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PROTO-ALGIC V: Doublets and their Implications

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Abstract: Accumulating evidence suggests that a
recalcitrant problem first addressed by Howard Berman
- how to explain an apparent correspondence among PA
*t̲, W t̲, and Y ʔ̲ - is best solved by reconstructing
Proto-Algic doublets. These doublets suggest dialect
mixing before the breakup of Proto-Algic society,
with frequent elements commonly manifesting the
prestige-dialect innovations. The combination of *ʔ̲
with adjacent consonants, once e-dropping is taken
into account, explains the glottalized consonants in
several words - but others remain and should be
transcribed.

0. Introduction

Ives Goddard, in describing Proto-Algic as being 'at the
limits of our perception, where only dispersed fragments of the
protolanguage can be perceived' (Goddard 1991:65), has wonderfully
captured the essence of the challenge inherent in its
reconstruction - and no aspect of that reconstruction justifies
his observation better than the present problem. Work on such
problems soon makes clear the nature of the scientific enterprise,
teaching the researcher the need for patience and the constant
reassessing and improvement of hypotheses. There is no quick fix,
short cut, magic methodology, or the like that will do the job.
Yet Goddard to some extent overstates the difficulty: gradually
some of the fragments begin to fit together, honest debate
sharpens insights, and the emerging picture comes ever into
clearer focus.

The first paper in this series,[1] in which I presented an
initial sketch of Proto-Algic phonology, was researched in the
late 1970's and early 1980's - the same period during which Howard
Berman was putting together his own sketch (Berman 1982a, 1984).
Despite some correspondence between us, we evolved surprisingly
different proposals.

This is a reflection of the fragmentary and often confusing
and/or ambiguous nature of some of the data. However, it has the
salutary effect of highlighting what Hockett (p.c.) calls the

residue of reconstruction. At any stage of reconstruction, according to Hockett, there will be some more or less promising matchings which do not fit the researcher's current model. Like the discard pile in a game of cards, they lie there on the table waiting for someone to find the opportunity to put them to good use. The more residue available, the better the opportunity to make progress on the reconstruction. And highly divergent alternate hypotheses do generate copious residue for each other - for what is a cognate set under one proposal is only close (or not so close) to being one under the other. Moreover, this particular residue is of especially worthy note as it comes with the certification that at least one of one's colleagues considers the matchings to be true cognates.

In theory, of course, the same scholar could entertain a variety of alternate hypotheses (and probably does so early in the game). Due to the enormous complexity of language and of the reconstruction of older protolanguages, however, a scholar soon narrows down working hypotheses to keep from being overwhelmed by the enterprise. Alternate hypotheses become the work of other scholars. In this paper, I turn to some of the residue Berman and Goddard have generated for me and show how some of their insights can be harmonized with my own.

Despite this partial harmonization, however, there remain radical differences between my own proposal and Berman's - essentially accepted by Goddard (1991:64-65) - which make it hard for me to discuss his insights without to a great extent reinterpreting them in terms of my own understanding. In particular, Berman is persuaded of the Ritwan Hypothesis (see appendix B), while I am not. The reader wishing to experience Berman's point of view (or Goddard's, for that matter) is therefore referred to the original sources.[2]

Throughout this paper, I will be mentioning consonant and vowel grades, and archaic ablaut, which manifest as follows. First, Proto-Algic has four sets of sound symbolic equivalences among phonemes, where grade 1 is neutral, grade 2 has diminutive and/or meliorative connotations, and grade 3 (where it is found) augmentative and/or pejorative ones. When there is no grade 3, its meanings are reassigned to grade 1 (at least in the case of the first set). The grades in Proto-Algic, and their unconditioned reflexes, are:

	GRADE 1=2=3	PA	Wiyot	Yurok	
(1)	**t=c=ĉ	*t=s=ŝ	t=c=ĉ	t=c	(Proulx 1984:175)
(2)	**s=ŝ	*ł=ŝ	s=ŝ	s=c	(Proulx 1984:175)
(3)	**l=r	*l=ŝ	l=ŝ	r=s	(Proulx 1991:sec.3.1)
(4)	**e=a	*e=a	---	e=ł	(Proulx 1984:175)

That is, grade 1 **t matches grade 2 **c and grade 3 **ĉ, and so forth. Grade 2 of **s and **t coincide in Yurok, and backformations from this grade explain the handful of secondary matchings of **s and **t (the latter serving as the new augmentative since grade 3 has been eliminated in Yurok). Y sesomen- 'scratch' and tetomen- 'scratch repeatedly' is a good example.

Second, archaic ablaut consists of the replacement of **e by **a: in verb stems, dependent nouns with matching verb medials, and what look like nominalized verbs. Its function (where recoverable) is to imply iteration, habitual action, and the like. For examples, see Proulx (1984:sec.1.3, and nos. 016, 018, 041, 077, 078, 105).

Goddard (1991:fn.17) has claimed that reconstructions involving such grade variation are implausible. However, this ignores the well-documented grade variation in both Wiyot (t=c=ĉ, s=ŝ, l=r, see Teeter 1964:21-22) and Yurok (t=c, l=r, e=ł, see Haas 1970, Hamp 1970, Berman 1981:259, and Proulx 1982b) - as well as the somewhat less obvious evidence from Algonquian (*t=*ĉ, *s= *ŝ, see Goddard 1975:74, 79; and *e=*a, see Siebert 1967:8, 13, 48, and 1975:11, 51, 52, 59, 101, 114, 130, 170, 184).

New or significantly revised Proto-Algic reconstructions begin with number (359); numbers 001-358 are found in Proulx (1984, 1985a, 1991, 1992). A bare number after a Proto-Algic reconstruction or reference to one, or after an Algic cognate set, refers to this numeration. The cognate sets underlying Proto-Algonquian reconstructions for which no source is given will be found with the earlier Proto-Algic reconstruction whose number is cited.

1. The history of the problem

Early in my research, I came upon a potential cognate set PA
*ŝeki-, W tik∔l-, and Y ?ahk- 'urinate' 099. I passed it on to
Howard Berman, who after initial skepticism went on to find more
examples of Y ? apparently corresponding to W t and PA *t (or one
of their grade variants), as well as to Y t in doublets: PA
*t(a:)- 'exist', W t(a)- 'stay, dwell, remain', Y ?(o)- 'be,
exist, be born' and the near doublet Y to:?m- 'be together in a
group' (with -o:?m 'incremental plural'); PA *ahŝam- 'feed', W t-
'feed, give food to', Y ?- 'give'; PA *net-, W dut-, Y ?ne- 'first
person' (and similarly with the second and third); PA *nyi:ŝ(wi),
W dit- 'two', Y ni?(iye∔) 'two (human beings)' (Berman
1982a:417ff). He also compares the final segment in W w∔tk∔dát, Y
?w∔∔k∔:? 'bone'; and W ta 'durative and articular preverb', Y ?o
'locative preverbal particle'. He suggests a second doublet, Y
-e?wey 'face' beside tewey 'forehead', where the initial Y e in
-e?wey is a link vowel (as shown by the allomorph -o?wey, see
Proulx 1985b), while that in tewey 'forehead' would presumably
have been dropped in -V?wey (Berman 1982a:fn.12).

Meanwhile, I too found some further examples of the same
sort: W dít∔bák 'for two days', Y na?amo?- 'be somewhere for two
days' 065; and PA *no:ĉpen-, Y no?p?en- 'pursue' 098. I explained
the former morphologically, the latter and 099 by postulating
clusters and divergent simplification. I explained the prefixes
as follows. Proto-Algonquian has two sets of prefixes used before
nouns beginning in vowels, e.g., *w- and *wet- 'third person'.
Blackfoot has eliminated the first set, everywhere substituting
the second (e.g., ot-). Proto-Algic has two comparable sets
(Proulx 1984:169, 198), but Yurok has only one. I assumed that
Yurok, like Blackfoot, had analogically leveled - but in the
opposite direction (replacing the second set by the first, e.g., Y
?w- beside PA *wet- would respectively reflect **w?- and **w?et-).
I further assumed that the leveling out of the **et extended to
some cases where etymologically the **t had belonged to the stem:
PA *wehtehkwani 'branch', Y ?weskwen 'small branches, twigs' 038;
PA *-atayi, Y -eyah 'belly' 095; and PA *watapya 'fine root used
in sewing', Y ?wohpeg 'spruce root' 102.

At the time, these explanations seemed more plausible to me
than Berman's solution, which was to equate Y ? with W t and PA *t
(and their grade variants) in items of this sort and assign both
this correspondence and the regular *t+t+t one to the same proto
phoneme *t - for neither of us could find a phonological
conditioning environment which would put these two correspondences
in complementary distribution. And indeed, no such environment

has ever been found. Consider the following contrasts of **T̲
versus **t̲ (and **K̲ versus **k̲), where the apparent *t̲+t̲+ʔ and
*k̲+k̲+ʔ correspondences (including grade variants of t̲) are
respectively written **T̲ and **K̲:

**ni̲Tema:K- 'two days' 065   cf. **pitekwli̲ 'basket' 111

**no̲:Tpen- 'pursue' 098   cf. **ketp- 'thick (cloth)' 040

**Tik̲- 'urinate' 099   cf. **ti̲ʔema̲:ʔ 'elderberry' 066

Berman's solution forces one to postulate dialect mixing of
some sort - and dialect mixing can be a too-easy solution to every
apparent deviation from regular phonological correspondences.
Therefore, one properly arrives at it by differential diagnosis,
when all other plausible explanations have been tried and found
wanting. By this test, his conclusion seemed premature.

Moreover, the prefixes are important here, and Berman's
suggestion that, for example, **ne̲t- gave Y ʔn̲- 'first person' by
regular sound change seemed unconvincing to me. His explanation
was that Yurok glottal catch (including that from *t̲) could move
backward in a word, as in Y no̲ʔnow̲os̲ 'fetch!' (stem no̲now- 'to
fetch' plus imperative singular -ʔos̲). However, it doesn't move
backwards in Y no̲ʔp̲ʔen- 'pursue' beside PA *no̲:ĉpen- 098, so it
appeared that a different phenomena was involved than in the
imperative. I also resisted the idea of a *t̲ > ʔ sound shift
before vowels as somewhat unnatural (though not impossible).

Nevertheless, Berman (1984:fn.11) found another Yurok doublet
(Y ʔa̲htema̲r and dependent -ʔa̲ʔ 'drawing, book, newspaper'). Later
he proposed two more cognate sets: W da̲t- 'be large', Y no̲ʔ(op)-
'be tall, high (round things, mountains, trees)' and no̲ʔ(omek)-
'be long (worms, ropes)' (Berman 1990:432); and Y ʔyekw(ɫ̲) and PA
*we̲tkw(e̲:wa) 'maggot' S248 (citing the latter as PA *o̲:tkwe:wa.
Goddard (1991:65) proposed PA *-t̲, Y -ʔ 'third person subject'.
Finally, I found one more: PA *we̲ɫki̲ĉyi̲ 'pipestem', Y ska̲ʔ 'pipe
scabbard' 331 (Proulx 1992:34). It was time for me to take another
hard look at the question, but first I had to recognize its
relationship to two others.

2. Some losses of **e̲

In my 1984 sketch, I reported some losses of **e̲ 'between an

obstruent and a consonant other than **g' in a first syllable in Wiyot and Yurok (p.186). I also reported loss of **e between **n and a stop or affricate in PA and Yurok (p.187), though only word medially, and of initial **ne before a single stop in Yurok (p.197). Finally, I pointed out that the environment for **e-loss had to have been broader (at least in Wiyot) to account for the vowel-less prefixes (p.198) - though the details are largely obscured by analogical restorations.

Additional evidence now leads me to also include the **e of the Yurok prefixes among the losses. For example, **e (and preceding **w) are lost in Y ska? 'pipe scabbard' beside PA *wełkiĉyi 'pipestem' 331, and in Y lo?og beside W wɨràg 'coals'. Other examples of the loss of initial **we are: 074, 102, 279, 289, and perhaps 280 (if its first **a had an e-grade).[3]

The loss of **e in a first syllable makes Berman's proposal for Y ?n- from **net- much more attractive: presumably, **net > *ne? > *n? > Y ?n or something of the sort. No backward movement across vowels needs be assumed.

3. The Reflexes of **?, and Some Proto-Algic Doublets

The distribution of ? (subtracting known secondary sources) in the three branches of Algic is as follows. In Wiyot, it's found before a continuant and in word final position. In Yurok, it's found everywhere except before a consonant (ignoring ? as a laryngeal increment and preglottalization of sonorants and erstwhile sonorants, e.g. ?r < Pre-Y *r?). In PA, most cases of *? are probably secondary - but evidence of this is often lacking. It is found as the first member of a consonant cluster and, written *h, between a preceding vowel and a following vowel or semivowel (with a morpheme boundary intervening in the known cases).

? is never preserved before a stop in any of the languages. PA and Wiyot evidently preserve (or innovate) it before **w: PA *-a?w, W -u?w and -utw (Teeter 1964:72-73) 'by tool, instrument, medium' 187, 369. If PA *-h 'abstract transitive final' (Bloomfield 1946:sec.86) is in origin a doublet with specialized *-t of transitive inanimate verbs (-Vt 'nonpersonal object' 178), this provides a good example of it occurring before a morpheme boundary plus, generally, a vowel.

**? is preserved (or innovated) in word final position in Wiyot and Yurok, and perhaps between unlike vowels in a word final

sequence in PA: PA *-t, W -i?, Y -o? 'third person subject' 300;
and perhaps (with a different inflectional vowel) PA *-ahi
'locative 1' (Proulx 1988:322) - possibly related to Y ?o
'locative preverbal particle'.⁴

**? drops in Wiyot and Algonquian in absolute word initial
position and between vowels within the root. Word initial
examples are W kɨ?y (ukiyɨbɨ?l 'her hat'), Y ?ekah (**?eki?yemi
'hat' 047); and PA *e:nsa, Y ?ɨncɨh 'abalone shell' (**?e:neca
'bivalve shell' 084). An intervocalic example is **wenli?a:gwi
'coals, charcoal' 289: Y lo?og, W wɨrág, cf. PA *-anŝye:wi.

Of course, these are only rough preliminary statements of the
environments. PA *aɨemwa 'dog' A205 beside deverbal *-a?ɨemw A176
of the same meaning suggests that, in Algonquian, position in the
word may be as important as the phonological environment. Or, the
glottal catches may be secondary in such cases.

However, some of the examples just cited strongly suggest
that Berman's Yurok doublets are of Proto-Algic antiquity.
Consider PA *-a?w, W -u?w and -utw (Teeter 1964:72-73) 'by tool,
instrument, medium'; PA *-t, W -i?, Y -o? 'third person subject';
and PA *tahkon- (a-grade) 'grasp (it)', W khɨn- 'grasp, hold', Y
tekon- and ?ekon- 'hold onto something'. These items show
presumed reflexes of **? in Wiyot and PA corresponding to those of
**t elsewhere (or in doublets in the same language) - something
impossible if the dialect mixing had taken place only within
Yurok. Consider also the doublets PA *ta:n- and *a:n- 'WH-'
(Proulx 1991:152), and Cree ce:skwa: (Cree diminutive grade ç from
PA *t) and e:skwa: 'still', as well as nama ce:skwa: beside
name:skwa: 'not yet'. Compare also W -u?w and PA *-etwi
'reciprocal' (Bloomfield 1946:sec.72, with the intransitive final
*-i).

All of the foregoing is surely sufficient evidence to warrant
serious consideration of Berman's hypothesis, modified to reflect
the greater antiquity of the doublets.

4. Testing the hypothesis

So far we have seen evidence for several Proto-Algic
doublets. Those longer than a single segment are (where for
present convenience **T is written for a **t + **? pair, and **C
and **Cˆ respectively for its grade 2 and 3 variants):

(359) *Tik- 'urinate' 008, 099: PA *ŝeki- (grade 3, with
mediopassive *-i) A1980, W tikɨl- (with stative -ɨl), and Y ?ahk-.

(360) **Tahkon-, **Tehkon- 'grasp, hold onto something with the hand' 064, 019: (a) PA *tahkon- 'grasp', (b) Y tekon- 'hold onto something'; Y ʔekon- 'hold onto', W khɨn- 'grasp, hold'. See sec.6 for the origin of the aspiration in Wiyot.

(361) **weskiTyi 'hollow tube used in smoking' 331: PA *weɬkičyi 'pipestem' (C oskičiy, O okkič), Y ska? 'pipe scabbard'. PA has regular mutation of t to č before y.

(362) **wehTelkweni, **wehTelkwani, **wehTerkwani 'branch' 038: (a) PA *wehtehkweni, (b) Y ʔweɬkun 'heavy limbs', PA *wehtehkwani, (c) Y ʔweskwen 'small branches, twigs'.

(363) **-eThey, **-aThay 'belly' 095, 145: medial PA *-ečy, medial W -ith, dependent Y -eyah (with **-i 'inanimate', see Proulx 1991:133), (b) dependent and medial PA *-atay. A fully inflected form, showing movement of Pre-Yurok *ʔ back onto the prefix, is **neTheyi, **naThayi 'my belly': Y ʔneyah, PA *natayi.

(364) **weTaphega and **weTa:phega 'root, fine ... used in sewing (usually spruce)' 102: PA *watapya S170, W tàp 'spruce root' (stem táph-), Y ʔwohpeg 'spruce root'.

(365) **n̥-, **n̥et-, **n̥eʔ- 'person, first...' 128: (a) PA *n̥-, W d- or zero, Y ʔn- (with ʔ analogical to the second by-form), (b) PA *net-, W dut- (vowel analogical to third person prefix), Y ʔn-, (c) PA *ne-, W du?- (vowel analogical), Y ʔn̥e- (ʔ analogical).

(366) **K-, **Ket-, **Keʔ- 'person, second...' 129: (a) PA *k-, W H̥- (the aspiration of an immediately following obstruent) in kin nouns specifying most senior consanguines, and W kh- otherwise (aspiration secondary), Y k̥ʔ- (with ʔ analogical to the second by-form), (b) PA *ket-, W khut- (vowel analogical to third person prefix, aspiration secondary), Y kʔ-, (c) PA *ke-, W khu?- (vowel analogical, aspiration secondary), Y k̥ʔe- (ʔ analogical).

(367) **w̥-, **w̥et-, **w̥eʔ- 'person, third...' 130: (a) PA *w-, W w-, Y ʔw- (with ʔ analogical to the second by-form), (b) PA *wet-, W hut-, Y ʔw-, (c) PA *we-, W hu?-, Y w̥ʔe- (ʔ analogical).

The short form (set a) is used in dependent nouns. The glottal variants of the long forms of the personal prefixes (set c) had evidently been adopted throughout Proto-Algic before independent elements which began in consonants - leaving their stop counterparts (set b) only for the small minority of cases where the following independent element began in a vowel.

The history of Wiyot second person prefixes begins with a specialization of **K-. The glottal variant is used with most

senior consanguines, the stop variant elsewhere. Next, after the loss of the connective **e, the glottal catch metathesizes with a following obstruent and turns into aspiration. Finally, that aspiration spreads to the stop variants of the prefix, creating a blend. In Yurok, the glottal (which is found in allomorphs of all three prefixes) is analogically extended from set b to sets a and c. Whatever its source, then, glottalization (and resulting aspiration) have tended to spread among the variants of the personal prefixes.

The final glottal catch in set c is only preserved (in careful speech) before sonorants in Wiyot. Despite Teeter's ambiguous statement of the matter (Teeter 1964:79), his own chart showing the distribution of consonants (p.16) as well as his examples (pp.79-80) shows they disappear without trace before obstruents. Perhaps they originally metathesized with the following obstruent and produced aspiration - but if so the resulting irregularity in the stem, lacking a morphological function, was leveled out.

(368a) **-eTew 'reciprocal': PA *-etwi (Bloomfield 1946:sec.72, with the intransitive final *-i), W -u?w, and Y -ew. Wiyot shows sporadic rounding (see Proulx 1984:181). Y ? has presumably migrated onto a previous element and been lost, after the loss of the initial **e (**e? ---> *?).

(368b) **-eCew 'reflexive' 192: PA *-eswi A333; Y -ew (in noninflecting verbs) R48-49. Compare W -w, -iw T74 (lacking glottal catch). Several of the proto subject endings, which would follow this element, have **K or **T as their consonants. Had their glottal variants followed Pre-W *-i?w, its glottal catch would have dropped by laryngeal elision (Teeter 1964:26) - if this type of elision dates back that far.

(369) **-VTw or **-VTew 'by tool, instrument, medium' 187: PA *-a?w, W -u?w and -utw (Teeter 1964:72-73). PA also has *-ah 'by tool, instrument, or medium' A76 in TI verbs and their derivatives, by analogy with the many TI stems which lack the *w or *aw of their corresponding TA stems.

(370) **ehT- **ahT-, **ahCam-, **ahC^am- 'give (especially food)' 011: (a) W t(u)- 'feed' (see Berman 1982a:fn13), (b) Y ?(o)-, (c) W łcɨb- 'give to' (grade 2), and (d) PA *ahŝam- 'feed' (grade 3, with final *-am, see Bloomfield 1946:sec.82). The last two proto stems have stem root extension **-Vm 355.

(371) *no:Tpen- 'pursue' 098: PA *no:ĉpen-, Y no?p?en- 'pursue'.

(372) **niTeThey-, **niTeC^hey- 'two humans' 036: W dɪ́t-

'two' (grade 1), Y ni?iy-; PA *ni:ŝwi 'two' A1630 (with root
extension **-Vw 357). The root is **niT-, followed by grades 1 and
3 of medial **-eThey 'belly' 095, 145, 363. **y and **ey evidently
drop in Algonquian after PA *ŝ from **ĉ and **ŝ (cf. 086).
Evidently too, Yurok has haplology - or perhaps **TeT ---> *?e?
---> *?? and thence Y ?. The loss of aspiration in Wiyot is
evidently analogical from word-finala position where it is regular
(e.g., in phrases like dit ba h+l+d '20').

   (373) **niTema:K- 'two days' 065: W d+t+bák 'for two days', Y
na?amo?- 'be somewhere two days'.

   One of the main tests of a rightful hypothesis is
productivity, that is, its ability to generate new insights.   If
Proto-Algic really had doublets of the sort envisaged above,
knowledge of this should allow new or improved reconstructions -
and perhaps new insights into the relationships among these and/or
existing ones.   Those new reconstructions longer than one segment
follow:

   (374) **na:T- 'large' (Berman 1990:432): W dat- 'be large', Y
no?omek- 'be long (ropes, etc.)'   (with **-Vm 'root extension'
355, and **-Vkh 'long thing' 155), no?op- 'be tall (round
things)'.   The reduplicated form Y no:no?op- does not show a
"laryngeal increment" (pace Berman, and cf. fn.2 below).   It
presumably reflects Pre-Y *no?ono?op- with contraction of *o?o to
Y o:. Compare Y m+kw+ł 'peak' and reduplicated m+kw+m+kw+ł 'peaks'
R14 for this type of reduplication, and Y co?one?n, and co:ne?n
'four (body parts, etc.)'   R88 for sporadic contraction of o?o to
o:.

   (375) **weTewi, **wegeTawi 'flesh, body, (her)...': (a) Y
tewon 'flesh' (with nominalizer **-Vn 296), ?wetew 'her flesh';
(b) PA *wi:yawi 'her body' A2265, and diminutive *wi:yawehsi
'meat, flesh' A2264. This noun is doubtless the source for the
reciprocal and reflexive suffix **-eTew, via the meaning 'self'
(see Bybee, Pagliuca, and Perkins 1990:36). The meaning 'self'
turns up in M ne:yaw 'my body, person, self', cognate K niiyai and
n+ai 'myself', and derivationally *-iyaw in C tipiyaw 'in person'
(f+w C weyu tipeyuwê 'herself', with ˆ for macron).

   (376) **peTk-, **peCk- 'catch fire': (a) Y pek?onoc- 'set on
fire' (with Y -Vnoc 'causitive', as in roykenoc- 'render fat,
force out liquid' beside royk- 'flow, drip, trickle', see Proulx
1985b:123), (b) PA *pesk- A1855. See sec.6 for the position of Y
?.

   (377) **Ta:wal- 'be around': Y ?o:le?m 'be, exist' and Y
?o:lo?op? 'she stands' R271, W tá?lib 'it lies there' (with **-Vm
'third-person subject' 295. Compare **a:wal- '(go) around'

respectively in Y ho̠:le?m 'go travel, be around, fare', Y ho̠:ro?op? and ho̠:ro?opep? 'she runs around' (Proulx 1985b:130), and W hálit 'you go, walk'.

(378) **weTehpehKa, **weCehpehKa '(her) backbone': Y ?up?ɨh, PA *wesehpehkwa (M os<:hp<hkon 'her backbone', with noun final *-w [see Bloomfield 1946:sec.57, 61]). **weTehpehKa gives Pre-Y **w?ep?a, and thence, with vowel harmony, **?wap?a and Y ?up?ɨh.

The general Algic pattern is for the part-of-whole noun to be homophonous with its corresponding dependent noun inflected for the third person (as in this case),[5] e.g., PA *wetkanĉege 'hoof, claw; her fingernail' 39, 134. For other examples, see Proulx (1992:36) and also 74 and 112. Often, as in 'backbone' above, attestation in the daughter languages is incomplete (see 035, 090, 091). In some cases (022, 322, and, for Wiyot, 090), the part-of-whole noun is treated as an ordinary independent noun, with allocative prefixes simply added.

The root **tekw- 'together, grouped (i.e., at the same place)' 380 may be related to the particle **?ékw 'just exactly at the same time or place, or in the same manner' 379. The semantic specialization in the latter pair (if such it be) was already present in the proto language, suggesting that doublets were not new.

(379) **?ekw- 'same, just exactly the time, manner, thing': PA *aŝikwa (NiO azhigwa 'at this or that time', with *aŝi- 'like that' 255 prefixed after loss of the initial syllable), W kwi- preverb 'on arrival' T86, e.g., kwi-kɬám 'I see her when I get there', kwi-khɨnápiɬ 'she just bites', Y ?ekw 'that's just exactly what or how' R140. Compare PA *e:kwe:la:ki 'exactly then' (pC e:kwe:ya:k, nC e:kwe:na:k); PA *e:kwa: and *me:kwa: 'while, in the act, at the place, at the time': NiO me:gwaa 'while, at the same time', pC me:kwa: 'while, in the act or place', wC âkwu 'now, whiles, whilst' (Faries), M m<:k- preverb 'engaged in, while the action goes on'. If related, these additional Algonquian forms have initial change and obscure affixes.

(380) **tekw-, **takw- 'together, grouped': PA *takw- 'joined, along with, together, grouped' A2016-2017, W ĉakw- in ki-piwɨ-ĉakwɨlɬwɨ?n 'one doesn't gather them much' (grade 3, with archaic ablaut), Y tek- 'together', e.g., teko?opi? 'it's burned on' (-o?op 'burn'), teku:ne?m 'they grow together' (-u:n 'grow'). Compare W takwun or taku 'they' T100, and W tɨla-ĉkwɬayúwi? 'how they hook eels' T47.1.

Finally, another set of apparent doublets in **T turns out to have a different origin. When a dependent noun stem beginning in **t has a counterpart used as a verb medial, the latter generally

lacks the initial **t.⁶ In these cases, the **t is a
structurally-required prefix receptor (Proulx 1992:19), normally
absent after a verb root (though extended there analogically in
some cases in the daughter languages, see Proulx 1985a:66-68).

5. Some **? vs **k Doublets

As we have seen, two of the **T doublets are also doublets in
**K: **niTema:K- 'two days' 65, 373 (W dítɨbák 'for two days', Y
na?amo?- 'be somewhere two days') and **weTehpehKa 'backbone' 378
(Y ?up?ɨh, PA *wesehpehkwa 'her backbone'). A search has turned
up several more. Those of more than one segment are as follows.

(381) **-VKa:p 'stand': PA *-ka:pawi A516 (with extension
**-Vw 357), Y -o?op 'stand, run'. Examples are PA
*kwe:ɬkika:pawiwa 'she turns as she stands' A1115, and Y ?o:lo?op?
'she stands' R271 (with ?o:l- 'be around', see 377).

(382) **Kiyew- 'in a circle, around, about': PA *ki:w-
'around, turning, returning' A993-1017, W hiyɨw- 'around, in a
circle'. Examples are: W hiyɨwéliliski?l 'circle around the sun',
kawi?yɨwéta?l 'they go around and around' (kaw- 'begin', -Vtal
'go'), ta-yɨwa?nɨtaliɬ 'she's walking around in a circle' (ta-
'progressive', **-Vn 'root extension' 356), hiyɨwa?nãkw 'I'm
dizzy'; PA *ki:we:wa 'she goes home, back' A1006,
*ki:wi?ta:pahta:wa 'she runs in a circle, runs around something'
A1013, *ki:waŝkwe:- 'be dizzy, silly' A1000-1001.

(383) **no:K- 'such a distance': W nuk-, Y no?- in no?om-
(incorporating postradical *-Vm 355), and no:ɬ 'far, long time'
(incorporating locative *-Vɬ). Examples: Y kus no?omekik? 'how
far did this water flow from?', Y kus no?omenek?w 'how long was it
submerged?', Y kus weno?omekik? 'where is the water up to (e.g.,
in an aquaduct)', Y kus no:ɬ 'how far?, how long?' R.232 (with
contraction of o?o), W ta-nukɨ-bíwi?yɨwiɬ 'they eat it for a long
time' 54-f, W ɬé-dukikwɬiɬ 'she cried a long time' 14-g, W
ta-núkɨk 'after a long time' 47-g.

(384) **-Vŝ-eKoK, **-Vs-aKoK 'I-you pl.': Y -Vc-?o? R70
(e.g., nekcenic?o? 'I meet you pl.' R71), PA *-eɬ-akok (Proulx
1990:111).

(385a) **neKila(wa) 'first person singular personal pronoun':
**nekila(wa) gives Y nek (shortened, **e retained in
monosyllable); **ne?ila(wa) gives PA *ni:la(wa) A1610-1611 (where
presumably **e?i gives PA *i:), and W yɬl (presumably via
**neyil).

(385b) **KeKila(wa) 'second person singular personal
pronoun': **?ekila(wa) gives W khĭl (where the initial **?e
produces the aspiration after e-dropping as in possessed nouns),
and **kekila(wa) gives Y kel- (presumably by haplology, or because
*kk simplifies to k after e-dropping). **ke?ila(wa) gives PA
*ki:la(wa) A896. This reconstruction (385b) replaces 260.
Evidently, Algonquian gets its prefix **k(e)- 'second person' from
a k-dialect of Proto-Algic, but its personal pronoun from the
?-dialect (the reverse of Wiyot). A similar union of mismatched
elements is seen in **kega:rKa 'gull' 135 (PA *keya:ŝkwa with noun
final *-w, Y kego?s-neg with neg 'animal; one who always eats').
Evidently, the final **-Ka is a nominalizing suffix in origin,
rather than part of the root, and its glottal varianat is attested
in Yurok while its stop one is found in Algonquian.

(385c) **weKila 'third person singular personal pronoun':
**wekila gives W kwilʌ?l (with obviative -ɨ?l), and Y kwelas (with
obviative -Vs); **we?ila gives PA *wi:la A2233. This
reconstruction replaces 262.

Items 385b-c suggest that the reflex of **i before a sonorant
in Yurok is e. Another example is **thigw- 'out, through an
opening' 288 (W thig-, Y tew[oy]-, PA *taw-). Yurok has the root
extension **-Vy 358, and PA has grade 2-3 *a from its regular
reflex *e of **i in a first syllable. This is plausible, for
before an obstruent **i gives Y a (Proulx 1984:181), and Y a and e
are barely contrastive (see Berman 1982a:413). Since Y a and e are
also the (partly overlapping) reflexes of **e (see Proulx
1992:14-15), it seems likely that **i and **e merged in Yurok -
and that the apparently slightly different environments for Y a
and e in the two cases are due to the vagaries of attestation.
The partial overlap in the distribution of Y a and e may be due to
differences of stress as suggested by Berman (1982a:413), or
perhaps to dialect mixing.

If **i and **e merged in Yurok, as I believe they did, then
the following items and their variants (all with Y i) should be
reconstructed with long **i: rather than short: **leski:m- 'scold'
41, **i:m- 'hurriedly' 123, **i:?meli 'below' 124, **-i:s 'paddle'
180.

Improved reconstructions in **K:

(386) **e?m?i:Ka 'pigeon' 121: W ɨ?mʌk, Y e?mi?.

(387) **-so:Kani 'hip' 133: PA *-ɬo:kani, and Y -to? [with
shortening, and grade 1 t for s].

(388) **naKh- 'be skillful' 229: Y nekomur- 'swim well'
(e-grade, with **-Vm 'root extension' 355), W dɨkhw- 'be good at'

(with **-Vw 'root extension' 357), PA *nak- and *nek- (with
various root extensions); but also PA *nah- (broad phonetic
*-[na?]) in C naha:piw 'she sees well' (with medial *-a:p 'look'
A45) and *neh- in M n<he:htaw 'she makes it skillfully' beside
ese:htaw 'she makes it so'.

The discovery of **K also explains the alternate plurals of
we?yon 'girl': we?yono? and, with the diminutive grade of vowel,
w∔?y∔n∔k 'girls' R23. It is even possible that PA *-Vki 'animate
plural' and *-Vhi (broad phonetic *-[V?i]) 'obviative animate
plural' are by-forms of a plural suffix **-VK.

6. ?-movement, ?-deletion

Glottalization of a Yurok consonantism is according to
Robin's (1958:38) rule: ? is found on all stops, and between two
continuants (e.g., no:yc?k?w 'she eats as a guest', stem no:yckw-
plus -? 'third person singular'). With one exception, **? from
**T always glottalizes an immediately adjacent consonantism in
Yurok when there is one (due to the loss of **e). Whether that
consonantism precedes or follows evidently makes no difference.
Most examples are of the former type (synchronically, Yurok is a
suffixing language; diachronically, e-loss is most common in a
first syllable in Yurok, frequently before **T). Diachronic
examples are:

**wehTelkwani, **wehTerkwani 'branch' 038, 362: Y ?we∔kun
'heavy limbs', Y ?weskwen 'small branches, twigs'.

**neTheyi 'my belly' 095, 145, 363: Y ?neyah.

**weTa:phega 'root' 102, 364: Y ?wohpeg 'spruce root'.

**neT- 'person, first...' 128, 365b: Y ?n-.

**KeT- 'person, second...' 129, 366b: Y k?-.

**weT- 'person, third...' 130, 367b: Y ?w-.

**weTehpehKa '(her) backbone' 378: Y ?up?∔h.

There is also at least one Wiyot example of ?-movement to the
left, which produce aspiration of a preceding obstruent:

**apiT- 'tie' 162, 347, 389, 410-412: W **∔ph-.

I have found two cases of ?-movement to the right (with
metathesis) in Yurok, and two in Wiyot. Note that the first ? in Y

no?p?en- is the regular laryngeal increment, not the reflex of
**T.

*no:Tpen- 'pursue' 371: Y no?p?en-.

**peTk- 'catch fire' 376: Y pek?onoc- 'set on fire'.

**Tehkon- 'grasp, hold' 360: W khɸn-.

**Keĉo:la 'thy maternal aunt' 048: W ĉhṳl T81.

Ambiguously to the right or left:

**KeKila(wa) 'thou' (385): W khɨl.

In the case of **Tehkon- 'grasp, hold', the reflex of the
absolute initial glottal catch was presumably restored in Wiyot by
analogy with those cases where it came before preverbs, as in kwi
khɨnáphiɬ 'she bites on arrival' T86, 25-h
(**?ekwi-?ehkon-a:p-eT-iɬ 'at-exactly-the-same-time,
grasp-by-tooth-it-she'). In the case of **Keĉo:la 'thy maternal
aunt', the morphological function of the erstwhile glottal catch
has evidently preserved it.

As all Proto-Algic clusters of occlusive plus **k are
simplified to k before Y w, *? from **T never glottalizes a
following Y kw. In the following examples, I write the missing
segment **T in the absence of evidence for **t (as in 390, where
the initial **t guarantees the second). In 395, **T is guaranteed
by the Wiyot cognate.

(389) **apiTeTk(w)-, **epiTeTk(w)- 'tie into a round shape,
i.e., a bunch or bundle' 346: (a) Y pɨkwɨy 'hill, back part of
house', W hɨphɨtk- 'tie roundish objects', (b) PA *petkw-, medial
*-a:peŝk 'lump, sphere, knot' (Proulx 1992:54). Yurok has no
initial p? in the lexicon, so presumably **piT ---> **pe? --->
**p? ---> p. The dependent stem would be analogical. PA evidently
has haplology after **i gives *e in a first syllable. Possibly, Y
Vy is from an unreconstructible nominalizer **-Vy, as suggested by
**-Vy 'third person subject' and the general identity of
Proto-Algic third-person and nominalizing suffixes (see Proulx
1992:25). Among the Micmac, at least, 'the back part of the
camp...is up' (Rand 1971 [1894]:xxxii).

(390) **tetkw-, **tatkw-, **taĉkw- 'short, be ...' 079: (a) Y
tkw-, (b) PA *tatkw- (F ĉahkwi 'short', O tɨkk(o:ya:) 'it's
short', Ch e-tse?keso 'it's short', C tahkosiw 'she's short', A
ĉee?ehixt 'she's short') and (c) *taŝkw- (M taski:w 'she's
short').

(391) **leweTk- 'soft' 085: PA *lo:tk- S126, Y rewkw-. Cf. Y sewkwelum- 'be bruised' (from **rewetk- plus ?).

(392) **s?yoyeTkw-, **s?yoyeCkw-, **s?yoyeC^kw- 'slip, be smooth' 086: (a) PA *šo:tkw- 'slip', Y syoykweł 'a slippery place' (with -eł 'place', Proulx 1985b:133), Y t?yoykwo?n 'it's slick' (grade 1 backformation, with **-Vn 'intransitive nondeliberate action' 177), (b) PA *šo:skw- 'slip'; (c) PA *šo:škw- 'be smooth'.

(393) **kweyeC^kweyehr-, **kweyeTkweyehl- 'whistle' 088: PA *kwi:škwihšiwa 'she whistles' A1121 (with the AI final *-i A453), Y kweykweyur.

(394) **yeTkw-, **yaTkw-, **ya:Tkw- 'curve': Y yekwohsok? 'I bend or fold it' NtBk 4:57, M wack- 'in a curved course, roundabout, by a detour' (reflecting **yatkw-, with Algonquian grade 3 consonant symbolism), M wa:k- 'bend, curve' (with archaic ablaut). The shift of **y to PA *w in word initial position is regular (see 'maggot' 318). The Menominee roots show the dissimilation of labials found in other words (Proulx 1984:178). Menominee examples are: wa:kepa:htaw 'she runs in a curved path' beside wack<:pahtaw 'she runs a curved course, by a detour', and wa:kesam 'she cuts it curved' beside wack<:sam 'she cuts it in a curve, cuts around it'. Yurok -ohs is a transitive final.

(395) **aleTewk-, **a:laTewk-, **a:leTewk-, 'be a cloud or shadow': (a) Y lewkw(enoł) 'be cloudy' (and perhaps Y rewkw[oł]- 'be misty'), PA *aletkw- (in Pe àlohk 'evening or night cloud', Mi alihkwatwi 'cloud', see S51), (b) PA *a:latkwatwi 'it's a cloud, it's cloudy' S51 (with II final *-at), (c) W halúkš 'shadow' (with nominalizer **-Vr). Compare Mc aluk 'cloud', which also rounds the **a. Presumably, **eTewk ---> *e?wk ---> *u?k ---> W ukh and then regular loss of sapirtion before a consonant. Similarly, **eTewk ---> *e?wk ---> *e?wkw ---> Y ewkw. The PA words contain medial *-atkw, *-etkw, deverbal from *watkwiwi 'cloud' S51 (with nominalizer **-Vw 304). For the archaic ablaut, compare 315 'projectile point'.

There are a few irregularities where one suspects a morphological origin, as in Berman's example of Y no?nowos 'fetch!' (stem nonow- 'to fetch' plus imperative singular -?os). Specifically, Y -ow 'do, act, be' (Proulx 1985b:130, 124) was probably added to many roots after the habit of glottalizing the previous consonantism had been established. Compare for example Y hu:nowoł 'they grow' (-oł 'they') and incremental (collective) plural hu:ne?m 'things grow' (-V?m 'incremental plural'), showing the root hu:n- 'grow' with and without -ow. Similarly, -ow is regularly lacking before the third person suffix -? (see the examples listed by Robins [1958:38]). Late addition of -ow is a

plausible explanation for the glottalization of the previous consonant in imperatives in most cases, and analogy may be responsible for the cases like 'fetch' where the secondary nature of stem final ọw is not clear.
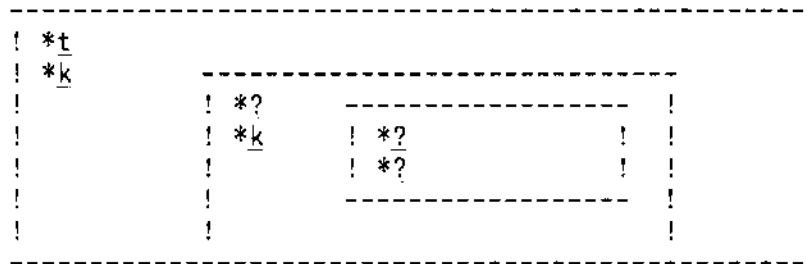

7. On dialect Mixing

As we have seen, two of the **T doublets are also doublets in **K. In both cases, one variant has glottal reflexes of both while the other variant has the stops in both cases. Indeed, scrutiny of the reconstructions shows that reflexes of **T + **K in a single element must be: (a) both glottals, (b) both stops, or (c) respectively **ʔ and **k.

This situation is somewhat reminiscent of that found in Cheyenne, an Algonquian language of the Great Plains. In Cheyenne, PA *k and *p have stop variants (reinforced with a prefixed laryngeal increment Ch h) and others it is convenient to call glottal variants (Ch ʔ - reinforced with a prefixed laryngeal increment consisting of a chameleon vowel when late in the word, zero elsewhere). For details, see Goddard (1978, 1988). Besides the three combinations of Proto-Algic (a-c above), Cheyenne has a fourth. The reflexes of *k + *p in a Cheyenne word must be: (a) both glottals, (b) both stops, (c) respectively ʔ and p, or (d) respectively k and ʔ.

Goddard (1978:75ff, 1988:335) has repeatedly made the puzzling claim that such a situation cannot result from dialect mixing. However, nothing could be a more normal, expected, and even typical result of it. Consider for a moment four groups of people speaking the same language, with at least two of them having high prestige in the society, another being under the influence of these two, and the last being relatively isolated. One of the prestigious groups modifies its pronunciation of k, the other that of p. The influenced group immitates both shifts, the isolated one neither. Later, under the impact of war, forced migration, or the like, their populations (and vocabularies) become mixed (and the erstwhile prestige factors largely lost). The resulting situation would look exactly like the Cheyenne one.[7]

The Proto-Algic case is only slightly different, in that only one innovating center is required - but with two innovations: one (the modification of **t) borrowed by some other group(s), the other not. One can roughly visualize this as follows:

```
!------------------------------------------------!
! *t                                             !
! *k        !-------------------------------!    !
!           ! *?      !-----------------!    !    !
!           ! *k      ! *?            !  !    !
!           !         ! *?            !  !    !
!           !         !-----------------!    !    !
!           !                              !    !
!------------------------------------------------!
```

Goddard (1978) makes a further argument against dialect mixing
in Cheyenne: he observes that there is semantic specialization of
the doublets in many cases (the glottal variant having
non-diminutive meaning). He then gives examples of etymologically
incorrect stop variants produced analogically from their glottal
counterparts (with the more common hk for the less common hp). If I
understand this puzzling argument correctly, he is trying to say
that Ch hk is produced by a diminutivization rule, and hence not by
dialect mixing. But this is a non sequitur: the synchronic
production of Ch hk from Ch V? tells us nothing of the ultimate
origin of such pairs (which he doesn't try to explain). Moreover,
his rule doesn't even begin to account for Ch hp. Why would a
diminutivization rule produce hp from V? in one case, hk from the
same source in others - nearly always with the etymologically
correct reflex of PA *p and *k?

In reality, semantic specialization is a very normal result of
dialect mixing. In particular, one may expect innovating forms from
prestige dialect(s) to be used in relatively formal situations,
calling for respect, and their traditional counterparts in less
formal ones. For example, while the cluster **Tl generally gives PA
*t and W l (both from **tl) and Yurok r (from **?l), there are two
kinds of exceptions. First, **-o:tetkohTliw-, **-o:tetkohCriw-
'kidney' 314 has W ?r rather than l (or its grade 2 variant r) as
the reflex of **Cr - showing that the source is **?r rather than
**cr. A more interesting example is **aTlemliyo:lkw- 'tell an origin
myth' 115, and its root **aTl- 'tell experiences' 116. Here again
Wiyot has the same reflex, presumably because such tellings are
relatively prestigious activities. Consider also the use of the
glottal variant of the second person prefix in Wiyot (described
above) when the allocated kin are senior consanguineals - and thus
entitled to extra respect.

Second, a suffix pair on the names for the digits of the left
hand, considered sinister (**-VTl-VKha, **-VCr-VKha, **-VC^r-VKha
'digit from five to ten' 109, 412) evidently has the stop variants
of both elements in all of the languages, including Yurok. The Yurok
reflexes of **Tl and **Cr in this case are respectively t and s. In
this case, the low prestige of the left hand is presumably
responsible. The correspondences are:

	**tl, **cr		**?l, **?r	
PA	*t	*s	*l	*ŝ
Wiyot	l/r	ŝ	?l	(?ŝ ?)
Yurok	t	s	r/l	(s ?)

Hence, there is nothing at all surprising about doublets having specialized uses such as diminutivization both in Cheyenne and Yurok (we?yon 'girl', but we?yono? and, with the diminutive grade of vowel, wɨ?yɨnɨk 'girls').

Goddard (1978) further argues against one specific theory of dialect mixing in Cheyenne (the Sutaio hypothesis) - but this is irrelevant for our purposes. So too is his discussion of gender dialects (ke for women, če for men).

It isn't possible at present to be sure of what kind of dialects got mixed in Proto-Algic. They could have been based on geographical units (as in the better-known Indo-European cases, and also Montagnais [see Clarke 1981, 1988]), on lineage membership (as in Australia), or indeed on any type of grouping of which there were three or more in the society (one each for elements with pairs of stops, pairs of glottals, and ?+k elements).

8. Implications for Grammar

It's generally expected that when people adopt features of a prestige dialect, they will tend to primarily adopt highly visible ones. That is, features which will show up quickly and noticeably whenever they speak. High frequency verbs, pronouns, and grammatical elements are thus likely candidates. We have already seen examples of this in the present instance, such as the personal pronouns and prefixes.

Other cases, involving derivational and inflectional suffixes, where glottal variants are preserved are **-eTew 'reciprocal' 193, 368a; **-eCew 'reflexive' 192, 368b; **-VTw or **-VTew 'by tool, instrument, medium' 187, 369; and **-Vŝ-eKoK, **-Vs-aKoK 'I-you pl.' 384.

We may now add several elements omitted earlier because they are too short to be good evidence for the existence of doublets.

Among the personal suffixes, there is:

(396a) *-T 'third person subject' (PA *-t and Y -?, Goddard 1991:65).

(396b) *-VK 'third person subject' 293, 300: PA *-k A499-500, W -ik (in verbs of being [somewhere]); W -i? (in relative clauses), Y -o?.

(397) **-VT 'second person subject' 212: PA *-at 'thou-her' A184, W -Vt T71 77, Y -a? 'thou-me' R70-72 (e.g., nekcena? 'you sg. meet me', ko?moyopa? 'you sg. hear me').

(398) **-VKw 'second person plural of verb': PA *-a:kw (in transitive *-eła:kw 'he...you', with *-eł 'second person object'), Y -o?w (for o-class verbs); PA *-e:kw (in all other combinations), Y -u? (for e-class verbs, presumably Pre-Yurok *-e?w). Compare Y -a?w for a-class verbs. The Algonquian endings are all conjunct order ones (see Bloomfield 1946:sec.46, 48); for the Yurok endings, see Robins (1958:33, 44).

There is one verb root:

(399) **T- 'be, exist, dwell' (Berman 1984), 221-222: PA *t(a:)- 'exist', W t(a)- 'stay, dwell, remain', Y ?(o)- 'be, exist, be born' and the near doublet Y to:?m- 'be together in a group' (with -o:?m 'incremental plural').

(400) **T- 'immobilizer: in one place', found in **Ta:wal- 'be around' 377 beside **a:wal- '(go) around' 056, and in **Tar-, **Tel- 'there' beside **er- 'thither' 255. Undoubtedly related to **T- 'be, exist, dwell'.

(401) **Tel-, **Tal- 'there' 223: PA *tał- A2023, W tɨlá- 'there, then, thus' beside **el-, **al- 'thither' 255.

(402) **T- 'WH-, TH-'. Surely related to **T- 'immobilizer: in one place' are **t- 253 and **?- 259 (the source for the first element in PA *ta:n- and *a:n- 'WH-') whose functions, while hard to reconstruct with precision, include locative, nominalizing, and relative-interrogative ones ('the one WH-/TH-'): W ĉi 'that's where, what, why, etc.', RhO a-bmi-noogseg 'the station' [i.e., 'where it (the train) stops going along'], e:-bngishmog 'in the west' [i.e., 'where it (heavenly body) sets'], e:-miijid 'what she eats', C e:-ki:-a:hkosit 'because she was sick' (Voorhis 1984a:38-1[9]); W ha-táłi?yɨk 'on my ship', halɨ-wímɨlutwu?y 'what one floats with' (Teeter 1964:82, 48); Y ?o ket?u?l 'there is a lake there', ?o tepo:noł 'in a forest', kic numi ?e?gah ?o lekwo?ł ku ?o?leł 'they were just eating when the house fell in', won so?n ?o ku yok ni hunowoni 'it is different from those that grow here'

(Robins 1958:103, 145, 146), W <u>hi</u> 'then (immediately after that)'
[see Teeter 1964:88], Y <u>?i</u> 'where, why, then'.

It is probably part of the normal evolution of zero-copula
languages for locative pronominals to end up being used as verbs
of 'being (somewhere)' and thence of existence (see Clark 1978 for
the synchronic relationship between existential and locative
constructions) - and I have suggested (Proulx 1991:155-157) that
this is the origin of **<u>T</u>- 'be, dwell, exist'.

It is also normal for locative pronominals used as
demonstrative pronouns to develop into nominalizers (Greenberg
1978), or into personal pronouns and thence into third person
pronominal suffixes, and I have shown that this is a
characteristic development in Algic (Proulx 1992:24-26). This
explains the origin of *-<u>T</u> 'third person subject', and the similar
nominalizer (W -<u>?</u>, Y -<u>?</u>) 299. The locative pronominal function of
**<u>T</u>- must date back to Proto-Algic; probably the existential verb
does too, but we cannot rule out independent parallel
developments. However, it has several competitors for the
functions of 'nominalizer' and of 'third person suffix', and these
may well postdate the proto language. Compare **-<u>VK</u> 'third person
subject' 396b, and:

(403) **-<u>VK</u> 'nominalizer': **-<u>Vk</u> 292 and W -<u>V?</u> 300, both
'nominalizer' - presumably from **<u>k</u>- 'the one previously
mentioned' 251. An example of this nominalizer with Y -<u>V?</u> is
**<u>tepehtleKi</u> 'ear' 092: W -tb<u>ɨ</u>l<u>ʊ́</u>k, Y -<u>cpege?r</u> (grade 2, infixed).
After the loss of the preceding <u>e</u>, the glottal moved back onto the
<u>r</u>.

Other likely doublets are:

(404) **-<u>Ka</u> 'demonstrative pronoun postclitic': **-<u>ka</u>
(Algonquian, Wiyot, Yurok) and/or **-<u>?a</u> (Yurok, vowel
hypothetical). This postclitic is generally found with **<u>ya</u>
'that, then' 243 (compare 240-241).

(405) **-<u>VKh</u> 'long thing' 155 evidently has a specialized
form **-<u>V?</u> 'tree, stem' 308. The former is generally used with
winding entities like rivers and ropes in Yurok and Algonquian,
but **-<u>VTl-VKha</u> 'digit from five to ten' 109, 412 (lit. 'sinister
finger, i.e., of the left hand') suggests that the broader meaning
found in Wiyot is ancient.

9. <u>Implications for the Status of Laryngealized Consonants</u>

With those in the prefixes (and some others) shown to be

secondary, there is no further evidence outside of Yurok for glottalized consonants, as Goddard (1991:65) points out. Outside of Wiyot, there has never been any evidence for aspirated stops, nor of glottal catch as the first member of a consonant cluster. Nor, outside of Algonquian, of PA *h as first member of a consonant cluster. In each of these cases, the features in question must be stated to have dropped in the other branches of the family before the rules of sound change apply in those branches.

There are often allomorphs with simple stops beside others with aspirated ones in Wiyot (Proulx 1985a:67); some Yurok suffixes have variants with glottalized and nonglottalized consonants (209, 213); and **s?yoyeTkw- 'slip' 86 has two grade variants in Yurok, one with its initial consonant glottalized, the other not: t?yoykwo?n 'it's slick' (with **-Vn abstract final 'nondeliberate action' 177, and **-T 'third person' 396a) and syoykweɬ 'a slippery place' (with **-Vɬ 'nominalizer' 298). In addition, the personal pronoun Y ke?l 'thou' lacks glottalization of the initial k, versus the prefix Y k?e- 'thy' (as pointed out by Goddard 1991:65). However, this may merely reflect the universal tendency for complex stops to have restricted distributions within words (see Proulx [1974] for examples from Quechua). In polysynthetic languages like the Algic ones, restrictions of this kind give rise to allomorphs which presumably may persist in many cases even after the original distributional rules break down.

The same is clearly true of W ? before consonants (see Teeter 1964:22-26 for the distributions). Preconsonantal h in Algonquian is more stable, but even it disappears unpredictably in some cases. In Menominee, for example, there is M pes- from *pehŝ- 'peel, husk' S153, and M seko:h 'weasel' for expected *sehko:h and M pes<:hnew 'she has a foriegn body in the eye' for expected *pehs<:hnew S131. Fox and Shawnee attest pseudo-PA *peŝekehsiwa 'deer' (F peŝekesiwa, Sh pŝekθi), an irregular diminutive of *peŝehkiwa 'buffalo' A1858. In addition, compare the root in PA *tahkon- 'grasp (i.e., grab with the hand)', having final **-Vn 'by hand' ɬ82, with the root in *sakipw- 'bite (i.e., grab with the teeth)', having final PA *-pw 'by mouth' (Bloomfield 1946:sec.84). The latter root, which is evidently a diminutive grade of the former, lacks its preconsonantal *h.

Restricted distributions or unpredictable losses are not necessarily indications of recent origin. Laryngeals are there in many words with Proto-Algic etymologies, and there is no obvious source for most of them but inheritance. It is not satisfactory to dismiss them as resulting from difusion (pace Goddard 1991:65), unless one can explain how they came to be in some words rather than others.[8] After all, words with Proto-Algic etymologies are

rather unlikely to be post-Proto-Algic loans.

Examples containing Wiyot ʔ are: **ʔeki?yem- 'hat' 047, **a:?lewe 'projectile point' 315b, **i:?meli 'below' 124, **pe?meyi 'grease' 024, **wa:wa?lewi 'egg' 003. Examples with Yurok Cʔ are: **as?ola:?w- 'pound' 120, **ek?ey- 'conceal' 122, **le:k?awi 'sand' 072, **mey?eɬki 'nettle' 062, **s?yoyeTkw- 'slip' 86, 392. Examples with Wiyot Ch are: **meyehkhwel- 'weep, mourn' 089, **nikhl- 'three' 046, **Tehkhon- 'grasp, hold onto something with the hand' 064/019, **thigw- 'through an opening; out' 288, **wechowe 'quadruped-tail' 317, **weTa(:)phega 'root, fine ... used in sewing (usually spruce)' 102.

There is only one of these items for which I have a possible explanation: **as?ola:?w- 'pound'. The initial **a drops in Yurok, and Yurok words describing violent actions tend to have **s? rather than **s in initial position. Of the 15 words listed by Robins (1958:lexicon) with initial Y s?, 10 have such meanings. Only two words with such meanings ('break' and 'kick') have initial Y s. Compare also Y s?o:p- 'hit' (e.g., s?o:pe?weyet- 'hit in the face') with Y to:ps 'slap' (with transitive -s, and grade 1 alternation of s to t). All this suggests that at least some of the Yurok words in initial s describing violent actions may have acquired glottalization secondarily.

Moreover, we now have an explanation for the developments of **s?yoyeTkw- 'slip' 86, 392 in Yurok: Y syoykw(eɬ) 'a slippery place' (with **-Vɬ 'nominalizer') beside t?yoykw(o?n) 'it's slick' (with **-Vn abstract final 'nondeliberate action' 177, and **-T 'third person'). This case is the exact opposite of the 'hit' and 'slap' pair - and for good reason: 'slipping' and 'being slick' are in themselves nonviolent actions. Evidently, just as s-initial Yurok words have tended to add glottalization where violent action is involved, they have tended to suppress it otherwise. However, in this case we are explaining the LOSS of **ʔ in Yurok, not its origin. More importantly, words with initial Y s are an isolated case which cannot be extended to the language as a whole.

Two questions arise in the present circumstance, which it's helpful to keep separate. (1) What is the phonemic status of the features in question in the proto language? (2) How should proto words be transcribed? For there is no absolute law requiring that transcriptions be strictly phonemic (provided contrasts are all recoverable from them) - as Goddard (1979:74-75) has pointed out.

In the present case, the existence of complex stops in Proto-Algic is uncertain; they may in fact all be secondary. But there are very good reasons to write them anyway. If one transcribes the complex stops in the proto words, one doesn't so

easily forget about them. Hence, one may more easily spot ways in which they may have conditioned changes in one of the other branches. This has not happened to date in the present case, but one cannot for that reason entirely rule out the possibility that it yet may. Also, a transcription including complex stops may be more helpful in wider comparisons with other language families: more distant relatives, if identified, might yet provide an explanation for them.

Finally, transcribing them helps keep us alert for possible sources for them, which may sometimes carry grammatical information. For example, **-Vp? 'place, put in place' draws attention to the sequence PA *a?t- A171 (rather than the root PA *a?- A159, the obvious comparandum for **-Vp), and thus leads to the reconstruction of the sequence:

(406) **-Vp-eT 'put SOMETHING in place' 161, 178: PA *-a?t 'place it', Y -ip? 'place things'. (The second element is **-VT 'nonpersonal object' 178).

This new reconstruction suggests that Proto-Algic had a transitive formative where Yurok does not, at least in this case. Another example involves the comparing of Y kep?- 'block an opening' with the PA sequence *kepah- 'block it' A734-739 (with *-ah 'by tool, instrument, or medium' A76) rather than root *kep- 'block' A728, as follows:

(407) **kep-e?- 'close an opening': PA *kepah- A734-739 (root PA *kep- A728-742, 744-745, 747-757, and a-grade *-ah 'by tool, instrument, or medium' A76), Y kep?- (in kep?el 'be deaf', kep?ol 'there's a barrier', kep?ol nɨp?ɨ?n 'my nose is blocked', kep?oksine?m 'you plug it up [e.g., a rat hole]'). Cf. V cappetaw 'deaf', and PA *kakye:pehte:wa redupl. 'she's deaf' S66.

(408) **Kep-etkoy?- 'choke on something (food, tobacco smoke)': fwC kipiskóyoo 'she chokes eating', Y ?epkɨ?y- 'choke smoking'. The root **Kep- is also seen in PA *kepene:we:ne:wa 'she chokes him' A745, *kepala:mowa 'she chokes' A742, Y ?ep- 'be choked'. Presumably, *t drops between obstruents in Yurok.

(409) **kep-w- 'cover': PA *kepw- A756-759, W kwɨp- (with distant metathesis). The stem extension is **-Vw 357. For a similar metathesis in Algonquian, see A726 'northern pike' and Middle Atlantic Algonquian *kwen- 'long' from PA *kenw- (Goddard 1980:148).

Similarly, **VT can be discerned behind Wiyot aspiration in W hɨph- 'tie', helping to establish the identity of a root, medial, and final:

(410) **apiT-, **epiT- 'tie, cord' 347. The loss of **i in
Wiyot is evidently regular in this environment, compare W bɨpt
'tooth' with PA *mi:pit- and medial *-a:pit-.

**apiTeTk(w)-, **epiTeTk(w)- 'tie into a round shape, i.e., a
bunch or bundle' 346, 389.

(411) **apiTe:kh-, **-a:piTe:kh 'cord' 348: Y pekcic
[diminutive?] 'thread, string, rope', dependent -pek; medial PA
*-a:pye:k 'string' A59. Composed of **-VpiT 'tie, string, root'
162, and **-Vkh 'long thing' 155. Presumably, **iT ---> **i? --->
*i ---> PA *y. Yurok has no initial p? in the lexicon, so
presumably **piT ---> **pe? ---> **p? ---> p. The dependent stem
would be analogical.

(412) **-VpiT- 'tie, string, root' 162: PA *epit- as in
*kaŝkepit- 'tie it shut' A614-615, PA *-a:py (as in NiO
mitigwaabiig 'bows' beside mitigoon 'sticks' from Pre-O
*mehtekw-a:py-aki and *mehtekw-ali), Y -pet as in sekipetek? 'I
tie it securely in place'.

Details of this sort are much easier to spot if one is
transcribing Proto-Algic reconstructions with the complex stops
their daughter languages suggest. Out of sight is out of mind.
Moreover, it is a classical logical fallacy to suggest that
because some of the complex stops of Wiyot and Yurok are
secondary, all of them are. One of the most universal of
phonological developments is for segments to lose some of their
articulatory features, being reduced to simpler elements like
glottal catches and aspirations. Such simplifications may in
principle be repeated many times in the history of a language,
with accretions to simpler phonemes comming from various sources
at different times. At the same time, the simplest phonological
elements are the weakest and most unstable, commonly being
restricted in their distribution (e.g., being limited to one per
word) or simply disappearing in enviroments where they are less
prominent. To dismiss the evidence of earlier structure which
they provide, as one does in too quickly devaluing and dismissing
them as "secondary" and "unstable", is simply to throw out an
important source of data which, at Proto-Algic time depths, is all
too scanty to begin with.

NOTES

1. Languages, their abbreviations, and the sources from which they are generally cited are as follows: Abenaki-Ab-Laurent (1884), Day (1964); Plains Cree-C-Bloomfield (ms.); Swampy Cree-swC-Voorhis (1984a); Western Cree-fwC-Faries and Watkins (1938); Delaware-D-Goddard (1969)<uD=Unami, mD=Munsee>; Fox-F-Bloomfield (ms.); Kickapoo-K-Voorhis (1974); Loup-L-Day (1975); Mahican-Mh-Mastay (1982); Menominee-M-Bloomfield (1975); Miami-Mi-Voegelin (1937-40); Micmac-Mc-Proulx (field notes), DeBlois and Metallic (1984); Natick-N-Trumbull (1903); Ojibwa-O-Bloomfield (1957); Central Ojibwa-bO-Baraga (1878); Western Ojibwa-NiO-Nichols (1979); Central and Eastern Ojibwa-RhO-Rhodes (1985); Passamaquoddy-Ps-LeSourd (1984); Penobscot-Pe-Voorhis (1979); Proto-Algic-PAc-Proulx (1984); Proto-Algonquian-PA-Aubin (1975), Siebert (1975); Saulteaux-wO-Voorhis (1984b); Shawnee-Sh-Voegelin (1937-40); Wiyot-W-Teeter (1964); Yurok-Y-Robins (1958), Proulx (field notes).

PA reconstructions found in Aubin (1975), and Siebert (1975) are respectively identified with the letters A, and S plus the item number. The frequent citations from Bloomfield (1946), Robins (1958), and Teeter (1964) are respectively identified with the letters B, R, and T plus the page number. Citations of Wiyot texts (Teeter 1964) are followed by the text number and line; those from my Yurok fieldnotes are identified by NB plus notebook number and page.

Transcription generally follows that of Siebert (1975) for Algonquian, Teeter (1964) for Wiyot, and Robins (1958) for Yurok. However, the following changes have been made: PA *ł is written for *θ, PA *s for cedilla, PA *t for *x, W ? for h before a consonant, W a for o, W ɨ for a, and Y ɨ for inverted r. For discussion of the changes, see Proulx (1984:168-169). Orthographic concessions to my word processor: s wedge is written as š, c wedge as č, schwa as ɨ, and Menominee epsilon as ꞓ.

2. Nevertheless, Berman (1984:fn.6, 7, 8, 9, 12) does indicate some specific differences with my 1984 reconstructions - and these I can certainly address. In his fn.6, he objects to **a:wal- 'around' 056: Mc al-, W hal-, Y hoːr-. He evidently wants to explain 'around' as secondary from **a:- 'go' 220 (see Berman 1984:336), but there are problems. First, he has no explanation for the l in Micmac nor r in Yurok. Second, the proposed direction of semantic drift is wrong. Compare the following Micmac, Yurok, and Wiyot verbs (DeBlois and Metallic 1984, Proulx 1985b, Teeter

mss) as to root and meaning:

(1) Mc <u>ala:sit</u> 'she goes about', Y <u>ho:le?m</u> '(they) are around, go, travel, fare', W <u>halú?wi?</u> 'boat, (that which) goes around'.

(2) Mc <u>alsink</u> 'she flies around', Y <u>ho:letkoli?m</u> 'birds circle in flight'. Compare Mc <u>pemsink</u> 'she flies by in the air after someone hits her', and Y <u>la:yetkoli?m</u> 'they all fly by'.

(3) Mc <u>ala:x</u> 'she swims about', Y <u>ho:ru:rek?</u> 'I swim around', W <u>ŝu?r halúli⁴</u> 'sea serpent' (means 'swims around in the ocean'). Compare, Mc <u>pema:x</u> 'she swims along', Y <u>ra:yurek?</u> 'I swim (along)', and W <u>hutúli⁴</u> 'she's swimming towards me'.

(4) Mc <u>ala:lukwet</u> 'she floats about', Y <u>ho:lenek?w</u> 'it drifts around', W <u>hal⁴wím⁴lutwu?y</u> 'what you float around with'. Compare W <u>wím⁴lutwuy</u> 'they (indef.) float with it' T48, and Y <u>la:yonek?w</u> 'it drifts by'.

(5) Mc <u>alu:l⁴k</u> 'she rows him about', Y <u>ho:lecok?</u> 'I move my boat around with a paddle'. Compare Y <u>ra:yecok?</u> 'I paddle along'.

(6) Mc <u>ala?ulat'm</u> 'she carries it around on her back', Y <u>ho:lu:lesek?</u> 'I carry a pack', Y <u>ho:lewkwse?m</u> 'you have a load in your boat', W <u>hálul⁴wi⁴</u> 'she brings it along, carries it around'. Compare rMc <u>enma?ulat'm</u> 'she carries him home', Y <u>la:yu:lesek?</u> 'I come by here with a pack', and Y <u>kelomewkwse?m</u> 'you turn around and come back in your boat', and W <u>ta tíkwul⁴wuy</u> 'they bring it down', with <u>tikw-</u> 'down' T32.

(7) Mc al'ĉa:t 'she staggers, stumbles about', Y <u>ho:letok?</u> 'I walk with effort (in a steep place, under a heavy load)'. Also Ps <u>alálikₐníke</u> 'she walks around in deep snow (without snowshoes)'. Compare Mc <u>pem'ĉa:t</u> 'she leaps or hops along', Y <u>himetos</u> 'hurry!'.

(8) Mc <u>aliskalk</u> 'she feels around for him', Y <u>ho:letewek?</u> 'I grope around'. Compare Y <u>la:yecewek?</u> 'I grope my way along'.

(9) Mc <u>alo:stasit</u> 'she hints', Y <u>ho:roksek?</u> 'I have clever but changing and unreliable thoughts'. Compare Y <u>ca:noksek?</u> 'I forgive (lit., have new thoughts)'.

Consider also: Mc <u>alamk</u> 'she looks around for him', Mc al'kopiĉik 'they all sit about', and Y <u>ho:lecok?</u> 'I stir food with a paddle cooking'. For the Micmac segmentation, see Inglis (1986, notably pp.133-134).

It seems evident to me that core meaning of the root is 'an

aggregation of individual actions (or discrete portions of an action), not coordinated with each other, but all of the same type'. Typical is 'moving about', with apparently random changes of direction. With semantic bleaching, 'going about' can become 'going, traveling' (for example, in Coyote stories) - but the reverse path of semantic evolution is unthinkable. There is just no way from 'I go' to 'I'm stirring food with a paddle cooking', or many of the other meanings.

Berman also claims that the vowel length in Y ho:l- is secondary, and sends us on a fruitless paper chase for the evidence: first to Berman (1982a:417), where he admits that 'length, though, does not occur as a laryngeal increment with the same regularity as h or ?', and then to Berman (1981:257-258), where the discussion is only about h and ?, not vowel length in Yurok. The only discussion of vowel length is of the Proto-Pomo canonical form CVHCV, where H can be either (unpredictably) vowel length or (predictably) h or ?.

All this is presented as an alternative to accepting the straightforward reconstruction of **a:wa for PA *a:wa (Mc a, lengthened in monosyllables), Y o:, and W a. This despite such cognate sets as PA *wa:walwi 'egg' A2135, Y wo:lew 'roe of several fish', and W wá?l 'salmon roe' 003; and PA *na:wal(a)w- and Y no:?rep- 'following one behind the other' 055 (where PA adds postmedial *-(a)w, and Yurok the intransitive final -ep). PA *a:wa generally gives Mc a, as in Mc saxamax 'chiefs' from PA *sa:kima:waki.

He also questions the etymology of Wiyot hálikwɬiɬ 'grey fox (the one who weeps around)'. Well, it really does consist of W hal- 'around' and -ikwɬ 'weep', as is evident from ta píkwɬiɬ 'she's crying secretly' (with p- 'secretly', see Teeter 1964:52), kawɨrɨwíkwɬiɬ 'they all start to cry' (with kaw- 'begin' and -ɨrɨw 'all', see Teeter 1964:51-52). Especially after a preverb ending in a vowel, Wiyot often inserts an empty root l- before a medial beginning in another vowel (Proulx 1985a:66). This ambiguity of l- led Teeter (1964:85) to synchronically analyze hal- as a sequence of preverb ha- 'around' plus empty l-, but this is historically incorrect and evidently misled Berman.

Berman's fn.7 questions my direct equation of the roots in PA *no:n-, W dunaĉ-, and Y newon- 'suck at the breast' 006 - claiming that the Yurok form has initial change (of the Ojibwa type, **o: to **wa:). This was a plausible enough hypothesis when he formulated it, but no further evidence for this type of change in Proto-Algic has since been found. Rather, what we find is ew(o) = u in such Yurok sets as no:lum- 'love' and passive no:lew (uninflected verb) and no:lewomoy-. These show a Pre-Yurok contraction of *ewo to *o: outside a first syllable except where

blocked by word shortening (and thence analogically restored). The original environment was probably 'in unstressed position', as is the case for the contraction of W ɨwu to u (Teeter 1964:26). This suggests we may be dealing with a very low level phenomenon here.

In his fn.8, he scoffs at my "unique" *o: + ɨ + o correspondence in **kemotl- 'steal' 21 - ignoring the fact that the vowel length in Algonquian is stated to be secondary to the simplification of the cluster **tl, where added vowel length is regular (Proulx 1984:193). PA *o is a rare phoneme (see Goddard 1979:75, who even doubts its existence), so there should be no surprise if we only have one example of the (entirely regular) *o + ɨ + o correspondence modified by the compensatory lengthening for the loss of **l in PA (the Wiyot and Yurok reflexes are also found in 049 and 120). The distribution of **o in Proto-Algic is limited to "next to **l or **tl (and usually **m) in the second syllable of a verb stem whose first syllable has a short vowel and is open" - which may mean it was a recent innovation in the protolanguage, but does not invalidate the correspondence.

He also (fn.9) scoffs at my allegedly "special vowel *i" in **ihkwa 'louse' 009, supposedly found only in 3 items before **k. But he is looking only at Algonquian + Wiyot pairs, ignoring the important Yurok cognates. **i (*e + i + a) was found in 009, 032, 046, 047, 099, 111 (before **t) in my 1964 paper, and since has been found in 385. There is nothing special about it.

Finally, in his fn.12, he questions my reconstruction of **ne:w- 'see' 043 (PA *ne:w-, Y new-) on the grounds that some inflectional suffixes of this verb in Yurok optionally have long link vowels generally found only after roots lacking a vowel (i.e., in monosyllables). His idea is that the Yurok root must therefore once have lacked a vowel (**nw-). However, vowels in monosyllables do not generally lengthen in Yurok (witness tey 'brother-in-law' and Y ɬʔos 'take!', with root ɬ- 'take' and imperative singular -ʔos) - and long vowels in inflectional suffixes of this sort are also found outside of monosyllables (e.g., merkweta:kʔ 'I ate everything' NB 4:38 and skewipʔa:ʔm 'you put in order' R44). So we are dealing with a morphological class with archaic irregularities and not with a phonological environment. Small irregular morphological classes tend to be shrinking ones, and there is nothing odd about leftovers like Y new- and merkwet- remaining in a class which otherwise has come to be limited to zero-vowel roots.

3. In the case of nouns, in Wiyot the preceding **K of the second person prefix produced aspiration in a following obstruent and the preceding **w of the third person prefix metathesized with a following **k - and so was preserved there, though lost before

other consonants (see Goddard 1966). The preceding **n̲ of the
first person prefix was lost, but despite this the prefix was not
restored in some nouns - notably a class of kin nouns. They were
restored elsewhere, including with subordinative verbs, in both
Wiyot and Yurok. In Proto-Algic, nouns referring to parts of
wholes generally took a third person prefix (allocating the part
to the whole, see Proulx 1992:sec.5.1). These prefixes are
generally restored as well, unless a semantic shift has ended the
part-of-whole relationship (as in the case of Y s̲k̲o̲y̲ 'strip of
buckskin' - beside PA wa?lakaya [a-grade] and W w̲ɨtkay 'skin'
280).

      In the case of verbs, restoration of an initial stem syllable
was possible by analogy with shielded forms (prefixed ones, those
with preverbs, or infixed ones, where the **g̲ of the infix **-e̲g̲
would block the rule). Thus we have Y n̲ek(e?y̲) 'call by name'
beside PA *ni:hk- (Pre-PA *n̲egehk-, with contraction of the infix
**-e̲g̲ plus the following **e̲ to PA *i̲:, see Proulx 1984:197).
Shielded forms are rare for verbs used as adjectives, making
restoration unlikely: Y p̲ek(oy)- 'be red' beside PA *n̲epek- and
*ni:pek- 'be bloody' 125, and W ɬáw(ik) 'be distant' beside PA
*w̲a̲:?l̲aw- (with archaic ablaut) 279.

      4. However, **n̲epi?i 'water' 067 (Y pa?ah, PA *n̲epyi)
suggests it may be lost between like vowels in a word final
sequence in PA - or perhaps after front vowels (**i̲?i > *iy̲?i >
*iyi > PA *yi). This would make PA *-ihi 'obviative plural'
analogical from its byform *-ahi, on the model of *-ili and *-ali
'obviative singular', as the expected reflex of Pre-PA **-i̲?i̲
would be *-y̲i.

      5. Although it does so in such pairs as W w̲ɨtw 'heart' and
w̲ɨtwi?l 'her heart', it's unlikely that obviation disambiguated
these meanings in the proto language (see Proulx 1991:142-143).

      6. There are some apparent examples of an initial **t̲
preserved in verb medials in Proto-Algic, but there is some
evidence that the **t̲ was not element-initial except after the
loss of a previous syllable. For example, beside **-t̲ekwli
'heart' 112 and medial **-Vtekwl- 'think' (see 416 in appendix B
below) there is W dɨtw- 'have thoughts, think' (Reichard 1925:127,
in normalized orthography). This suggests a verb stem **n̲etekwl-
from which both the medial and the dependent noun are formed.

      7. Of course, single-element variants must be consistent as
to having stop or glottal reflexes. An isolated apparent
exception to this rule is **weT̲egeteke, **weT̲ecake 'her buttocks'
327 - which apparently contains both **T̲ and **t̲ (and its grade 2
variant). However, Y -c̲ɨk is easily explained as resulting from
reinterpretation of stem-initial **t̲ as part of the prefix, and

the regular analogical replacement of the stop variant of the prefix by its glottal variant (and thus Y ?w- 'her', see 367).

8. Such explanations are not impossible; I have explained the origin of aspirated and glottalized stops in Quechua (Proulx 1974), but I find no such explanation in the Algic case.

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Appendix A: NEW OR SIGNIFICANTLY REVISED RECONSTRUCTIONS

Some of these reconstructions are among the most problematic ones in Proto-Algic, and are included here only for the sake of completeness.

(413) **weTayehca (formally diminutive) '(her) dog': PA *wetayehsa 'her dog' (M oti:hsak 'her pet dogs') and W wáyic 'dog', and Y wɨyc?(ɨks) 'dog', adding -Vks 'child' (as in Y ca:nu:ks 'baby', with ca:n- 'new'). Evidently, there was early

metathesis of the first two vowels in Pre-Yurok, giving
*wa?eyehca. With the loss of **h, the two **e's and the final
vowel, *wa?yc fed into the glottalization rule. The only real
difficulty is that a pet dog is not literally part of a whole -
though, at least in Algonquian, the noun is clearly dependent (as
would be appropriate for a body part).

(414) **wa:yelKwa 'roe': PA *wa:hkwa S168, Y ?wɨyɬ 'egg'. The
Yurok term evolves via Pre-Y *woyɬ?wɨ (and, with vowel harmony,
*wɨyɬ?wɨ) followed by metathesis of *?wɨ with *wɨ and loss of the
latter in wordfinal position.

(415) **-VTl-VKha, **-VCr-VKha, **-VC^r-VKha 'digit from five
to ten' 109: (a) W -ɨlúk in tɨkɬɨlúk 'six', dɨlúk 'ten', and (with
consonant grade harmony, T21) bɨŝɨrúk 'nine'; (b) Y -ɨsik? in
cɨwɨsik? 'seven', cf. cɨwɨhs- 'point', and grade 1 Y -etik? in
knewetik? 'eight', with knew- 'long'; (c) PA *-a:ŝika, as in
*nekwetwa:ŝika 'six' A1048 (with **nekwet- 'one' 63, both
originally reconstructed with *o for *we). The literal meaning is
'sinister long things', in reference to the fingers of the left
hand (presumably counted on). Possibly the rounding in Wiyot was
caused by a plus of **w in stem final position. This and the
secondary glottalization in Yurok could respectively be the
nominalizing suffixes **-Vw 304 and **-T 299, the former also
present in the PA suffix *-ikwi 'digit from five to ten' (Siebert
1975:303, reconstructed with *ye for *i). See item 155 on the
reconstruction of **-VKha.

(416) **we?ilkw-, **we?irkw- 'bundle-strap' 037: (a) PA
*wi:hkwe:- 'wrap with a bundle strap' (with final *-e:), Y ?weskul
'strap' (with the nominalizer **-Vl 302); (b) PA *wi:ŝkwe:- 'wrap
with a bundle strap'. **? may well be from **T, but a stop
variant isn't attested.

(417) **wetl?epi:teki, **wetl?epi:taki 'root' 094: (a) PA
*weĉye:pitki, W wɨlápitk-, (b) Y ?wɨ?ɬpitɨk. The initial **we-
marks the part-of-whole relationship and the its glottalization is
analogical. The stem initial **e is subject to initial change in
two of the branches: with archaic ablaut in Wiyot, and **-eg-
'iterative infix' 025 or 'plural' 338 in Algonquian (giving PA
*y). It is lengthened as a result of the simplification of Pre-PA
**tl (see Proulx 1984:193).

(418) **?ekweytp-, **?ekwayĉp- 'fear' 097: PA *kweĉpan-, Y
?ekweyɬpel- 'be frightened'. PA *-an is an AI final, Y -el a
passive one. Y we relfects **wa (with grade variation, see Proulx
1984:sec.4.2). This reconstruction, somewhat simpler than the
original, suggests that **yt may be a source for PA *ĉ in
clusters.

(419) **-etekwl- verb medial 'think': PA *-te:h 'think' (F
iŝite:he:wa 'she thinks thus', Ps alitahasu 'she thinks about her
own welfare', Mc et'lite:t'm 'she believes it' and tel'ta:sit 'she
thinks so'), W natᵻtw- 'think highly of' beside nat- 'be big'
(Reichard 1925:127, in normalized orthography).

Appendix B: THE RITWAN HYPOTHESIS

Although Proto-Algic is composed of three main branches
(Algonquian, Wiyot, and Yurok), originally in 1913 only the last
two were recognized as being related and their protolanguage was
called Proto-Ritwan (Teeter 1964:v). Their genetic relationship to
Algonquian was recognized later the same year, and the
protolanguage shared by the three was called Proto-Algonkin and
later Proto-Algic. For a long time, evidence was far too scanty to
determine whether Proto-Ritwan was the same language as
Proto-Algic (i.e., whether the three Algic languages are related
at the same time depth), or whether Ritwan was a subgrouping
within Algic. The latter view came to be called 'the Ritwan
Hypothesis'.

The Ritwan Hypothesis was originally associated with the idea
that the Proto-Algic homeland was in the East (the Great Lakes
area) and that the Wiyot and Yurok migrated to northwestern
California (where they were territorially adjacent). Given an
Eastern homeland, it does indeed seem unlikely that there would be
two independent migrations to this corner of California. However,
if the Algic homeland was in the West - especially in or near
Northwestern California - there is nothing odd about the Wiyot and
the Yurok independently ending up where they are.

Methodologically, one must assume that Algic is composed of
three equal branches unless a Ritwan grouping can be proved - and
no such proof exists. Berman (1982a:sec.3) did speak of a shared
merger of Proto-Algic *t and *ĉ (which he wrote *ƙ) and loss of
vowel length as evidence suggesting a possible Wiyot-Yurok
subgrouping. However, subsequent research involving many more
cognate sets has clearly shown (Proulx 1984:175, 182) that *ĉ and
*t are consonant-grade variants of each other - giving only the
illusion of correspondences in some sets - and that the loss of
vowel length follows several independent vowel mergers in the two
languages and thus postdates their genetic separation.

Anticipating another argument, the slightly higher rate of
basic vocabulary shared by California Algic (Proulx 1982a:191,
199) does not provide a basis for genetic grouping. Wiyot and
Yurok are in contact, and languages in contact retain more shared
vocabulary (Swadesh 1971:32).

Since there is no evidence for a Wiyot-Yurok subgrouping, Wiyot/Yurok cognate sets require a Proto-Algic etymology (unless borrowing appears likely).

COMPREHENSIVE PROTO-ALGIC INDEX

The following index is a cumulative one for all the papers in this series. Reconstructions have been updated to reflect doublets, as well as the improvements in the phonology over the years (see the discussion of **i in the present paper, and Proulx [1992:11-19] for a summary of the other changes). We may conveniently refer to items in this index by their initial number with "i" (for "index") prefixed, e.g., i001, or alternatively by their old numbers (e.g., 208).

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