THE COLVILLE EVIDENCE IN THE RECONSTRUCTION OF PElS VOWELS

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1. Introduction. This paper attempts to integrate Colville (Cv) evidence with the material in Columbian (On) and Coeur d'Alene (Cr) utilized by Kinkade and Sloat (KS) toward the reconstruction of Proto-Eastern Interior Salish (PElS) vowels. It is simplest to introduce Cv evidence following KS's format, starting with the Cv vowel inventory, restating the hypothesized PElS vowels, and adding the available Cv forms to the cognate sets that represent the reflexes of each proto vowel.

2. Colville vowels. Cv vowels are i, u, and a. *a is automatically inserted in the following environments (R resonant, Ç glottalized consonant, C (other) consonant):

\[
\begin{align*}
C^a & \quad \text{R} \quad C^0 \\
\hat{C} & \quad -C \{C|C\} \\
C^1 & \quad -C \{C, C\}
\end{align*}
\]

(2) interconsonantly a redundant feature of deliberately slow utterances (e.g. a word repeated for the benefit of one who didn't understand it); (3) the unexplained unstressed vowel grade of a few roots: tok, tok, and a few others; (4) unexplained in a few cases where it alternates with 0, for example preceding the actual aspect c- (oc- c-).

3. PElS vowel reconstructions. KS reconstruct a PElS system that includes *a, *i, *u and "three types of the *a," a full-grade vowel, a secondary ablaut grade of the other three vowels, and an epenthetic, "largely predictable" 0. This last is not discussed in detail by KS, and is not considered distinctive in PElS.

4. Cognate sets. On and Cr cognates are divided in five sets, one for each reconstructed phoneme. Each set is subdivided by the environments that condition the On and Cr reflexes. Schematically, the "most characteristic developments of PElS vowels" may be charted thus:

<table>
<thead>
<tr>
<th>On</th>
<th>Cr</th>
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<tbody>
<tr>
<td>*a</td>
<td>a</td>
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<tr>
<td>*i</td>
<td>i</td>
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<td>*u</td>
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<tr>
<td>*a</td>
<td>a</td>
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<tr>
<td>*o</td>
<td>o</td>
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The reconstruction of each PElS vowel phoneme and the On and Cr evidence adduced by KS is now discussed in detail, alongside the Cv evidence as it confirms KS's analysis, or as it suggests revisions.

4.1. *a. KS found the reflexes of *a to be (A) On a, Cr a; (B) On o, Cr å, (C) On å, Cr i, exceptionally; (D) On o, Cr i; (E) On å, Cr å, regularly. KS list irregular, unexplained correspondences in (F).

A. KS list 45 etymologies showing On å, Cr å. 29 of these occur before back consonants, with or without an intervening consonant; 16 are unexplained.

1. On å, Cr å, (Cv å). In Cv, as in Cr, a back consonant or an r prevented the *a > i shift, as evidenced by the following items which are numbered to correspond to the KS lists: (2) war, (6) n(a)\(\hat{a}q\) rot, (7) ña\(\hat{a}\) pay, (9) ca\(\hat{a}\)qw summer, (10) lay\(\hat{a}\) escape, (13) 1ax friend, (14) pay scrape, (16) 2ay\(\hat{a}\)qw tired, (17) sa(?)\(\hat{a}\) melt, (18) ca\(\hat{a}\) holler, (19) ña\(\hat{a}\) fan, (20) ya\(\hat{a}\) gather, (21) -\(\hat{a}\)qw clothes, (25) -aq\(\hat{a}\)q day, (26) -a\(\hat{a}\)qw tree, (29)
-əxən am. Two Cv forms, for reasons that remain unclear, show a pre-Cv *a, subsequently i, metathesized with the back consonant that followed it. This metathesis, not an uncommon phenomenon in pre-Cv, must have preceded the *a → i shift, otherwise the *a would have remained Cv a. In these two cases, (1) kənəi yellow, (8) s-qua?i sun, we can infer pre-Cv forms, respectively *kənəi and *s-qua?, but the processes by which they developed into Cv are not altogether clear. In the case of kənəi the laryngealization of x is problematic; in the case of s-qua?i the Cv root is probably to be interpreted as /qVs/.

Unlike Cr, where both -lip and -aip are found, the latter before a suffix containing a back consonant, only Cv (28) -lip tree occurs; on the other hand it is possible that Cv (5) xəm-qin roan animal has retained a because of the back consonant of the suffix.

The Cv form (15) əwəs-1ɨšə? robin is not directly comparable with either of the other two cognates and, in fact, the analysis of the On and Cr forms is unclear. Is it On s-ɨəw-ɨšə? and Cr wəs-ɨəw? In any case, the Cv reflex of *a between or before x is not to be found.

Finally, the two forms Cv (4) pəqə, pəqə have assumed, according to an informant, complementary meanings; pəqə referring to the weasel in winter, and pəqə to the weasel at other times.

2. On a, Cr a, (Cv ā). Of the 16 examples in this section, 5 represent borrowings. Cv has a in these. These forms were borrowed after the *a → i shift had taken place. Of the remaining 11 examples, four known Cv cognates retain a post-tonic pharyngeal, which regularly prevented the *a → i shift: (53) xətə duck, (36) ćəmə grashopper, (38) məfə fly, (40) swəl cougar. I infer that On and Cr lost the pharyngeals in these forms after the *a → i shift had taken place.

Two other Cv items, (31) scim bone, (32) ćim wash, indicate that it is only the Cr forms that developed irregularly, and remain to be explained, while the On and Cv reflexes are regular. We note further that Cr (30) qəm-ən pleasant is irregular only in V2, and that the behavior of V2 in Cv qəm-ənt is similar to that of a in (5) xəm-qin. The reflexes of another form remain unexplained in all tree languages, (37) On maʔɁ, Cr maʔɁ, and Cv məʔɁ warm water.

B. KS list only two examples of On a, Cr ā. The Cv cognates are (46) qəmə kidney and (47) qəmət pus. Neither cognate supports the hypothesis that these are reflexes of *a. Each Cv form has only one vowel, a, which corresponds to On ʊ, Cr u, not to On a, Cr ā. Cv (46) is probably analyzable as məʔas, where -as is a variant of -us with pharyngeal displacement and total vowel assimilation.

C. KS list 11 examples of On ā, Cr e; 37 examples of On a, Cr ē, which share the environment of a-final glottal stop; 6 borrowings; and 22 other unexplained pairs.

1. On ā, Cr e, (Cv ē). Cv (48) məʔɁəm women, (50) swə t ʊə, (51) kaʔəs three, (52) smən enem., (56) məkəyə? hood, all exhibited, as expected. What remains unexplained in this set is the stress shift that took place in Cr, from the final syllable to earlier in the word.

2. All Cv forms that include the suffix -a retain the vowel as a; the others do not, and the development of *a is irregular: Cv ē (stressed), a otherwise. Thus Cv (62) ʔəsəʔ go out, (63) ćəkəʔ left side, (65) ʔətsəʔos grass, (66, 70) ʔətəʔ body, (67) ʔəpəʔ digger, (75) ʔəʔəʔ ear, (76) ʔəʔəʔos great-grandfather/child, (77, 79, 83, 84, 85, 87, 88, 89, 91) -ʔəʔ, (92) -ʔəʔəʔ ear, (96) ʔəpəʔ handle, (94) -ʔəʔəʔ blanket, surface, (95) -ʔəʔəʔ body. In all these forms -a? is unstressed. In two forms, Cv (72) ʔəʔəʔ grass, and (73) ʔəʔəʔ cane, the reflex is i, suggesting that Cv -i did not correspond to the suffix -a, or at least that Cv, before the shift, interpreted these two forms as not including that suffix. Moreover, stress in the Cv forms has shifted to the final syllable, and a glottal stop has intruded before the last vowel. These are not isolated instances of ?-insertion. It should be noted that the ?-insertion and the V? - V? metathesis produce similar results (Cf (6) n(ə)?əq, (9) qəmən).

In all such cases we may infer pre-Cv forms CVc, but for the moment we lack information about the conditioning factors that triggered these phenomena.

The remaining Cv forms exhibit əi: (74) s-əməʔ?i-tit daughter, (81) ccaʔ-upt younger sister. The reduced grade is a function of the shift of the stress to the suffix. However, the language does not seem to have preserved either of these roots (roots like təməʔ and ccaʔ would not fit
the Colville canon) without strong suffixes. The analysis of these forms is problematic in any case: if a? is the root in Cv (81), then the form does not contain the reflex of the suffix *-[t].

3. On ã, Cr ẽ (Or ã). The set of six borrowings presented here differs from that discussed in A.2. only in the Cr reflex. Analysis of these forms reveals that On and Cv regularly borrowed as [a] French [ẽ] and English [a] and [e]; and that Cr borrowed French [ẽ] and English [a] as [a], and French [e] and English [e] as [e]. With respect to (100) On sultas, Cr sultes, Cv sultas, 1 should point out that the item is borrowed from English, and not French, that the word-final [t] is retained in each language as [s], and that in Cv the stress pattern has conformed to that of the more common borrowings from French, which, incidentally, is favored by Cv, a language where stress tends to shift to the end of the word according to these rules of weighted morphemes: strong suffixes have weight 5, weak suffixes 1; strong roots have weight 2, weak roots 0. The heaviest morpheme receives the stress. Thus a strong root is unstressed in construction with strong suffixes, but stressed in construction with weak suffixes, and so on. Of two or more consecutive strong suffixes it is the rightmost that retains stress.

4. (a) On ã, Cr ẽ (Or ã); (b) On a, Cr ẽ, (Or i, a). The Cv evidence does not help as much as one would wish in the analysis of the correspondences listed here. Although two forms exhibit ablaut, (110) may, mîy tell, (113) tâlq, tâx pierce, five others have only a, and remain unexplained: (102) ?am(t) feed, (103) ?amix sit, (105) ?awt follow, (106) ?ac tie, (111) mayÁ too much. It would only be conjecture to advance that the initial ã and ã might have been present, in these cases, the *a, i shift (for a counterexample cf (133) Cv ?ap wipe), and, if that were the case, the Cv forms would still remain unexplained. On the other hand it may be more reasonable to suspect that y (and w) prevented the shift to í in Cv (cf 4.2.B.).

There are no available Cv cognates for (119) and (115), and Cv (117) wâxâ bark has been recorded unstressed only. Cv (116) kâx?âxâ bark has unstressed i, which is unusual (unstressed vowels nearly always reduce), and remains unexplained. Likewise in (119) kâx?âxâ šaran, the a remains unexplained. But in Cv (122) mîa? bair, the a is probably segmentable, although the discrepancy in stress remains unexplained.

D. KS list 3 examples of On a, Cr í. None of the Cv forms belonging to this set has been recorded stressed.


Of the remaining 20 forms for which Cv cognates are available, two occur with both i and a: (152) qick, i-óqâ-qâ? older brother, (223) t(??)st, -ast projectile, qick and tqa? are both regular developments, not so -i(?)st and -ast. Six forms exhibit a, contiguous to y or w: (137) yal run, (141) s-ymâw Coyote (probably borrowed), (155) wâxâ wandance, (175) qâ-yâ black, (178) qâ-yâ plenty, (191) kâ? cross; one exhibits a following word-initial glottal stop (similarly to (102) tâm feed and (103) tâm sit), (146) tawt follow; one has i following initial glottal stop, (133) tîp wrote; four are irregular in Cv: (132) tâkap bucket, (149) sa?âm sibling-in-law, (199) tâ? next to, (208) xám foot. Two other Cv forms exhibit a regularly before back consonants, (131) sâxâppa? grandfather, (159) qua? grandbrother.
in reduplicated constructions. Finally, three Cr forms have either meta-
thesized *a? or they have inserted a glottal stop before the root
vowel, and while (200) wahi bark suffixes a reduplicated final vowel, (128)
koan follow has probably developed from an original disyllabic root.

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128. On koam Cr ci:lip On koan go along
150. q'a? c qic q'ac warn
194. pikw pikw pi:ax' shine
197. k'a? k'a? k'a?a(m) bite
200. wah wah wahi bark

F. Irregular correspondences. Cr (228) sq'a?w prairie chicken, (228)
ma? break, (230) q'a?w drunk confirm the fact that the Cr cognates have
developed irregularly. Cr (321) x'a?l:nk thornberry, (232) x'iy go, confirm
the fact that these items have undergone irregular developments, but it
isn't clear how, and in which language(s) the regular developments took
place. Cr (235) cOn-cam suggests that its pre-On and pre-Cr cognates
also had a pharyngeal; its presence would have prevented the *a? i shift
in Cr.

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4.2. *i. KS found the reflexes of *i to be (A) On i, Cr ei; (B) On
i, Cr i; (C) On i, Cr i, regularly. They list irregular, unexplained
correspondences in (D).

Sets (A) and (C) are in complementary distribution, (A) exemplifying
the reflexes of *i before back consonants and (B) elsewhere. Cr e could
be accounted for with a rule that inserts i to e before back consonants.
I will include (C) in (A).

A (and C). KS list a set of 61 correspondences On i, Cr i, e. Ex-
cept for Cr (246) k'aw greet, all other known Cr cognates have i: (236)
pik white, (238) liq bury, (241) ciq' skin, (242) x'os*?isga? robin,
(243) pik' spit, (244) ciq' spark, (245) ?iy'sa? camas, (247) qolsplam
Kalispe, (248) ylnax'om chief, (256) si?i hide, (257) ciq' pinch, (250)
ulunin iron, (261) cix raw, (262) skil climb, (263) kit near, (264)c'it
corrugated, (265) pik boy, (266) x'it first, (267) k'it fles, (268) ?istik
winter, (269) pikw* disgust, (270) kic arrive, (271) k'ic find, (272)
The Ov cognates and the Cr vowels point to proto forms with pharyngeals in them. These were lost in On leaving no trace; they were lost in Cr leaving the "darkened" vowels as trace; and were retained in Ov along with *a which developed irregularly to a. The explanation for the Cr retention of *a as a might be that both snas and pfas look as if they contained the suffix -us / -us face (and they might have at one time), and like those forms that exhibit pharyngeal displacement, retained -as.

4.3. *a. KS found the reflexes of *a to be (A) On u, Cr ø before back consonants (4 etymologies), and (B) On u, Cr ø regularly (69 etymologies). They list irregular, unexplained correspondences in (C). Sets (A) and (B) are complementary in the same way as sets (A) and (C) of the reflexes of *a. The Cr evidence confirms KS's reconstruction while it shows some peculiar developments in Ov. Regularly *a, Ov u, thus: (334) h*k'up win, (355) *x'up weak, (336) lup dry, (337) molqup asgle, (338) tígo spider, (339) tóapu? great-grandparent/child, (341) òun brown, (344) sun sniff, (347) x'upit nine, (348) lut no, (350) x'ut rock, (351) x'ut badder, (353) mus feel, (356) mus four, (358) k'kus frisky, (361) ?a'tusa egg, (362) pus cat, (364) ssíuscon narrow, (365) chísum hail, (366) x'us foam, (370) spú?us heart, (371) q'uc fat, (372) ñuc mare, (375) xul dip, (376) sul freeze, (377) k'ut lend, (379) xüátca muile deer, (380) òul gopher, (382) scúus bull, (383) q'ut dust, (384) suxyní white man, (385) puí wrinkled, (387) ?uk' bring, (389) suk'd drift, (390) puux blow, (391) su?x know, (393) xüán foot, (397) lapa?yo bottle, (398) -lup place, (399) -uus tail, (400) -us face, (401) -ilax ground.

A significant number of forms show Ov a corresponding to On u, Cr ø (and ø), as well as to On u, Cr a. Spokan cognates are added in an attempt to understand better the developments involved.

332. nux'nux Mux'nux nax'hox' nax'hox' wife
342. tun tun tum, tunnum suck
346. kaw ñaw ñaw gone
354. pu'pu'sak pusuxë pa'pa'sak pusúxë sad
356. matus matus ñfas mtoos kidney
381. macúlt macúlt ñq'alt mott pus
388. yu'yu'k'ul du'k'ul más'k'ul yó'yu'k'ul stingy
395. con pu? ca? ca? hit

The Sp(akan) evidence divides the examples of this set into two subsets, one characterized by the Sp reflex ø, the other u. The two Ov items (363, 381) that contain a pharyngeal, although not analyzable synchronically, point to complex forms underlain by pharyngeal roots *mWÇ and *mWÇ respectively. The shifted pharyngeals are preserved in Ov, and the original vowels assimilated. The development of the Sp forms parallels that of Ov, with subsequent loss of pharyngeals and "darkening" of the vowels.

Two other sets of cognates,

403. cúyx ?oyx ñayya? nyoye' crawfish
differ from the others just discussed in the Cr reflex a, and any hypothesis that explains the reflexes of two languages leaves the other two unaccounted for.

All Cr members of the subset of correspondences characterized by the Sp reflex ø, have unexplained a. Two of these forms are reduplicated, complex forms (354, 388), and a third one (395) exists alongside the synonymous ci?, suggesting that the Ov root has been reformed, as if it were an ablaut pair.

In addition we must note the peculiar incongruence between the rounded consonants and their plain counterparts (Cr unrounded ø, Ov rounded ø in 332) opposite the case of (33) On s'axat (unrounded ø) Cr x'at'at (rounded ø), duck.

Several other items need individual comments.

405. On sc?cumus Cr sc?cumits Ov sc'cumus Sp sc'cumit boil
407. pu? sps pa?sp (p?us?) (p?us) thought
408. spucut spucut spucut sore
410. hoy hoy hoy [hoy] finish
Sp 405 is irregular, while the other three languages show reflexes which parallel the development exemplified in 363, 381; Cv (407) s-pu?ús is almost certainly related to pa?pe?sink (cf 354, similarly Sp 407), and be-speaks the difficulty of comparing complex forms in related languages without a reconstruction of the derivational processes of each language; Cr 408 must be an irregular development which shows no trace of the factors that might have conditioned the Cr and Sp reflexes; similarly Cv 410. However, I must add that Cv [hey] is pronounced with a singularly low vowel, which I have considered a variant of u in this form. The form in isolation is used as an interjection, with high frequency of occurrence, but also undergoes regular inflection and derivation in (usually) transitive constructions. [hey] exists alongside x'uy, from which I distinguish best by noticing the rounding of the initial consonant in x'uy and its conspicuous absence in [hey].

4.4. *où. KS found the reflexes of *où to be (A) On i, Cr e; (B) On a, Cr a; (C) On u, Cr u, (D) On u, Cr e; (E) On a, Cr a; and regularly (F) On o, Cr e. Irregular correspondences are discussed in (G).

A. On i, Cr . Three of the 13 pairs in this group are disyllabic with initial stress. Two Cv forms have shifted the stress to the final syllable and have lost the reflex of *où: (416) ʔiʔ? canoe, (418) siʔʔ? grass; the third, (424) sʔʔiʔ? skin has retained initial stress and unstressed i corresponding to On i, Cr e. These correspondences parallel (320) On ʔis, Cr ʔište? unhank, and (321) On ʔaʔiʔ, Cr sʔʔiʔiʔi? thornberry, and here again, I think it’s the unclear morphology of these stems that precludes a firm understanding of the origin of the vowels. Of the remaining etymologies 6 lack Cv cognates; a pharyngeal has inexplicably intruded in (415) ʔiʔʔe black; two forms have i: (421) miy know, and (425) wiʔ? finish; and the last a: (426) ʔayʔ write. Cv wiʔ occurs mostly in compounds, for example wiʔ? sʔʔaʔʔ? -it-s- on I'm done showing you, kon wiʔ? sʔʔaʔʔiʔ-iʔ- on I'm done harvesting, rarely in complex forms like wiʔ? -ciʔ finish eating (with lexical suffix), more rarely in simple transitive forms like wiʔ? -st-ip you finish it, but not in simple intransitive forms (unless way, as in k-s-wiʔʔ-ʔaʔ he's going to finish is the a-grade of the same root).

mii (strong root) exists alongside miy (weak root): c-miʔ-st-s (-c-miʔ-st-is) he's sure of it, c-miʔ-st-is (-c-miʔ-st-is) he knows it.

B. On a, Cr a, (Cv a). Of the 28 examples listed here, 21 represent reflexes of *où before back consonant. Available Cv cognates corroborate KS's reconstructions: (429) ʔar cut, (430) ʔar swim, (435) yarkʔ curved, (437) ʔar kiʔk, (439) ʔaq liʔe, (440) ʔaq set, (445) ʔaqʔ alap, (453) ʔaq fast, (454) ʔaq smart, (460) ʔaqʔ instruct, (468) ʔalq point, (456) ʔaʔap shake, (465) ʔaʔaʔ escape (the last two with metathesis). Other Cv roots that belong with this group are weak and have not been recorded stressed, leaving the vowels unattested. In addition, still in this group, three items, disyllabic in On and Cr, are monosyllabic in Cv (the Cv reflex of the vowel in question has been lost): (432) On ʔorís, Cr ʔałlús, Cv ʔiris kingfisher, (433) ʔarʔám, ʔarím, ʔarim doctor; 448. sqʔʔaqʔosaʔaʔ, sʔʔasʔaqʔeseʔaʔ, sqʔʔisʔiʔ. Seven other pairs have On o, Cr a, for “indeterminate reasons.” As KS suggest, every available Cv cognate is a pharyngeal root, thus seemingly explaining these reflexes: (469) ʔaʔap gnaw, (473) spʔaac squirt, (474) ʔaʔam gentle, (475) mʔal (also mʔal) warm. Note, however, that the pharyngeal is pre-vocalic, and these purported developments of *où would not parallel those of *a. Schematically,

\[ *\text{to} \quad \text{On o} \quad \text{Cr a} \quad \text{Cv a} \]
\[ *\text{a} \quad (\text{a}) \text{a} \quad i \quad \text{vi} \]
\[ *\text{af} \quad a(\text{a}) \quad a \quad a? \]

C,D. On u, Cr a / e. A total of 8 examples comprise these two sets. Although some labial or labialized consonants is in each of these forms, the correspondences are not systematic, and the available Cv evidence is insufficient to clarify the relationships that hold between these pairs: (478) sqʔʔatʔaqʔuʔ pile, (482) xʔaʔuʔ clean.

E. On a, Cr a. The Cv root that corresponds to the single etymology of this category exhibits ablaut, (484) pin, pas white.

F. On o, Cr e. This set exemplifies the regular reflexes of *où. Of the 63 Cr cognates available, a few have never been found stressed, hence their vowel is unattested: the large majority indicate that *où regularly became Cv a, and others point to special developments of several
types. The Cv forms with the (unstressed) o / ø reflex of KS's reconstructed *o₁ are: (488) lón surface, (506) xé surround, (506) ká cut, (509) qₐ scratch, (525) xné tie, (528) yá bridge, (531) sol-p turn, (568) plak-w one, *o₁, Cv a in the following: (492) turn melt, (498) wap thick growth, (499) can small, (500) ká'm take, (504) xta care, (507) cae finish, (508) fast bud, (510) ɑ̃pí? long time, (511) fast good, (514) ɑ̃ be, (516) pack leaf, (517) tat ɑ, (523) xal stand, (532) xlék turn, (533) x'ul live, (539) xal break, (540) plak turn, (543) k'al warm, (546) plak thick, (547) tæ straight, (548) stabem boat, (557) lak tie, (559) tax sweet, (560) xran (?) follow, (566) lk'â far, (572) xap (?),hole, (573) tax' sew, (574) lax' kill.

Finally, several comments need to be made about the remaining Cv cognates: five of these exist in pairs with i - a ablaut; 6 exhibit i; 3 others u; and the rest are not directly comparable. The ablaut pairs do not shed light on the development of *o₁, but of course need to be studied in Cv. Metathesis of C₂ with V accompanies three of the a-grade forms (pointing to i -a): (527) milk, milk whole, (531) slip, slay turn, (550) xii, xla level, (551) k-xi', k'-la take out, (570) tax', tax' obtain. The six forms with i do not necessarily indicate an irregular development of *o₁ in Cv, but more needs to be known about the stress properties of each and of its cognates: (485) x'in spread, (487) qvi stitch, (497) q'il-m sing, (501) ɑ̃ dark, (524) pa'pin fold, (542) tæ tear.

Three Cv forms have irregular u, before a rounded consonant in each case: (564) cuk' pull, (569) cuk' stiff, (569) pun' blow (cf Cv 566, 572, 573, 574 where *o₁ Cv a in a similar environment). The other available Cv cognates match unstressed o in Cv, which corresponds to O (or epenthetic o) in Cv: (494) spil'm bitterroot, (495) xam enemy, (496) tæm easy, (522) xdit road.

6. KS list 16 examples of irregular, unexplained correspondences. The available Cv cognates do not corroborate KS's hypothesis that these reflexes go back to *o₁: one is an ablaut pair, (577) xin, xil turn; two have a, (575) ɑ̃m clear, (578) cae cold; and four 1: (576) x'il first, (579) xtok'ip willowberry, (582) x'ul fit, (583) x'ul'ix' fox. Too many Cv forms with i derive from proto-forms reconstructed by KS with *o, and this requires further study.

4.5. *o₂ (probably epenthetic). Cv rules of epenthesis given in 2 above will not shed any light on the rules of epenthesis of PEIS until similar synchronic rules have been formulated for the other languages of the interior. Consequently no discussion of Cv o is relevant in this context.

5. Conclusions. Evidence from Cv data explains irregular developments in Cr and/or Cr in all those cases where the original ? has been retained in Cv, but not in one or both of the other languages. Further internal evidence (in Cr and Cr) should explain what caused the retention or loss of the original pharyngeal. Otherwise the Cv evidence confirms KS's reconstructions except for the details pointed out in this paper. The sources of the Cv vowels are: a *a, *u; u *u; i *a, *i; best mapped as follows:

```
<table>
<thead>
<tr>
<th>o₁</th>
<th>a</th>
<th>i</th>
<th>u</th>
</tr>
</thead>
<tbody>
<tr>
<td>o₂</td>
<td>a</td>
<td>i</td>
<td>u</td>
</tr>
</tbody>
</table>
```

An approximate count of the frequency of IS vowels, perhaps of typological interest, is mapped thus:

```
<table>
<thead>
<tr>
<th>PEIS</th>
<th>Cr</th>
<th>Cv</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>42%</td>
<td>42%</td>
</tr>
<tr>
<td>e</td>
<td>34%</td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>14%</td>
<td>16%</td>
</tr>
<tr>
<td>o</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>u</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>30%</td>
<td>28%</td>
<td></td>
</tr>
</tbody>
</table>
```

In Cv, and probably in the other IS languages, the most pressing need is for the internal reconstruction of the ablaut system. Of special interest in Cv is the metathesis characteristic of one item of the ablaut pair.
Notes

1Kinkade, M. Dale and Clarence Sloat. Proto-Eastern Interior Salish Vowels." IJAL 38, 26-48, 1972. My paper is meant to be read with this article at hand.

2'Back' consonants are r, uvulars and pharyngeals.


4Strong suffixes are stressed. See the immediately following paragraph in the text for further discussion of stress and morpheme weight.

5Spokan forms are taken from Barry F. Carlson's unpublished Spokan Dictionary.

Spokane -e-

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0. Introduction
1. The Spokane Word
2. Repetitive Infixation -- Suffix Stressed Forms
3. Repetitive Infixation -- Root Stressed Forms
4. Conclusion

Appendix A -- Suffix Stressed Repetitive Forms
Appendix B -- Root Stressed Repetitive Forms