677 (Smithsonian Institution, Bureau of American Ethnology, Bulletin 40.) Washington: Government Printing Office.
- Sapir, Edward. 2001. Yurok texts. Edited by Howard Berman. *Collected works of Edward Sapir*, vol. 14, *Northwest California linguistics*, ed. by Victor K. Golla and Sean O'Neill, pp. 1015-38. Berlin: de Gruyter.
- Schultze-Berndt, Eva. 2000. *Simple and complex verbs in Jaminjung: A study of event categorisation in an Australian language*. Doctoral dissertation, Katholieke Universiteit Nijmegen.
- Trull, Georgiana. [2003.] *Yurok language conversation book*. [Klamath, Calif.: Yurok Tribe.]
- Valentine, J. Randolph. 2001 *Nishnaabemwin reference grammar*. Toronto: University of Toronto Press.
- Weeda, Donald S. 1992. *Word truncation in prosodic morphology*. Ph.D. dissertation, University of Texas at Austin.
- Wilson, Stephen. 1999. *Coverbs and complex predicates in Wagiman*. Stanford, Calif.: CSLI Publications.

Department of Linguistics  
University of California  
1203 Dwinelle Hall #2650  
Berkeley, CA 94720-2650  
garrett@socrates.berkeley.edu