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PROTO-ALGIC V: Doubles and their Implications

Paul Proulx

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

3. 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 1981:65), 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, 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

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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 (1991:54-65) - 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 Ritoan 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 mellow or affective 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:
<table>
<thead>
<tr>
<th>Grade</th>
<th>PA</th>
<th>Wiyot</th>
<th>Yurok</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>**t=ceč</td>
<td>*t=t=č</td>
<td>tč=č</td>
</tr>
<tr>
<td>2</td>
<td>**s=č</td>
<td>*l=č</td>
<td>s=č</td>
</tr>
<tr>
<td>3</td>
<td>**l=č</td>
<td>*č=č</td>
<td>l=č</td>
</tr>
<tr>
<td>4</td>
<td>**s=č</td>
<td>*o=č</td>
<td>---</td>
</tr>
</tbody>
</table>

That is, grade 1 **t matches grade 2 **č and grade 3 **č, 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 sesomən- 'scratch' and tetomən- '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 (1994: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=č, s=č, l=č), see Teeter 1984:21-22) and Yurok (**t=č, l=č, es=t, see Haas 1970, Hamp 1970, Berman 1981:259, and Proulx 1992b) - as well as the somewhat less obvious evidence from Algonquian (**t=č, *č=č, see Goddard 1975:74, 79; and *č=č, see Siebert 1967:8, 13, 48, and 1975:11, 51, 52, 59, 101, 114, 130, 170, 184).

New or significantly revised Proto-Algonic reconstructions begin with number (350); numbers 001-358 are found in Proulx (1984, 1985a, 1991, 1992). A bare number after a Proto-Algonic reconstruction or reference to one, or after an Algonic 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-Algonic reconstruction whose number is cited.
1. The history of the problem

Early in my research, I came upon a potential cognate set PA *šeki-, W tikt-, and Y ṭak- 'urinate' OSG. I passed it on to Howard Berman, who after initial skepticism went on to find more examples of Y that apparently corresponding to W and PA * (or one of their grade variants), as well as to Y in doublets: PA *t(a)- 'exist, W t(a)- 'stay, dwell', remain', Y ṭ(a)- 'be, exist, be born' and the near doublet Y to:म 'be together in a group' (with q:lm 'incremental plural'); PA *ahian- 'feed', W t- 'feed, give food to', Y ṭ- 'give'; PA *net-, W dit-, Y ṭen- 'first person' (and similarly with the second and third); PA *myis[iw], W dit- 'two', Y ni?i[ayl] 'two (human beings)' (Berman 1982a:47ff). He also compares the final segment in W w̱ṯḵit, Y ṭw̱kk-a- 'some'; and W ṭa 'durate and articular preverb', Y ṭo 'locative preverbal particle'. He suggests a second doublet, Y -eṭway 'face' beside Śewy 'forehead', where the initial Y ṭe in -eṭway is a link vowel (as shown by the allomorph -eṭwa, see Proulx 1885b), while that in Śewy 'forehead' would presumably have been dropped in -eṭwy (Berman 1982a:fn.12).

Meanwhile, I too found some more examples of the same sort: W ditṯẖḵax 'for two days', Y ṉṯam- 'be somewhere for two days' OSG; and PA *ṉp̱ḵip̱-en, Y ṉp̱ḵi- 'pursue' OSG. I explained the former morphologically, the latter and OSG 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., *aw- and *aw- 'third person'. Blackfoot has eliminated the first set, everywhere substituting the second (e.g., ot-). Proto-Algon has two comparable sets (Proulx 1984:169, 1985), 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 ćaw- beside PA * wat- would respectively reflect *waw- and *waw-). I further assumed that the leveling out of the *wat extended to some cases where etymologically the *wat had belonged to the stem: PA *w̱ṯḵi̱ḵwa- 'branch', Y w̱ṉḵi̱ḵwa- 'small branches, twigs' OSG; PA *s̱ṯa̱j̱i, Y s̱v̱a̱h 'belly' OSG; and PA *ṉṯap̱va 'fine root used in sewing', Y ṉw̱p̱p̱a- 'spruce root' OSG.

At the time, these explanations seemed more plausible to me than Berman's solution, which was to equate Y with W and PA * (and their grade variants) in items of this sort and assign both this correspondence and the regular *t=tt one to the same proto phone *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 **t versus *t (and **k versus *k), where the apparent *t vs. *t-? and *k-k-? correspondences (including grade variants of t) are respectively written **t and **k.

**nitena:k- 'two days' 065 cf. **pitekwili 'basket' 111
**nok-:pen- 'pursue' 098 cf. **ket- 'thick (cloth)' 040
**tl- 'urinate' 099 cf. **titena: *e '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, **net- gave Y ?n- 'first person' by regular sound change seemed unconvincing to me. His explanation was that Yurok glottal catch (including that from *t) could move backward in a word, as in Y no?towno: 'fetch'! (stem no?to: 'to fetch' plus imperative singular -?tno). However, it doesn't move backwards in Y no?towen- 'pursue' beside PA *nok-:pen- 098, so it appeared that a different phenomena was involved than in the imperative. I also resisted the idea of a *t-? sound shift before vowels as somewhat unnatural (though not impossible).

Nevertheless, Berman (1984:fn.11) found another Yurok doublet (Y ?ateman- and dependent -?a: 'drawing, book, newspaper'). Later he proposed two more cognate sets: Y dat- 'be large', Y no?top- 'be tall, high (round things, mountains, trees)' and no?tomok- 'be long (worms, ropes)' (Berman 1990:42); and Y yekwily and PA *yekwily 'mappot' 5248 (citing the latter as PA *otkewily. Goddard (1991:85) proposed PA *-t, Y -? because of the third person subject. Finally, I found one more: PA *teki'kiyi 'pipesstem', Y ska? 'pipe scabbard' 331 (Proulx 1992:14). 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 **t

In my 1984 sketch, I reported some losses of **t 'between an
obstructed and a consonant other than **g' in a first syllable in Wiyot and Yurok (p.188). I also reported loss of **e between **m and a stop or affricate in PA and Yurok (p.187), though only word medially, and of initial **a 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 **a) are lost in Y mka? 'pipe scabbard' beside PA *wekik'éy 'pipestem' 331, and in Y lofog beside W wirag 'coals'. Other examples of the loss of initial **we are: 974, 102, 276, 289, and perhaps 280 (if its first **a had an e-grade).7

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

3. The Reflexes of **e, and Some Proto-Allic Doubles
t

The distribution of ? (subtracting known secondary sources) in the three branches of Allic 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. ?k < Pre-Y *a??). 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 **a, between a preceding vowel and a following vowel or semivowel (with a morpheme boundary intervening in the known cases).

**e is never preserved before a stop in any of the languages. PA and Wiyot evidently preserve (or innovate) it before **e, PA *go or *wu and *uw (Teeter 1964:72-73) by tool, instrument, medium' 197, 369. If PA *a-h 'abstract transitive final' (Blochfield 1946:sec.80) is in origin a doublet with specialized *-t of transitive inanimate verbs (**e, **t 'nonpersonal object' 178), this provides a good example of it occurring before a morpheme boundary plus, generally, a vowel.

**e is preserved (or innovated) in word final position in Wiyot and Yurok, and perhaps between unlike vowels in word final
sequence in PA: PA *-t, W -i?-, Y -e?- ‘third person subject’ 300; and perhaps (with a different inflectional vowel) PA *-ahi ‘locative t’ (Proulx 1988:322) – possibly related to Y to ‘locative preverbal particle’. *

**#** drops in Wiyot and Algonquian in absolute word initial position and between vowels within the root. Word initial examples are W kłjy (uktyhbt2? ‘her hat’), Y 2exah (**#**eki?yem1 ‘hat’ 347); and PA *e:nsa, Y ?tosh ‘abalone shell’ (**#**a:nse1 ‘coals, charcoal’ 288: Y toloq, W wa:xq1, cf. PA *-anbwe:-**.

Of course, these are only rough preliminary statements of the environments. PA *akawma ‘dog’ AZCS beside deverbal *-akawm1 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-Alcik antiquity. Consider PA *-a:g1w, W -e:ya and *etw (Teeter 1964:72-73) ‘by tool, instrument, medium’; PA *-t, W -i?-, Y -e?- ‘third person subject’; and PA *takcon- (a-grade) ‘grasp (it)’, W khñ- ‘grasp, hold’, Y təkon- and təkon- ‘hold onto something’. These items show presumed reflexives of **#** in Wiyot and PA corresponding to those of **#** 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 *tajn- and *a:jn- ‘Wh-’ (Proulx 1991:152), and Cree ce:skwa: (Cree diminutive grade ç from PA **t**) and ce:skwa: ‘still’, as well as na:na:ce:skwa: beside na:na:skwa: ‘not yet’. Compare also W -e:ya and PA *-etw ‘reciprocal’ (Bloomfield 1946:sec.72, with the intransitive final **-**).

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-Alcik doublets. Those longer than a single segment are (where for present convenience **#** is written for a **#** + **#** pair, and **#** and **#** respectively for its grade 2 and 3 variants):

(359) *tik- ‘urinate’ 008, 039: PA *e:k1- (grade 3, with mediopassive **-** J A100, W tikt1- (with static **-** J), and Y Takh-.
(360) **Tahkon-** 'grasp, hold onto something with the hand' 014, 018: (a) PA *Tahkon-* 'grasp', (b) Y tekon- 'hold onto something'; Y *Tehkon-* 'hold onto', W khem- 'grasp, hold'. See sec. 6 for the origin of the aspiration in Wyiot.

(361) **wekhilyi** 'hollow tube used in smoking' 331: PA *wekhilyi* 'pipestem' (C only, D no), Y skka? 'pipe scabbard'. PA has regular mutation of ɔ to ɔ before y.

(362) **wehtelkwani.** **wehtelkwani** 'branch' 038: (a) PA *wehtelkwani*, (b) Y *wehtelkwani*. PA *wehtelkwani*, (c) Y *wehtelkwani* 'small branches, twigs'.

(363) **-eThey.** **-eThey** 'belly' 035, 145: medial PA *eThey*, medial W -i-th. dependent Y -eyah (with **-i** 'animat suffix', see Froula 1991:133), (b) dependent and medial PA *-atay. A fully inflected form, showing movement of Pre-Yurok *t* back onto the prefix, is **naTheyi.** **naTheyi** 'my belly'. Y *-eyah PA *-atay.

(364) **wealaphega** and **walaphega** 'root, fine... used in weaving (usually spruce)' 102: PA *wealaphega* S170, W *pe* 'spruce root' (stem teph-), Y *wealaph* 'spruce root'.

(365) **-en.** **-en.** **-prei** 'person, first...' 128: (a) PA *n*, W d- or zero, Y ?n- (with ? analogical to the second by-form), (b) PA *net-*, W dut- (vowel analogical to third person prefix), Y ?n-, (c) PA *nei-*, W du? (vowel analogical, Y ?ne- (? analogical).

(366) **-et.** **-et.* **-kei?- 'person, second...' 129: (a) PA *k*, W H- (the aspiration of an immediately following obstruent in kin nouns specifying most senior consanguines, and W kh- otherwise (aspiration secondary), Y k?- (with ? analogical to the second by-form), (b) PA *pet-*, W huk- (vowel analogical to third person prefix, aspiration secondary), Y k?-, (c) PA *kei-*, W huk- (vowel analogical, aspiration secondary, Y k?- (J analogical).

(367) **-et.** **-et.* **-wek? 'person, third...' 130: (a) PA *w*, W H-, Y ?w- (with ? analogical to the second by-form), (b) PA *zet-*, W huit-, Y ?w-, (c) PA *wek*, W hu?-, Y w? (J 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-Algoni before independent elements which began in consonant- 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 Wyiot second person prefixes begins with a specialization of **-kei**. The glottal variant is used with most
senior consanguines, the stop variant elsewhere. Next, after the loss of the connective **e, the glottal catch meta- 
thesizes 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 (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 meta- 
thesized with the following obstruent and produced aspiration - but if so the 
resulting irregularity in the stem, lacking a morphological 
function, was leveled out.

(368a) **-etw 'reciprocal': PA *-etwi (Bloomfield 
1946:sec.72, with the intransitive final *-i), W -w, and Y -gw. 
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 (***?/ ***?).

(368b) **-gaw 'reflexive' 192: PA *-gaw a333; Y -aws (in 
noninflecting verbs) #48-49. Compare W -w, -iw #74 (lacking 
glottal catch). Several of the proto subject endings, which would 
follow this element, have **k or *it as their sonorants. Had 
their glottal variants followed Pre- w-?tw, its glottal catch 
would have dropped by laryngeal elision (Teeter 1964:26) - if this 
type of elision dates back that far.

(369) **-VIw or **-Vlew 'by tool, instrument, medium' 187: PA 
*-a?w, W -u?w and -utw (Teeter 1964:sec.72-73). PA also has *-aw '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 IA stems.

(370) **shf- **shf- **ahC-am- **ahC-am- 'give (especially 
food)' 111: (a) W *t[j] 'feed' (see German 1982:292:13), (b) Y 
?o-), (c) W 4w- 'give to' (grade 2), and (d) PA *aham- 'feed' 
(grade 3, with final -am, see Bloomfield 1946:sec.82). The last 
two proto stems have stem root extension **-in 355.

(371) *no:lpen- 'pursue' 999: PA *no:lpen-, Y *lo?pen-
'pursue'.

(372) **niTayey-, **niTayey- 'two humans' 336: W dif-

two' (grade 1), Y nĩi:y-; PA nĩi:wi 'two' A1630 (with root extension **-ŷn 357). The root is **nĩi-, followed by grades 1 and 3 of medial **-u:he'y 'belly' 065, 145, 293. **ŷ and **ŷy evidentally drop in Algonquian after PA *g from **yg and **ȳg [cf. OBF]. Evidently too, Yukon has haplology - or perhaps **te? --- > *s?e? --- > *s?e and thence Y ?, The loss of aspiration in Wiyot is evidently analogical from word-final a position where it is regular (e.g., in phrases like dit be 'liked' 20').

(373) **nĩi:Temak- 'two days' 065: W dã:tehk 'for two days', Y na?ama? '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-Algonic 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:w- 'large' (Berman 1900:432): W da:- 'be large', Y no?onmek- 'be long (ropes, etc.)'. (with **-ŷn 'root extension' 355, and **-u:kh '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?onop- with contraction of *g to Y o:. Compare Y mëkëwët 'peak' and reduplicated mëkëwët 'peaks' R14 for this type of reduplication, and Y oçöyën7n, and coineën 'four (body parts, etc.)' R86 for sporadic contraction of oç to o:.

(375) **wekwa:, **wegeyawi 'flesh, body, (her)...': (a) Y tewon 'flesh' (with nominalizer **-ŷn 298), twew 'her flesh'; (b) PA më:yiaw 'her body' A2265, and diminutive më:yiawëh: 'meat, flesh' A2264. This noun is doubtless the source for the reciprocal and reflexive suffix **-ewë, via the meaning 'self' (see Eybe, Pagliuca, and Perkins 1990:38). The meaning 'self' turns up in W më:yiaw 'my body, person, self', cognate K mëyiyal and nfaj 'myself', and derivationally **-yëw in G tayïyëw 'in person' (wç wëyë tayïyëwë 'herself', with _ for macron).

(376) **peTe:, **peCö 'catch fire': (a) Y pek{nocê 'set on fire' (with Y -Vnöc 'causitive', as in royanco 'render fat, force out liquid' beside roy{- 'flow, drip, trickle', see Proslx 1965b:123), (b) PA *pek7- A1855. See sec.6 for the position of Y ?.

(377) **ná:wal- 'be around': Y ?n:le?m 'be, exist' and Y ?o?o?op? 'she stands' R271. W tê?ilëb 'it lies there' (with **-ȳm 'third-person subject' 295. Compare **ná:w- 'go around'
respectively in Y ho:le?m 'go travel, be around, fare'. Y hor:ro?op? and hor:ro?ope? 'she runs around' (Proulx 1985b:130), and W hêtit 'you go, walk'.


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), e.g., PA *wehkân?pe '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 Nyoit, 091), the part-of-whole noun is treated as an ordinary independent noun, with allocative prefixes simply added.

The root **te:ke 'together, grouped (i.e., at the same place)' 380 may be related to the particle **te:kw '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) **te:kw 'same, just exactly the time, manner, thing': PA *ge:kwa (NIO e:zhige:wa 'at this or that time', with *ge:-'like that' 255 prefixed after loss of the initial syllable), W kw- preverb 'on arrival' 376, e.g., kw-ki:k?i 'I see her when I get there', kw-ki:k?op?i 'she just bites', Y te:kw 'that's just exactly what or how' 1140. Compare PA *ge:we:la:ki 'exactly then' (PC e:kw:ya:k, N e:kw:en:ak); PA e:kw:a and *ge:kwa; 'while, in the act, at the place, at the time'; NIO me:swas 'while, at the same time', PC me:kwa; 'while, in the act or place', WC âkeu 'row, whiles, whilst' (Faries). M me:k- preverb 'engaged in, while the action goes on'. If related, these additional Algic forms have initial change and obscure affixes.

(380) **te:kw, **te:ke 'together, grouped': PA *te:kw- 'joined, along with, together, grouped' A0516-2018, W te:kw- in Ki-pune*te:kw- 'one doesn't gather them much' (grade 3, with archaic ablaut), Y te:- 'together', e.g., tek?op?i 'it's burned on' (-o-p 'burn'), te:kuez?em 'they grow together' (-u:n 'grow'). Compare W te:kw?un or te:ku 'they' T100, and W tèle-te:kw?ayõh? 'how they hook ells' 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 mediaw, the latter generally
lack 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 1998a:66-68).

5. Some **t vs **k Doublets

As we have seen, two of the **T doublets are also doublets in **k: **nlemax: **k 'two days' 85,372 (# ditsebâk 'for two days'), Y na?amo? - 'be somewhere two days' and **nlehepekâ **k 'backbone' 378 (Y ?up?th, PA **wehepekâ 'her backbone'). A search has turned up several more. Those of more than one segment are as follows.

(381) **-VKap: **k 'stand'; PA **k-ka:pawi A516 (with extension **-Va 357), Y -o?op 'stand, run'. Examples are PA **k-ka:pawi 'she turns as she stands' A115, and Y ?o:lo?op? 'she stands' R271 (with ?o:l- 'be around', see 377).

(382) **-klyw: **kw 'in a circle, around, about'; PA **k-li:w- 'around, turning, returning' A903-1017, W hlyw- 'around, in a circle'. Examples are: W hlyw?litiki? 'circle around the sun', kwa?iyweta? 'they go around and around' (kwa- 'begin', -tai 'go'), Ta-ywam4hálik 'she's walking around in a circle' (Ta- 'progressive', **-Vn 'root extension' 356), hiywamáñâw 'I'm dizzy'; PA **k-li:wa:wa 'she goes home, back' A1006, **k-li:wa:pahtawaiwa 'she runs in a circle, runs around something' A1013, **k-li:waškwê - 'be dizzy, silly' A1000-1001.

(383) **nok- 'such a distance': W nuk-, Y no? in no?om- (incorporating postradical **-Va 358) and no? 'far, long time' (incorporating locative **-V'). Examples: Y kus no?omâki? 'how far did this water flow from?', Y kus no?omêkow 'how long was it submerged?', Y kus weno?omêki? 'where is the water up to (e.g., in an aqueduct?)', Y kus no?: 'how far, long?' R.232 (with contraction of o?o), W ta:nuk-?bwi? 'they eat it for a long time' S4-F, W ta:nuk-?bwik 'she cried a long time' W4-G, W ta:nuk- 'after a long time' 4?G.

(384) **-Vn-ekOK, **-Vn-akOK 'I-you pl.'; Y -Vn-?o? R70 (e.g., nekonci?ka? 'I meet you pl.' R71), PA **-ek-akok (Proulx 1990:111).

(385a) **neKila(we) 'first person singular personal pronoun': **neKila(we) gives Y nek (shortened, **n retained in monosyllable); **neKila(we) gives PA **nila(we) A160-1011 (where presumably **g?i gives PA **i(:), and W ?i? (presumably via **neyil)).
(385b) **Kekila[wa] 'second person singular personal pronoun': **Kekila[wa] gives W kh1 (where the initial *k* 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). **Kekila[wa] gives PA *Kkila[wa] AB86. This reconstruction (385b) replaces 260. Evidently, Algonquian gets its prefix **Kekila- 'second person' from a k-dialect of Proto-Algonkian, but its personal pronoun from the ?-dialect (the reverse of Miwok). A similar union of mismatched elements is seen in **Kejarka 'gull' 135 (PA *Kejarkwa with noun 'final *-w, Y kegor*-neg with neg 'animal; one who always eats'). Evidently, the final **K- is a nominalizing suffix in origin, rather than part of the root, and its glottal variant is attested in Yurok while its stop one is found in Algonquian.

(385c) **Wekila 'third person singular personal pronoun': **Wekila gives W ke[li]*] (with obviative -41), and Y Wekla (with obviative -42); **Wekila gives PA *Wekila A2232, this reconstruction replaces 262.

Items 385b-c suggest that the reflex of **K- before a sonorant in Yurok is e. Another example is **Thigew- 'out, through an opening' 288 (W thig-, Y te[f]o-y), PA *Taw-. Yurok has the root extension **K- in 358, and PA has oracle 2-3 *g* from its regular reflex *g* of **K- in a first syllable. This is plausible, for before an occlusive **K- gives *V* (Proulx 1984:181), and *Y* and *e* are barely contrastive (see Berman 1982:413). Since *Y* and *e* are also the (partly overlapping) reflexes of **K- (see Proulx 1993:14-15), it seems likely that **K- and **K-emerged in Yurok - and that the apparently slightly different environments for *Y* and *e* in the two cases are due to the vagaries of attestation. The partial overlap in the distribution of *Y* and *e* may be due to differences of stress as suggested by Berman (1982:413), or perhaps to dialect mixing.

If **K- and **K-emerged in Yurok, as I believe they did, then the following items and their variants (all with *Y* !) should be reconstructed with long **K- rather than short: **Le[ki]- 'cold' 41, **Kem- 'hurriedly' 125, **Kem- 'paddle' 180.

Improved reconstructions in **K-

(386) **Kem[li]-:'pigeon' 121: *W *Kem[k, Y e[m].

(387) **Kom[Kan'i 'hip' 133: PA *Komkan, and Y *to? [with shortening, and grade 1 for *s].

(388) **Na[h- 'be skillful' 229: Y nemokur- 'swim well' (e-grade, with **Um 'root extension' 355, W dokhh- 'be good at'
(with **-Wq 'root extension' S37), PA *nak- and *mak- (with various root extensions); but also PA *nah- (broad phonetic *-[n?]) in C nahagw 'she sees well' (with medial *-jip 'look' A46) and *neh- in M neh:htaw 'it makes it skillfully' beside egeh:htaw 'it makes it so'.

The discovery of **K also explains the alternate plurals of we'yon 'girl': we'yon? and, with the diminutive grade of vowel, we'ya:K 'girls' R23. It is even possible that PA *Vki 'animate plural' and *-Vhi (broad phonetic *-[Vhi]) 'oblique animate plural' are by-forms of a plural suffix **-Vq.

6. ?-movement, ?-deletion

Glottalization of a Yurok consonantism is according to Rothen's (1959:36) rule: ? is found on all stops, and between two continuants (e.g., noy:cy:kw 'she eats as a guest', stem noy:cy:kwa- plus ? 'third person singular'). With one exception, **? from **Ef always glottalizes an immediately adjacent consonantism in Yurok when there is [o] (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 suffixed language; diachronically, ?-loss is most common in a first syllable in Yurok, frequently before **f). Diachronic examples are:

**weh:telkwani, **weh:terkwani 'branch' 028, 362: Y ?weikun 'heavy limbs', Y ?wesken 'small branches, twigs'.
**neThey 'my belly' 095, 145, 393: Y ?neyah.
**we:te:peque 'root' 102, 364: Y ?wohp:eg 'spruce root'.
**ne:T- 'person, first...' 128, 365b: Y ?e:-.
**ne:T- 'person, second...' 129, 366b: Y k?-.
**we:T- 'person, third...' 130, 367b: Y w-.
**wetshp:eh:ka 'her) backbone' 376: 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, 404-412: W **ap-.

I have found two cases of ?-movement to the right (with metathesis) in Yurok, and two in Wiyot. Note that the first ? in Y
noŋpʔen- is the regular laryngeal increment, not the reflex of **t.

noŋpʔen- 'pursue' 371: Y noŋpʔen-.

*speK- 'catch fire' 376: Y pekiŋonoc- 'set on fire'.

*tehkon- 'grasp, hold' 360: W kʰhən-.

*keʔo:la 'thy maternal aunt' 048: W chʰul T01.

Ambiguously to the right or left:

**keʔila(wa) 'thou' (385): W kʰɪl.

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 kʰiŋapʰɨt 'she bites on arrival' T86, 25-h (**təki:–tehkon-aip-eət-i⁴⁴ 'at-exactly-the-same-time, grasp-by-tooth-it-she'). In the case of **keʔo:la 'thy maternal aunt', the morphological function of the oroteminal glottal catch has evidently preserved it.

As all Proto-Algon clusters of occlusive plus **k are simplified to k before Y w, #3 from #2 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.

(390) *apilek(wa), *epilek(wa) 'tie into a round shape, i.e., a bunch or bundle' 346: (a) Y pipki 'in1', back part of house', W hipikta 'tie roundish objects'. (b) PA *getkw-, medial *-a:peK 'jump, sphere, knot' (Proulx 1992:54). Yurok has no initial p in the lexicon, so presumably *pil --- *pu2 --- **p? --- p. The dependent stem would be analogical. PA evidently has haploglot after ** given # in a first syllable. Possibly, Y Yv is from an unreconstructible nominalizer **-yv, as suggested by **-yv 'third person subject' and the general identity of Proto-Algon 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]:xxx1).

(390) *tektkw-, *tatkw-, *takke 'short, be...' 070: (a) Y tkw-, (b) PA *takke- (ʔe:ahwa 'short, o tskikosya:) 'it's short', Ch e-tseʔkeso 'it's short', C tahkos: 'she's short', A ceʔepiχit 'she's short') and (c) *takw- (M taskiw 'she's short').
(391) **[ewelk] - 'soft' OBS: PA *[lo.i-tu>- S126, Y rawkw-. Cf. Y sekwkelum- 'be bruised' (from *rewekwk- plus ?)).

(392) **[ŋyoeTkw]-, **[ŋyoeTkw]-, **[ŋyoeTkw]- 'slip, be smooth' OBS: (a) PA *[ŋo.Tkw]- 'slip', Y syo'ywe 'a slippery place' (with -ŋ in 'place', Proulx 1985b:133), Y ŋyowe'n 'it's slick' (grade 1 backformation, with **-ŋ) 'intransitive nondeliberate action' 177), (b) PA *[ŋo.Tkw]- 'slip'; (c) PA *[ŋo.Tkw]- 'be smooth'.

(393) **[kweyeC'kweyeh]-, **[kweyeC'kweyeh]- 'whistle' OBS: PA *[kwel.ŋwehiwa 'the whistle' A1121 (with the AI final *-[A453], Y kwweyeur.

(394) **[yeTkw]-, **[yaTkw], **[yaTkw]- 'curve': Y yewohsok 'I bend or fold it' NBk 4:57, M wack- 'in a curved course, roundabout, by a detour' (reflecting **[yaTkw]-, with Algonquian grade 3 consonant symbolism, M wack- 'bend, curve' (with archaic ablaut). The shift of ** to PA *w in word internal position is regular (see 'maggot' 318). The Menominee roots show the dissimilation of labials found in other words (Proulx 1984:178). Menominee examples are: wakpekaphatw 'she runs in a curved path' beside wakpekaphatw 'she runs a curved course, by a detour', and wakpekasi 'she cuts it curved' beside wakpekasi 'she cuts it in a curve, cuts around it'. Yurok *-q[i]s is a transitive final.

(395) **[laTkw], **[laTkw], **[laTkw]-, **[laTkw]-, **[laTkw]-, **[laTkw]- 'be a cloud or shadow': (a) Y lekw[enčč]- 'be cloudy' (and perhaps Y rawkw[enčč]- 'be misty'), PA *[laTkw]- (in Pe ąłök 'evening or night cloud', Mi ałłkwatwi 'cloud', see SS1), (b) PA *[latakwa]tvi 'it's a cloud, it's cloudy' SS1 (with TI final *-[t]), (c) W halčč 'shadow' (with nominalizer **-[t]) Compare Mi alux 'cloud', which also rounds the **-[t]. Presumably, **[lekw] --- **[euk] --- **[u]- **[y] --- W yk and then regular loss of aspiration before a consonant. Similarly, **[lekw] --- **[euk] --- **[euk] --- Y ekw. The PA words contain medial *-[t]kw, *-[t]kw, deverbal from *[taktwi] 'cloud' SS1 (with nominalizer **-y) 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[no]owos 'fetch!' (stem nonow *te fetch' plus imperative singular -ow). 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 hyınowd 'they grow' (*-o[n] 'they') and incremental (collective) plural Huk:nem 'things grow' (*-m 'incremental plural'), showing the root hyın- '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 ow is not clear.

7. On dialect Mixing

As we have seen, two of the **I 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 **I + **K in a single element must be: (a) both glottals, (b) both stops, or (c) respectively **I 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 h - 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-Algonic (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 g, 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 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 imitates 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.

The Proto-Algonic case is only slightly different, in that only one innovating center is required - but with two innovations: one (the modification of **I) borrowed by some other group(s), the other not. One can roughly visualize this as follows:
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 \( \mathbf{h} \) for the less common \( \mathbf{g} \)). If I understand this puzzling argument correctly, he is trying to say that \( \mathbf{h} \) is produced by a diminuitivization rule, and hence not by dialect mixing. But this is a non sequitur: the synchronic production of \( \mathbf{h} \) from \( \mathbf{g} \) 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 \( \mathbf{h} \) from \( \mathbf{g} \). Why would a diminuitivization rule produce \( \mathbf{h} \) from \( \mathbf{g} \) in one case, \( \mathbf{h} \) from the same source in others - nearly always with the etymologically correct reflex of \( \mathbf{P} \mathbf{A} \mathbf{g} \) and \( \mathbf{g} \) ?

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 **tJ** generally gives \( \mathbf{t} \) and \( \mathbf{W} \) [both from **tJ**] and Yurok \( \mathbf{r} \) [from **tJ**], there are two kinds of exceptions. First, **P-tetkoh\{I\}w, **P-tetkoh\{Cr\}w- 'kidney' 314 has \( \mathbf{W} \mathbf{r} \mathbf{r} \mathbf{r} \mathbf{r} \mathbf{r} \) rather than \( \mathbf{I} \) (or its grade 2 variant \( \mathbf{r} \)) as the reflex of **CC** - showing that the source is **\{Cr\}r** rather than **\{Cr\}r**. A more interesting example is **\{Cr\}\{I\}w - 'tell an origin myth' 115, and its root **\{Cr\}\{I\} - 'tell experiences' 116. Here again Wyot 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 Wyot (described above) when the allocated kin are senior consanguineal - and thus entitled to extra respect.

Second, a suffix pair on the names for the digits of the left hand, considered sinister (**VT**-\( \mathbf{V} \)h, **VC**-\( \mathbf{V} \)h, **VC**-\( \mathbf{V} \)h '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 **VT** and **VC** in this case are respectively \( \mathbf{t} \) and \( \mathbf{s} \). In this case, the low prestige of the left hand is presumably responsible. The correspondences are:
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?yone? and, with the diminutive grade of vowel, wi?yintk '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 (he for women, ce for men).

It isn't possible at present to be sure of what kind of dialects got mixed in Proto-Algie. They could have been based on geographical units (as in the better-known Indo-European cases, and also Montagnais [see Clarke 1981, 1983]), 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 ? elements).

§. 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 **-eFew 'reciprocal' 193, 366a; **-eFew 'reflexive' 192, 366b; **-eTVw or **-eTVw 'by tool', 'instrument, medium' 157, 369; and **-e-akK, **-eakK 'I-you pl.' 364.

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:

(386a) **-I 'third person subject' (PA **-t and Y -?, Goddard 1991:63).

(386b) **-YK 'third person subject' 293, 300: PA **-k A499-500, W -ik (in verbs of being [somewhere]); W -? (in relative clauses), Y -?Q.

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

(388) **-Vkw 'second person plural of verb': PA **-akw (in transitive **-e:la:kw 'be...you', with **-aI 'second person object'), Y -a:kw (for o-class verbs); PA **-ekw (in all other combinations), Y -? (for e-class verbs, presumably Pre-Yurok **-e?w). Compare Y **-a:kw 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:

(389) **-? 'be, exist, dwell' (Bernan 1984), 211-222: PA **t[a:]- 'exist', W t[a]- 'stay, dwell, remain', Y t[a]- 'be, exist, be born' and the near doublet Y to:am- 'be together in a group' (with **-?m 'incremental plural').

(400) **-I 'immobilizer: in one place', found in **Tj:wal- 'be around' 377 beside **g:wal- 'go around' 058, and in **Tj- **Tel- 'there' beside **er- 'thither' 255. Undoubtedly related to **T- 'be, exist, dwell'.

(401) **Tel- **Tel- 'there' 223: PA **tal- A2023, W te:la- 'there, then, thus' beside **e:la- 'thither' 253.

(402) **T- 'WH-, TH-'. Surely related to **I- 'immobilizer: in one place' are **T- 253 and **- 259 (the source for the first element in PA **Taj- and a:j- 'WH-') whose functions, while hard to reconstruct with precision, include locative, nominalizing, and relative-interrogative ones ('the one WH-/TH-'): W Sî 'that's where, what, why, etc.'; WH- a:B:M-rogseg 'the station' [i.e., 'where it (the train) stops going along'], e:bngshoa in the west' [i.e., 'where it (heavenly body) sets'], e:miij:ad 'what she eats', C e:k-ahko:siit 'because she was sick' (Voorhis 1984a:38-1[9]); W ha-ta?l:ts:ek 'on my ship', ha-la-wa?l:twily 'what one floats with' (Teeter 1964:82, 48); Y ?o kett'u: ? there is a lake there', ?o teco:nt 'in a forest', ?i cun? ?a?gah ?o laha? ? ku ?il? 'they were just eating when the house fell in', won so?n ?o ku yok ni hunwnoi 'it is different from those that grow here'
It is probably part of the normal evolution of zero-copula languages for locative pronouns 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 1999:155-157) that this is the origin of **I- 'be, dwell, exist'.

It is also normal for locative pronouns 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 *-T 'third person subject', and the similar nominalizer (W -*, Y -*?) 299. The locative pronominal function of **I- must date back to Proto-Algic; probably the existential verb does too, but we cannot rule out independent parallel developments. However, there are several competitors for the functions of 'nominalizer' and of 'third person suffix', and these may well postdate the proto language. Compare **-VK 'third person subject' 396b, and:

(403) **-VK 'nominalizer': **-Vk 202 and W -*V 300, both 'nominalizer' - presumably from **-k 'the one previously mentioned' 251. An example of this nominalizer with W -*V is **-teqhtlek 'ear' 062; W -*tb1h6k, Y -*peq2h6 (grade 2, infixed). After the loss of the preceding e, the glottal moved back onto the V. Other likely doublets are:

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

(405) **-Vkh 'long thing' 155 evidently has a specialized form **-V 'tree, stem' 308. The former is generally used with winding entities like rivers and ropes in Yurok and Algonquian, but **-Vt-*Vkh '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. Implications for the Status of Laryngealized Consonants

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,
vor of glottal catch as the first member of a consonant cluster.
Nor, outside of Algonquian, of PA ʔ 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 ronglottalized
consonants (209, 213); and **yoyëkilw- 'slip' 86 has two grade
variants in Yurok, one with its initial consonant glottalized, the
other not: t̤oyëkiw7m 'it's slick' (with **-ł- abstract final
'nondeflatabe action' 177, and **-ł 'third person' 356a) and
yoyëkiw 'a slippery place' (with **-ł 'nominalizer' 288). In
addition, the personal pronoun Y ke?1 'thou' lacks glottalization
of the initial k, versus the prefix Y ke?2- '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 1974a) for examples from
Quechua). In polysynthetic languages like the Aligc 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 ʔ before consonants (see Teeter
1984:22-26 for the distributions). Preconsonantal ʔ in Algonquian
is more stable, but even it disappears unpredictably in some
cases. In Menominee, for example, there is M pes- from *pehš-
'peel, husk' 5153, and M pesh- 'weasel' for expected *pehš-; and
M peskšnew 'she has a foreign body in the eye' for expected
*pešš-<fnew 5133). Fox and Shawnee attest pseudo-PA *peššktšewa
'deer' (F peššktšawa, Sh pšškčl), an irregular diminutive of
*peššktšawa 'buffalo' A1688. In addition, compare the root in PA
*tlon- 'grasp (i.e., grab with the hand)', having final **-ł- 'by hand' 482,
with the root in *akšš- 'bite (i.e., grab with the teeth')', having final PA ʔ- with 'by mouth' (Bloomefield
1946:sec.84). The latter root, which is evidently a diminutive
grade of the former, lacks its preconsonantal ʔ.

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

Examples containing Wiyot are: **[ekiyem]-[hat] 047, **[a]lew- 'projectile point' 315b, **[mi]-megi- 'below' 124, **[ne]-meiy- 'grease' 024, **[wa]-a[w]-[e]/- 'egg' 003. Examples with Yurok C7 are: **[a]/s/[o]-la/- 'pound' 120, **[e]k-ey- 'conceal' 122, **[lek]-key- 'sand' 072, **[ne]-key/- 'rotten' 052, **[e]/s/[y]-o-y/- 'slip' 86, 392. Examples with Wiyot Ch are: **[me]-hishikew/- 'weep, mourn' 089, **[nk]-kei/- 'three' 046, **[te]-khon/- 'grasp, hold onto something with the hand' 064/019, **[thi]-[g]- 'through an opening; cut' 088, **[o]/w/e/- [qua]-w-urd-tai/- '317, **[wa]-[oo]/- [d]-[j]/-hama/- 'root, fine ... used in eating (usually spruce)' 102.

There is only one of these items for which I have a possible explanation: **[a]/s/[o]-la/- 'pound'. The initial **[a] drops in Yurok, anc Yurok words describing violent actions tend to have **[a] rather than **[a] in initial position. Of the 15 words listed by Robins (1928:lexicon) with initial **[a] 5, 10 have such meanings. Only two words with such meanings ('break' and 'kick') have initial **[y]. Compare also Y [s]/o/- [p]/- 'hit' (e.g., [s]/o-[p]/- [e][-w]e/- 'hit in the face') with Y [s]/o/- [p]/- '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 **[a] describing violent actions may have acquired glottalization secondarily.

Moreover, we now have an explanation for the developments of **[s]/y/- [o]-la/- 'slip' 86, 392 in Yurok: Y [s]/o/- [e/-] 'slippery-place' (with **[s]-y- 'nominalizer') beside [e]/y/- [o/-] 'it's slick' (with **[s]-y- abstract final 'nondeliberate action' 177, and **[s]-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 **[s] in Yurok, not its origin. More importantly, words with initial **[y] 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 (1919:74-75) has pointed out.

In the present case, the existence of complex stops in Proto-Altic 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, **-vpt* 'place, put in place' draws attention to the sequence PA *k#- A71! (rather than the root PA *k#- A79, the obvious comparandum for **-vpt), and thus leads to the reconstruction of the sequence:

[(406) **-vpt ET 'put SOMETHING in place' 161, 173: PA *-st 'place it', Y -i-p? 'place things'. (The second element is **-VT 'nonpersonal object' 178).]

This new reconstruction suggests that Proto-Alginic 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 *k#epah* 'block it' A734-739 (with *-ah 'by tool, instrument, or medium' A76) rather than root *kep-'block' A728, as follows:

[(407) **-epah* 'close an opening': PA *k#epah- A734-739 (root PA *k#ep- A728-742, 744-745, 747-757, and a-grade *-ah 'by tool, instrument, or medium' A76), Y kep- (in kep?ol 'be deaf', kep?ol 'there's a barrier', kep?ol epstítn 'my nose is blocked', kep?oksínes'm 'you plug it up [e.g., a rat hole]'). Cf. V cappetaw 'deaf', and PA *kaygíemíwa 'returns', 'she's deaf' 306.]

[(408) **-epahkoy?* 'choke on something (food, tobacco smoke)': ftc *k#lipkóyoo 'she chokes eating', Y ?epkah?* 'choke smoking'. The root **Kepah- is also seen in PA *kopenaw: 'she chokes him' A745, *kopenahowa 'she chokes' A742, Y ?ep- 'be choked'. Presumably, *t drops between obstruents in Yurok.]

[(409) **-epahw* 'cover?': PA *k#epah- A750-759, W k#ep- (with distant metathesis). The stem extension is **-w 357. For a similar metathesis in Algonquian, see A726 'northern pike' and Middle Atlantic Algonquian *k#ew- 'lions' from PA *k#ew- (Goddard 1980:148).

Similarly, **VT can be discerned behind Wyiot aspiration in W h#ph- 'tie', helpful to establish the identity of a root, medial, and final:
(410) *apit-*, *epit-* ‘tie, cord’ 347. The loss of *i* in Wyot is evidently regular in this environment, compare W bpt ‘tooth’ with PA *mejipit-* and medial *ajapit-*.

*apitek(w)-, *epitek(w)- ‘tie into a round shape, i.e., a bunch or bundle’ 346, 399.


(412) *ajapit- ‘tie, string, root’ 162; PA *ajepit-* as in *ajekapit- ‘tie it shut’ AS14-615; PA *ajagy* (as in M10 mitigamy ‘bows’ beside mitigam ‘sticks’ from Pre-D *mehtekw-agy-aki* and *mehtekw-all*), Y -pet as in seejpetek? ‘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 Wyot and Yukok 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 coming 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 environments where they are less prominent. To dismiss the evidence of earlier structure which they provide, as one does it 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: Abenak=A5-Laurent (1884), Day (1964); Plains Cree=C-Bloomfield (ms.); Swampy Cree=Cw-Voebel & Watkins (1898); Western Cree=Cw-Faries and Watkin (1938); Delaware=O-Goddard (1968); Ud-Unam; Nd-Minesee; Fox-F-Bloomfield (ms.); Kickapoo=K-Voebel (1974); Lupa-L-Day (1975); Mahtic=Mr-Mastay (1982); Menominee=W-Bloomfield (1975); Miami-M-Voebel (1937-40); Micmac=W-Proulx (field notes), Dubois and Metallic (1984); Natick-Trumbull (1903); Ojibwa=W-Bloomfield (1957); Central Ojibwa=Bo-Baraga (1870); western Ojibwa=K-O-Nichols (1979); central and eastern Ojibwa=Rhodes (1985); Passamaquoddy=Ps-Lesourd (1984); Penobscot=Pa-Voebel (1979); Proto-Algonquian=Ps-Proulx (1984); Proto-Algonquian=Ps-Aubin (1975); Siebert (1975); Bautteaux-W-Yoohis (1948); Shawnee=St-Voebel (1937-40); Wyot=W-Teeter (1964); Yuruk=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 Wyot texts (Teeter 1964) are followed by the text number and line; those from my Yuruk fieldnotes are identified by NB plus notebook number and page.

Transcription generally follows that of Siebert (1975) for Algonquian, Teeter (1964) for Wyot, and Robins (1958) for Yuruk. However, the following changes have been made: PA *# is written for #B, PA *# for cedilla, PA *# for *#W, V for b before a consonant, W a for o, W + for a, and Y + for inverted r. For discussion of the changes, see Proulx (1984:160-168). Orthographic concessions to my word processor: s wedge as S, c wedge as C, schwa as I, and Menominee epsilon as E.

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 "*sa.y" - 'around' 066: Mc alv., W hgr., Y hor.: He evidently wants to explain 'around' as secondary from *sa.y - 'go' 220 (see Berman 1984:336), but there are problems. First, he has no explanation for the 1 in Micmac nor r in Yurok. Second, the proposed direction of semantic drift is wrong. Compare the following Micmac, Yurok, and Wyot verbs (DeBlois and Metallic 1984, Proulx 1985b, Teeter
nss) as to root and meaning:

(1) Mc al:asi't 'she goes about', Y ho:le<u>wa? 'they are around, go, travel, fare', W ha<u>l<i>ghi? 'boat, (that which) goes around'.

(2) Mc al:siŋk 'she flies around', Y ho:letuksi?i'm 'birds circle in flight'. Compare Mc pensink 'she flies by in the air after someone hits her', and Y la:yuksi?i'm 'they all fly by'.

(3) Mc al:i<u>ax 'she swims about', Y ho:ri<u>rex 'I swim around', W a'u?ra ha<u>li?i'm 'sea serpent' (means 'swims around in the ocean'). Compare, Mc pensi:ax 'she swims along', Y rayurex 'I swim along', and W al:hu?i'm 'she's swimming towards me'.

(4) Mc al:<u>lukwi? 'she floats about', Y ho:le<em>mek'w 'it drifts around', W ha<u>le<u>u<em>l<i>twu?y 'what you float around with'. Compare W wi<u>l<i>twu<i>y 'they (indef.) float with it' T46, and Y la:yorek'w 'it drifts by'.


(6) Mc ala<u>l<i>u<u>l<i>twu<em> 'she carries it around on her back', Y ho:luu<i>le<u>se<k 'I carry a pack', Y ho:<u>le<u>uk<i>wa<em> 'you have a load in your boat', W ha:la<u>l<i>hi<i>i<em> 'she brings it along, carries it around'. Compare Mc ena<u>l<i>u<u>l<i>twu<em> 'she carries him home', Y la:yu<i>le<u>se<k 'I come by here with a pack', and Y kelowe<u>l<i>u<u>l<i>twu<em> 'you turn around and come back in your boat', and W ta ti<u>l<i>u<i>l<i>twu<i>y 'they bring it down', with ti<u>ku<em> 'down' T32.

(7) Mc al:<u>cat 'she staggered, stumbled about', Y ho:letok? 'I walk with effort (in a steep place, under a heavy load). Also P<em> al<em>al<i>li<i>ko<em>ke 'she walks around in deep snow (without snowshoes)'. Compare Mc pen<em>cat 'she leaps or hops along', Y hineto 'hurry!'.

(8) Mc al:i<u>skalk 'she feels around for him', Y ho:letewek? 'I grope around'. Compare Y la:yec<i>w<i>ek? 'I grope my way along'.

(9) Mc alo<u>stasit 'she hints', Y ho:rokhek? 'I have clever but changing and unreliable thoughts'. Compare Y caru<i>u<i>kek? 'I forgive [lit., have new thoughts]'.

Consider also: Mc al<em>am 'she looks around for him', Mc al:<em>kop<em>ok 'they all sit about', and Y ho:le<u>ek? 'I stir food with a paddle cooking'. For the Micmac segmentation, see Inglis (1986, notably pp. 130-134).

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 bleeding, '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 $Y$ 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 $\tilde{2}$, and then to Berman (1981:257-258), where the discussion is only about $h$ and $\tilde{2}$, not vowel length in Yurok. The only discussion of vowel length is of the Proto-Pomo canonical form CV(C)V, where $H$ can be either (unpredictably) vowel length or (predictably) $h$ or $\tilde{2}$.

All this is presented as an alternative to accepting the straightforward reconstruction of **Wiya** for PA *gaw* (Mc a, lengthened in monosyllables), Y a, and W a. This despite such cognate sets as PA **gawwil** 'egg' A2135, Y **o:lew** 'roe of several fish', and W **wil** 'salmon roe' O63; and PA *gawwil(a)*- and Y *aw:rel* - following one behind the other O50 (where PA adds post medial *-a-l*, and Yurok the intransitive final *-ep*). PA *gaw* generally gives Mc a, as in Mc **sawax** 'chiefs' from PA *sawaxwil*.

He also questions the etymology of Yiot hal**wil** 'grey fox (the one who weeps around)'. Well, it really does consist of W hal- 'around' and **wil** 'weep', as is evident from ch**wil** 'she's crying secretly' (with p- 'secretly', see Teeter 1964:52), kawitwil**l** 'they all start to cry' (with kaw- 'begin' and -**wil** 'all', see Teeter 1964:51-52). Especially after a preverb encluing in a vowel, Yiot often inserts an empty root *l- before a medial beginning in another vowel (Proulx 1982a:68). This ambiguity of -led Teeter (1964:55) 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 *noon-*, W *du:na-*-, and Y *newon- 'suck at the breast' (60) - claiming that the Yurok form has initial change (of the Ojibwa type, **o** to **wai**). This was a plausible enough hypothesis when he formulated it, but no further evidence for this type of change in Proto-Algonic has since been found. Rather, what we find is *wiw* = u in such Yurok sets as *nol:um- 'love' and passive *nol:lew (unreflected verb) and *nole:ga:wy-. These show a Pre-Yurok contraction of *w* to *w* 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 **K to y (Teeter 1984:26). This suggests we may be dealing with a very low level phenomenon here.

In his fn.8, he scoffs at my 'unique' **g: + t + o correspondence in **kemot- 'steal' 21 - ignoring the fact that the vowel length in Algonquian is stated to be secondary to the simplification of the cluster **k], where added vowel length is regular (Proulx 1984:193). PA **g 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) **g + t + o correspondence modified by the compensatory lengthening for the loss of **k] in PA (the Wiyot and Yurok reflexes are also found in 048 and 120). The distribution of **g in Proto-Algonkian is limited to 'next to **k] or **t]' (and usually **g) 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 **ikwaka 'house' 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 + j + a) was found in 009, 032, 046, 047, 099, 111 (before **k] 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 **new- 'see' 043 (PA **new-; 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 (**new-). However, vowels in monosyllables do not generally lengthen in Yurok (witness sëy 'brother-in-law' and Y loss 'take'), with root 2 - 'take and imperative singular - [s] - and long vowels in inflectional suffixes of this sort are also found outside of monosyllables (e.g., merkwa'tak:1 'I ate everything' MB 4:38 and askewga:1m '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 merkwat - 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 **k of the third person prefix metathesized with a following **k - and so was preserved there, though lost before
other consonants (see Goddard 1986). The preceding **% of the first
parson 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 subordinateive verbs, in both
Wiyot and Yurok. In Proto-Algonic, 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 s'oy 'strip of
backskin'—beside PA wə'(l)əkaya [a-grade] and W ətəkəy 'skin'
259).

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 **g of the inflexion
**-gg would block the rule). Thus we have Y nesk[iy] 'call by name'
beside PA ʷnə:ki: ʷ (Pre-PA *nepok-), with contraction of the inflexion
**-gg plus the following **g to PA ʷi- ʷ, see Proulx 1984:197).
Shielded forms are rare for verbs used as adjectives, making
restoration unlikely: Y pēkoy:] 'be red' beside PA ʷnegok- and
*ni:p- ʷni: 'be bloody' 125, and W ətəkəl ʷ 'be distant' beside PA
*ma:ʔləw (with archaic ablaut) 279.

4. However, **ndəj[i] 'water' 067 (Y paʔəh, PA *nepiy) suggests it may be lost between like rows in a word final
sequence in PA—or perhaps after front vowels (**[i] > *iy[i] >
*iy] > PA *y[i]). This would make PA ʷi:bi 'obliative plural'
analogical from its byform ʷəbi, or the model of ʷ-ii) and ʷ-ali
'obliative singular', as the expected reflex of Pre-PA **-ii would be ʷ-yi.

5. Although it does so in such pairs as W ətəki 'heart' and
wətəki] '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 ʷ-,
preserved in verb medials in Proto-Algonic, but there is some
evidence that the ʷ- was not element-initial except after the
loss of a previous syllable. For example, beside ʷə-təkəl 'heart' 112 and medial ʷ-ətəkəl- 'think' (see 416 in appendix B
below) there is W ətəw- 'have thoughts, think' (Relchard 1925:27,
in normalized orthography). This suggests a verb stem ʷətəkəl-
from which both the media 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 ʷənətegeteke, ʷənəteke 'her buttocks'
327—which apparently contains both ** and ** (and its grade 2
variant). However, Y cək is easily explained as resulting from
reinterpretation of stem-initial ʷ- as part of the prefix, and
the regular analogical replacement of the stop variant of the prefix by its glottal variant (and thus Y ‘we, ‘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-Algonkian and are included here only for the sake of completeness.

(413) **wetayehca (formally diminutive) 'her' dog'; PA *metayjhsa 'her dog' (M ojibwa 'her pet dog') and W muyic 'dog', and Y styc (Yayj) 'dog', adding -yik 'child' (as in Y caunyik 'baby', with caun- 'new'). Evidently, there was early
metathesis of the first two vowels in Pre-Yurok, giving
**wakawetah. With the loss of *th, the two **s and the final
vowel *-a* followed 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) **wakawetah 'roen': PA *wakawetah S168, Y *wìtì 'egg'. The
Yurok term evolves via Pre-Y *wakawetah (and, with vowel harmony,
* wìti) followed by metathesis of **w* with **t and loss of the
latter in wordfinal position.

(415) **-VT-Vkha, **-VC-vkha, **-VC'vkh*a 'digit from five to
ten' 109: (a) **wìtì in *tì and 'six', and ('ten', and with
consonant grade harmony, T21) *tìtì 'nine'; (b) Y *wìtì in
ckwìtì 'seven', cf. Y *wìkha 'point', and grade ! Y -stì? in
kwekwekì 'eight', with kne- 'long'; (c) PA **wakawetah, as in
**wakawetah 'six' A1048 (with **wakawetah 'one') 63, both
originally reconstructed with *w for *wak. 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 **-v 298, the former also
present in the PA suffix *-kwa 'digit from five to ten' (Siebert
1975:302, reconstructed with *v for *ì). See item 156 on
the reconstruction of **-Vkh*a.

(416) **wìtì 'bundle-strap' 037: (a) PA
**wìtì 'bundle-strap with a bundle strap' (with final *-e), Y *weskuł
'strap' (with the nominalizer **-v 302); (b) PA **wìtì 'wrap
with a bundle strap'. **? may well be from **t, but a stop
variant isn't attested.

(417) **wìtì 'taki, **wìtì 'taki 'root' 094: (a) PA
**wìtì 'taki, *wìtì *- *wìtì. The initial **w
marks the part-of-whole relationship and the glottalization is
analogical. The stem initial **w is subject to initial change in
two of the branches: with archaic ablaut in Wiyot, and **-eg-
'iterative infix' 025 or 'plural' 336 in Algonquian (giving PA
**w). It is lengthened as a result of the simplification of Pre-PA
**w (see Proulx 1984:92).

(418) **wìtì 'fear', **wìtì 'be frightened'. PA **an is an AI final, Y -el a
passive one. Y *wìtì reflects **w* (with grade variation, see Proulx
1984:sec.4.2). This reconstruction, somewhat simpler than the
original, suggests that **t may be a source for PA *w in
clusters.
Although Proto-Algonkian is composed of three main branches (Algonquian, Yiwyot, and Yurok), originally in 1913 only the last two were recognized as being related and their protolanguage was called Proto-Ritwan (Teeter 1964:w). Their genetic relationship to Algonquian was recognized later the same year, and the protolanguage shared by the three was called Proto-Algonkind and later Proto-Algonkian. For a long time, evidence was far too scanty to determine whether Proto-Ritwan was the same language as Proto-Algonkian (i.e., whether the three Algonkian languages are related at the same time depth), or whether Ritwan was a subgrouping within Algonkian. The latter view came to be called 'the Ritwan Hypothesis'.

The Ritwan Hypothesis was originally associated with the idea that the Proto-Algonkian homeland was in the East (the Great Lakes area) and that the Yiwyot 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 Algonkian homeland was in the West - especially in or near northwestern California - there is nothing odd about the Yiwyot and the Yurok independently ending up where they are.

Methodologically, one must assume that Algonkian 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-Algonkian *t* and *c* (which he wrote *k*) and loss of vowel length as evidence suggesting a possible Yiwyot-Yurok subgrouping. However, subsequent research involving many more cognate sets has clearly shown (Proulx 1984:175, 182) that *c* and *k* 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 Algonkian (Proulx 1982a:191, 199) does not provide a basis for genetic grouping. Yiwyot 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 **k** 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 "**k**" (for "index") prefixed, e.g., **k001**, or alternatively by their old numbers (e.g., 208).

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