# STRESS ASSIGNMENT IN MOSES-COLUMBIAN SALISH*

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As in other interior Salish languages, the placement of stress in Moses-Columbian words seems at first glance to be highly erratic and unpredictable. Contrasting pairs of words such as those in (1), which contain identical morphemes but differ in position of stress, clearly suggest that some Columbian words need to be lexically specified for stress:[1]

(1) a. kn wák$^{w}$mnct 'I hid'
wak$^{w}$mínct kn 'I perjured myself; I hid it inside me'
(kn 'I', √wak$^{w}$ 'hide', -min 'rel.', -cut 'refl.')
b. ǩ$^{w}$ísə̓t 'how many days'
ǩ$^{w}$ən'ásə̓t 'a few days'
(√ǩ$^{w}$in' 'how many', -asə̓t 'day')

Closer investigation reveals, however, that in a large majority of cases stress assignment, while complex, is in fact predictable, particularly in words which contain two or more suffixes, and that the lexical idiosyncrasy exemplified in (1) is confined to a small set of forms in which it appears that a root followed by a suffix functions as a lexicalized unit. It is the purpose of this paper to describe the system that underlies stress assignment in

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[1] The transcription system and abbreviations used in this paper are as follows:

| Consonants | labial | coronal | | | velar | | uvular | | pharyngeal | glottal |
|---|---|---|---|---|---|---|---|---|---|---|
| Stops & | p | t | c | | k | k$^{w}$ | q | q$^{w}$ | | ʔ |
| Affricates | p̓ | t̓ | c̓ | x̓' | k̓ | k̓$^{w}$ | q̓ | q̓$^{w}$ | | |
| Fricatives | | | s | ɬ | x | x$^{w}$ | χ | χ$^{w}$ | ħ ħ$^{w}$ | h |
| Resonants | m | n | r | y | l | w | | | ʕ ʕ$^{w}$ | |
| | m' | n' | r' | y' | l' | w' | | | ʕ' ʕ'$^{w}$ | |

Vowels i u a ə

x̓' = [ tl'] C' or C = glottalized consonant
ɬ = lateral (vls) fricative C$^{w}$ = labialized consonant
c = [tʃ] ç = [ts] V̓ = retracted vowel
s = [ʃ] ʂ = [s] l̓ = retracted l



Columbian. In particular, I suggest that Columbian stress is determined by the interaction of morphological stress features, cyclicity, and the rule of stress assignment given in (2):

(2) Columbian Stress Rule (CSR):
(i) Stress the rightmost accented syllable or, in the absence of accented syllables,
(ii) stress the rightmost syllable.

Earlier work on interior Salish languages by Kinkade (1973), Thompson and Thompson (1986), and others, has proposed that in these languages both roots and suffixes are divided into three classes for purposes of stress assignment: strong, variable, and weak, such that strong morphemes are always stressed except when followed by other strong morphemes, variable morphemes receive stress in some positions and not in others, and weak morphemes are never stressed. In Czaykowska-Higgins (1985) I attempted to conflate these three classes into two: strong and weak, such that weak included both the traditional variable and weak classes. In this paper I argue that there are two types of roots – which I now refer to as accented and unaccented – and in addition, that there are three types of suffixes: accented, and cyclic [+dominant] or [-dominant]. Accented morphemes correspond to those traditionally classified as strong; the other types include both the traditional variable and weak classes. The work presented here is still in progress, and therefore the stress-behaviour of some morphemes is not yet fully understood (see §4 in particular); nevertheless, their behaviour does not seem to contradict the basic claims which I make below.

It is interesting to note that the stress system found in Columbian is similar to those of various Indo-European languages. As analyzed in Melvold (1987), Kiparsky and Halle (1977), Kiparsky (1982), Halle and Mohanan (1985), and Halle and Vergnaud (1987a,b), the stress systems of Russian, Sanskrit, and Lithuanian, for example, all also involve the interaction of cyclicity, morphological stress features similar to those that I suggest are needed in Columbian, and one rule of stress assignment (the precise nature of the interaction of these three stress-determining factors varies from language to language). The primary difference between all the Indo-European languages and Columbian is that in the former stress is assigned to the leftmost stressable element,[2] whereas in the latter it is assigned to the rightmost stressable element.

I begin the paper with a brief introduction to the morphology of Columbian. Section 2 focusses on words containing one suffix and shows that it is necessary to assume the existence of accented morphemes in Columbian. In section 3 I turn to words containing two or more suffixes and provide evidence that the CSR given in (2) is regular and cyclic. I suggest that there is a class of morphemes, referred to as [+dominant] which cause the deletion of stress assigned on previous cycles and at the same time trigger application of the CSR. In this section I also discuss the nature of "accent." Section 4 presents a third type of suffix, [-dominant], whose primary characteristic is that of not causing stress-deletion.

[2] The Indo-European stress rule is referred to in the literature as the Basic Accentuation Principle (following Kiparsky and Halle 1977). Halle and Vergnaud (1987a,b), to take one example, formulate this rule as follows: Stress the leftmost accented vowel or, in the absence of accented vowels, the leftmost vowel.

## 1. Columbian Morphology

The basic template of a Columbian word is given in (3); only the Root is obligatory:

(3) PREFIX - √**ROOT** - PRIMARY - LEXICAL - IN/TRANS - CAUS - OBJ - SUBJ
AFFIX SUFFIX

While there may be several prefixes in a Columbian morphological word, none of the prefixes ever affects stress placement. For purposes of this paper prefixes will be considered to occur outside the domain of stress assignment, and will not be discussed further here[3]

The Primary Affixes consist of an infix and various suffixes which are always affixed directly to the root: **-ílx** 'autonomous', **-t** 'characteristic', and **-p/-ʔ-** 'inchoative'. The two variants of the inchoative are in complementary distribution (see Kinkade, this volume, for discussion).

Lexical Suffixes are bound morphemes with lexical referents (e.g., **-akst** 'hand', **-atkʷ** 'water', **-tn** 'instrument'). In general only one or two such suffixes occur in a word, but there do exist forms in which three or four are found. Lexical suffixes (LS) take on semantic roles such as theme or location in relation to the roots with which they cooccur; within individual words their meanings may be more abstract than the glosses might suggest. Columbian has over 90 lexical suffixes; more than 2000 forms containing lexical suffixes have been examined for this paper.

The Intransitive and Transitive markers referred to in this paper are as follows: **-m** 'middle', **-n** 'control', **-nun** 'success', **-min** 'relational', **-t** 'simple transitive', **-xit** 'redirective', **-tul** 'redirective', **-t** 'redirective', **-xix** 'indirective'. These morphemes may cooccur in various combinations; several of them may be followed by **-stu** 'causative', and all but **-m** must be followed by both an object and a subject suffix.[4] For discussion of the redirectives and of transitive inflection, see Kinkade (1980,1982).

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[3] Columbian has three basic types of reduplication: $C_1$-, $C_1VC_2$-, and $C_2$-reduplication (where $C_1$, $C_2$ refer to consonants in the root). $C_1$- and $C_2$-reduplication do not affect position of stress in a word; in the case of $C_1VC_2$-reduplication, stress sometimes falls on the reduplicated $C_1VC_2$-prefix, sometimes on the root, and sometimes on following suffixes. Details of the conditions under which stress falls on the $C_1VC_2$-prefix remain to be worked out.

[4] The object and subject suffixes are given below in both their stressed and unstressed variants. **-stu** 'causative' is followed by special variants of 1sg and 2sg object suffixes:

| | Object Suffixes | | Subject Suffixes |
|---|---|---|---|
| | non caus | caus | |
| 1sg | -sə(l)/ s(l) | -m | -nn |
| 2sg | -sí/s | -m | -x |
| 3sg | | | -s |
| 3 | ø | | |
| obv | -wə/u | | |
| 1pl | -əl/l | | -t |
| 2pl | -ulm/lm | | -p |
| 3pl | | | -s |





## 2. Accented Morphemes

Given the CSR in (2) one would expect that any form containing a combination of a root followed by one suffix would always be stressed on the suffix. And, in fact, as the examples below illustrate, in a large majority of the cases stress is indeed assigned to the suffix in accordance with the CSR:[5]

(4) a. ɬačč**álps** 'hitting on head'
(√ɬač- 'hit', **-álps** 'back part of neck')
b. cyər**ákst** 'coiled (snake)'
(c- 'asp.', √yər- 'round', **-akst** 'hand')
c. tər'q**áɬča**ʔ 'kick'
(√tər'q- 'kick' **-aɬča**ʔ 'body, side')
d. nuχʷ**áw's** 'ferryboat cable'
(√nuχʷ- 'ʔ', **-aw's** 'middle')
e. nʔiqɬkn t sqʷ**á**ʔc 'sunburned back'
(n- 'loc.' √ʔiq- 'burn' **-ɬkn** 'back')
f. q̓ʷ**ɬyús** 'Negro'
(√q̓ʷɬy- 'black' **-us** ' face')
g. suw'suw'**ílx** 'whisper'
(√suw'- 'whisper', **-ílx** 'autonomous')

There is a smaller number of forms, however, in which stress falls unexpectedly on the root. The examples in (5) contain the same suffixes as those in (4):[6]

(5) a. skč**í**wwlps 'horse-mane'
(s- 'nom.', k- 'loc.', √čiw- 'ʔ', **-alps** 'back part of neck')

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[5] Notice that in (5c), while stress is on the suffix, it is not on the rightmost syllable of the word. Suffixes that end in [əʔ] consistently do not get stressed on this syllable. In Czaykowska-Higgins (1985) I argued that the vowel [ə] in these final [əʔ] syllables is epenthetic and therefore absent at the point at which the stress rule applies ([ə] is certainly epenthetic in the suffix **-ul'axʷ** 'ground', which, if stressed, is always stressed on [u]). An alternative hypothesis, suggested to me by M. Dale Kinkade, is that [əʔ] is derived from [nʔ] (cf. Upper Chehalis which has an **-n'** suffix that functions like a nominalizer). Other suffixes with final [əʔ] are: **-ana**ʔ 'ear', **-aya**ʔ 'head', **-ɬča**ʔ 'skin', **-usa**ʔ 'egg', **-am'in'a**ʔ 'ʔ', **-awya**ʔ 'ʔ', **-iw'ly'a**ʔ 'ʔ', and **-utly'a**ʔ 'nom.' The final suffix in the list, **-utly'a**ʔ is always stressed only on its first vowel; the [ɬ] in this suffix is clearly epenthetic.

[6] In some of the examples below, in/transitive or inflectional affixes (given in parentheses) follow a Root+Suffix combination; for reasons to be discussed in §4 these affixes do not affect the placement of stress on the Root+Suffix combination and should be disregarded for the moment.

b. txátkstm 'he raised his hand'
(t- 'loc.', √xat- 'raise', -akst 'hand', -m 'middle')

c. natúmɬča? 'hollow tree or log'
(na- 'loc.', √tumt- 'rotten', -ałča? 'side, inside')

d. k̓ʷúp̓əp̓u?s 'bent over with cramp in back'
(√k̓ʷup̓- 'cramp', -aw's 'middle')[7]

e. namáʕʷkn 'he broke his back'
(na- 'loc.'√maʕʷ- 'break' -ikn 'back')

f. hún̓s 'pimples on face'
(√hun- 'rough, porous', -us 'face')

g. ɬáqəlx 'sit (sg.)'
(√ɬaq- 'sit' -ilx 'autonomous')

The roots in (5) which attract stress even when they are not in rightmost position in a word belong to the class of roots which Kinkade (1973) and other Salishanists have called strong. There are no surface characteristics which differentiate these types of roots from roots which do not take stress away from following suffixes. Thus, while it is generally true that stress-attracting roots contain full vowels (that is, [i], [u], or [a]) rather than [ə], whereas roots that do not attract stress contain [ə] or predictable vowels ([i] before /y/, [u] before [w], and [a] before back consonants), there are enough cases of stress-attracting roots with [ə] (6a,b), and in particular of normal roots with full vowels (4a,e & 6c,d) that one must assume that the property of attracting stress is an idiosyncratic property which is marked on each stress-attracting root.

(6) a. pélla?st xƛ̓'út 'flat rock'
(√pəl- 'flat', -a?st 'stone', xƛ̓'út 'rock')

b. čəʕʷčéʕʷkst 'cold hands'
(√čəʕʷ- '?', -akst 'hand')

c. haw'iyáltm 'give birth'
(√haw'y- 'make' -alt 'child' -m 'middle')

d. kp̓əsƛ̓'a?ána? 'big ears'
(k- 'loc.', √p̓isƛ̓'a?- 'big' -ana? 'ear')

[7] The unstressed variant of **-aw's** 'middle' is derived as a result of the deletion of the unstressed initial [a], and vocalization of glottalized [w'] into [u?]. Both vowel deletion and vocalization of glides are common processes in Columbian. Recall that $C_2$-reduplication does not affect stress placement (see footnote 3).





In recent work on stress systems there has been some discussion about how best to represent the property of being stress-attracting. Halle and Vergnaud (1987b), for instance, propose that in languages with stress-attracting morphemes, these morphemes are listed in the lexicon with stress assigned to them; in other words, these morphemes are represented with foot structure.[8] In contrast to Halle and Vergnaud (1987b), Hammond (1988) proposes that the property of being stress-attracting be represented not by lexically-assigned metrical structure, but rather by a diacritic mark, or accent which is "picked out" by the rule(s) of stress assignment. I provide evidence below (§ 3) that in Columbian stress-attraction must be marked by diacritic rather than by lexically-assigned foot structure. Stress-attracting morphemes are thus "accented" morphemes; accent is represented by the degree symbol '°'.

In addition to having accented roots, Columbian also has a small number of accented suffixes. Such suffixes are distinguished by the fact that when they cooccur with accented roots, they, and not the roots, receive stress. All the roots in (7) are accented, but stress nevertheless falls on the accented suffixes:

(7) a. kɬxarləwǻs(n) 'bib'
(kɬ- 'loc.', √xǻr- 'cover', -ələwǻs 'chest', -tn 'instr.';
**cf.** katxárkʷ 'thin layer (of scum) on water', kat- 'on', -atkʷ 'water')

b. kʷan'útiy'a? 'carry in hand'
(√kʷǻn- 'grab, carry', -ů́tiy'a? 'LS'; **cf.** kʷána?st 'pick up weapon', -a?st 'stone'; nakʷánkʷtn 'water bag', na- 'loc.', -atkʷ 'water', -tn 'instr.')

c. kasmaʕʷx̌ix(əms) swəl'wəl'mink 'ruin s.o.'s rifle'
(√mǻʕʷ- 'break', -x̌ix 'indirective', -ms 'infl,', **cf.** (5e))

d. kʷanx̌ix(mən) 'I took it away from someone'
(√kʷǻn- 'grab, carry', -x̌ix 'indirective', -mən 'infl.', **cf.** (7b))

e. k̓ɬ?aytúɬ(n) 'I brought s.t. to change back'
(k̓ɬ- 'loc.', √?ǻy- 'return', -tů́ɬ 'redir.', -n 'infl.';
**cf.** k̓ɬ?á́yxtn 'I returned it for him,' -xit 'redir.')

It is worth pointing out here that, while in all the examples in (7) the accented suffix is directly adjacent to the root, such suffixes in fact always receive stress in a word, regardless of how many morphemes precede or follow them:

(8) a. nɬql'xkn'útiy'a? 'ride bareback'
(n- 'loc.', √ɬǻq- 'sit', -ilx 'autonomous', -ikn 'back', -ů́tiy'a? '?')

[8] In their model, lexical foot structure is represented by assigning line 1 asterisks; see their work for details.

b. nə̓a?akstúɬcn 'I put it in your hand'
(n- 'loc.', √ə̓a? 'middle,' -akst 'hand', -tə̓ɬ 'redir.', -t 'trans.', -sɨ '2sg.obj.' -n '1sg.subj.')

Recall that according to clause (1) of the CSR in (2) stress is assigned to the rightmost accented morpheme in a word. In words where only one morpheme is accented, stress obviously falls on that accented morpheme since it is vacuously the rightmost, accented morpheme in the word. In forms containing an accented suffix as well as an accented root, stress always falls on the suffix since it is always positioned to the right of the root. The CSR thus accounts for all forms containing one or more accented morphemes.

The two suffixes in (7a,b) are the only lexical suffixes that I am sure are accented; in addition to the transitivizers in (7) other accented affixes are **-wə́xʷ** 'reciprocal', **-wə́p** 'reciprocal', **-ə̓ɬ** '?', **-xə́x** 'redirective'. So far I have found no examples of words containing two or more accented suffixes.[9]

Before going on to discuss forms containing two or more suffixes, I shall comment briefly on lexicalized Root+Suffix combinations. There is a small number of words in the corpus under investigation in which stress is assigned to the "wrong" syllable. For example, in (1a) above, since **√wə́kʷ** is an accented root, one would expect stress to fall on it and not on the unaccented **-mɨn**. In **kn wə́kʷmnct** 'I hid' stress is thus assigned as expected, whereas in **wakʷmɨ́nct kn** 'I perjured myself; I hid it inside me' it is not. Given that **wə́kʷmn** means 'hide', while **wakʷmɨ́n** means 'hide inside, perjure', one can assume that the latter form has been lexicalized with stress on **-mɨn** in order to create a contrast in meaning between the two stems; stress is assigned by the interaction of the CSR and accent in the former case. Not all cases of "wrong" stress placement are the result of a semantic contrast; in the examples in (9) stress is not assigned as expected, but there are no contrasting forms containing these particular Root+Suffix combinations:

(9) a. snxərə́xən 'shield'
(s- 'nom.', n- 'loc.', √xə̓r- 'cover', -ax̣n 'upper arm'; **cf.** katxárkʷ 'thin layer (of scum) on water' (7a))
b. skatxə́n'lup 'rug, linoleum'
(s- 'nom.', kat- 'loc.', √xən'- 'cover', -lup 'floor'; **cf.** katxənqɨ́nn 'I cover closed box from top', -qɨn 'top', -n 'infl.')

Examples such as (9a) and (9b) must also be considered lexicalized stems. In addition to such lexicalized stems, Columbian has a few lexicalized combinations of lexical suffixes (see §4).

[9] Kinkade (1973) and Czaykowska-Higgins (1985) assume that **-nun** 'success' is a strong (i.e., accented) suffix. While it is true that it is stressed in all examples in which it occurs, I have found no examples which show unambiguously that it is an accented suffix; rather, in every case the fact that stress falls on **-nun** could be explained by assuming that it is a cyclic [+dominant] affix (see below). The status of this suffix thus requires further investigation.





### 3. [+Dominant] Morphemes

In Root+Suffix combinations stress falls on the root or on the suffix, depending on the accentual properties of the two morphemes or on the lexicalized status of the combination. When another one (or more) suffix(es) is added on to a Root+Suffix combination, there are two possible outcomes: either stress shifts to the right from the Root+Suffix combination onto the newly added suffix, or it remains in place. Whether or not stress shifts rightward as a result of suffixation depends on the properties of the morpheme being suffixed. This section focusses on suffixes which trigger stress-shift.

Consider the following forms:[10]

(10) a. nə̓ɬy'ə́tkʷ(tn) 'washtub'
b. nə̓ɬy'atkʷə́lqs(n) 'washtub'
(n- 'loc.', √ə̓ɬy'- 'wash', -atkʷ 'water', -alqs 'clothes' -tn 'instr.')
(11) a. xʷɨ́rkst(m) 'reach out'
b. xʷɨrkstə́tkʷ 'reach into water'[11]
(√xʷɨ́r- 'reach', -akst 'hand' , -atkʷ 'water', -m 'middle')

(10b) and (11b) show that affixation of a second lexical suffix to a stem containing a root and one lexical suffix causes stress to shift to the right, regardless of whether the root is accented. Thus in (11b) even though the root is accented, stress falls on the second lexical suffix, just as it does in (10b), a form with an unaccented root. This shifting of stress to the right is a completely regular process. (12)-(19) provide additional examples of stress-shift in forms with both unaccented and accented roots:

[10] The reader will notice that some suffixes seem to lose their vowels when they are unstressed, whereas others do not. Only unstressed vowels can be deleted; but there are other factors which seem to govern vowel deletion. For instance, all lexical suffixes (except **-ə?st** 'stone') lose their underlying vowel when they occur in Root+Suffix combinations in which the root is accented and therefore stressed. However, some unstressed lexical suffixes, when followed by another, stressed, lexical suffix, like **-atkʷ** in (10), seem to retain their vowels, whereas other lexical suffixes in the same environment do not. Vowel-retaining suffixes are **-ə?st** 'stone', **-akst** 'hand' (the form **xʷɨrkstə́tkʷ** from (11) is the only exception), **-alqʷ** 'tree', **-alqʷp** 'throat', **-ank** 'stomach', **-ap** 'bottom', **-atkʷ** 'water', **-atkʷp** 'fire'; vowel-deleting suffixes are **-atc'ə?** 'body', **-mɨx** 'people', **-ɨkn** 'back', **-qɨn** 'head', **-ups** 'buttocks', **-us** 'face', **-cɨn** 'mouth', **-mɨn** 'instrument'; **-awɨt** 'distant', **-awɨ's** 'middle' surface in both forms. Whether or not an unstressed vowel is deleted is probably linked to syllabification; this is a subject for future investigation.

[11] M. Dale Kinkade marks secondary stress on the root vowel of this form. It is unclear whether secondary stress is in fact assigned by rule in Columbian. In the corpus under investigation only about 2% of the forms have been transcribed with secondary stress and of those cases where secondary stress is transcribed few seem to follow any obvious pattern. It seems likely that, since unstressed full vowels in Columbian tend to be reduced or deleted, in those cases where for some reason neither reduction nor deletion has taken place these undeleted or unreduced vowels are perceived as having secondary stress, when, in fact, they are unstressed. I shall not consider secondary stress further here.

(12) a. kʷƛ'kʷƛ'pákst(ms) 'he dropped it'
b. nkʷƛ'pakstátkʷ(n) 'drop s.t. into water'
(n- 'loc.', √kʷƛ'- 'drop', -p 'inch.', -akst 'hand', -atkʷ 'water' , -n, -ms 'infl.')

(13) a. snx̌əmqín 'roof'
b. nx̌əmqnáɬxʷ 'ceiling'
(n- 'loc.', √x̌əm- 'surface of', -qín 'top, head', -aɬxʷ 'house')

(14) a. sčṣą̓ʔṣt 'gravel'
b. čṣą̓ʔṣtíkn 'Arbuckle Mountain (gravel back)'
(s- nom.', √čṣ- 'gravel', -aʔst 'stone', -íkn 'back')

(15) a. yapkʷánks(n) 'grab s.o. by arm'
b. kɬkʷəncnáks(n) 'grab s.o. by wrist'
c. tkʷənɬčaʔwɬíl(n) 'I grabbed side of it (box)'
(yap- 'asp.', kɬ-, t- 'loc.', √kʷə̓n- 'grab', -akst 'arm', -cín 'front', -aɬčaʔ 'side,' -wil 'container', -n 'infl.')

(16) a. naqʷáykʷ(tn) 'bluing'
b. qʷayapáʔst 'Camp Gilbert'
(na- 'loc.', √qʷə̓y- 'blue', -ap 'bottom', -atkʷ 'water', -aʔst 'stone', -tn 'instr.')

(17) a. wənɬíl'x(sn) 'lower s.t.'
b. nwənɬxátkʷ 'sink in water'
(n- 'loc.', √wən- 'go down', -ílx 'aut.', -atkʷ 'water', -sn 'infl.')

(18) a. tx̌ɬwəl'x 'go upstairs'
b. tx̌əwɬxálqʷ 'climb a tree'
c. nx̌əwɬxánk 'climb a bluff'
(t-, n- 'loc.', √x̌ɬw- 'climb', -ílx 'aut.', -alqʷ 'tree', -ank 'flat')

(19) a. ɬáqəlx 'sit (sg)'
b. ɬqəlxcín 'sit on river edge'
c. ɬqəlxcnátkʷ 'sit on river edge'
(√ɬə̓q- 'sit', -ílx 'aut.', -cín 'edge', -atkʷ 'water')

In all of the above examples, we find two lexical suffixes, or one primary affix and one or more lexical suffixes. In every case, affixation of the second or third suffix causes stress to shift rightwards. This kind of "layering" indicates that the CSR must apply cyclically; in other





words, it must apply every time a new suffix is affixed.[12] Furthermore, the fact that stress is assigned to the rightmost suffix on a particular cycle, regardless of where it was assigned on previous cycles, indicates that suffixes which trigger cyclic application of the stress rule must delete all previously assigned metrical structure before the CSR can apply. Following Halle and Vergnaud (1987a,b) and others, I refer to suffixes which delete previously assigned stress as [+dominant]. In §4 we shall see examples of suffixes which trigger cyclic application of the CSR but do not delete previously assigned stress.

The observation that stress shifts consistently rightwards with the affixation of a second suffix (i.e., on the third cycle) can be used to explain a fact that has puzzled Salishanists for many years; namely, why infixation of the 'inchoative' allomorph **-ʔ-** seems to cause a strong or accented root to function as if it were unaccented (see Thompson and Thompson 1986; Kinkade, this volume). As Kinkade shows, although **-ʔ-** may be infixed into roots which in non-inchoative forms function as accented, all roots containing the **-ʔ-** infix always lose stress to a following suffix:

(20) a. naxʷúskʷ 'beer'
b. katxʷuʔsátkʷ 'foam'
c. nxʷuʔxʷuʔscín 'animal with foam around mouth'
(na-, kat- 'loc.', √xʷús- 'foam', -atkʷ 'water', -cín 'mouth')
d. kʷə́l-s 'ruddy complexion'
e. kʷaʔl-ús 'face turns red'
(√kʷə́l- 'red', -us 'face')

If we assume that infixation of **-ʔ-** constitutes the second cycle of affixation, then an additional suffix added onto an inchoative form will always constitute the third cycle, and, if this suffix is [+dominant], will cause stress to shift rightwards onto it, just as in those cases where the second cycle is created by affixation of **-ílx** 'autonomous', or of a lexical suffix. The other allomorph of the 'inchoative', **-p**, and another mono-consonantal primary affix, **-t** 'characteristic' ,function just like **-ʔ-** with respect to stress assignment. As the following examples illustrate, a form containing **-p** or **-t** is never stressed on the root if there are additional lexical suffixes following (but see §4):

(21) a. yaʕ'páp 'constipated'
(√yaʕ'- 'ʔ', -p 'inch.', -ap 'bottom')
b. səlpqín 'dizzy'
(√səl- 'round', -p 'inch.', -qin 'head')

[12] Cyclic assignment of stress rules is, of course, not unusual in languages of the world; in English, for instance, there is one class of affixes that behaves exactly like these Columbian suffixes (cf. grámmar , grammátical, grammaticálity; párent, paréntal; nátional, nationálity).

c. nwəntátkʷ 'deep water'
(n- 'loc.', √wən- 'low, deep', -t 'char.', -atkʷ 'water')
d. nɬəx̌ʷtúl'əxʷ 'dried up lake'
(n- 'loc.', √ɬix̌ʷ- 'dry', -t 'char.', -ul'əxʷ 'ground', cf., naɬɬx̌ʷl'əxʷ 'cracked earth')

The [+dominant] class of suffixes includes most of the lexical suffixes, the primary affixes, and **-cut** 'reflexive'.[13] (22) provides a derivation beginning with cycle 2 of (11b) to illustrate the cyclic application of the CSR in combination with the stress-deleting properties of the [+dominant] morphemes (SDEL refers to stress deletion; +D to the property of dominance):

(22) [xʷíɬr+akst] → CSR → [xʷíɬr+akst] → [xʷírakst+atkʷ] → SDEL →
+D +D
[xʷirakst+atkʷ] → CSR → [xʷirakst+átkʷ] → **xʷirkstátkʷ**

According to the derivation in (22), on Cycle 2, the lexical suffix **-akst** 'hand' is not assigned stress by the CSR because the root **√xʷíɬr-** 'reach' is accented. **-akst**, however, is a [+dominant] morpheme; this is clear from forms such as (15b) **kɬkʷəncnáks(n)** /kɬ+kʷǎn+cin+akst+n/ 'grab s.o. by wrist' in which **-akst** causes stress to shift rightwards from the accented root onto it. A comparison of (11b) and (15b) raises the following question: if **-akst** is indeed a [+dominant] and therefore stress-deleting morpheme, why is stress assigned to an accented root when such a root is directly followed by this [+dominant] suffix? The fact that on Cycle 2, an accented root consistently receives stress over a [+dominant] suffix, whereas on Cycle 3 a [+dominant] suffix consistently causes stress to shift rightwards from the root requires explanation. The explanation suggested below is based on two assumptions.

First, it is assumed in Halle and Vergnaud (1987a,b) for languages such as Russian and Sanskrit in which morphological stress properties must be marked in underlying representations, that cyclic application of stress rules is blocked from applying on the first cycle (blocking is accomplished by the Strict Cycle Condition; see Halle and Vergnaud 1987a,b for details). In other words, Halle and Vergnaud assume that in such languages the rule(s) assigning stress cannot apply until Cycle 2 and the affixation of new morphological material. Since Columbian has morphological stress properties similar to those found in Russian and Sanskrit, one can assume that the same type of condition applies in the case of the CSR. This brings us to the second assumption, one concerning the representation of accent in the language. In §2 I mentioned two possible views about how accent should be represented: the

[13] Although in many words **-cut** functions as if it were [+dominant] (e.g., **ɬəmkəncút** 'I cut myself on the hand'; **√ɬəm-** 'cut', **-akst** 'hand' **-n** 'infl.', **-cut** 'refl.'), there is also a large number of forms in which it is unstressed (e.g., **ɬix̌ʷmnct** 'dry up and crack'; **√ɬix̌ʷ-** 'dry' , **-min** 'relational', **-cut** 'refl.'). This variable behaviour of **-cut** suggests that this morpheme has two allomorphs, one which is [+dominant] and one which is [-dominant]. The conditions under which the two different forms of the reflexive are found remain to be determined.





first, proposed by Halle and Vergnaud (1987a,b), is that accented morphemes are lexically stressed in underlying representation, and thus enter the phonology bearing metrical structure; the other, proposed in Hammond (1988), is that accent is a diacritic property of morphemes. In order to account for the stress facts of Columbian it is necessary to assume that the latter view, that accent is a diacritic, is the correct one. If we assumed the former view, then on Cycle 2 an accented root would already have stress assigned to it. Upon affixation of a [+dominant] suffix, this stress would have to be deleted, given that [+dominant] suffixes are stress-deleting; then the CSR would apply and stress would be assigned to the rightmost suffix vowel. Such a derivation of (11a) **xʷírkst** 'reach' is given in (23) where it is assumed that accent is represented as underlying stress:

(23) [xʷíɬr] → [xʷíɬr+akst] → SDEL → [xʷɬr+akst] → CSR → [xʷɬr+ákst] → *xʷɬrákst
+D

As the derivation in (23) shows, if [+dominant] morphemes like **-akst** are stress-deleting, and if accent is represented as underlying stress, then on Cycle 2 these morphemes should always delete the underlying stress of an accented root; such Root+Suffix combinations should thus always be stressed on the suffix by the CSR. But as we know, accented roots and not the [+dominant] suffixes in such combinations are stressed. To assume that accent is underlying stress causes us to derive incorrect forms. If we assume, however, that accent is a diacritic, correct forms are derived. If accent is a diacritic, then on Cycle 2 it is available to the CSR and serves to attract stress. The Root+dominant Suffix combination thus enters Cycle 3 with stress on the root. At this point, if the suffix on Cycle 3 is [+dominant], it will delete the stress assigned to the root on Cycle 2 (see (22)). But more important, the diacritic feature on the root will no longer "be visible" to the rule of stress assignment because it will be embedded and hence buried in an earlier cycle. Consequently, after stress deletion on Cycle 3, the CSR will assign stress to the rightmost stressable element in the word. By assuming that accent is a diacritic property of morphemes one can thus explain why on Cycle 3 all Root+Suffix stems are treated identically by [+dominant] morphemes, whether or not the root is accented: namely, in both types of cases on Cycle 3 only the stress assigned by the CSR on Cycle 2 (given in bold in (24)) is visible to stress-deletion and to the CSR on Cycle 3. Diacritic marks such as accent are no longer visible on Cycle 3 (I illustrate this in (24b) by placing the accent diacritic '•' under the root on Cycle 3):

(24) a. / b. /
[[nx̌ʷíy' atkʷ]+alqs] [[xʷir akst]+atkʷ]
(see (11a) above) •

Obviously, if the diacritic accent is not visible to the rules of stress assignment on Cycle 3, then it is also not visible on any subsequent cycles. This explains why it is only on Cycle 2 that accented roots receive stress, while on all later cycles stress shifts to the rightmost stressable element in the form.

To conclude, I have shown in this section that there is a class of [+dominant] morphemes which behave in the following ways: 1) when directly adjacent to the root they receive stress if the root is unaccented, and lose stress to the root if the root is accented; 2) when they are the second, third, or fourth suffix in the word, they always delete previously assigned stress and as the rightmost elements in the form themselves receive stress by the CSR.

### 4.0 [-Dominant] Morphemes

The behaviour of the [+dominant] morphemes must be contrasted with that of another set of morphemes. Morphemes from this second set behave similarly to the [+dominant] morphemes when directly adjacent to the root; namely, if the root to which they are adjacent is accented, it receives stress, if it is unaccented, the suffixes receive stress:

(25) a. sq̓íy'mîx 'school children'
(s- 'nom.', √q̓iy'- 'write', -mix 'people')
b. skîc?əxʷ 'Coeur d'Alenes'[14]
(s- 'nom.', √kîc- 'visit', -mix 'people')

(26) a. kashaw'w'imîx 'he's going to be born'
(kas- 'unrealized aspect', √haw'y- 'make', -mix 'imperfective')
b. kasǩîʕʷəxʷ 'he's going to pray'
(kas- 'unrd.', √ǩîʕʷ- 'pray', -mix 'impf.')

(27) a. haw'iyxît(n) 'I made it'
(√haw'y- 'make', -xit 'redir.', -n 'infl.')
b. ǩɬ?áyxt(ən) 'I returned s.t. to s.o.'
(ǩɬ- 'loc.', √?q̓y- 'return', -xit 'redir.' -n 'infl.')

(28) a. chaw'iystú(nn) 'it lasted a long time'
(c- 'asp.', √haw'y- 'make', -stu 'caus', -nn 'infl')
b. ?ackîcst(ms) 'they took me to X'
(?ac- 'asp.' √kîc- 'visit' -stu 'caus.', -ms 'infl.')

(29) a. haw'iymîn(n) 'I used it to fix it'
(√haw'y- 'make', -min 'relational', -n 'infl.')
b. chúymn(c) 'he's visiting me now'
(c- 'asp.', √hq̓y- 'visit' -min 'rel.' -c 'infl.')

However, when preceded by one or more suffixes in the word, suffixes from this second set never cause stress to shift, even if, as in (30) there is more than one such suffix in the

[14] The unstressed variant of **-mix** 'people' and of **-mix** 'impf.' is sometimes **-mx**, but more commonly **-axʷ**.





word. In (30a), for instance, **-mix** 'people' is preceded by the lexical suffix **-alqʷ** 'tree' and stress falls on the lexical suffix, not on **-mix**; in (30b)-(30e) stress is determined by where it falls on the combination of Root+**ilx** or Root+LS, and not on **-mix** 'impf.'; and so on:

(30) a. stǩənłə?álqʷəxʷ 'Canadian'
(s- 'nom.', t- 'loc.', √ǩənłə? 'over there', -alqʷ 'tree', -mix 'people')
b. kasnáw'lxəxʷ 'he's going to run'
(kas- 'unrd.', √náw'- 'run', -ilx 'aut.', -mix 'impf.')
c. kasləkʷîl'xəxʷ 'he's going to leave'
(kas- 'unrd.', √ləkʷ- 'leave', -ilx 'aut.', -mix 'impf.')
d. kashaw'iyáltəxʷ 'she's going to give birth'
(kas- 'unrd.', √haw'y- 'make', -alt 'child', -mix 'impf.')
e. kasnp̓íy'átkʷəxʷ 'she's going to wash clothes'
kasnp̓íy'atkʷál'qsəxʷ 'she's going to wash a dress' (cf. 10a,b)
f. kłč̓álqʷxt(n) 'telephone s.o.'
(k- 'loc.', √łč̓- '?' -alqʷ 'tree', -xit 'redir.', -n 'infl.')
g. cwwáwlxs(n) 'I'm talking to him'
(c- 'asp.', √wáw- 'talk', -ilx 'aut.', -stu 'caus.', -n 'infl.')
h. kʷanxîxmən 'I took it away'
(√kʷán- 'grab', -xîx 'indir.', -min 'rel.')
i. ?acwákʷcnmst(ms) 'he's talking about me'
(?ac- 'asp.', √wákʷ- 'talk', -cin 'mouth', -min 'rel.', -stu 'caus.', -ms 'infl.')

The reason that these suffixes never cause stress to shift is that they do not trigger deletion of previously-assigned stress. Consequently, when the CSR applies in a form ending with one of these suffixes, it vacuously reassigns stress to the rightmost stressed element preceding the suffixes (see (31a)). When these suffixes are adjacent to roots, since there is no previously assigned stress in such forms, they function just like the [+dominant] morphemes seen in §3 (see (31b)):

(31) a. [kashaw'iy+alt] → CSR → [kashaw'iy+ált] → [kashaw'iyálṭ+mix] →no SDEL → CSR →
[kashaw'iyálṭ+mix] → kashaw'iyáltəxʷ (see (30d))

b. [kashaw'w'y+mix] → CSR → [kashaw'w'y+mîx] → kashaw'w'i+mîx
(see (26a))

Since the suffixes illustrated in (25)-(30) do not delete stress, they can be referred to as [-dominant].

While it is clear from the examples above that [-dominant] suffixes do not delete stress, it is less clear whether [-dominant] suffixes trigger cyclic application of the stress-rules, largely because there are few relevant forms in the data. Evidence concerning the cyclic status of [-dominant] morphemes should come from words of the form unaccented Root+[-dominant]suffix$_1$+[-dominant]suffix$_2$. If the [-dominant] morphemes are cyclic, then in words of this form stress will always fall on the first (leftmost) [-dominant] suffix, since on Cycle 2 [-dominant]suffix$_1$ will receive stress by the CSR, and on Cycle 3 the stress assigned on Cycle 2 will be preserved due to the fact that [-dominant] suffixes do not delete stress. Examples of words containing two [-dominant] suffixes are given in (32); in these cases the leftmost suffix is assigned stress, providing evidence for cyclic stress assignment in the environment of [-dominant] suffixes (in (32a), for example, **-xit** and not **-wa** is stressed, in (32b,c) **-min** and not **-stu** is stressed, and in (32d) **-min** and not **-ulm** is stressed):

(32) a. q̓íyx̂itus 'he writes to him (obviative)'[15]
(√q̓íy- 'write', -xit 'redir.', -wa 'obv. obj.', -s '3 sg subj.')
b. yərmîstm 'we push him'
(√yər- 'push', -min 'rel.', -stu 'caus.', -Ø '3sg obj.', -m '1pl subj.')
c. cx̌ʷa?mîsən 'I took hold of it with pliers'
(c- 'asp.' √x̌ʷa?- 'bite', -min 'rel.', -stu 'caus.', -n 'infl.')
d. yərmîntlmn 'I push you (pl)'
(√yər- 'push', -min 'rel.', -t 'trans.', -ulm '2pl.obj.', -n '1sg.subj.')

However, there are also a few forms containing two adjacent [-dominant] suffixes in which the rightmost suffix is stressed (the components of the form in (33b) are unclear to me, but it seems to contain **-min** and **-stu**, with stress on **-stu**; cf. (32b,c)):

(33) a. cəkmxîtən 'I threw it for s.o. else'
(√cək- 'throw', -min 'rel.', -xit 'redir.', -n 'infl.'; **cf.** cəkmînn 'I threw it')
b. tlyacmistún kasckîcxəxʷ 'I expected him'

If forms such as these are not exceptional then they require us to assume that [-dominant] suffixes do not trigger cyclic application of the CSR. To explain stress assignment in such cases we would need to assume that the CSR applies only once after all [-dominant] suffixes have been affixed, thus assigning stress to the rightmost of these suffixes.

There are two sets of facts which complicate the picture somewhat. The first involves inflectional and causative suffixes, the second involves the inchoative morpheme.

In the examples above which contain the inflectional suffixes **-wa** 'obviative' and **-ulm** '2pl.obj.', stress is assigned to the [-dominant] morphemes (**-xit** and **-min**, respectively)

[15] In this form, unstressed [a] is deleted and the glide [w] is vocalized to [u].





preceding the inflectional suffixes. As mentioned, this stress assignment can be explained if we assume that [-dominant] morphemes trigger cyclic application of the CSR and further that the inflectional suffixes are [-dominant] morphemes. However, in words in which the inflectional suffixes are preceded by the causative morpheme, **-stu**, stress falls not on **-stu**, as one would expect given these assumptions; rather, stress falls on the inflectional suffixes:

(34) a. cəkstwás 'he throws it'
(√cək- 'throw', -stu 'caus.', -wa 'obv.', -s '3sg.subj.')
b. c?əmstáls 'he is feeding us'
(c- 'asp.', √?əm- 'feed', -stu 'caus.', -al '1pl.obj.', -s '3sg.subj.')

The fact that stress falls on the inflectional suffixes in such forms might perhaps be evidence that [-dominant] suffixes do not trigger cyclic assignment of the CSR. The problem with assuming that all [-dominant] suffixes are noncyclic, however, is that such an assumption would make it difficult to account for the fact that in forms containing **-min** and **-xit** stress consistently does not fall on the inflectional suffixes, but instead falls on **-min** or **-xit** (see 32). There are several possible explanations for this difference in the behaviour of **-stu** and of **-min** and **-xit**. One possibility is that while the latter two morphemes are [-dominant] and cyclic, **-stu** and the inflectional suffixes may be [-dominant] and noncyclic. Another possibility, and the one which I shall adopt here, is that **-stu** is a [-dominant] cyclic suffix which has an additional property, namely that of being post-stressing.[16] By post-stressing I mean that in forms such as those in (34), in which **-stu** is followed by inflectional suffixes that contain stressable elements, **-stu** causes the stress which has been assigned cyclically to it to shift to the right:

(35) /cək+n+stu+wa+s/ → [cəkn+stu] → CSR → [cəkn+stú] → [cəknstú+wa]
→ CSR → [cəknstú+wa] → Post-stress → [cəknstu+wá] → etc. → cəkstwás

If there is indeed a category of post-stressing morphemes, then **-stu** is not the only such morpheme. Indeed another possible post-stressing morpheme is the inchoative, in both its allomorphs. I suggested in §3 that the **-ʔ-** infix found in inchoative forms constitutes a cycle, and for this reason, when [+dominant] suffixes are affixed to a stem containing the inchoative, stress falls on the suffixes, and not on the roots, even if those roots are accented (cf., **naχ̣ʷúskʷ** 'beer'; **katχ̣ʷuʔsátkʷ** 'foam'). If **-ʔ-** constitutes a cycle, then when it is infixed into a root it must trigger application of the CSR, which will assign stress to the root vowel since no other vowel is available for stress-assignment. When a [+dominant] suffix is affixed it will delete the stress assigned to the root vowel, and stress will shift to the suffix. When a [-dominant] suffix is affixed to a root containing the inchoative morpheme, stress should

[16] Post-stressing morphemes have been posited for Russian (see, for example, Melvold 1987) and Sanskrit (see Kiparsky 1982).

remain on the root vowel and should not shift to the [-dominant] suffix. The reason for this is that since [-dominant] morphemes do not delete previously assigned stress, they could not delete the stress assigned to a root vowel after infixation of **-ʔ-**. As it turns out, however, [-dominant] suffixes following roots containing the inchoative morpheme are always stressed (the **-p** allomorph of the inchoative behaves just like **-ʔ-**; see (36d)):

(36) a. ctuʔqxítms 'they passed me the bone'
(c- 'asp.', √tuq- '?', -ʔ- 'inch.', -xit 'redir.', -ms 'infl.')
b. nyaʔǩʷstús 'he took him across'
(n- 'loc.', √yaǩʷ- 'cross', -ʔ- 'inch.', -stu 'caus.', -s 'infl.')
c. scyaʔǩmíx 'it's burning'
(sc- 'asp.', √yaǩ- 'burn', -ʔ- 'inch.', -mix 'impf.')
d. scƛ'əxpmíx 'he's growing up'
((sc- 'asp.', √ƛ'əx- 'grow', -p 'inch.', -mix 'impf.')

Interestingly, while **-t** 'characteristic' behaves like the inchoative when followed by [+dominant] morphemes, in the sense that [+dominant] morphemes affixed to stems ending in **-t** cause stress to shift rightwards away from the stems (e.g., **nt̓əǩʷt̓úl'əxʷ** 'dried up lake'), it does not behave like the inchoative when followed by [-dominant] suffixes. As the following forms indicate, stems ending in **-t** get stressed on the root – as predicted if **-t** constitutes a cycle – when they are followed by [-dominant] morphemes:

(37) a. sq̓íltəxʷ 'become ill'
(s- 'nom.', √q̓il- 'ill', -t 'char.', -mix 'impf.')
b. kashúytəxʷ 'he's going to get bored'
(kas- 'unrd.', √huy- 'bore', -t 'char.', -mix 'impf.')

The difference in the behaviour of the inchoative and of the characteristic morphemes can be explained if one assumes that, like **-stu**, the inchoative is a post-stressing morpheme. Notice that by assuming that **-stu** is a cyclic, post-stressing morpheme it is possible to put the inchoative and the causative together into one additional, but small class of morphemes. If, however, **-stu** were assumed to be a noncyclic [-dominant] morpheme, then it would still be necessary to provide a separate explanation for the behaviour of the inchoative.

To conclude this section on [-dominant] morphemes, I wish to consider the stress behaviour of a number of lexical suffixes. With the exception of **-mix** 'people', the [-dominant] morphemes discussed above were all in/transitivizers or inflectional suffixes. In fact, a number of lexical suffixes are [-dominant] morphemes: **-tn** 'instrument', **-xn** 'foot', **-lqs** 'nose', **-lqst** 'shin', **-qin** 'head', and **-mix** 'people'; all of them except **-mix** and **-qin** contain no





underlying vowels. As the following examples show, affixation of these morphemes does not cause stress to shift rightwards:

(38) a. nq̓íy'átkʷtn 'washing machine'
(n- 'loc.', √q̓íy'- 'wash', -atkʷ 'water', -tn 'instr.')
b. snałáqlxtn 'buttocks'
(s- 'nom.', na- 'loc.', √łáq- 'sit', -llx 'aut.', -tn 'instr.'; cf. 5g)
(39) a. khaçhaçqín'xn 'tied on pants'
(k- 'loc.', √haç- 'tie', -qin 'top', -xn 'leg')
b. stq̓wáyxnəxʷ 'Blackfeet'
(s- 'nom.', t- 'loc.', √q̓wáy- 'black', -xn 'foot', -mix 'people')
c. skwəpwáplqstxn 'hair on legs'
(s- 'nom.', k- 'loc.', √wəp- 'hair', -lqst 'shin', -xn 'leg')
(40) a. pałłáya?qn 'thick-headed' [17]
(√pał- 'thick', -aya? 'top', -qin 'head')
b. ntəmtəmxʷqnákst 'worn-out elbows'
(n- 'loc.', √təmxʷ- 'worn out', -qin 'top', -akst 'arm')
c. páłya?qn 'flat-head'
(√páł- 'flat', -aya? 'top', -qin 'head')

Almost all the forms discussed so far in this paper have contained no more than two lexical suffixes. Columbian does have a number of forms in which three lexical suffixes occur in most cases, in words containing three lexical suffixes the final suffix is [-dominant] and vowelless (see (41)). There are, however, a number of forms in which the final lexical suffix is [+dominant]; of these only one form (42a) exhibits the expected stress assignment. In the other two cases (42b,c), stress falls on the penultimate suffix rather than on the expected ultimate:

(41) a. ntəmxʷqnúsxn 'worn-out toe'
(n- 'loc.', √təmxʷ- 'worn out', -qin 'top', -us 'face', -xn 'foot')
b. ǩłmiymiyu?scínxn 'halfway to knees in depth'
(ǩł- 'loc.', √miy- 'middle', -aw's 'middle', -cin 'mouth', -xn 'leg')
c. katǩʷəƛ'qnáltn 'opener'
(kat- 'loc.', √ǩʷəƛ'- 'open', -qin 'head', -al 'cover', -tn 'instr.')
(42) a. kyər'yər'qnalqʷákstn 'roll up sleeves'
(k- 'loc.', √yər'- 'round', -qin 'head', -alqʷ 'tree' -akst 'arm' -n 'infl.')

[17] There are two exceptional forms containing **-qin** 'head', in which it behaves as if it were a [+dominant] suffix: **ncəlcəlakətqin** '5-point buck', and **nłq̓ʷu?əqin** 'pack rope'.

b. nkʷənapúsχn 'hold s.o. by arm'
(n- 'loc.', √kʷə̓n- 'grab', -ap 'base', -us 'face', -aχn 'upper arm')
c. sx̌an'p̓qn'úskst 'ring'
(s- 'nom.', √x̌an'p̓- 'round', -qin 'head', -us 'face' -akst 'arm')

To account for the penultimate stress assignment in forms like (42b,c) it seems necessary to assume that the lexical suffix combinations **-us+(a)χn** and **-us+(a)kst** are lexicalized compound suffixes which have stress lexically specified on the penultimate vowel. Evidence for this assumption comes from the observation that **-usχn** appears as a unit in the form **snx̌k̓púsχn** 'armpit' (the root is **√k̓p**); this is the only form containing two [+dominant] lexical suffixes in which stress falls on the penultimate rather than the ultimate suffix.

As I have tried to show in this paper, the stress system of Columbian makes use of three different morphological stress features: accent, [+dominant], and [-dominant] (and marginally a fourth feature: post-stressing). Once the morphological stress features of the morphemes in a word are known, the Columbian Stress Rule applies in a completely predictable fashion to assign stress to the word. Although there is no question but that stress assignment in Columbian is complex, given that morphological stress features are associated with each morpheme in the language, it is nevertheless clear that Columbian stress assignment is systematic.





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