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0. In this paper I describe the circumstances under which a Colville word has, in addition to a stressed full vowel (i, a, u), another, unstressed full vowel. Such unstressed full vowels are found consistently, obligatorily, and only in their full grade, in (a) borrowings; (b) in about thirty affixes; and (c) in compounds. Other unstressed full vowels are the syllabic (phonotactic) realization or the (morphophonemic) consequence of consonants. Remaining unstressed vowels are unexplained in morphologically unanalyzable words.

1.1. Colville has borrowed a number of words from French. Disyllabic French sequences of article plus word are borrowed in Colville in their syllabic integrity and with final stress. Thus Lapal 'shovel', Laprit 'bridle', Lasmis 'shirt', Latap 'table', Lawan 'oats', Laki 'key' reflect Fr lapal, laprit, lasmis, latap, lawan, lakí. Cv Lipul 'hen' reflects Fr lapul with Fr a adapted to Cv i, probably owing to the form of the Fr plural lepul, and Cv lipwa 'peas' also reflects a plural form lepwa. A
similar explanation is not necessary to account for Cv likôk 'rooster' (o
is a marginal phoneme) from Fr 1akôk because Fr œ = Cv i is not unusual
(cf. litî 'tea' Fr lötë, with infrequent/improbable plural form). I need
only point out that Cv *1okôk is not allowed, and the only possible vowel-
less alternative would be the non-occurring lkok.

Trisyllabic Fr sequences of article plus word are borrowed as syllabic
plus disyllabic form; thus lkapî 'coffee', lkasât '(money) trunk', lqalât
'biscuits', reflect Fr lêkafr, lakasët, and lagalët; but there is at least
one exception to this pattern, Cv laputây Fr labutîl.

Other Fr words, mostly proper names, are borrowed di-or tri-syllabic, e.g.
supî 'Sophie' sořî, susâp 'Joseph' žśîf, yasukî 'Jesus Christ'
žśsykrî.

1.2. Borrowings from English are not as numerous as those from French.
Cv adaptations of Eng compounds, phrases and words retain stress as
in English: kutpâysëlîx 'they said good bye', k'îťåta 'quarter' capsûya 'chop suey',
utmîl 'oatmeal', kulfëm 'Cooley Dam'. rûspëltilëk 'Roosevelt Lake', except
for sultâs 'soldier', a form that cannot be assumed borrowed from French
because (1) it lacks the equivalent of the Fr article, and (2) it has a
final s for which there is no corresponding Fr phone.

2.1. Several Cv prefixes have an unstressed full vowel: (1) the possessives
i(n)- 'my' and a(n)- 'your sg.', e.g. i-k-s-cûn-ém 'I'm telling you',
an-kël-cût-(t)n 'your upbringing'; (2) the locative na- (the function and
form of which, contrasted with the common locative n-, is not entirely clear
to me), e.g. na-mût 'it sat there', na-tâ? 'on the other side'; (3) the
lexical prefixes pu- 'wife', qa?î- 'children', ti- 'deceased', e.g.
pu-yîmîx'ëm 'the chief's wife', qa?î-yîmîx'ëm 'the chief's children',
in-ti-qîck 'my deceased older brother'.

2.2.1. Monovocalic suffixes. (1) -a?x 'inchoative' (analyzable as the
diminutivized form of the progressive -x), e.g. k-s-wây-a?x 'he's going to
end it'. (2) -i? 'transitive pl. imperative', e.g. lâ-nt-i? 'get him!'.
(3) -i? 'past', e.g. lût-i? 'not yet, before'. (4) -wi? 'intransitive pl.
imperative', e.g. lîáp-wî? 'stop a minute!'. (5) -a?, of indeterminate
meaning, in a great number of forms, sometimes not clear if segmentable,
e.g. s-k-'îk-w-a? 'left (hand side)', kûtîx'-a? 'lice', pîn-a? 'basket',
qîpx'-a? 'nut', sîlx'-a? 'big', qmîl-a? 'greedy', sînc-a? 'younger brother',

cm ayp?
tup-a? 'great-grandfather', cayx-a? 'crayfish', kám-a? 'pine needle', sám-a?
'Frenchman', skáw-a? 'man's name', yánxw-a? 'basket', s-xáx-a? (?) 'man's
father-in-law', ikiklx-a? 'older sister', s-xúx-wy-a? 'ant', qá-qn-a?
'father's mother', pú-su-a? 'fish heart', t-qá-qc-a? 'older brother',
s-xp-xip-a? 'male black bear', c-Poy-pyáq-a? 'ripe berry', q"-qwis-a? 'little
pouch', s-túkW-a? 'wood turning to pitch', ccwíxm-a? 'creek', ká-kwap-a?
'dog', etc. (6) -ma?, of uncertain meaning, e.g. s-cúm-ma?-s 'their telling
them', k" i-s?úkW-ma?-m 'my leaving you'. (7) -as?st '?', e.g. s-c-k"úl-a?st-s
'he fixes arrows'. (8) -ská? '?', e.g. lut a-k-s-xúus-aska? 'don't get
anxious'.

2.2.2.1 Bivocalic suffixes. Strong (always stressed) bivocalic suffixes
occur regularly with two vowels, the first of which bears stress. (1) -útya?
'poor(ly done)', e.g. či-čh-útya? 'a poor bow and arrow'. (2) -ípna?
'lips', e.g. s-čč-ís-ípna? 'cigar'. (3) -sqáxá? 'animal, horse', e.g. s-čč-kí-ča?-sqáxá? 'horse'. (4) -ipas 'chin', e.g. ká-cy-ípa?s-ont 'hit him
on the chin'. (5) -áya? 'not real, pretend', e.g. ?at-čtx-áya? 'he
pretends to be asleep'. (6) -áyaqon 'top of head', e.g. c-s-čql-člx-áyaqon
'he has a night cap on'. (7) -úma? '?', e.g. k"o-čkW-yúma? 'small'. (8-9)
-áli?s, -íli?s 'related', e.g. k" i-s-tm-áli?s 'I'm your relative', sëncá?
c?-íli?s-c 'his little brothers'. (10) -ápustn 'loins' n-čqW-ápustn 'loin
cloth'. (11) -ípustxn 'step', e.g. náqs-íçpustxn 'takes one step'.
(12) -álq'wa? '?', e.g. k-č-álq'wa? 'Marcus (place name)'.

2.2.2.2. The unstressed vowel of weak bivocalic suffixes occurs only in
its full grade, and is never lost. The stress bearing vowel of the suffix,
on the other hand, occurs either in its full grade (stressed), or is lost,
when stress falls elsewhere on the word. Each suffix is exemplified with
and without its stress-bearing vowel: (1) -úlaxw 'ground', e.g., čokW-čkW-
úlaxw 'it fell on the ground', 1úkW-úlaxw 'dust'. (2) -ičca? 'meat, surface,
inside', e.g. qč-čičca?-n 'I pluck feathers', n-wík-čičca?-m 'he sees inside'.
(3) -ípla? 'handle', e.g. c-k-sí-ípla? 'she disappeared', t-xaˈq-pla?-ntxw
'you'll get paid'. (4) -ičca? 'cover', e.g. qčwsp-čičca? 'buffalo robe',
k-mús-čca? 'four packages'. (5) -ína? 'ear', e.g. n-wnxW-ína? 'he believed',
n-súxW-na? 'she understood'. (6) -iskit 'pharynx', e.g. n-yq-iskit-om 'he
jumped and groaned', k-s-čxwW-skit-a?x (phonetics uncertain) 'he's going
to rest'. 
2.3. The single infix with unstressed full vowel is -a?- 'diminutive/repetitive'. Although the semantic distance between 'diminutive' and 'repetitive' does not strike me as necessarily great, I am not yet able to identify their common denominator for a more appropriate label. Nor have I found convincing evidence to separate the 'diminutives' from the 'repetitives', and possibly other infixes. In any case, the infix is very common in C\textsubscript{v}, and cognates are sure to occur in other IS languages. Spokane -e- 'repetitive aspect', discussed by Carlson (1978: 72-90) is, to my knowledge, the only likely cognate identified to date. -a?- is found infixed in roots and in affixes, following, with one exception discussed below, all other derivation and inflection.

2.3.1. The rules that govern its affixation to roots are:

(1) immediately after \( C_1 \) of biconsonantal roots (with or without a vowel)

(2) immediately after the first consonant of a cluster in poly-(tri- or more) consonantal roots.

Examples follow.

(1) CC roots -- C-a?-C

\[
\begin{align*}
/\text{kt} & \quad \text{t-ka?t-ús-əm-s} & \text{he gets close to it} \\
/\text{mt} & \quad \text{mú-ma?t} & \text{sit a little} \\
/\text{pq} & \quad c-ən-pa?q-cín & \text{dawn} \\
/\text{s1} & \quad k-səl-sa?1-íca? & \text{dappled grey horse} \\
/\text{wl} & \quad ə-wa?1-íl-əm-s & \text{it puzzled him} \\
/\text{ws} & \quad ə-wa?s-núxə & \text{the sun was high} \\
/\text{xs} & \quad ə-xə?s-íls & \text{he felt good about it} \\
 & \quad ə-xa?s-íkst-m-ən & \text{I aimed at it} \\
 & \quad ə-xa?s-íws & \text{some good horses} \\
 & \quad ə-xa?s-ína?-m-s & \text{he enjoyed hearing it}
\end{align*}
\]

(2) Polyconsonantal roots -- C-a?-CC, CVC-a?-C, C-a?-CVC

\[
\begin{align*}
/\text{tk}'t & \quad ti-ta'k'ət & \text{little lake} \\
/\text{q}'st & \quad s-q'æst-ínk & \text{he pulled it from the stomach} \\
/\text{mt} & \quad s-ən-ŋima?t & \text{grandson} \\
/\text{xist} & \quad s-k-kəm-xisa?t & \text{little bear} \\
/\text{tp} & \quad tət-ła?təp & \text{he jumps up and down} \\
/\text{mŋk} & \quad s-ən-ma?nık-mən & \text{out house}
\end{align*}
\]

2.3.2. In cases where -a?- infixation is accompanied by some form of re-duplication that copies -a?-., there are two possibilities: (1) in words
where stress does not occur on the root, -a?- is inserted in the root according to the rules already given; however, intensive reduplication must be viewed as following -a?- infixation (as an exception to the norm given), copying C\textsubscript{1}a?- and producing forms like C\textsubscript{1}a?-C\textsubscript{1}a?C\textsubscript{2}(C\textsubscript{3})...
(2) if word stress occurs on the root, then (a) partial prefixing reduplication (C\textsubscript{1} of root) is followed by (b) -a?- infixation, with -a?- inserted in the C\textsubscript{1}C\textsubscript{1} cluster. Although these two processes are very common--and appear to be in complementary distribution--I cannot identify their function. All I can say is that this -a?- infixation, accompanied by these two types of reduplication, changes the meaning of the root in a special, non-predictable way.

2.3.2.1. C\textsubscript{1}a?-C\textsubscript{1}a?C\textsubscript{2}(C\textsubscript{3})... Examples:

- /px\^w\ n-pa?-pa?'x\^w-ús it shone in his eyes
- /ws\ n-wa?-wa?'s-xán his feet left the ground
- /k\^l\ c-ka?-ka?l-í?st he went slowly
- /ps\ pa?-pa?š-ínk he felt bad
- /cx\^m\ i-s-øn-ca?-ca?x\^m-s-čǐm I am weak boned
- /q\^l\ s-øn-q\^w-a?-q\^w-a?q-l-tán courthouse
- /q\^m\ q\^w-a?-q\^w-a?m-scút he practiced
- /i\^t\ t̕a?-t̕a?'t-x\^tán he got his feet wet
- /t\^k\ s-t̕a?-t̕a?'k-míx virgins

2.3.2.2. C\textsubscript{1}a?-C\textsubscript{1}(C\textsubscript{2})\^r... Examples:

- /kc\ k̕a?-k̕ic-ønt-s-øn I found you
- /k\^w\ n-k\^u-a?-k\^u-in-øm she picked some
- /pk\ s-c-pa?-pík boards
- /pn\ pa?-pín-ŋ I fold it severally
- /t\^m\ k-s-ta?-t̕im-a?q will go to strange places
- /wl\ wa?-wíl weaves from side to side
- /pt\ pa?-pút they look alike
- /q\^k\ c-q\^w-a?-q\^w-u-xøn-m-ølx they're having a race
- /plx\ s-øn-pa?-púlx-tŋ hotel
- /x\^?\ x̕a?-x̕á? he's great
- /yk\^w\ y̕a?-yāk\^w-a? he's stingy
- /my\ s-øc-ma?-mäy-a? student

2.3.3. The rules that govern the infixation of -a?- to suffixes follow:
(1) in necessary contradiction to its form, -a?- is added before single-consonant suffixes

(2) immediately after the first C of a cluster in all other suffixes.

Examples follow.

(1) -\( \text{C} \) -- -\( \text{a}?\)-C

\[ \text{-t} \quad \text{tıl-a}?\text{t} \quad \text{rain sprinkle} \]
\[ \text{c-cām-a}?\text{t} \quad \text{little} \]

(cf also -\( \text{a}?\)x 'inchoative')

(2) -\( \text{VC} \) -- -\( \text{VC} \)-\( \text{a}?\)-C

\[ \text{-alq}\text{w} \quad \text{tı-tq-āla}?\text{q}\text{w} \quad \text{short person} \]
\[ \text{-aqs} \quad \text{n-q-q=lxw-āqa}?\text{s} \quad \text{little trail} \]
\[ \text{-iłx}\text{w} \quad \text{c-qo-qc-ila}?\text{x}\text{w} \quad \text{little log house} \]
\[ \text{-ıws} \quad \text{kı-xo-xs-iwa}?\text{s} \quad \text{little field} \]
\[ \text{-ılp} \quad \text{s-tā-țk-ila}?\text{p} \quad \text{pillow} \]

(3) -\( \text{CVCC} \) -- -\( \text{CVCC} \)-\( \text{a}?\)-C

\[ \text{-aql}\text{w} \quad \text{s-p-qa}?\text{c-sāla}?\text{q}\text{w} \quad \text{new shoots} \]

(4) -\( \text{VC} \text{C} \) -- -\( \text{VC} \text{C} \)-\( \text{a}?\)-CC

\[ \text{-ikst, -akst} \quad \text{c-t-xom-m-u?s-āka}?\text{st} \quad \text{one in each hand} \]
\[ \text{-isxn} \quad \text{c-o-cm-ısa}?\text{xö}n \quad \text{a handful of small rocks} \]

(5) -\( \text{CVCCC} \) (further analyzable, but functioning as a unit) -- -\( \text{CVCC} \)-\( \text{a}?\)-CC

\[ \text{-qınxn} \quad \text{s-tun-qına}?\text{xö}n-s \quad \text{his little toe} \]

(6) -\( \text{CVCCCC} \) (further analyzable, but functioning as a unit) -- -\( \text{CVCC} \)-\( \text{a}?\)-CCC

\[ \text{-ıpıxn} \quad \text{c-cıam-cıpa}?\text{ıxn} \quad \text{sharp-heeled shoes} \]
\[ \text{-ıınxn} \quad \text{s-tun-qına}kst \quad \text{little finger} \]

There is only one apparent exception to these rules of infixation, s-\( \text{ınk}^{w} \)-\( \text{ınk}^{w} \)-aspına?tk 'yearlings' in which -(i)ntk behaves as though it were a unit suffix. The etymology of the form suggests a root /pn and a suffix -tk.

2.4. -\( \text{a}?\)-, never bearing stress, connects stems in a few compounds. How it differs from -\( \text{i}?\)-, the other compound connecting morpheme, is unclear to me. The topic of compounding deserves separate treatment, and in this context I can only give a couple of examples: a-s-\( \text{k}^{w} \)-\( \text{a}?\)-x'ılp 'a place made for you to lie down', n-\( \text{ın} \)-\( \text{ın} \)-a?\-s-qılx-'tң 'man-eater'.

3.1. Unstressed i is the syllabic realization of interconsonantal or word-initial preconsonantal y, and u of w. Likewise i\( \rightarrow \) y and u\( \rightarrow \) w. Examples follow.
they make noise
I finish it
chief
fringed chaps
he washed his eyes

Note that the stressed "real" vowels of /ylmxw/ and /wnxw/ disappear when stress moves away from them, while the "false" vowels (x and w) are realized as vowels: s-/ilmxw-ílxw 'chief's house', n-/wnxw-ína? 'he believed it'.

3.2. Syllabic n (i). Interconsonantal suffixal n (not root or prefixal) syllabifies to i before s or l. Carlson has discussed the homologous phenomenon in Sp (1976:133-9). I am not sure of the phonetics of certain Cv forms: does ? follow i, and therefore n i?? For example, -i{l}(9), n-íq-xlx-íki?-s 'he lay flat on her back'; -i{l}(9), n-sp-íli?-ím-á'n 'I club you pl'. (Note that in these -nt transitive forms where the person suffix is not stressed -nt 'transitive' is lost morphophonemically. Compare n-íq-xlx-ík(n)-nt-x' 'you lay flat on his back'.)

3.3. I find it useful, when discussing pharyngeal roots, to classify them into (1) biconsonantal roots with C1 = s; (2) biconsonantal roots with C2 = s; and (3) polyconsonantal roots with C2 = s most commonly. Weak (unstressed) roots of the first two types always retain a syllabic pharyngeal, but I am not sure whether there is a significant difference between s, a?, and ãa. Roots of the third type lose the pharyngeal to the suffix under the circumstances I described in another paper (1979:17-24). The problems with a definitive classification of pharyngeal roots stem from the difficulty in identifying the phonetic reality associated with them. Whereas I am reasonably sure that I hear /li{k}w/ 'fit' as [li{k}w], with /kaw 'greet' I vacillate between thinking I hear [kaw] and [ka{k}w]. In any case, aside from these phonetic indeterminacies, there is the problem of ascertaining the (underlying) vowel of all these roots without attested (stressed) vowel. The unrounded pharyngeals of these stressed roots syllabify as s = [sa{a}]. Thus we have the following forms:

(1) C1VC2 = ãaC2
we tied it up
fence
I melt it
Laryngeal roots, when stress is shifted away from them, do not lose their vowels, unless the laryngeal comes in contact with another (affixal) vowel. Similarly, root-initial ? coming in contact with a preceding c- 'actual' or k- 'resultive', combines with them to yield c and k respectively. Once the ? as such is lost, the vowel that might have followed it will be lost with the shift of stress to another part of the word. Thus, for example, ?axil 'act so', cxiil (c-?axil -- 1 ~ 1). Examples of laryngeal roots with retained (unstressed) vowels follow:
(1) ?VC(C), hVC(C)  
\[\begin{align*}  
?am-t-ín & \quad \text{I feed him} \\
?ay-m-īws & \quad \text{cross} \\
?awt-īp-ən & \quad \text{I follow it} \\
?āy-čw-t-īls & \quad \text{he's getting tired} \\
hā'a-m & \quad \text{he soaks a hide} \\
k^w i-s-ən-hi?-īls-əm & \quad \text{I suspect your feelings} \\
κən k-s-ha^w-mist-a?x & \quad \text{I'm going to get loose} \\
hū-hūy & \quad \text{OK} \\
\end{align*}\]

(2) CV?, CVh  
\[\begin{align*}  
κa?cən-mást & \quad \text{he talks dirty} \\
k^w u c-kət-ə?n-ist-îx^w & \quad \text{you're jealous of me} \\
ŋ-ma?-înə?-s & \quad \text{he disturbs her} \\
k-ca?-q nil-ənt-x^w & \quad \text{you hit him in the groin} \\
k-cah-hā-m & \quad \text{it'll fit} \\
wah-wahá-m & \quad \text{he was barking} \\
\end{align*}\]

In addition to the two patterns just exemplified (root initial and root-final), but rarely, laryngeals may be root medial -- all exhibiting similar behavior and retaining their contiguous vowel. Note, however, that any root-internal -a?- sequence is suspect of being infixed, as most actually are. Examples: ŋ-xa?mx^w-cin 'Moses language' (\(< */mx^w ?>); ƙl-ən-kahk^w-îp-s 'he opened it'.

5. Unexplained unstressed root vowels. In this section I can only list a few of the unanalyzable forms with unexplained unstressed vowels. My assumption is that further work of comparison and internal reconstruction will uncover etymologies that will point to the sources of these unstressed vowels.

(1) a  
\[\begin{align*}  
tammūs & \quad \text{(do) nothing} \\
k-ná-naqs & \quad \text{alone} \\
naqs-ľúp & \quad \text{one place} \\
k-s-cak^w-əm-scút-a?x & \quad \text{he's going to play hard to get} \\
ŋ-pan-u?x-(s)cút & \quad \text{bucking horse} \\
\end{align*}\]

(2) i  
\[\begin{align*}  
ilí? & \quad \text{there} \\
sipi? & \quad \text{hide} \\
\end{align*}\]
6. I conclude this descriptive survey of Cv full vowels with two remarks. Synchronically, it is possible, as I have tried to demonstrate, to account for all unstressed full vowels of Cv words as either given (present in the underlying representation of morphemes), or morphophonotactically derived. Diachronically I surmise that Cv laryngeals and pharyngeals have tended to assimilate their contiguous vowels -- whatever their (underlying) original value -- to homorganic [a]. Even though it might be tempting to explore the possibility that all Cv vowels are derivable from consonants (i from y, u from w, a from ʷ, h, ʷ), the attempt would almost certainly be fruitless. In the first place one would have to explain all Cv cases of i and u contiguous to laryngeal and pharyngeal consonants; and in the second place one would have to contend with the comparative evidence.
FOOTNOTES

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2 Always-unstressed vowels are more stable than vowels that may bear stress. What are their sources?

3 I have given examples of i, u, a contiguous to laryngeal and pharyngeal consonants--but I should note that a is far more common than either i or u in those positions.

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