# TWO ASPECTS OF SLIAMMON (ɬɑ́ʔɑmɪnqən̓) PHONOLOGY:

## Glide/Obstruent Alternation

## and Vowel Length

By

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# ABSTRACT

This thesis examines two specific aspects of Sliammon phonology: the nature of the glide/obstruent alternation and the issue of phonemic vowel length.

In this thesis an analysis of these issues is presented within a non-linear framework, adopting as a point of departure the model of feature geometry proposed by McCarthy (1988). Other theoretical components of the analysis include Mora Theory as proposed by Hayes (1989), and Underspecification Theory.

In Chapter 2 it is argued that Glide/Obstruent Alternation is a phonological process which is sensitive not only to syllable structure but also to the moraic affiliation of the segment in question. Specifically, deletion of the feature [-continuant] targets any [sonorant][high] segment in moraic position. By adopting underlying representations (UR) which are underspecified and hierarchically organized, it is possible to avoid problems associated with previous analyses of these facts. This thesis also motivates an amendment to the feature geometry such that the feature [sonorant] is dependent on the root node rather than being an integral part of that node.

In Chapter 3 it is argued that vowel length in Sliammon is not distinctive but rather that vowel length is derived. It is derived by a process essentially equivalent to Compensatory Lengthening (CL). Further the Sliammon facts support Hayes's (1989) hypothesis that "it is the moraic structure of the language and not its vowel inventory that determines whether CL may occur". It is proposed that further study of languages which permit bimoraic syllables will confirm this hypothesis.

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# CHAPTER 1

## 1.0 Introduction

Sliammon[1], a Salish language spoken just north of Powell River, B.C. on the Malaspina Peninsula[2], has numerous phonological alternations which are of interest. This thesis examines two aspects of the phonology in detail: first, the process of glide/obstruent alternation: ǰ~y~i~č and g~w~u~$x^w$[3] and secondly, the issue of phonemic vowel length in Sliammon. Both of these aspects of Sliammon phonology have been discussed in previous works, but warrant further discussion since they have significant descriptive and theoretical ramifications.

The organization of this thesis is as follows. Chapter 1 provides an introduction to the consonantal and vocalic inventory of Sliammon. Assumptions regarding feature geometry and underspecification theory are outlined. Emphasis is placed on the interaction between consonants and vowels in Sliammon. The special status of schwa is discussed in terms of conditions on the Prosodic Licensing of this vowel. It is proposed that schwa is licensed in one of two configurations: (1) by the presence of a following tautosyllabic consonant or (2) in a stressed syllable. The last section outlines the assumptions which are made with respect to syllabification and morafication in Sliammon. It is claimed that consonants which follow a full vowel are assigned a mora by a language specific rule of Weight by Position (cf. Hayes 1989). It is argued that there are bimoraic (CVC) syllables in Sliammon. Chapter 1 provides an introduction to Sliammon phonology which will be built on in the subsequent chapters.

Chapter 2 addresses the process of the glide/obstruent alternation. It is argued that the segments which alternate as ǰ~y~i~č and g~w~u~$x^w$ are properly classified as resonants, /Y, W/ respectively, since they pattern phonologically with the class of [sonorant] segments. It is argued that the rule governing the glide/obstruent alternation is subject to the prosodic organization of the syllable. Specifically, the feature [-cont] is delinked from a target [son][hi] segment in moraic position. The description of Sliammon provides evidence from several individual rules (/Y/ → č; /W/ → $x^w$; /L/ → ɬ) that the feature [son] is delinked in word-final position. In light of this evidence, it is argued that the feature [son] is not an integral part of the root node as McCarthy (1988) suggests, but that it is dependent on the root node since it is clearly subject to deletion.

In Chapter 3 it is argued that vowel length in Sliammon is not phonemic. Instead, it is proposed that vowel length is derived from schwa/glide sequences, as well as from the deletion of a moraic coda consonant with the subsequent lengthening of the preceding vowel in a process essentially equivalent to Compensatory Lengthening (cf.Hayes 1989). The arguments for this claim are based on an analysis of CV-, CəC- and CVC- reduplication. The analysis is then extended to vowel/glottal stop sequences which provide the environment for Compensatory Lengthening. The moraic approach which is adopted not only accounts for the existence of Compensatory Lengthening in Sliammon but also explains the distribution of glottalization for glottalized resonants.

### 1.1 Consonantal Vowel Inventory

The purpose of this section is to present the inventory of consonants and vowels in Sliammon and make my assumptions regarding underspecification and feature theory clear. Basic issues of surface vowel quality are addressed, as well as "retraction[4]", stress placement, morafication and syllabification, in order to provide a background for the central issues which are discussed in Chapters 2 and 3.

#### 1.1.1 Surface Consonantal Inventory

The inventory which appears in (1) illustrates the consonantal segments which are used in a broad phonetic transcription of Sliammon. The reader is referred to the Appendix for exemplification and to the symbols used in this thesis for an articulatory description of any nonstandard characters.

**(1) Sliammon Phonetic Consonantal Inventory**

| | bilabial | interdental | dental | alveo-palatal | lateral | palatal/velar | labio-velar | uvular | labio-uvular | glottals |
|---|---|---|---|---|---|---|---|---|---|---|
| Stops and | p | (ç) | t | č | (ƛ) | (k$^{y}$) | k$^{w}$ | q | q$^{w}$ | ʔ |
| Affricates: | p̓ | ç' | t̓ | č̓ | ƛ̓ | (k̓$^{y}$) | k̓$^{w}$ | q̓ | q̓$^{w}$ | |
| Fricatives: | | θ | s | š | ɬ | (x$^{y}$) | x$^{w}$ | x̣ | x̣$^{w}$ | h |
| Resonants: | m | | n | y | (l) | | w | ɫ | | |
| | m̓ | | n̓ | y̓ | (l̓) | | w̓ | ɫ' | | |
| Voiced stops: | | | | ǰ | | (g$^{y}$) | g | | | |

The segments which are bracketed in (1) have marginal status and limited frequency[5]. The segment [k$^{y}$], for example, occurs in the form [k$^{y}$έʔt̓ɛˆʔq$^{w}$oʔǰɛ$^{h}$] for 'pinky, small finger.' The ejective counterpart [k̓$^{y}$] is recorded in the following two examples: the form [t̓ʌ́ɬk̓$^{y}$ɛq$^{wh}$] 'nostril' and the form [tík̓$^{y}$] 'slim.'

There are also certain limitations on the freedom of occurrence of some other segments. For example, glottalized resonants do not occur in word-initial position; in syllable-initial position they are restructured, as is discussed in more detail in Chapter 3 section 3.5.

The alveo-palatal fricative [š] does not occur word-initially; however, it does occur syllable-initially[6] as in the lexical suffix [-šɪn] /-šen/ 'foot, leg'. Davis (1970:17) states that "the phoneme /h/ is common in Mainland Comox" and that "it also occurs in coda position, which has not been reported for other Coast Salish languages." This statement is contrary to my own findings in which the glottal fricative /h/ is restricted to syllable-initial position. The segments [ǰ] and [g] only occur in syllable-initial position. It is claimed in this thesis that these segments are best treated as [sonorant][-continuant] segments which are represented as /Y/ and /W/ respectively in underlying representation.

It should also be noted that the following variants, which are not shown in (1), also occur. The interdental fricative [θ] is realized as [s̤] as in [s̤áʔən] /θaʔan/ 'cohoe'. The dental fricative [s] also surfaces as [ṣ] as in the word [čʰʸǽˑɫʌṣ] /čalas/ 'three'. It is proposed that [s̤] and [ṣ] are "retracted" variants of /θ/ and /s/ respectively. They occur in the environment of a uvular consonant or in the environment of the vowel /a/[7]. The behaviour of [ɫ] is parallel to the behaviour of [s̤] and [ṣ]. This is illustrated by a form like 'barbecued deer meat' [ʔɛ́ɫq̓ɑy] /ʔelq̓ay/. The segment [ɫ] surfaces as a "retracted" or dark variant of /l/ in the environment of uvulars or the vowel /a/[8]. Clear laterals are restricted to loan words and recent borrowings, although, it is likely that the dark 'l' [ɫ] is also of foreign origin[9] since PS *l became [ɬ] word-finally, [w] next to a round vowel and [y] elsewhere[10] in Sliammon. Compare the word [ʔɑ́tʰnopɛ̀l] 'automobile, car', for example, which is a recent borrowing from English with [ʔɛ́ɫq̓ɑy] 'barbecued deer meat'. The lateral in the word borrowed from English is not retracted, whereas there is a retracted lateral in the word for 'barbecued deer meat'. Although both sonorant laterals are borrowed, I will treat the clear laterals as nonnative, whereas dark 'l', within a synchronic analysis of Sliammon, will be treated as a phoneme, since it appears to be an earlier borrowing.

There are also a very few cases in which /m/ and /n/ surface as [b] and [d] respectively. This occurs infrequently in word-final position.

Stops and affricates are aspirated in syllable-final position in Sliammon. This is most noticeable in word-final position; however, it is recorded in word-internal environments. The uvular fricatives [q, and q̓] are phonetically affricated in syllable-initial position. They surface as [qˣ· and q̓ˣ·] respectively.

### 1.1.2 Underlying Consonantal Inventory

The corresponding underlying consonantal inventory is presented in (2) and will be restated in terms of underspecification theory in section 1.1.4.

(2)

**Underlying Consonantal Inventory**

| | bilabial | interdental | dental | alveo-palatal | lateral | palatal/velar | labio-velar | uvular | labio-uvular | glottals |
|---|---|---|---|---|---|---|---|---|---|---|
| Stops and | p | (ç) | t | č | (ƛ) | (k) | $k^w$ | q | $q^w$ | ʔ |
| Affricates: | p̓ | ç' | t̓ | č̓ | ƛ̓ | (k̓) | $\dot{k}^w$ | q̓ | $\dot{q}^w$ | |
| Fricatives: | | θ | s | š | ɬ | (x) | $x^w$ | x̣ | $\underset{\cdot}{x}^w$ | h |
| Resonants: | m | | n | y | l | | w | | | |
| | m̓ | | n̓ | y̓ | l̓ | | w̓ | | | |
| | | | | Y | L | | W | | | |
| | | | | Y' | L' | | W' | | | |

The underlying lateral /L/ is used to represent the alternation [ɬ~w~y]. In a similar fashion /Y/ represents the alternation [ǰ~y~i~č] and /W/ represents the alternation [g~w~u~$x^w$]. These capital symbols /L, Y, W/ are used as cover terms for these alternations which will be the focus of the discussion in Chapter 2.

Historically, Proto-Salish (PS) *y and *w became [ǰ] and [g] respectively, in syllable initial position in Sliammon. Only syllable final instances of [y] and [w] remain from original PS *y and *w. Subsequently, PS *l became [ɬ] in word final position, [w] in the environment of a round vowel, and [y] elsewhere in Sliammon. Therefore, from a diachronic perspective, there are only two possible sources for occurrences of [y] and [w]. In light of this discussion, it may seem desirable to reduce the inventory given in (2), so that all surface instances of [y] and [w] are derived from either /Y,W/ or /L/. This implies that we dispense with underlying /y/ and /w/, within the synchronic grammar. I will argue, however, that there is justification for this tripartite phonemic distinction: /Y,W/ versus /L/ versus /y,w/. A discussion of the forms in (3) and (4) argue for the presence of underlying /y/ and /w/ in a synchronic description of Sliammon. The segments in question appear in boldface.

(3)

| | | |
|---|---|---|
| a. [hé**y**um̓] | /heyom-ʔ/ | 'seagull'(MG 35) |
| b. [ǰɨ́mǰɨmʔayɔɬ] | /Yəm-Yəm-(ʔ)ay-oɬ/<br>CəC pl - root - LS 'wing'- dim | 'bird's wings'(MG 570) |
| b'. [ǰɪ́mʔa**y**] | /Yəm-(ʔ)ay/<br>root - LS 'wing' | 'bird's wing'(MG 569) |
| c. [λ̓ɨ́λ̓x̣ʷa**y**ʊ̀ɬ] | /λ̓e-λ̓ox̣ʷ-ay-oɬ/<br>Ce - root - ? - dim | 'small chum salmon'<br>(MG533) |
| c'. [λ̓ʷə̱́x̣ʷə**y**] | /λ̓ox̣ʷ-ay/<br>root - ? | 'chum salmon'(MG 6) |
| d. [x̣ʷáx̣ʷa**y**umʔ] | | 'fly (insect)' (MG 163) |

(4)

a. [q̓ʷáq̓ʷaq̓ʷàwadíxʷ] 'woodpecker'(MG 75)

b. [móx̣ʷwaʔᵃǰu] /mox̣ʷ-waY'o/ 'belly button, navel'

root - LS 'navel' (MG 309)

c. [tíʰ x̣ʷáʔᵃwɪtʰ] /təy x̣ʷaẇ-et/ 'big fire'(MG 176)

root 'big' root - stv

d. [ç'ʌ́ç'awəšin] 'hail'(MG 159)

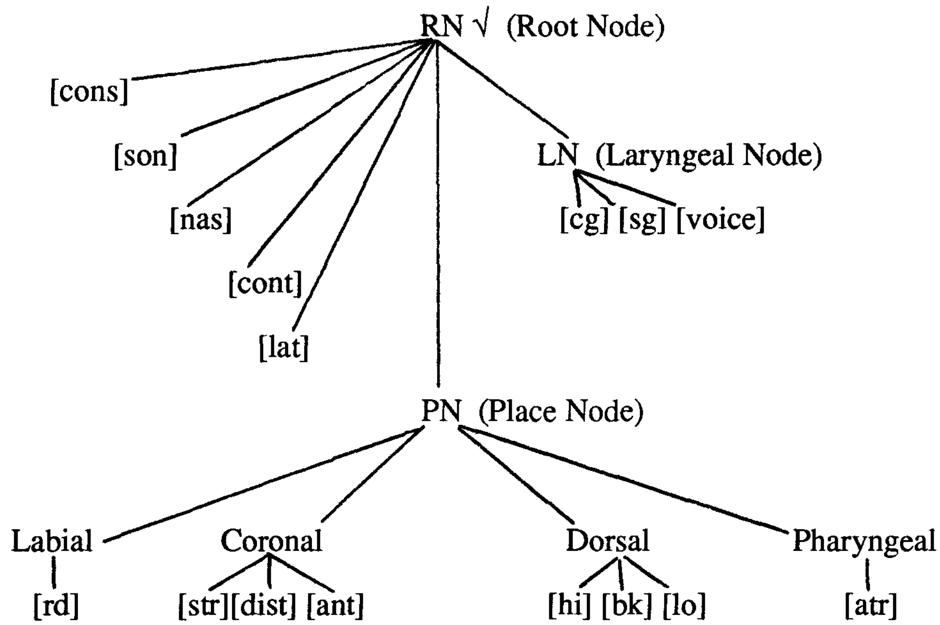
In (3a, b, c, d) the segment [y] occurs syllable initially, and before a round vowel. If /Y/ were posited as the correct underlying representation, then [ǰ] should surface in syllable initial position, in accordance with the rule of Glide/Obstruent Alternation discussed in Chapter 2. This is simply not the case. On the other hand, if /L/ were posited as the underlying representation, then [w] should surface in the environment of a round vowel. Further, (3b', c') show that the underlying representation cannot be /L/, since [ɬ] should surface word finally. In (4) [w] occurs in syllable initial position, and in the environment of nonround vowels. If it were posited that these instances of [w] were to come from /W/, then [g] should surface in syllable initial position. Since this is not substantiated by the data, these forms would have to be marked as exceptions to the rule of Glide/Obstruent Alternation. If /L/ were underlying, then [y] should surface in these nonround environments, rather than [w]. Based on this evidence, I adopt a position in which /Y,W/, /L/, and /y,w/ are all present in underlying representation.

### 1.1.3 Feature Geometry

The underspecification system in (7-11) utilizes the set of features which can be shown to be operative in Sliammon. These features are hierarchically organized as in (5) (see Clements (1985), Sagey (1986), Archangeli and Pulleyblank (1986), Piggott (1987), McCarthy (1988), Halle (1989), Shaw (1989) and Kaisse (1992)). It is assumed that the feature [-consonantal] is dependent on the root node following arguments made by Kaisse (1992). It is argued in Chapter 2 that the feature [sonorant] is also dependent on the root node, as are the features [-cons], [nasal], [-cont], and [lateral]. The Feature Geometry in (5) includes these proposals.

(5)

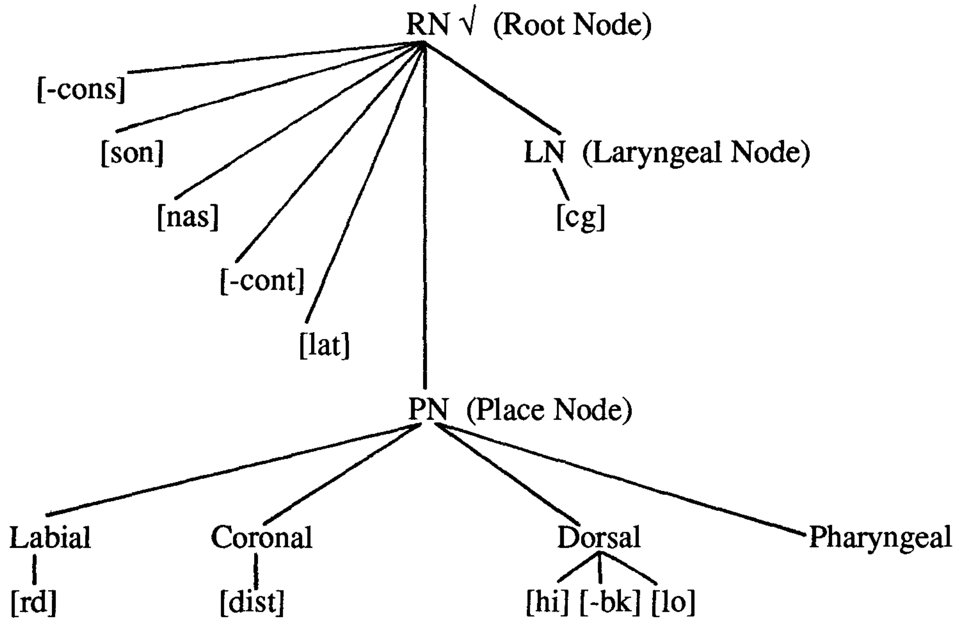
**Feature Geometry**[11]




The Feature Geometry in (6) is a subset of those features which appear in the Feature Geometry in (5). Features such as the laryngeal feature [voice], and the pharyngeal feature [atr] have been omitted for the sake of simplicity, since they are not oppositions which are functional in Sliammon. It is assumed that features as well as the articulator nodes (Lab, Cor, Dor, Phar) are privative—they are either present or absent from representations[12].

(6)

**Feature Geometry**




It seems necessary to justify some of the features that are claimed to be operative in Sliammon. For example, it is argued that the feature [sonorant] correctly separates the class of obstruents from the class of resonants. Resonants are subject to several different processes of glottalization, whereas obstruents are not eligible targets for these rules. In addition, there are strict constraints on the distribution of glottalized resonants which do not hold of glottalized obstruents. As discussed in Chapter 2, since the feature [sonorant] is subject to deletion, it is proposed that it is not an integral part of the root node as suggested in McCarthy (1988, 1989). This claim is made given the following assumptions: first, that voicing of obstruents can be shown to be inoperative in Sliammon, and secondly, that the feature [sonorant] is present in UR.

Evidence for such a claim comes from several sources. Stops, which are [-continuant], are pronounced variably in Sliammon. The labial stop [p] is sometimes pronounced as [B][13] and the dental stop [t] can be pronounced as [D]. These are phonetic manifestations—the variability of which would suggest, at least for the class of obstruents, that voicing is not a phonologically functional opposition in Sliammon. In other words, there is no phonemic distinction between /p/ and /b/ in Sliammon. By extension, observing the lack of voicing contrast at all other places of articulation represented by the obstruent series, it can be concluded that any segment which is [-continuant] is not specified for [voice]. Since voicing is a phonemic opposition which is normally considered to be restricted to the class of obstruents, and since there is the absence of a voicing contrast in the resonant series, it is also concluded that [voice] is not an available opposition with respect to the class of resonants. The facts relating to the Glide/Obstruent alternation discussed in Chapter 2 suggest that the segments which alternate between [ǰ~y] < /Y/ and [g~w] < /W/ clearly function with the class of resonants since these segments are subject to resonant glottalization as well as the prosodic constraints on freedom of occurrence of their glottalized counterparts, /Y', W'/. It is also proposed that the correct underlying representation for the segments /Y,W/ is one in which both [sonorant] and [-continuant] are present in UR since the deletion of [-continuant] in syllable-final position is arguably preferable to the introduction of the same feature from outside of the autosegmental domain. This also implies that [-continuant] is the specified value in Sliammon and that [+continuant] is not the appropriate value of this feature. I assume the analysis of affricates proposed by Shaw (1989, 1991) in which affricates are "exclusively [-cont] in UR" (Shaw 1989:16). This claim will require further discussion. Furthermore, the fact that /Y/ and /W/ are targets for resonant glottalization implies that they are also overtly specified as [sonorant].

One additional piece of evidence which shows that [ǰ] is not interpreted as a voiced obstruent in Sliammon comes from recent loans, such as [č$^{y}$á:m] from English 'jam' (Davis 1971:26). Notice that although the source segment [ǰ] is clearly voiced in English, it is introduced as the voiceless counterpart in Sliammon. This suggests that the Sliammon speaker recognizes this segment as a [-continuant] obstruent and that it is borrowed as such. Since /ǰ/ is here postulated not to be an underlying segment in Sliammon, the closest [-continuant] obstruent is /č/. It is claimed that [ǰ, g] are appropriately represented as [sonorant]

[-continuant] segments. These arguments are presented in order to show that the feature [sonorant] is not part of the root node since it is subject to deletion, as will be discussed in Chapter 2.

### 1.1.4 Distinctive features and Underspecification

The following charts show the proposed underlying representations for consonants.

Distinctive Features

(7) **Labials, Interdentals, and Dentals**

| | p | ṗ | m | ṁ | ç' | θ | t | ṫ | s | n | ṅ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Root Node | • | • | • | • | • | • | • | • | • | • | • |
| [son] | | | + | + | | | | | | + | + |
| [nas] | | | + | + | | | | | | + | + |
| [cont] | - | - | - | - | - | | - | - | | - | - |
| L Node | | • | | • | • | | | • | | | • |
| [cg] | | + | | + | + | | | + | | | + |
| Place Node | • | • | • | • | • | • | • | • | | • | • |
| Lab | Lab | Lab | Lab | Lab | | | | | | | |
| Cor | | | | | Cor | Cor | | | | | |
| [dist] | | | | | + | + | | | | | |

**(8) Laterals**

| | ƛ̓ | ɬ | L | L' | l | l̓ |
|---|---|---|---|---|---|---|
| Root Node | • | • | • | • | • | • |
| [son] | | | + | + | + | + |
| [cont] | - | | | | | |
| [lat] | + | + | + | + | + | + |
| L Node | • | | | • | | • |
| [cg] | + | | | + | | + |
| Place Node | • | | | | | |
| Dor | | | • | • | | |
| [hi] | | | + | + | | |
| Phar | | | | | Phar | Phar |

**(9) Alveopalatals and Palatals**

| | č | č̓ | š | Y | Y' | y | y̓ |
|---|---|---|---|---|---|---|---|
| Root Node | • | • | • | • | | • | • |
| [son] | | | | + | | + | + |
| [cont] | - | - | | - | | | |
| L Node | | • | | | • | | • |
| [cg] | | + | | | | | + |
| Place Node | • | • | • | • | | • | • |
| Dor | Dor | Dor | Dor | Dor | Dor | Dor | Dor |
| [hi] | + | + | + | + | + | + | + |
| [bk] | - | - | - | - | - | - | - |

**(10) <u>Labiovelars</u>**

| | $k^w$ | $\dot{k}^w$ | $x^w$ | w | ẇ | W | W' |
|---|---|---|---|---|---|---|---|
| <u>Root Node</u> | • | • | • | • | • | • | • |
| [son] | | | | + | + | + | + |
| [cont] | - | - | | | | - | - |
| <u>L Node</u> | | • | | | • | | • |
| [cg] | | + | | | + | | + |
| <u>Place Node</u> | • | • | • | • | • | • | • |
| Lab | Lab | Lab | Lab | Lab | Lab | Lab | Lab |
| [rd] | + | + | + | + | + | + | + |
| Dor | Dor | Dor | Dor | Dor | Dor | Dor | Dors |
| [hi] | + | + | + | + | + | + | + |

I am adopting the use of the Pharyngeal node (Phar) as proposed by J. McCarthy (1989) and I. Doak (1989) for the representation of uvular consonants[14]. Vowels, coronal consonants, and laterals, which are "retracted" in the environment of uvulars, as well as in the environment of the vowel /a/, are "uvularized". It is proposed that uvular consonants and the low vowel /a/ share similar Pharyngeal node representations and therefore behave in a similar fashion. The process of "uvularization" or "retraction" in Sliammon is the autosegmental spreading of the Pharyngeal node.

**(11) <u>Uvulars and Glottals</u>**

| | q | q̓ | x̣ | qʷ | q̓ʷ | x̣ʷ | ʔ | h |
|---|---|---|---|---|---|---|---|---|
| <u>Root Node</u> | • | • | • | • | • | • | • | • |
| [cont] | - | - | | - | - | | - | |
| <u>L node</u> | | • | | | • | | | |
| [cg] | | + | | | + | | + | |
| <u>Place Node</u> | • | • | • | • | • | • | | |
| Lab | | | | Lab | Lab | Lab | | |
| [rd] | | | | + | + | + | | |
| Phar | Phar | Phar | Phar | Phar | Phar | Phar | | |

The correct representation of glottal stop remains problematic. There seems to be a special affinity between glottal stop and the low vowel [ɑ]. Schwa becomes [ɑ] in a total glottal context as discussed in 1.1.6. It should be noted that glottalized consonants do not seem to trigger the same lowering effect. The lateral /L/ also surfaces as [ʔ]/ɑ_ɑ, in a few lexical items[15]. The relationship between glottal stop and [ɑ] should be reflected in terms of feature sharing—the sharing of the Pharyngeal node or the feature [low], for example. Uvular consonants, marked by the presence of the Pharyngeal node, lower the vowels /e, o/ to [ɛ/eˇ, ɔ/oˇ]. Since glottal stop does not exert a lowering effect on the vowels /e, o/, it must be concluded that this "special relationship" is restricted to the low vowel [ɑ]. See Bessell (1992) for a discussion of the typological status of glottals.

Since glottalization is phonologically distinctive in Sliammon, there is evidence that the laryngeal feature of [constricted glottis] is operative. The feature [constricted glottis] can also be shown to be a "floating" morpheme in the morphological marking of the diminutive, further justifying the presence of this laryngeal feature.

I am assuming that the underlying representation of affricates is simply [-continuant] with the presence of a release feature such as [distributed], [lateral], or [hi], following the work of Shaw (1989; 1991) (also see Lombardi (1989) for additional arguments against affricates being represented as contour segments of the type [-cont][+cont]).

The consonants in (7-11) are not specified for the feature [-cons]; in particular, the glides /y, w/ are simply marked as [sonorant]. This allows the morafication algorithm, discussed in 1.3.1, to ignore these segments since they are not specified for the feature [-cons].

Underspecification systems are generally accompanied by a set of language specific and universal redundancy rules which supply the unspecified values for a set of binary features. Following Sagey (1986), McCarthy (1988), and others, it is assumed in this thesis, that the articulator nodes (Lab, Cor, Dor and Phar) are privative; they are either present or absent in phonological representations. It is assumed that terminal features are also monovalent. From the evidence provided by the Sliammon data discussed in Chapters 2 and 3, there is no positive evidence that redundancy rules need ever apply within the phonological component of the grammar. In addition, Beckman (1988) and Keating (1988) provide independent evidence from phonetic studies which indicates that the input to the level of phonetic representation is necessarily underspecified. Therefore, in the absence of any positive evidence for the operation of RR at this level of the grammar, I make the strong hypothesis that redundancy rules are not operative here, if at all.

### 1.1.5 Vowel Inventory

Having introduced the representation for consonants, now consider the following phonetic vowel inventory, along with the proposed underlying system. The rules which relate the phonemic and phonetic representations follow. The vowel system and their surface reflexes are presented here in order to clarify the assumptions made in this thesis with respect to the vowel inventory, as well as to familiarize the reader with the complex interaction between consonants and vowels in Sliammon. Consider the following phonetic vowel inventory. The segment [æ] which appears in parentheses is limited in occurrence: it occurs in a limited number of lexical entries.

**(12) Sliammon Phonetic Vowel Inventory**

| | | | | |
|---|---|---|---|---|
| i | | ɨ | | u |
| ɪ | | ᵻ | | ʊ |
| e | | | | o |
| | ɛ | ə | ə̰ | ɔ |
| | (æ) | | ʌ | |
| | | a | ɑ | |

It is claimed that the phonetic vowels in (12) are allophones of the four vowel system in (13). The fact that a large number of phonetic variants occur with respect to a small number of phonemic vowels seems to be characteristic of Salish languages in general, judging from other accounts of neighbouring languages such as Kuipers' (1967) description of Squamish, and

Beaumont's (1985) description of Sechelt . Consider the following proposed phonemic vowel inventory.

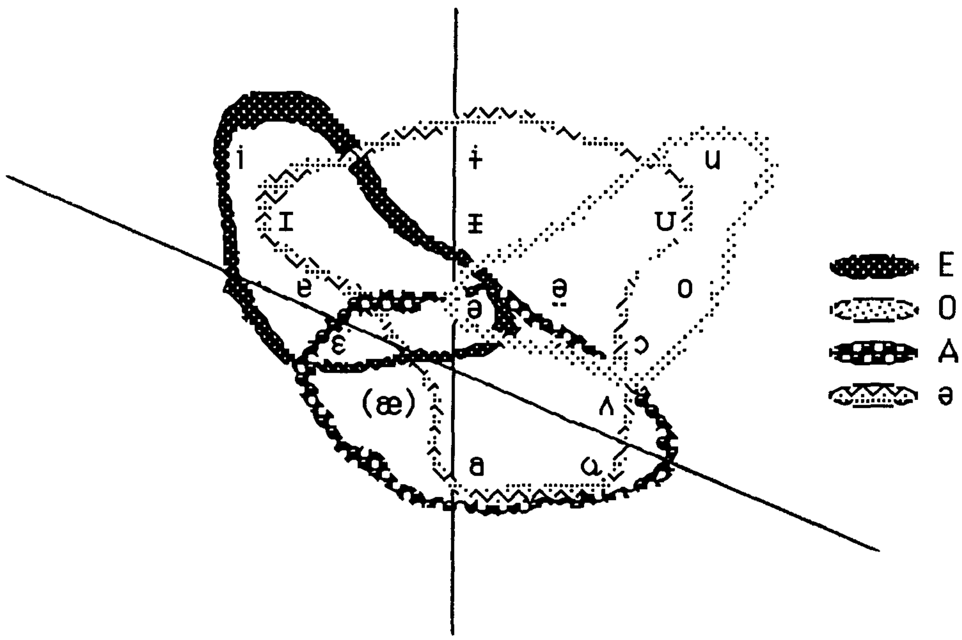
**(13) Sliammon Phonemic Inventory**

| | | |
|---|---|---|
| e | | o |
| | ə | |
| | a | |

I have chosen to represent the underlying vowel system as /a, e, o, ə/ rather than representing it as the more familiar /a, i, u, ə/ for the following reasons. In Sliammon, it would seem that the neutral setting for nonlow vowels is nonhigh. /e, o/ are realized as [e, o] elsewhere. If the vowels were marked as [high], then there would be no clear motivation to explain why lowering would occur in a neutral context. It is claimed that the appropriate opposition for vowels in Sliammon is "low" and "nonlow". The phonetic height of the nonlow vowels /e, o/ is determined by the height of the adjacent or neighbouring consonants. By the same token, the low vowel /a/ ranges from [ɑ] to [ɛ]. It is suggested that /a/ is completely unmarked for the feature [back] and that the allophonic variation of the vowel /a/ is determined by adjacent consonants. The autosegmental spreading of the feature [-bk], and the presence or absence of the Phar node within the phonological derivation will determine the resulting degree of "backness". The vowel /a/ is also raised in certain environments, suggesting the loss of the feature [lo]. /a/ can be realized as [ʌ], here analyzed as the retention of the Phar node with the loss of the feature [lo], or /a/ can be realized as schwa [ə], this entailing the loss of all associated place features.

The chart in (14) shows the division of the vowel space and the general area occupied by each phoneme. Notice that underlying schwa never becomes the nonlow vowels [e, o].

**(14) Division of Phonetic vowel space**




The matrix in (15) is the vocalic underspecification system which is assumed in this thesis. It is based on the behaviour of the segments discussed here and in the following chapters.

(15)

**Vowels**

| | /e | o | a | ə/ |
|---|---|---|---|---|
| RN | • | • | • | • |
| [Cons] | - | - | - | - |
| PN | • | • | • | |
| Lab | | Lab | | |
| [rd] | | [rd] | | |
| Dor | Dor | | Dor | |
| [bk] | [-bk] | | | |
| [lo] | | | [lo] | |
| Phar | | | Phar | |

The matrix in (16) gives the surface representations of the most frequent allophones:

(16)

**Phonetic Vowels**

| | [i | ɪ | e | ɛ | a | ə | ɨ | ɑ | ʌ | ɔ | o | ʊ | u] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RN | • | • | • | • | • | • | • | • | • | • | • | • | • |
| [cons] | - | - | - | - | - | - | - | - | - | - | - | - | - |
| PN | • | • | • | • | • | • | • | • | • | • | • | • | • |
| Lab | | | | | | | | | | Lab | Lab | Lab | Lab |
| [rd] | | | | | | | | | | [rd] | [rd] | [rd] | [rd] |
| Dor | Dor | Dor | Dor | Dor | Dor | Dor | Dor | Dor | Dor | Dor | Dor | Dor | Dor |
| [hi] | [hi] | [hi] | | | | | [hi] | | | | | [hi] | [hi] |
| [-bk] | [-bk] | [-bk] | [-bk] | [-bk] | | | | | | | | | |
| [lo] | | | | ([lo]) | | | | [lo] | | ([lo]) | | | |
| Phar | | Phar | | Phar | | | | Phar | Phar | Phar | | Phar | |

The segments [ɛ, ɔ] are specified as Pharyngeal, and may or may not be specified for the feature [lo]. For example, the cases of [ɛ] which come from /e/, and phonetically vary as [eˇ], are simply specified for Pharyngeal. Instances of [ɛ], however, which come from /a/, may also be specified as [lo], in addition to Pharyngeal[16].

The following summary of rules in (17) relates the proposed underlying representations to surface forms. These rules are exemplified in section 1.1.6.

**(17) Summary of Rules**

(18)

/e/ is raised to [i] in the environment of a tautosyllabic [hi] C

/e/ is lowered to [ɛ] in the environment of a tautosyllabic uvular C (local rule)

/e/ is lowered to [ɛ] after /a C___/[17]

/e/ reduced to schwa [ə] in unstressed position (with some variability)

/e/ is realized as [e] elsewhere

(19)

/o/ is raised to [u] in the environment of a tautosyllabic [hi] C

/o/ is lowered to [ɔ] after /a C__/

/o/ is reduced to schwa [ə] in unstressed syllables

/o/ is realized as [o] elsewhere

(20)

/a/ is realized as [a] in the environment of a non-sonorant lateral

/a/ is realized as [ɛ] after a [hi][-bk] C[18]

/a/ is realized as [ɑ] in the environment of a tautosyllabic uvular C (local rule)

/a/ is realized as [ɑ] after /a C___/

/a/ is raised to [ʌ] in the environment of coronals

/a/ is reduced to schwa [ə] in unstressed post-tonic position

/a/ is realized as [ɑ] elsewhere

(21)

/ə/ becomes [u] in the environment of $x^w$___ $x^w$[19]

/ə/ becomes [ʊ] in the environment of a tautosyllabic [hi]$C^w$

/ə/ becomes [ɪ] in the environment of a tautosyllabic [hi][-bk] C

/ə/ is raised to [ɨ] in the environment of [hi]C (many examples)

/ə/ becomes [ɨ̞] in the environment of [hi] C (only one variant example)

/ə/ becomes [ʌ] in the environment of a uvular[20]

/ə/ becomes [ɑ] in the environment of glottal stop

root ə→Ø / (open syllable) post-tonic position. (see CV- reduplication)

/ə/ becomes [ə̰] in the environment before a nonhigh labialized consonant $C^w$

### 1.1.6 Exemplification of the Surface Realizations of Sliammon Vowels

The following sets of data illustrate each of the rules summarized in (17). The segments in question are highlighted[21].

**(18) Surface realizations of /e/**

18.1 /e/→i/following a [hi] Consonant

18.1.0 Lexical suffix for 'clothing' /- eç'a/

a. [ɬáʔᵊgɪç'əʰ] /ɬaW-**e**ç'a/ 'without clothes'(MG 603)
root - LS 'clothing'

a'. [ɬáɬgiç'əʰ] /ɬa-ɬaW-eç'a/ 'everybody's without clothes' (MG 604)
CV - root - LS 'clothing'

b. [p̓éç'ayɪç'əʰ] /p̓eç'-ay-**e**ç'a/ 'wash clothes'(MG 438)
root - ex - LS 'clothing'

18.1.1 Stative Aspect

a. [x̣ʷɑ́ǰit] /x̣ʷaY-et/ 'kill several'(JD 1970:85)
root - stv

18.1.2 Diminutive

a. [qáqəgʸiᵊθotɬ] /qa-qaW-e-θ-Vt-oɬ/ 'small potato' (MG 422)
CV - root - dim -st ex - CTr - dim

This alternation, in which /e/ becomes [i], is construed as the autosegmental spreading of the feature [hi].

18.2 /e/→[ɛ]/{a}C_

18.2.0 Lexical Suffix for 'clothing'/- eç'a/

a. [ƛ̓ə́q̓amɛç'əʰ] /ƛ̓əq̓am-eç'a/ 'grass clothing'(MG 518)
~[ƛ̓ʌ́q̓ameç'əʰ] root 'grass' - LS 'clothing'

18.2.1 Stative marker

a. [ʔáx̣ʌθ] /ʔax̣əθ/ 'to lie down'(JD 1971:20)
a'. [ʔáx̣ɛθ] /ʔax̣-e-θ / 'to be lying down'(JD 1971:20)
root - stv - rt

18.2.2 Lexical Suffix (LS) for 'elongated objects' /- eq̓ʷ/

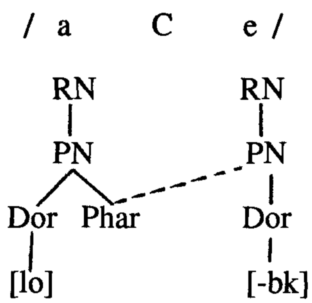
a. [q̓ˣ·ʌ́p̓ɛᵊq̓ʷòʔjɛ] /q̓əp̓-eq̓ʷ-oY'a/ 'finger nail'(MG 300)
root - LS - LS 'hand'

b. [kʸɛ́ʔƚɛ˙ʔqʷoʔjɛʰ] /kaƚ-eq̓ʷ-oY'a/ 'small finger'(MG 221)
root - LS - LS 'hand'

c. [x̣ʷə́ç'x̣ʷəç'ɛᵊq̓ʷɔ̀ʔjɛ] /x̣ʷəç'-x̣ʷaç'-eq̓ʷ-oY'a/[22] 'joints (pl)'(MG 303)
CəC pl - root - LS - LS 'hand'

d. [ç'ágətɛ̀q̓ʷojɪtən] /ç'agət̓-eq̓ʷ-oYa-tən/ 'ring'(MG 306)
root - LS - LS 'hand' - instr

Although a number of cases show the presence of the preceding vowel /a/ followed by an intervening non-uvular consonant, each of these examples also includes the presence of a following uvular consonant. This rule is construed as the spread of the Phar node, which is present not only on uvular consonants, but also on the vowel /a/.




18.2.3 /e/ →[e] in the environment of a (following) tautosyllabic uvular consonant.

a [ç'éᵊp̓eᵊqʷ] /ç'ep̓ - eqʷ/ 'pointed nose' (MG 668)
root - LS 'nose'

18.3. whereas /e/ becomes [ɛ] in the environment of a tautosyllabic uvular:

a. [másɛʔqʷ] /mas - eq̓ʷ/ 'purple sea urchin'(MG 41)
root - LS 'elongated object'

b. [λ̓ʌ́x̣ɛq̓ʷojɛ] /λ̓əx̣-eq̓ʷ-oYa/ 'thumb'(MG 295)
root - LS - LS 'hand'

18.3.1

| | | | |
|---|---|---|---|
| a. | [ƛ̓íšʸɛqʷ] | /ƛ̓əš - eqʷ/<br>root - LS 'nose' | 'nasal mucus'(JD 1970:38) |
| b. | [mɑ́qɛn] | /maqen/ | 'hair'(MG 266) |

18.4 /e/ → ə/ in unstressed position (notice preceding uvular)

18.4.0 Lexical Suffix for 'mouth/language' /- qen/

| | | | |
|---|---|---|---|
| a. | [sʌ́yᵊqən]<br>~[sə́yᵊqən] | /say-qen/<br>root - LS 'mouth/language' | 'mouth'(MG 280) |
| b. | [ɬɑ́ʔamɪnqən] | /ɬaʔa-men-qen/<br>root - instr - LS 'mouth' | 'Sliammon language'(MG 66) |

18.4.1 Lexical suffix for 'elbow' /- əx̣en/:

| | | | |
|---|---|---|---|
| a. | [sɑ́y̓ɑᴵy̓əx̣ən] | /say̓-ay̓-əx̣en/<br>root - VC - LS 'elbow' | 'elbow'(MG 290) |
| a'. | [sísɑy̓ɑyəx̣ən] | /səy-say̓-ay-əx̣en/<br>CəC pl - root - VC - LS 'elbow' | 'elbows'(MG 291) |
| b. | [mʌ́qʰmɑqən] | /məq-maqen/<br>CəC pl - root | 'lots of hair'(MG 267) |

18.5 /e/ → [e]/elsewhere

18.5.0

| | | |
|---|---|---|
| a. [qéw] | /qeW(əθ)/<br>truncated root | 'Deer; mythical name'<br>(JD 70G:13) |
| a'. [qégəθ] | /qeWəθ /[23]<br>root | 'deer'(JD 1970: viii) |

Notice that in the above example (18.5.0.a') the vowel /e/ is followed by a non-tautosyllabic [hi] consonant [g] < /W/ ; however, the presence of the preceding tautosyllabic uvular takes precedence in determining the height of the resultant vowel. The [hi] segment /W/ is in the following syllable and therefore is outside of the domain which exerts an influence on the colouration of the preceding vowel.

| | | |
|---|---|---|
| b. [ç'íčɛɬ'e] | /ç'əčale/ | 'kingfisher'(MG 132) |
| c. [ƛ̓əq$^{w}$enəs] | /ƛ̓əq$^{w}$-enəs/<br>root - LS 'heart' | 'human heart'(MG 211) |

18.5.1 <u>Stative Aspect</u>

| | | |
|---|---|---|
| a [tóx̣$^{w}$et$^{h}$] | /tox̣$^{w}$-et/<br>root - stv | 'it's true'(MG 467) |

18.5.2 <u>CV-Reduplication</u>

| | | |
|---|---|---|
| a [ṗéṗeç'ɑyıç'ə$^{h}$] | /ṗe-ṗeç'-ay-eç'a/<br>CV - root - ex - LS 'clothes' | 'washing clothes'(MG 439) |

18.5.3 <u>Root Structure</u>

| | | |
|---|---|---|
| a [ṗéç'ɑytoˆɬč$^{h}$] | /ṗeç'-ay-t-oɬ-č/<br>root - ex - CTr - past - 1sg Sb | 'I washed it already' (MG 441) |

18.5.4

The following examples illustrate that it is the preceding consonant (in the same syllable) that conditions vowel colouration and not a following non-tautosyllabic consonant. In examples (15.2.4 a, a', b, b', e) the following consonant is adjoined as the onset to the next syllable.

| | | |
|---|---|---|
| a. [hé̌gus] ~[hé̌gʊs] | /heW-os/ root - LS 'face' | 'chief' (MG 352) |
| a'. [héhəwhègʊs] ~ɛ́ | /he-həW-heW-os/ CV - CəC - root - LS 'face' | 'small chiefs'(dim pl)(MG 355) |
| b. [héyum̓] | /hey-om-ʔ/ root - ? - gl | 'seagull'(MG 35) |
| b'. [híyᵊheyoˆmʔ] | /həy-hey-om-ʔ/ CəC - root - ? - gl | 'seagulls' (pl)(MG 36) |
| c. [ǰíᵊqeš] | /Yə-Yəq-e-aš/ CV - root - stv - intr | 'crawling;'anyone on hands ' and knees' (MG 454) |
| d. [kʷúmews] | /kʷom -ews/ root 'red' - LS 'body' | 'Red snapper'(MG 10) lit: 'red body' |
| e. [nónpegàʔnəm] | /no-nop-eWan-ʔəm/ CV - root - LS 'spirit; sentiments' - intr | 'thinking'(MG361) |

18.5.5

Notice, however, the realization of /e/ in this example.

| | | |
|---|---|---|
| a. [qʷáyegən] | /qʷay-eWən/ root - LS 'sentiments' | 'I'll think about it'(MG 363) |

Although /y/ is [hi], it seems that the vowel /a/ in the preceding syllable nucleus affects the height of /e/, causing /e/ to be realized as [e] rather than as [i].

**(19) Surface realizations of /o/**

19.0 /o/ → [u]/after a [hi] Consonant

19.0.1 Lexical suffix for 'appearance/look' /- omeš/

a. [ʔáʔǰumš] /ʔə-ʔəY-omeš/ 'pretty'(MG 427)
Cv - root - LS 'look'

a'. [ʔá:ǰumìš] /ʔə-ʔəY-omeš/ 'good looking' (JD 1970:ix)
Cv - root - LS 'look'

a''.[ʔáʔǰumisθʊ̀tʰ]/ʔə-ʔəY-omeš-θot/ 'becomes pretty'(MG 429)
Cv - root - LS 'look' - reflex

19.0.2 however

a. [tʰíxʷomɪš] /təy-xʷ-omeš/ 'fat'(MG 331)
big- st ex - LS 'appearance/look'

The one example in (19.0.2a) suggests that the rule in which /o/ becomes [u] applies only in the context of [hi] [-bk] segments since /xʷ/ does not have the same raising affect. The data in (19.0.3, 19.0.4) however, show that this is not the case.

19.0.3 Lexical suffix 'hand' /-oYa, -oY'a/

a. [ç'ík̓ʷuǰɛ] /ç'ek̓ʷ-oYa/ 'left handed'(JD 1970:83)
root - LS 'hand'

a'. [ç'ɛ́q̓ʷo?jɛ?ᵊ]   /ç'eq̓ʷ-oY'a-?/   'left handed'(MG 503)[24]

~[ç'éq̓ʷo?je?ᵊ]   root - LS 'hand' - gl

19.0.4 Roots

a. [kʷúmews]   /kʷom -eWs/   'Red snapper'(MG 10)

root 'red' - LS 'body'   lit: 'red body'

19.1 /o/ → [ɔ]/aC_

19.1.1 The irregular plural Ca-

a. [ç'áç'ɔç'oq̓ʷ]   /ç'a-ç'o-ç'oq̓ʷ/   'feathers'(MG 169)

Ca pl - CV - root

a'. [ç'ʷóç'ʷoq̓ʷ]   /ç'o-ç'oq̓ʷ/   'feather'(MG 168)

CV - root

19.1.2 Diminutive suffix /-oɬ/

a. [ɬáɬgat̓ɔ̀ɬ]   /ɬa-ɬaWat̓-oɬ/   'small herring'(MG 340)

CV - root - dim

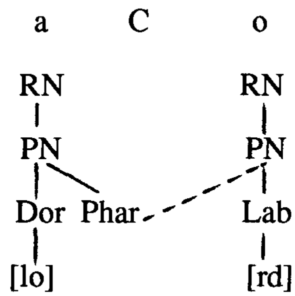
b. [?ámamɔ̀?]   /?amamo?/[25]   'chiton'(MG 47)

root

b'.[?ʌ́m?amamɔ̀?ᵓ]/?əm-?amamo?/   'chitons'(MG 632)

CəC - root

The following diagram shows autosegmental spreading of the Phar node associated with /a/ onto the adjacent vowel /o/, giving [ɔ].




19.1.3 <u>however</u>: the form in (19.1.3a) is realized as [o] rather than as [ɔ].

a [ʔáʔ$^{ə}$moʔʊ̀ɬ] /ʔa-ʔamoʔ-oɬ/ 'small chiton'(MG 633)
CV - root - dim

19.1.4 <u>Lexical Suffix 'face'</u> /-os/

a [q̓$^{w}$ǒq̓$^{wo}$pɔs] /q̓$^{w}$o-q̓$^{w}$op-os/ 'wrinkle'(MG 329)
CV - root - LS 'face'

Notice that the preceding uvular has the same effect as the vowel /a/. This is accounted for by positing that the vowel /a/ and the set of uvular consonants share a Pharyngeal node representation.

19.2. /o/ is reduced to [ə] in unstressed syllables, and subsequently coloured:

a. [tɪ́čtɑʔǰeʔǰɪs] /təY-taY'-aY'-os/ 'cheeks (pl)'(MG 257)
CəC pl - root - VC - LS 'face'

19.3 /o/ → [o]/elsewhere

19.3.1 <u>Lexical suffix 'appearance/look'</u> /- omeš/

a. [čʊ́yʔtomɪš] /čoẏ-t-omeš/ 'young man'(MG 141)
young - ? - LS 'appearance /look'

19.3.2 <u>Lexical Suffix 'hand'</u> /- oY'a/

a. [q̓ˣ·ʌ́p̓ɛᵊq̓ʷò?ǰɛ] /q̓əp̓-eq̓ʷ-oY'a/ 'fingernail'(MG 300)
root - LS - LS 'hand'

b. [kʸɛ́?t̓ɛˆ?qʷo?ǰɛʰ] /kat̓-eq̓ʷ-oY'a/ 'small finger'(MG 221)
root - LS - LS 'hand'

c. [x̣ʷə́ç'x̣ʷəç'ɛᵊq̓ʷò?ǰɛ] /x̣ʷəç'-x̣ʷaç'-eq̓ʷ-oY'a/ 'joints (pl)'(MG 303)
CəC plural - root - LS - LS 'hand'

19.3.3 <u>Roots</u>

a. [mə́s] /mos/ 'four'(MG 114)

b. [ç'ə́x̣o] /ç'ox̣o/ 'ling cod (fish)'(MG 7)

c. [ɬə́ɬmə̀m̓] /ɬoɬməm̓/ 'little neck clam'(MG 52)
~[ɬóɬmʊ̀m̓]

19.3.4 <u>Reduplication</u>

a. [q̓ʷóƛ̓q̓ʷoƛ̓qʷo] /q̓ʷoƛ̓-q̓ʷoƛ̓-qʷo/ 'lots of salt water'
CVC - root - LS 'water' (MG 140)

**(20) <u>Surface realizations of /a/</u>**

20.0 /a/ →[a]/in the environment of the nonsonorant laterals: ɬ, ƛ̓, ƛ.

20.0.1 <u>Lexical suffix for 'neck'</u> / -an̓a/

a. [x̣ʌ́?gəɬa?nə] /x̣əW'-aɬ-an̓a/ 'bone up the back (MG 283)
bone - cl - LS 'neck' of one's neck'

b. [x̣ʌ́ʔgəɬagɪč$^h$] /x̣əW'-aɬ-aWəč/ 'whole backbone'(MG 284)
root 'bone' - cl - LS 'back/spine'

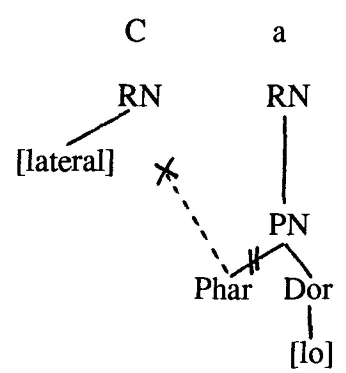
20.0.2

a. [ç'ʌ́x̣ɬaw$^U$m] /ç'əx̣-ɬawəm/ 'fish; gather food in salt water (MG 138)
root - LS 'food'

b. [ƛáƛəpx$^w$] /ƛa-ƛapx$^w$/ 'pocket knife'(MG 145)
CV - root

c. [q$^w$ʌ́sƛ̓ač] /q$^w$əs-ƛ̓ač/ 'human liver'(MG 127)
root - LS 'abdomen/belly'

Notice that /a/ becomes [a] in the environment of the nonsonorant laterals /ɬ, ƛ̓, ƛ/. It is proposed that the vowel [a] is simply specified as [lo]. This is analized as the deletion of the Pharyngeal node. The Pharyngeal node spreads to a lateral which is [sonorant] as illustrated by the data in section (23). Since Phar is not permitted in a feature sharing relationship with a nonsonorant lateral, then it is subject to delinking as illustrated below.




20.1 /a/ → [ɛ]/ after a [hi][-bk] Consonant

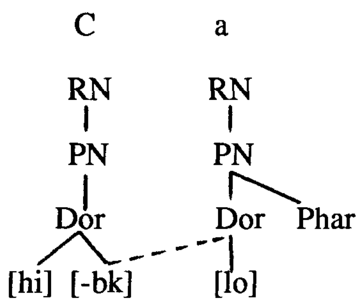
20.1.1 <u>Lexical suffix for 'neck' /</u>-aḣa/

a [sʌ́yɛʔnə] /say-aḣa/ 'neck'(MG 282)
root - LS 'neck'

20.1.2 <u>Roots</u>

| | | | |
|---|---|---|---|
| a | [čɛ́ˆyɪš·] | /čayəš/ | 'arm, hand'(MG 288) |
| b | [č$^{y}$ɛɬʌṣ:] | /čalas-s/<br>root - LS 'day' | 'Wednesday'(MG 78) |
| c | [$^{ŋ}$gíǰɛ] | /WeYa/ | 'soil, ground'(MG 341) |
| d | [ǰɛ́nx$^{w}$] | /Yanx$^{w}$/ | 'fish, salmon'(MG 4) |
| e | [k̓$^{y}$í·k̓$^{y}$ɛ k̓$^{y}$] | / k̓ e k̓ a k̓ / | 'crow'(MG 71) |
| f. | [ƛ̓ə́q$^{w}$o·yɛ] | /ƛ̓əq$^{w}$-oy̓a/<br>root - LS ? | 'summer'(MG 83) |

This rule in which /a/ becomes [ɛ] is construed as the autosegmental spreading of the feature [-bk] onto the following vowel /a/. This is represented as follows.



20.1.3 <u>CV- Reduplication</u>

a. [tάtɑʔǰɪș] /ta-taY'-os/ 'cheek'(MG 256)
CV dim - root - LS 'face'

a'. [tíčtɑʔǰeʔǰɪș] /təY-taY'-aY'-os/ 'cheeks'(MG 257)
CəC pl - root - VC - LS 'face'

20.2 /a/ → [ɑ]/after a uvular C

a. [ʔέʔɛɬq̓ɑ̀y] /ʔe-ʔelq̓ay/ 'barbecuing (deer)'(MG 478)
CV - root

b. [x̣ɑ́p̓] /x̣ap̓/ 'papoose basket'(MG 95)

c. [x̣ɑ́ʔʌynɪč^h] /x̣aʔ-ay-nač/ 'old stump'(MG 202)
root -LS 'tree' - LS 'base/root'

d. [q̓^wɑ́ƛ̓əm] /q̓^waƛ̓əm/ 'river'(MG 223)

e. [qʌ́p̓qɑp̓ɑw^əs] /qəp̓-qap̓-awəs/ 'bats' (MG 137)
CəC pl - root - LS 'eyes'

20.3 /a/ → [ʌ]/in environment of coronals

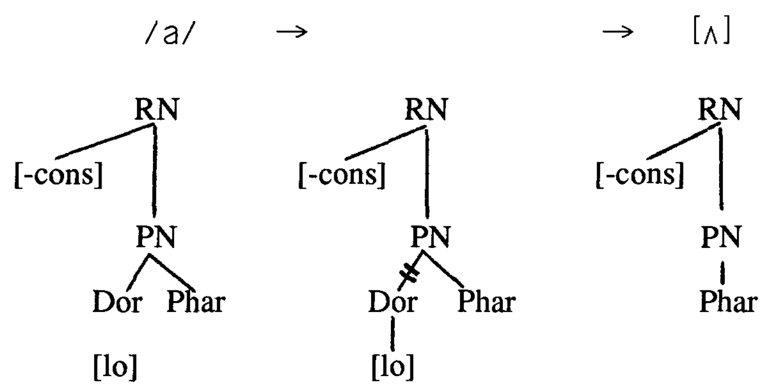
a. [tə́tƛ̓^wtʌs] /tə-tək̓^w-t-as/ 'he's pulling it' (MG 411)
~[tə́tƛ̓^wtɑs] CV - root - CTr - 3 Sb MC

b. [ƛ̓ʌ́mstɑn] /ƛ̓am-s-tan/ 'house'(MG 233)
root -?- LS 'container/enclosure'

b'. [ƛ̓ʌ́mƛ̓ʌmstʌn] /ƛ̓əm-ƛ̓əm-s-tan/ 'houses (pl)'(MG 235)
~[ƛ̓ʌ́mƛ̓ʌmṣtʌn] CəC pl- root - ? - LS 'enclosure'

c. [ʔópʌn] /ʔopan/ 'ten' (MG 120)
~[ʔópɑn]

This rule has the following autosegmental representation:




20.4 /a/ → [ə] / in unstressed position (variable)

a. [ʔɛ́m·ɑˆš] /ʔem-aš/ 'to walk'(MG 212)
root - intr

a'. [ʔɑ́mʔɛməš] /ʔəm-ʔem-aš/ 'walking' (MG 214)
CəC - root - intr

b. [q̓ʷə̱́x̣ʷɑ] /q̓ʷəx̣ʷa/ 'food storage box'(MG 237)

b'. [q̓ʷúx̣ʷq̓ʷə̰ x̣ʷə] /q̓ʷəx̣ʷ-q̓ʷəx̣ʷa/ 'boxes' (MG 238)
CəC - root

c. [q̓ʷɑ́ɬəṣ] /q̓ʷalas/ 'raccoon'(MG 26)

c'. [q̓ʷə́q̓ʷəɬɑṣò̵ɬ] /q̓ʷe-q̓ʷalas-oɬ/ 'small raccoon'(MG 28)
Ce - root - dim

In Sliammon, it seems that vowels in syllables towards the end of longer words are more likely to be reduced to schwa than are vowels towards the beginning of a word. Stress in Sliammon, is fixed on the word-initial syllable.

20.5 /a/ is realized as [ɑ] elsewhere

**(21) Surface realizations of Schwa**

21.0 /ə/→[u] if stressed/__ $C^{w}]_{\sigma}$

a. [túk̓ʷtʰ] /tək̓ʷ-t/ 'to pull'(MG 410)
root - CTr

a'. [tə́tk̓ʷtʌs] /tə-tək̓ʷ-t-as/ 'he's pulling it' (MG 411)
CV - root - CTr - 3 Sb MC

21.1 /ə/→[ʊ]/in the environment after a tautosyllabic [hi] rounded consonant - $C^{w}$

a. [kʷʊ́s̺ʌys] /kʷəθ-ays/ 'island'(MG 68)
~[kʷʊ́θɑyṣ] root - LS 'rock'

21.2 /ə/→[ɪ]/in the environment of a tautosyllabic [hi][-bk] consonant.

a. [q̓ɑ́yɪƛ̓] /q̓aYəƛ̓/ 'scar'(MG 304)

21.3 /ə/→[ɨ]/[hi]C (many examples)

a. [θɑ́ʔᵊyɨm] /θay-əm/ 'to sink'(MG 365)
root - middle

b. [x̣ɛ́x̣ɑʔǰeyɨṣ] /x̣e-x̣aY'-ay(ə)s/ 'small rock'(MG 383)
Ce dim -root -LS 'rock'

21.4 /ə/→[ɪ̵]/[hi] C (one example only - lax variant of [ɨ])

a. [tíčtačɨnaǰɪ̵pʰ]/təč-tač-ən-aYəp/ 'hips, legs' (MG 312)
CəC pl - root - ? - LS 'thigh'

21.5 /ə/→[ʌ]/in the environment of a uvular

a. [nə́nq̓ʌm] /nə-nəq̓-əm/ 'killer whale; diving'(MG 17)
CV - root - middle

b. [qʌ́p̓qap̓awᵊs] /qəp̓-qap̓-awəs/ 'bats' (MG 137)
CəC pl - root - LS 'eyes'

c. [qʷʌ́sƛ̓ač] /qʷəs-ƛ̓ač/ 'human liver'(MG 127)
root - LS 'abdomen/belly'

21.6 ə→ɑ/glottal stop

a. [ʔɑ́:ǰumìš] /ʔə-ʔəY-omeš/ 'good looking' (JD 1970:ix)
CV - root - LS 'look'

21.7 root ə→Ø / in unstressed post-tonic position.

a. [nə́nq̓ʌm] /nə-nəq̓-əm/ 'killer whale; diving' (MG 17)
CV - root - middle

b. [ǰíᵊqeš] /Yə-Yəq-e-aš/ 'crawling'(MG 454)
CV - root - stv - Tr 'anyone on hands and knees'

c. [ʔá:ǰumìš] /ʔə-ʔəY-omeš/ 'good looking' (JD 1970:ix)
CV - root - LS 'look'

21.8 /ə/→ [ə̳] /____Cʷ (tautosyllabic)

a. [ɬə̱́q̓ʷ] /ɬəq̓ʷ/ ‘arrow; bow and arrow’(MG 134)

a'. [ɬə̱́q̓ʷɬə̳q̓ʷ] /ɬəq̓ʷ-ɬəq̓ʷ/ ‘arrows’(MG 135)

CəC pl - root

b. [ƛ̓ʷə̱́x̣ʷəy] /ƛ̓əx̣ʷ-ay/ ‘chum/dog salmon’(MG 184)

b'.[ƛ̓ʷə̱́x̣ʷƛ̓ʷə̳x̣ʷəy] /ƛ̓əx̣ʷ-ƛ̓əx̣ʷ-ay/ ‘lots of chum’(MG 185)

CəC pl - base - ?

c. [ƛ̓ə̱́qʷƛ̓ ə̳qʷenəs]/ƛ̓əqʷ-ƛ̓əqʷ-enəs/ ‘hearts’(MG 211)

CəC pl - root - LS ‘heart/chest’

As seen from the examples in (21), schwa obtains its resultant place features from the adjacent consonants and vowels. Since it is totally underspecified except for its specification as [-cons], schwa is an eligible target for spreading from many sources.

**(22) Surface Realizations of Schwa/Glide sequences**

22.0 /əy/

22.0.1 /əy/→[i]

a. [yíq̓ɑšəs] /yə-yəq̓aš-as/ ‘using it’ (MG 377)

CV - root - 3 Sb MC

but compare:

a'. [yə́q̓əš] /yəq̓aš/ ‘use it’(MG 376)

b. [sísisəy̓] /səY-səY-saY'/ ‘they're afraid’ (MG 415)

CəC - CəC - root

but:

b'.[sə́ysɑ̀ˀǰɨčxʷ]  /səY-saY'-ə-čxʷ/  'are you afraid?' (MG 413)
CəC - root - stv - 2 sg Sb

c. [⁽ŋ⁾gí:gìǰɛ]  /WeY-WeYa/  'lots of soil, ground'(MG 342)
CVC pl - root

c'. [ᵑgíǰɛ]  /WeYa/  'soil, ground' (MG 341)

22.1 /əy/ → [e]/ after a uvular

a. [x̣ éx̣ɑˀǰiṣ·]  /x̣ **ə**Y-x̣aY'es/  'lots of rocks' (MG 382)
CəC pl - root

b. [x̣ **é**ᵊx̣ɑyᵊq̓ᵊ]  /x̣ **əy**-x̣ayq̓/  'crabs'(MG 46)
CəC pl - root

c. [q̓x̣ éʸq̓x̣ɑykʷʰ]  /q̓**əy**-q̓aykʷ/  'eagles'(MG 32)
CəC pl - root

22.2 /əw/

22.2.1 /əw/ → [u]

a. [t**ú**tuumɑ̀ỷə]  /t**əw**-towmaỷə/  'West wind'(MG 387)
CəC pl - root

b. [ɬ**ú**:ɬɑgɪt̓ʰ]  /ɬ**ə**W-ɬaWət̓/  'lots of herring'(MG 338)[26]
CəC pl - root

22.2.2 /əw/→[o]/ after a uvular

a. [q̓ʷóq̓ʷowəʔanaʰ] /q̓ʷəw-q̓ʷow-aňa/ 'ears' (MG 271)
CəC pl - root - LS 'ear'

b. [x̣ʷóx̣ʷaʔwawɨšɨn] /x̣ʷəw-x̣ʷaw̓-aw-ə-šen/ 'toes'(MG 317)
CəC pl - root - VC - LV - LS 'foot'

c. [x̣ʷóx̣ʷawaq̓ʷojɛ] /x̣ʷəw-x̣ʷaw-Vq̓ʷ-oYa/ 'fingers'(MG 294)
CəC pl - root - LS 'elongated' - LS 'hand'

### (23) "Pharyngeal" Roots

a. [čʸɛɬʌṣ:] /čalas-s/ 'Wednesday'(MG 78)
root - LS 'day' lit: 'day three'

b. [ʔɛ́ʔɛɬq̓ày] /ʔe-ʔelq̓ay/ 'barbecuing (deer)'(MG 478)
CV - root

c. [q̓ʷáɬəṣ] /q̓ʷalas/ 'raccoon'(MG 26)

c'. [q̓ʷə́q̓ʷəɬaṣòɬ] /q̓ʷe-q̓ʷalas-oɬ/ 'small raccoon'(MG 28)
Ce - root - dim

d. [mʌ́ṣ] /mas/ 'mink' (MG 22)
root

e. [páɬʔ] /pal̓/ 'heron'(MG 30)
root

| | | |
|---|---|---|
| f. [ʂ̤á ʔən] | /θaʔən/<br>root | 'cohoe'(MG 186) |
| f'. [ʂ̤áʔʂ̤ɑʔən] | /θaʔ-θaʔən/<br>CVC pl - root | 'lots of cohoe'(MG 187) |
| g. [kʷʊ́ʂ̤ʌys]<br>~[kʷʊ́θ:ʌyʂ̣] | /kʷoθ-ays/<br>root - LS 'rock' | 'island' (MG 68) |

The examples in (23) show the spread of the Phar node throughout the word domain on coronals, laterals and vowels, these being the eligible targets for "retraction". As mentioned above, this is analyzed as the autosegmental spreading of the Pharyngeal node across the domain.

This illustration of the interaction between consonants and vowels in Sliammon is far from being exhaustive; however, it does provides the reader with sufficient background information in order to discuss the specific issues raised in Chapters 2 and 3. The assumptions made with respect to suprasegmental phenomena are the subject of the following sections.

### 1.2 Schwa

Kroeber (1989:108) claims that the allophones of schwa are generally "lax and a bit shorter than the allophones of non-ə vowels, at least in stressed open (i.e., initial) syllables". Similar findings are illustrated in (21). The fact that schwa is noticeably shorter than the non-schwa vowels /a, e, o/ is here encoded structurally. It is reflected by morafication and syllabification of this segment, this being discussed in 1.3.

Additional evidence for this prosodic difference comes from the phonological behaviour of CəC roots as opposed to CVC and CəRC roots. As Kroeber (1989:109-110) points out there are at least three cases in which CəC roots behave differently. First, in the formation of CV- progressive reduplication, both CVC and CəRC roots retain their root vowel, whereas CəC roots lose their root vowel. Secondly, both CVC and CəRC roots take a linking vowel with the addition of the transitive suffix -t, whereas CəC roots do not take this transitional vowel. Finally, although all roots seem to lose their root vowel in CV- diminutive reduplication, CVC roots copy the root vowel as the vowel of the affix, whereas CəC roots take Ce- as the reduplicative prefix rather than a Cə- prefix.[27] The fact that CVC and CəRC roots pattern together suggests that they share a common structure. The fact that CəC roots behave differently should also be reflected in their structural representation. In this thesis, it is proposed that CVC and CəRC roots are assigned bimoraic status via the rules of morafication whereas CəC roots are monomoraic, thus reflecting the "special" status of schwa. These observations and claims also raise the issue of vowel reduction: another example of the difference in behaviour of schwa and non-schwa vowels. Often a "full" vowel /a, e, o/ is reduced to schwa in unstressed position whereas schwa, in the same position, is deleted. Full vowel reduction is viewed as the simplification of a bimoraic syllable to the status of a monomoraic syllable. The loss of schwa, on the other hand, is viewed as delinking of the root node and the melodic content, which is dependent on the root node, followed by "parasitic delinking" (Hayes 1989:268) of the associated syllable structure. Both processes of vowel reduction entail the loss of a single mora. This discussion emphasizes the difference in behaviour of schwa as opposed to the behaviour of the non-schwa vowels.

It should also be noted that schwa is underspecified for place features, at the melodic level in underlying representations. It is represented simply as [-cons]. The additional featural content of schwa is determined by adjacent (and non-adjacent) consonants and vowels. As might be expected in a language with few vowel phonemes, it may seem desirable to try and eliminate schwa from the underlying inventory of vowels, thus obtaining a three vowel system /a, e, o/ akin to /a, i, u/. If the locus of schwa could be determined from syllable structure constraints, restrictions on relative sonority, and so on, then it would be possible to claim that schwa is simply an epenthetic nucleus position provided by the governing prosodic structures of morafication and syllabification. There are however, some arguments in Sliammon which suggest that it is not possible to derive all instances of schwa as a function of syllabification. It is here claimed that there are both underlying and epenthetic schwas in Sliammon.

If the placement of schwa were entirely predictable, then CəC- plural reduplication would be interpreted as the affixation of a CC- sequence. It is argued on general theoretical grounds that this is undesirable since the prefixation of a CC- sequence does not constitute a prosodic constituent in accordance with the principles of Prosodic Morphology (see McCarthy & Prince 1986). Having considered and rejected the possibility of schwa epenthesis in this case, it is claimed that schwa is a phoneme and is present in UR as such. This does not rule out cases in which schwa is truly epenthetic[28], but rather it does not allow all instances of schwa to be predicted by rule.

Specifically, a consonantal segment which is not syllabified is subject to deletion rather than triggering epenthesis. As noted in the section on morafication, the number of consonants which are permitted in word-final clusters exceeds the number of consonants which are permitted in medial consonant cluster. It is argued that extrametricality allows for two extra consonants at the right-hand edge of the word domain. A consonant, which is situated between a single coda consonant of a licensed syllable and the final consonants which are licensed by virtue of extrametricality, is subject to deletion as shown in section 1.3.5. If schwa epenthesis were pervasively available as a function of syllabification, then one would not expect consonants to delete in this position. This again suggests that schwa is present in UR rather than being inserted via syllabification.

These facts may also offer a possible explanation for why the common Salishan nominalizer prefix s- does not occur in Sliammon, since the presence of this prefix would violate the constraints on possible onsets. Nor do we find cases in which schwa epenthesis has applied, in order to license the nominalizer prefix. The absence of this prefix is illustrated by the data in section 1.3.3.

### 1.2.1 Proper licensing of Schwa

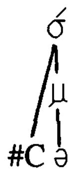
It is assumed that all vowels /e, o, a, ə/ receive a single mora by the rule of morafication. In addition, there are special conditions on the prosodic licensing of schwa. The motivation for such a claim comes from the observed behaviour of schwa. In the analysis presented here, schwa is properly licensed in the configurations given in (24) and (25). Consider the first structure in which schwa is licensed, which is governed by syllable structure. As can be seen from the diagram in (24), schwa is properly licensed when it occurs in a monomoraic maximal syllable.

(24) a. Monomoraic maximal syllable


A single consonant to the immediate right of schwa does not receive a mora via morafication.[29] Instead, as part of coda formation, this consonant is adjoined to the mora which immediately dominates schwa. It would seem that schwa, which is a root node specified only for the feature [-cons], is not heavy enough to license a syllable nucleus. Schwa and the mora to which it is affiliated require the adjunction of a single consonant in order to be properly licensed.

The second type of condition which serves to license schwa is prosodic in nature. Specifically, schwa is also properly licensed in stressed open syllables, as illustrated in (25):

(25)

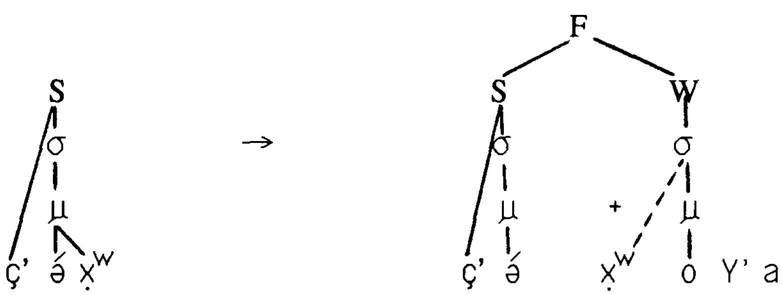



Stress in Sliammon is word-initial.[30] The vowel in a word-initial syllable receives primary stress. In the example in (25) schwa receives primary stress. Foot construction follows morafication and syllabification, thus organizing these prosodic categories. In Sliammon, feet are assumed to be binary, and left-dominant. The first syllable in a word is designated S(trong) and receives primary stress. Schwa is therefore prosodically licensed if it is dominated by a syllable which is labelled Strong. Example (26) illustrates the second type of configuration in which schwa is properly licensed. Notice that schwa occurs in the syllable which receives primary stress. That syllable in turn is dominated by the strong branch of a metrical foot.

(26)

| | | |
|---|---|---|
| [ç'ə́x̣ʷoỳəm] | /ç'əx̣ʷ-oY'A-əm/<br>root - LS 'hand' - intr | 'go wash your hands' (MG 442) |

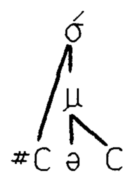
a. b.



This partial derivation focuses on the first two syllables, which constitute a left dominant foot in Sliammon. As can be observed, schwa is licensed in a stressed open syllable. It should be noted that there are no vowel-initial words in Sliammon; this is a consequence of the Obligatory Onset Principle for syllabification holding in this language.

Needless to say, schwa is also licensed when it occurs in any configuration which is a composite of (24) and (25) above. In other words, schwa is also properly licensed in a monomoraic maximal syllable which receives primary stress, as illustrated in (27).

(27)




Schwa is also licensed in a bimoraic syllable of the form CəCC. The conditions on the prosodic licensing of schwa seem to restrict the occurrence of schwa in open syllables.

The conditions on the prosodic licensing of schwa described above predict that schwa will never occur in an unstressed open syllable. This is an empirical claim which is subject to verification.[31] Now that the special conditions[32] on the distribution of schwa have been presented, morafication and syllabification become the focal point of discussion which follows. The next six sections are devoted to a description of these algorithms.

### 1.3 Syllabification

The following canonical syllable types are found in Sliammon: CV, Cə, CVC, CəC, and CəCC. It is hypothesized that syllables are maximally bimoraic. The canonical shape of roots in Sliammon is generally CəC, CVC, or CəCC although a number of roots of the form CVCV are also attested. Notice that all of these root types are maximally bimoraic. CVC and

CəCC root types are monosyllabic bimoraic syllables, whereas CVCV roots are bimoraic bisyllabic units. It is hypothesized that the minimal word is a CVC, CəCC, or CVCV sequence. This can also be restated in terms of the moraic content of the minimal word. It is claimed here that the minimal word is bimoraic. In Sliammon, longer roots are also attested; however, they most likely reflect morphologically complex forms which may or may not be subject to compositional analysis. It should be noted that the base for morphological operations must be defined by Prosodic Circumscription as the first CVC sequence[33] of the root, at least for the cases in which the root and base are not coextensive.

Morafication and syllabification apply to underlying representations as the first rules of the phonological component. These rules are reapplied in a cyclic fashion throughout the phonological derivation whenever new roots and/or affixes are added. The derivation of 'lots of hemlock' in Chapter 3 section 3.3.1 provides positive evidence for the cyclic application of morafication and syllabification in Sliammon. In this thesis, where the output of a cyclic versus a noncyclic derivation would be the same, a noncyclic derivation is adopted for purposes of simplicity. The present discussion is prompted by the need to clarify certain underlying assumptions which are made with respect to these algorithms and which are included in the discussion of Glide/Obstruent Alternation in Chapter 2. These aspects of prosodic structure (namely morafication and syllabification) are treated here as part of a six step process.

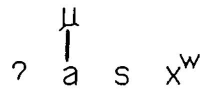
### 1.3.1 Morafication

The first step in this process is the morafication of each [-cons] segment within the morphological domain. Shaw (1992) hypothesizes that this process is universal. Morafication applies directionally from left to right. This algorithm assigns a mora to every root node that is specified as [-cons]. In other words, the algorithm assigns a mora to every vowel: /a, e, o, ə/. Notice that in Sliammon glides are marked as [sonorant], but are unmarked for the feature [-cons]. Examples (28) illustrate this process.

(28)

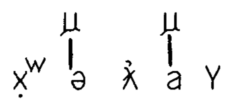
a. [ʔásxʷ] /ʔasxʷ/ 'seal' (MG 18)

Morafication



b. [x̣ʷə́ƛ̓ay] /x̣ʷəƛ̓-aY/ 'mountain goat' (MG497)

Morafication

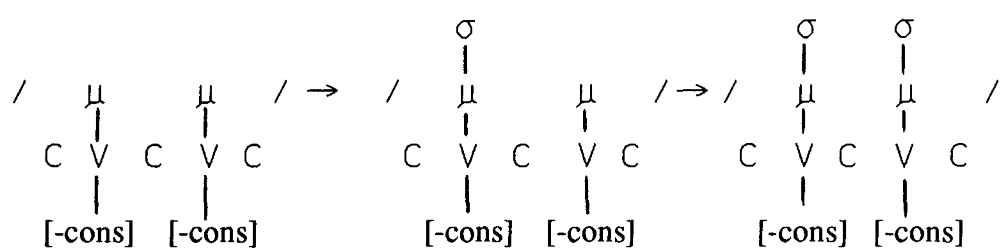


The projection of the syllable node follows exhaustive morafication and is discussed in section 1.3.2.

### 1.3.2 Syllable Projection

Syllable projection is illustrated schematically by the diagram in (29). The moraic [-cons] segment is the optimal head of the syllable.

(29)



Sliammon seems to allow any of the sonorant segments (resonants (R) and vowels (V)) the potential of occupying the nucleus of a syllable; however if available, a [-consonantal] segment always functions as the head of the syllable. The sonority scale proposed in (30) defines the relative sonority of sonorant segments.[34] For example, the [-cons] segments, which have a sonority rating of one, are more sonorant than [sonorant] lateral segments with a sonority rating of four.

(30) Relative Sonority of Sonorant Segments:

| | | | |
|---|---|---|---|
| Most sonorant | > Less Sonorant | > Less Sonorant | > Least sonorant |
| 1 | > 2 | > 3 | > 4 |
| [-cons] | > [son, hi] | > [son, nasal] | > [son, lat] |
| e, o, a, ə | > Y, W, y, w | > n, m | > L, l |

In the absence of a [-cons] segment, a language specific morafication parameter may allow a segment which is overtly specified as [son] to function as the syllabic head. A [son] consonant only occupies head position in the absence of a [-cons] segment. In other words, it is always the most sonorant segment which functions as the head of the syllable. The partial derivations in (31) illustrate how morafication and syllable projection proceed.

(31)

a. [k̓ʷáč̓] /k̓ʷač̓/ 'dogfish' (MG 1)
root

a'. Morafication

μ
|
k̓ʷ a č̓
|
[-cons]
|
[lo]

a''. Syllable Projection

μ
|
k̓ʷ a č̓ → 

σ
|
μ
|
k̓ʷ a č̓

In (31a') the vowel /a/ is identified as the only [-cons] sonorant segment in the string. This moraic segment becomes the head of the syllable as depicted in (31a'') by the process of syllable (σ) assignment. Sliammon has a very few cases of surface adjacent nonidentical vowels; these are discussed in footnote 38. When nonidentical nuclei come together across a morphological boundary, the rightmost vowel is deleted. It is proposed that the deletion of the rightmost vowel follows from the Directionality Parameter. Once syllable projection has applied exhaustively, then the next step is to incorporate the syllable onset.

### 1.3.3 Onsets and Onset Adjunction

Every word in Sliammon has one and only one consonant in word-initial position. In fact, one of the striking properties of Sliammon is the absence of the nominalizer prefix s- which is found in all of the other Salish languages (see Davis 1970:15). Compare the Sliammon (Sl) and Sechelt (Se) forms in (32) which show the absence of this widespread prefix in Sliammon.

(32)

| | | |
|---|---|---|
| a. [núxʷɪɬ] | | 'canoe' (Sl) (MG 62) |
| a'. [snə́xʷɪ́ɬ] | <snéxwílh> | 'canoe' (Se) (RB 1985:24)[35] |
| b. [q̓ʷéy̓ᵊx̣] | | 'wood' (Sl) (MG 198) |
| b'. [sq̓ʷʌ́yɪx̣] | <sk̲w'éyex̲> | 'firewood' (Se) (RB 1985:143) |
| c. [x̣ʷʌ́s·] | | 'animal fat or lard' (Sl) (MG 332) |
| c'. [sx̣ʷʌ́s] | <sx̲wes> | 'grease' (Se) (RB 1985:276) |
| d. [tú·mɪš][36] | | 'man' (Sl) (JD 1970:79) |
| d'. [stómɪš] | <stúmish> | 'man' (Se) (RB 1985:24) |

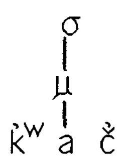
There are no complex onsets in the Sliammon forms. If the nominal prefix were present in Sliammon, it would clearly be a violation of the constraint on possible onset sequences.[37]

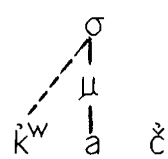
Based on the assumption that syllable onsets behave the same as word-initial onsets in Sliammon and the fact that it is an overwhelming generalization that there are no vowel sequences in the language, it is assumed that all syllables must have an onset and that each onset contains a maximum of one consonant.[38] Consequently, the Obligatory Onset Principle for Syllabification is operative in this language. Onset incorporation adjoins a single nonmoraic segment to the immediate left of a moraic segment as an onset directly under the syllable node. This step is illustrated in (33) below. Onsets are by definition nonmoraic, in keeping with current assumptions of Mora theory (Hayes 1989, McCarthy & Prince 1990, Shaw 1992). Consider the following examples of Onset incorporation:

(33)

a. [k̓ʷáč̓] /k̓ʷač̓/ 'dogfish' (MG 1)
root

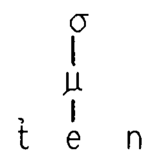
a'. Output of Morafication & Syllable Assignment a''. Onset Adjunction



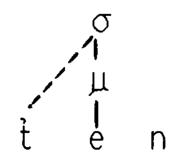



b. [t̓ɛ́n] /t̓en/ ‘barbecued fish’ (MG 432)

b'. Output of Morafication & Syllable projection




b''. Onset adjunction

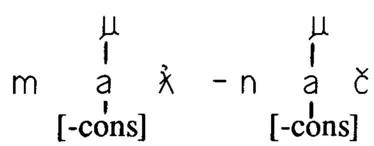



Both (33a'', 33b'') illustrate the adjunction of the consonant to the immediate left of a moraic segment as the onset of the syllable. It is assumed that the segment's root node is adjoined directly to the syllable node (σ). The derivation in (34) is a further example.

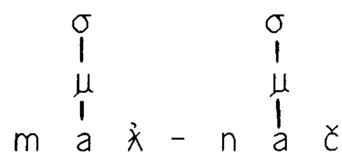
(34)

a. [mʌ́ƛ̓ᵊnəčʰ] /maƛ̓ - nač/ ‘Mitlenatch Island’ (MG 69)
root ‘calm’ - LS ‘end, bottom or tail’ also: ‘calm back end’

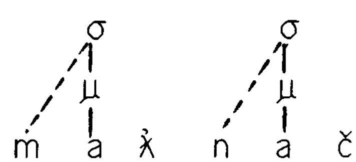
a'. Morafication




a''. Syllable Assignment




a'''. Onset adjunction



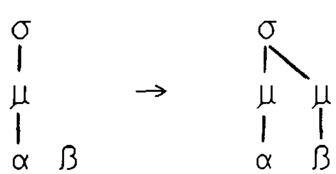
The example in (34a') shows morafication of each [-cons] segment according to the principles of morafication discussed above. In (34a''') the nasals are adjoined as the obligatory onsets to their respective syllables. The partial derivation in (34) concludes the section on onset adjunction. The following section which establishes the rule of "Weight by Position" (cf. Hayes 1989:258).

### 1.3.4 Weight by Position

The rule of Weight by Position is a language specific rule which assigns a mora to each (nonmoraic) segment to the right of a moraic segment except for a single (nonmoraic) segment to the immediate right of the vowel schwa. This rule applies exhaustively but does not affect segments which have been syllabified. Schwa is identified by its lack of melodic content: it is a root node specified only for the feature [-cons]. The remaining moraic [-cons] segments are the "full" vowels /a, e, o/. In contrast to schwa, /a, e, o/ contain additional featural content which distinguishes them from schwa.The motivation for this approach comes from the fact that coda consonants which follow a full vowel can be shown to be moraic, as seen from the discussion of vowel length in Chapter 3.

Hayes (1989:256) states that language-particular moraic structure seems well motivated. The schematic formalization of the rule of Weight by Position is reproduced here as it appears in Hayes (1989:258).

(35) Weight by Position




Hayes allows restrictions to be placed on ß in any language particular version of the rule of Weight by Position. For example, ß may be restricted to a specific natural class of segments which are themselves a subset of the available inventory of consonants in a particular language. Sliammon seems to show that there can also be restrictions or conditions placed on $\alpha$, which in turn affects the application of the rule of Weight by Position to $\beta$. In other words, in Sliammon if $\alpha$ = ə, then $\beta$ is nonmoraic; however, if $\alpha$ = a full vowel (V), then $\beta$ is moraic. The derivations in (36) and (37) exemplify the application of the rule of Weight by Position.

(36) $\alpha$ = ə; therefore $\beta$ is nonmoraic

| | | |
|---|---|---|
| [pʌ́q$^h$pʌq$^h$] | /pəq-pəq/ | 'all white' (MG 129) |
| | CəC pl - root | |

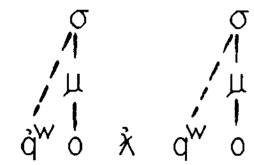
a. Output of Onset adjunction    b. Weight by Position


As can be seen from this derivation, the uvular consonant does not receive a mora via the rule of Weight by Position because the quality of the preceding vowel is identified as schwa. In (37) the preceding vowel is a full vowel.

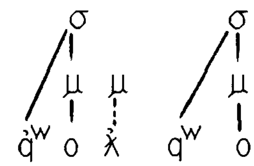
(37) $\alpha$ = V; therefore $\beta$ is moraic

| | | |
|---|---|---|
| [q̓$^w$óƛ̓q$^w$o] | /q̓$^w$oƛ̓-q$^w$o/ | 'salt water'(MG 139) |
| | root - LS 'water' | |

a. Output of Onset Adjunction



b. Weight by Position



The application of the rule of Weight by Position assigns a mora to the lateral affricate /ƛ̓/ after the full vowel /o/.

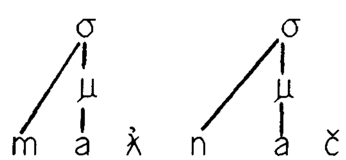
### 1.3.5 Codas and Coda Adjunction

The final step in this process is to syllabify as much of the remaining melodic material as possible after exhaustive morafication, syllable projection, onset incorporation and morafication by Weight by Position have taken place. The hypothesis that syllables are maximally bimoraic is adopted. A single nonmoraic segment to the immediate right of schwa is adjoined to the mora dominating schwa as a sister of schwa. The mora dominating a single (moraic) consonant which remains unassociated is adjoined to the preceding syllable node (σ). There are the following limitations on adjunction. Word-internal syllables with full vowels have a maximum of one coda consonant. This follows from the hypothesis that syllables are maximally bimoraic. For example, a word like 'Mitlenatch' discussed in (34) is re-examined in (38) with respect to the incorporation of the coda consonants.

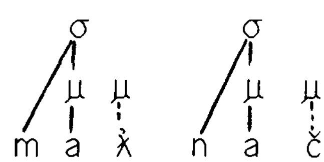
(38)

a. [mʌ́ƛ̓$^{ə}$nəč$^{h}$] /maƛ̓ - nač/ 'Mitlenatch Island' (MG 69)
root 'calm' - LS 'end, bottom or tail' also: 'calm back end'

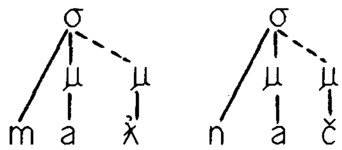
a'.Output of Onset Adjunction



a". Weight by Position



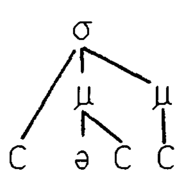
a'''. Coda Adjunction



The derivation in (38a') shows the output of morafication, syllable projection and onset incorporation. The derivation in (38a'') shows the application of the rule of Weight by Position. The nonmoraic consonant /λ̓/ to the right of the full vowel A is assigned a mora by the language specific rule of Weight by Position, as is the consonant /č/. The first syllable in example (38a''') shows adjunction of the post-nuclear mora directly to the syllable node (σ). Word-internal clusters following full vowels, such as /λ̓+n/ in example (38), contain a maximum of two consonants: one consonant which functions as the obligatory onset to the following syllable, and the other consonant which functions as the coda to the preceding syllable.

Syllables in which the underlying vowel is schwa may have as many as two post-vocalic segments—one which is adjoined as a sister to schwa, and the second which is moraic. This is illustrated in (39).

(39)



This configuration allows for triconsonantal medial clusters, as long as the preceding vowel is schwa. There is a limited number of forms which in surface realization have word-internal clusters of three consonants. It will be argued that phonologically these can be shown to conform to the limitation placed on word-internal clusters, and therefore do not pose counterexamples to the current analysis.

(40)

| | | | |
|---|---|---|---|
| a. | [ƛə́ƛpxʷəč] | /ƛa-ƛapxʷ-ət-č/<br>CV prog - root - CTr -1sg Sb | 'I'm breaking it ' (MG 153)[39] |
| b. | [ʔáʔp̓tənóɬ] | /ʔa-ʔap̓tən-oɬ/<br>CV dim - root - dim | 'small sea urchin' (MG 586) |
| c. | [tə́tk̓ʷtʌs] | /tə-tək̓ʷ-t-as/<br>CV prog - root - CTr - 3 Sb | 'he's pulling it' (MG 411) |
| d. | [hóʔmʔhom] | /hom̓hom/ | 'blue grouse' (MG 121) |
| e. | [čúyʔtomɪš] | /čoy̓-t-omeš/<br>young - male - LS 'appearance' | 'young man' (MG 141) |
| f. | [q̓ʷítowsnəč] | /q̓ʷet-ows-nač/<br>root - LS 'body' - LS 'base, bottom' | 'bottom, backside' (MG 326) |

Examples (40a-c) are morphologically complex forms in which CV-reduplication takes place. The root vowel is eventually lost, resulting in surface phonetic clusters which exceed the maximum of three. The underlying representations show, however, that these examples do conform to the restrictions on syllable size within the phonological component. The surface clusters are, therefore, apparent counterexamples only at a later phonetic level. Notice that (40a, 40c) are bimoraic syllables of the form CəCC which are in keeping with the possible syllable types discussed above. Examples (40d, 40e) are cases of the surface linear ordering of underlying glottalized resonants /m̓, y̓/ respectively. Phonologically, these segments function as units, and are therefore not problematic. This observation motivates the proposal that glottalized resonants are present in underlying representations in Sliammon. In the final example (40f), the cluster of three consonants -wsn- has a morphological boundary which separates these segments (-ws+n-). In addition, it is still unclear what the appropriate UR is for the lexical suffix for 'body'.[40]

There are no examples which have more than three consonants in a word-internal cluster. It is concluded, that phonologically, word-internal clusters with a maximum of two consonants occur when they are preceded by a CVC syllable. It is also concluded that word-internal clusters with a maximum of three consonants occur when they are preceded by a CəCC syllable.

### 1.3.6 Extrametricality

It would seem, however, that word-final position in Sliammon does permit more than a single final consonant in the case of a full vowel and more than two consonants in the case of a preceding schwa. This is seen by the stacking up of consonants at the right-hand margin of the word domain. Based on the data presented in the Appendix, word-final position seems to permit as many as three post-vocalic segments,[41] as in:

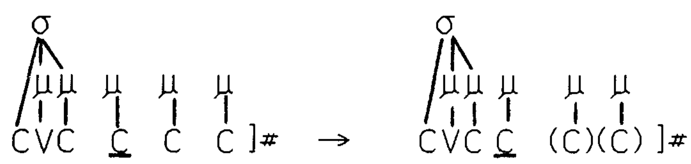
(41)

| | | | |
|---|---|---|---|
| a. | [čúyʔsɑ̀ɬtxʷ] | /čoY'-saɬ-txʷ/<br>young - woman - LS 'house' | 'young woman' (MG 143)[42] |
| b. | [yə́čɛšč̌xʷ] | /yəč̌-aš-čxʷ/<br>root - Tr - 2 sg Sb | 'you (sg) fill it up'(MG 370) |
| c. | [ç'ɑ́mqʷɬ] | /ç'amqʷɬ/<br>root ? | 'cloud' (MG 392) |
| d. | [kʷúkʷɬtʰ] | /kʷə-kʷəɬ-t/<br>CV - root - CTr | 'untying rope' (MG 462) |

Since it is argued that syllables are maximally CVC or CəCC, these additional consonants[43] in word-final position in Sliammon will be treated as extrametrical. It is assumed that they are not adjoined to the syllable node (σ) and are independently licensed by the principle of extraprosodicity. Extrametricality is assigned directionally from right to left starting at the right-hand edge of the word domain. Syllable structure is assigned maximally. Thus once the word-final syllable is a maximal CVC or CəCC sequence, up to two remaining consonants may be marked as extraprosodic[44].

(42)

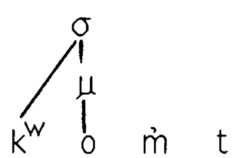
a. a'. extraprosodicity



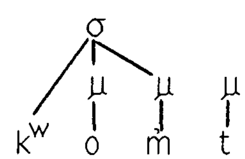
In the representation in (42a'), the final syllable is a maximal CVC syllable. The two rightmost consonants (C)(C) are marked as extrametrical in keeping with the assumptions regarding extraprosodicity outlined above. The remaining consonant $\underline{C}$ would eventually be deleted via Stray Erasure since it is neither syllabified nor independently licensed by the principles of extrametricality. In example (43) there are two post-nuclear consonants.

(43) [kʷúm̓tʰ] /kʷom̓ - t/ 'kelp' (MG 16)
root - ?

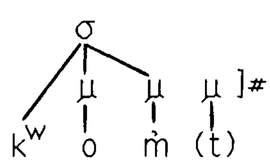
a. Output of Onset Adjunction



a'. Weight by Position & Coda Adjunction



a''. Extrametricality

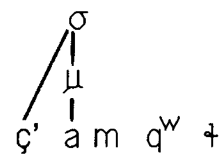


In (43a') the mora dominating the nasal consonant is adjoined to the syllable node (σ) to form a maximal CVC syllable. The syllable must be maximized before extrametricality applies. The final consonant (t) is then marked as extrametrical. In (44) there are three post-vocalic consonants.

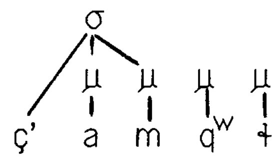
(44)

c. [ç'ámq$^{w}$ɬ] /ç'amq$^{w}$ɬ/ 'cloud' (MG 392)

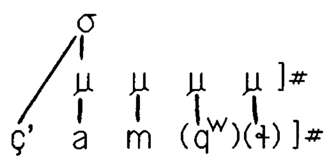
c'. Output of Onset Incorporation



c''. Weight by Position & Coda Incorporation



c'''. Extrametricality



The mora dominating the nasal consonant is adjoined to the syllable node (σ) to form a maximal CVC syllable. Then the two right-most consonants are marked as extrametrical as in (44c'''). The two word-final consonants which are extrametrical were each assigned a mora via the rule of morafication. These segments are licensed by virtue of extrametricality.

In conclusion, it has been shown that it is insufficient to look at word-final position as an indication of the maximal size of word-internal codas. Therefore the assumptions made for onsets and codas are different with respect to the uniformity of word and syllable domains. This is by no means an exhaustive discussion of Sliammon syllabification, but provides an adequate background to discuss the rule of Glide/Obstruent Alternation which will be the focus of the discussion in Chapter 2.

**Notes to Chapter 1**

[1] Sliammon is an anglicization of [ɬáʔamɪn] (MG:64), a term used by the southernmost Mainland Comox in reference to their own people. The linguistic community refers to the language as either Mainland Comox or Sliammon, whereas these people refer to their own language as [ʔayʔaǰúθəm] (Davis 1978:237) which has the proposed literal meaning 'to exchange language/words' and demonstrates the alternation which is the focus of Chapter 2.

[2] See Sliammon Life, Sliammon Lands by Dorothy Kennedy and Randy Bouchard (1983) for a detailed ethnographic study of the Sliammon, Klahoose and Homalco peoples who together comprise the Mainland Comox dialect of Comox (Coast Salish). Field notes which appear in the Appendix to this thesis are from a speaker of Sliammon, Mrs. Mary George. I am not aware of any linguistic fieldwork which has taken place either at Squirrel Cove (Cortes Island) or at Church House (located on the mainland near the opening to Bute Inlet). It is still unclear whether or not the Klahoose and Homalco people's speech is the same as that of the Sliammon. Mrs. George has intimated that there are some differences. This remains as an area for future research.

[3] See Sapir (1915:7-8) and Harris (1981: 220-31) for a discussion of this alternation in Island Comox and Davis (1970:34-5; 1978:218-20), Hagège (1981:37), Kroeber (1988:fn 22 and 23; 1989:111) for previous discussions of this alternation in Mainland Comox. See Chapter 2, section 2.1 for further discussion. Although much of the data for this study are from my own field notes, which provide the basis for the Appendix to this thesis, additional data and descriptions are drawn from the authors mentioned above. Needless to say, any oversights or errors are my own.

[4] This is perhaps better classified as "uvularization", since lowering and backing is caused by the presence of either the uvular consonants or the vowel /a/.

[5] The status of so-called "marginal segments or phonemes" merits further discussion; however, it is beyond the scope of the present paper.

---

[6] The failure of this segment to appear in word-initial position may be accidental since it does occur syllable-initially within words. This distributional gap is mentioned nonetheless.

[7] Some examples which contain these "retracted" coronals are not as clear as the examples containing the retracted 'l'. It may be necessary to posit some inherently "retracted" roots along the lines of Remnant (1990). This area of Sliammon phonology requires further study.

[8] Hagège (1981: 23) attributes the darkening of this lateral to "velarization" whereas it is suggested here that it is more appropriately attributed to "uvularization" since it parallels the behaviour of the dental and interdental fricatives as well as the behaviour of the vowels, which are discussed below.

[9] M. D. Kinkade (pc) has suggested that these words containing a dark 'l' may be borrowed from Kwak'wala. The lateral /L/ which is realized as [ɬ, w, y] may be "velarized" as suggested by Hagège. If this were the case, it would explain the allophone [y] in the environment of both /a/ and /e/. The loss of the feature [lateral] leaves the the Dorsal node which dominates the feature [hi].

[10] Intervocalically, PS* l may also have become a glottal stop between two low vowels—/a__a/. This seems to be restricted to several lexical items and warrants further study.

[11] The following abbreviations for features are used: ant = anterior, atr = advanced tongue root, bk = back, cg = constricted glottis, cons = consonantal, cont = continuant, dist = distributed, hi = high, lat = lateral, lo = low, nas = nasal, rd = round, sg = spread glottis, son = sonorant, str = strident. The articulator nodes will also be abbreviated as follows: Lab = Labial, Cor = Coronal, Dor = Dorsal, and Phar = Pharyngeal.

[12] This claim raises the issue of the use of the features [-bk], [-cons], and [-cont]. These are the only features which are stated in terms of a negative value for that feature. If features are monovalent and are to be expressed by either their presence or absence from underlying representations, then these three features may be better referred to as [front], [vocalic], and [stop] respectively. I adopt the features [-cons], [-bk] and [-cont] since they are frequently used in the literature.

[13] See the Symbols used in this thesis.

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14 McCarthy (1988) represents uvulars as coarticulated dorsal/pharyngeal segments. There does not seem to be any positive evidence that the uvulars in Sliammon are coarticulated. Shaw (1991a) argues that uvulars in Nishga are simply specified for pharyngeal, and not for dorsal, since there is no evidence that they pattern with velars.

15 This may be evidence that glottal stop is specified as Phar in Sliammon. By the same token, it may also be construed as evidence that glottal stop is specified as [lo] in Sliammon, since the vowel [ɑ] is both Phar and [lo].

16 I am also assuming that the lax variants of schwa are specified Phar, since in many of the examples explored in this thesis, there is an adjacent Phar consonant or vowel in the environment of schwa. An alternative explanation appeals to the structural configurations in which schwa occurs. Since schwa occurs in a monomoraic syllable, and shares its mora with the following consonant, this may be an alternative explaination for the resulting lax variants of this underlying vowel.

17 The vowel /a/ in this context, as well as in the parallel cases which follow, is in the preceding syllable nucleus. It is still unclear whether or not there are limitations on the nature of the intervening consonant. All consonants, except uvulars and perhaps glottal stop, should be transparent. This is a topic for future study.

18 There are also a few examples which suggest that the low vowel is realized as such **before** a tautosyllabic [hi][-bk] consonant.

19 This environment is documented by Kroeber (1988). [u] from an underlying schwa occurs rarely in my own data.

20 This is analysed as the autosegmental spreading of the Pharyngeal node.

21 See the appendix of Abbreviations used in this thesis.

22 In the phonetic form the root vowel /a/ is reduced to schwa in post-tonic position.

23 Honoré Watanabe (pc) suggests that the second vowel is an underlying /a/.

[24] Kroeber (1988) suggests that final glottalization of the LS for 'hand' may indicate the stative versus the nonstative form of this suffix.

[25] This form is inherently reduplicated.

[26] If this is CəC- plural reduplication, then it is unclear why the vowel of the reduplicative prefix is long. See Chapter 3 on Vowel Length in Sliammon for further discussion.

[27] These differences between CVC/CəRC and CəC roots have been used as criteria for determining the UR of some roots. These are generalizations regarding the behaviour of these root types and are not without exception.

[28] M.D. Kinkade (pc) has suggested that any schwa which occurs before a resonant is most likely epenthetic, except where the surface schwa can be shown to be an underlying full vowel which has undergone reduction.

[29] There is positive evidence, from the compensatory lengthening facts discussed in Chapter 3, that a subset of segments in Sliammon does receive weight by position. These include glottal stop and the glottalized resonants ỷ and ẇ, which are moraic in post-vocalic position. The glottalized resonants could be viewed as glottalized vowels and their moraic status could be assigned by the rule of morafication rather than by a language specific rule of Weight by Position. The glottal element in some respects seems to determine the presence or absence of weight by position. Since this is unusual and presumably marked, I claim that all consonants which follow full vowels are assigned weight by position, and that it is rather the absence of any other relevant consonant deletion rules which accounts for these facts. I, therefore, hypothesize that all consonants in coda position, which follow full vowels, are moraic. As pointed out to me by Patricia A. Shaw, this statement implies that morafication is syntagmatically sensitive. This will be discussed in 1.3.4.

[30] It is hypothesized that stress in Sliammon is last cyclic. This analysis is adopted since there does not seem to be any phonological evidence of a stress shift which requires that stress rules apply in a cyclic fashion. A complete analysis of stress in Sliammon is beyond the scope of this thesis. The generalizations which are made with respect to stress placement are adequate for presentation of the processes in question.

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[31] There are many examples of excrescent vowels in Sliammon. It is proposed that these vowels are of a phonetic nature. They are inserted post-lexically and are not phonologically relevant. Therefore, the presence of excrescent vowels does not constitute a set of counter-examples to the claim that schwa does not occur in open syllables within the phonology. These vowels are very brief in duration and are transcribed here as a raised vowel. They occur as svarabhakti vowels between morphemes: the schwa in the example cited below is a case in point. The fact that these schwas are absent from URs is indicated by the morphological composition of many words. In addition to svarabhakti vowels, echo vowels occur after glottal stop as an exact copy of the preceding vowel, as in [mɑ́ʔ$^{ɑ}$ƛ̓$^{ə}$mʌƛ̓$^{h}$] /mAƛ̓-mAƛ̓/ 'always calm' (MG 675). See Kuipers's discussion of echo and svarabhakti vowels in Squamish (1967:31).

[32] It would seem that the conditions on the licensing of schwa are generally met; however, this is certainly not without exception. There is interaction between the proper licensing of schwa and syllabification. Syllabification takes precedence over the prosodic licensing of schwa, as discussed in footnote 20 in Chapter 3, for example. The deletion of schwa is prevented if it were to create an unsyllabifiable string of consonants.

[33] Stating the definition of "base" in terms of a single bimoraic syllable creates problems in the case of CVCV roots, since CVCV roots are bimoraic and bisyllabic. The portion which clearly functions as the base for morphological operations is the first CVC sequence of any root, regardless of the structure of the root - be it CVC, CəCC, or CVCV. It should also be noted that the prosodically circumscribed base for (weak) CəC roots is a monomoraic maximal syllable - a CəC sequence.

[34] In Sliammon it is still unclear whether or not sonorants which are glottalized (i.e. [constricted glottis]) occupy the same position on the sonority scale as do their nonglottalized counterparts. This remains a topic for further study.

[35] I have adapted these transcriptions from Beaumont's (1985:3-13) pedagogical grammar which are written in the standard orthography adopted by the Sechelt people. The Sechelt orthographic versions appear here in angle brackets.

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36 In the related forms given in the appendix, the vowel quality which was recorded was closer to an [o].

37 The nominalizer s- should not be confused with the proclitic s- which marks a subordinate clause. For an interesting discussion of these clitics, see Davis (1978:239). I will adopt Davis' claim that the s- which marks a subordinate clause is, in fact, a clitic, and therefore does not present a problem for the present analysis of permissible syllable onsets within the domain of the lexical phonology. Cases of true counterexamples are documented for some place names. The following forms show that the s- nominalizer was used in Sliammon, at some time in the past. I have included all the examples cited by Davis. I assume that examples (a, c) are cases of a frozen s- nominalizer, and that (b) exemplifies the subordinate clause marker, since [pʌq] most likely functions as the predicate.

| | | |
|---|---|---|
| a. [spasta'anoɬ] | 'the United States side of the border' | (JD 1970:91). |
| b. [pʌq sč́éàǰɪn] | 'weasel' (JD 1970:16) | |
| c. [skʷíči] | 'bothersome, noisy' (JD 1971) | |

38 Although there are no vowel-initial words recorded, there do seem to be two examples of word-internal vowel-initial syllables:

| | |
|---|---|
| [θí.ɛčʊ̀ṣ] | 'five' (MG 115) |
| [tú.umɑ̀ỳə] | 'Westerly (wind)' (MG 386) |

The second example is clearly heard as a single vowel followed by a rearticulation of the same vowel. This suggests the possible existence of word-internal vowel-initial syllables. These forms are rare and will therefore be treated at the present time as exceptions rather than the rule. The morphological composition of these forms remains uncertain.

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39 The loss of the transitive -t before the first person subject marker č does not trigger compensatory lengthening since the consonant is nonmoraic in the environment after schwa. Thus, this provides positive evidence that structurally, schwa and the following consonant constitute a monomoraic syllable.

40 While the examples in (34) have been explained, the following forms still require clarification:

a. [mɑ́ʔmuqʷɬkʷʊ̀ʰ] /?/ 'an accident' (MG 347)

b. [kʷíẇkʷpɪtʰ] /?/ 'hills (pl)' (MG 230)

b'. [kʷúpɪtʰ] 'hill' (MG 229)

c. [ƛ̓ʌ́mstɑn] /ƛ̓am-s-tan/ 'house'(MG 233)
root - ? - LS 'enclosure'

d. [ʔíšxʷčɨn] /ʔəy- š - xʷ čən/ 'I like it'(MG 379)
root 'good' - Tr - ? 1sg Sb indep

The morphological structure of (a) and (b) is still unclear. The form for 'hills' seems to be irregular, judging from the singular in (b'). The form in (d) seems to use the independent first person affix (see Davis 1978:227), which may be adjoined in the syntactic component, and would therefore not present a problem for issues regarding the phonological syllable structure. The examples in (34) and the ones listed in (36) provide an exhaustive set of those phonetic forms in the Appendix which have word-internal surface clusters containing three consonants.

41 Notice that the restriction on word-internal codas is in fact a subset of the restriction on word-final codas. Since extrametricality is a word domain phenomenon, we would never expect the number of permissible word-internal coda consonants to outnumber the number of word-final coda consonants.

42 There is a sonority reversal in the final clusters in examples (37a, 37b) - txʷ, -čxʷ.

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[43] It should be noted that traditionally extrametrical consonants have been limited to one. Inkelas (1989) however, allows for the existence of more than one extrametrical consonant, though she does not document any cases of this.

[44] See Chapter 2 section 2.4.3 which provides some indication that this hypothesis needs refinement. The examples cited in Chapter 2 suggest that a maximum of one consonant at the right-hand edge of the word domain is extrametrical.

# CHAPTER 2

## 2.0 Introduction

In this chapter, I discuss the process of Glide/Obstruent Alternation as exemplified by the data in (1). This is treated as a single process in which the "obstruents" [ǰ, g] alternate with their corresponding glides [y, w] respectively. It is argued that the obstruents occur in syllable "onset" position and their glide counterparts occur in syllable "rhyme" position. In moraic theory, this must be restated since the internal structure of the syllable within the theory does not include either an "onset" or a "rhyme" constituent. It is assumed that "onset" consonants are adjoined directly to the syllable node and are by principles of prosodization "nonmoraic." Further, in the absence of syllables with enriched internal structure, the notion of "rhyme-internal" segment can be reformulated as "segment dominated by μ" (following the assumption made by Hayes (1989:299), which he attributes to Donca Steriade (pc)). The rule of Glide/Obstruent Alternation can be reformulated as well. The consonants [ǰ, g] are nonmoraic. Their glide counterparts [y, w] are moraic. It is argued that the loss of the feature [-continuant] occurs when any [sonorant] [high] segment is dominated by a mora. Consider the following data in which a capital Y is used to indicate y~ǰ and a capital W is used to indicate w~g in underlying representations. The surface segments in question are highlighted.

(1)

| | | | |
|---|---|---|---|
| a. | [ǰúθutʰ] | /Yoθ -ət/<br>root - CTr | 'to push' (MG 406)[1] |
| a'. | [ǰúyθotəs] | /Yo-Yoθ -ət-əs/<br>CV - root - CTr - 3Sb | 'pushing it' (MG 408) |
| b. | [ŋgə́ɬ][2] | /Wəɬ/<br>root | 'shiny' (MG 250) |
| b'. | [gə́wɬ] | /Wə-Wəɬ/<br>CV - root | 'shiny (pl)'(MG 251) |

| | | | |
|---|---|---|---|
| c. | [x̣ʷáǰɪm] | /x̣ʷaY -əm/<br>root - intr | 'war club' (MG 245) |
| c'. | [x̣ʷéyx̣ʷaǰɪm] | /x̣ʷəY-x̣ʷaY-əm/<br>CəC - root - intr | 'war clubs' (MG 246) |
| d. | [qéw] | /qeW/<br>(truncated) root | 'Deer; mythical name' (JD 1970:13)[3] |
| d'. | [qégəθ] | /qeWəθ/<br>root | 'deer' (JD 1970:viii) |
| e. | [x̣ʷə́ƛ̓ay] | /x̣ʷəƛ̓-aY/<br>root - ? | 'mountain goat'(MG 497) |
| e'. | [x̣ʷə́ƛ̓aǰukʷʰtʰ] | /x̣ʷəƛ̓-aY-okʷ-t/<br>root - ? - LS skin[4] - ? | 'mountain goat blanket' (MG 252) |

The data in (1) show the obstruents [ǰ] and [g] occurring in word-initial position in (1a, 1a') and (1b, 1b'), and intervocalically in (1c, 1c', 1e', and 1d'). On the other hand, the corresponding glides [y] and [w] which alternate with these segments occur either word-finally as in (1e) and (1d) or before another consonant as in (1a', 1c', and 1b'). The consonants [ǰ, g] occur in syllable-initial position and their respective glides [y, w] occur in syllable-final position. In (1b'), the glide [w] is not in final position. This means that the rule statement requires some refinement, such that the feature [-continuant] is lost in moraic position, regardless of whether the target is in nuclear, post-nuclear, or in syllable-final position.

In this chapter, the first objective is to characterize this alternation process within the framework of underspecification theory.[5] The alternation in question is viewed as "featural incompatibility". The simultaneous presence of the features [sonorant] and [-continuant] in moraic position requires resolution. Although in most cases, it is the feature [-continuant] which is lost, it is also argued that the feature [sonorant] may be subject to deletion in Sliammon. This suggests that the feature [sonorant] is not an integral part of the root node, as McCarthy (1988) suggests, but rather that [sonorant] is dependent upon the root node, since it is accessible for delinking.

The second objective is to emphasize the central role of the prosodic category of "mora" as the appropriate domain governing this alternation in Sliammon.

The remainder of the chapter is organized in the following way. Section 2.1 deals with previous analyses of this alternation. Two alternative approaches are considered: (1) Glide Formation and (2) Obstruent Formation. The difficulties of both segmental solutions are presented. Section 2.2 formalizes the rule of Glide/Obstruent Alternation within the context of underspecification theory. Emphasis is placed on determining the appropriate autosegmental representations for the segments in question. Section 2.3 deals with morafication and syllabification of the examples in (1). It is shown that Glide/Obstruent Alternation is a rule which is sensitive to the prosodic organization and moraic content of the syllable. Section 2.4 extends the proposed analysis to include a number of related rules, as well as other manifestations of the same rule.

## 2.1.0 Previous Analyses

Previous analyses of the alternation in (1) have relied on a unidirectional segmental solution of these facts. Either underlying /ǰ, g/ become [y,w] in syllable-final position or underlying /y,w/ become [ǰ, g] in syllable-initial position. Unfortunately, there are problems with both analyses. These inherent problems have led ultimately to the conclusion that there are difficulties with the segmental approach in general. It is desirable to discuss these previous analyses before considering the solution which is proposed in Sections 2.2 and 2.3 in order to place the present proposal in context.

### 2.1.1 Glide Formation

The first segmental solution, which will be referred to as the Glide Formation Analysis, assumes that the underlying obstruents become their glide counterparts in syllable-final position. This particular approach is the one adopted by Davis (1970) and outlined below. The obstruent/glide alternation is treated by Davis (1970:34-35) as a process of phonemic neutralization. He postulates both underlying glides /y/ and /w/ as well as underlying voiced obstruents /ǰ/ and /g/ in Sliammon. He claims that "whenever an underlying /ǰ/ or /g/ falls at the end of a word or before another nonsyllabic, it becomes the corresponding glide" (1970:35). Davis gives an SPE type rule which states that " before or after a stop <u>or</u> word finally the voiced stops /ǰ, g/ become homorganic glides" (1970:60). Davis does not state this rule in terms of the prosodic categories governing the alternation, namely, mora and syllable.

There are several problems with a Glide Formation approach. First, positing underlying voiced obstruents in Sliammon creates an asymmetrical phonemic inventory in which /ǰ, g/ are the only voiced obstruents in the language. Secondly, the segments /ǰ, g/ behave phonologically as though they were resonants. For example, /ǰ, g/ and the resonants /y, w, m/[6] are subject to the same process of diminutive glottalization as illustrated in the data in (2) where the diminutive form is given first, followed by the corresponding singular and plural forms. To characterize /y, w, m, ǰ, g/ as a natural class of targets for this process would be unmotivated under the assumption that /ǰ, g/ are "voiced" obstruents. The diminutives contain a glottalized resonant ([ỷ, m̉, w̉]), whereas each of the corresponding singular and plural forms contain the plain non-glottalized counterpart ([y, m, w]).[7] The segments in question appear in boldface. The glottalization of [ǰ, g] is discussed in 2.4.4.

(2)

| | | |
|---|---|---|
| a. [ƛ̓ɨ́ƛ̓x̣ʷaỷ] | /ƛ̓e-ƛ̓əx̣ʷ-ay-ʔ/<br>Ce dim - root - ? - dim gl | 'small chum salmon'<br>(MG 533) |
| a'. [ƛ̓ʷə̣́x̣ʷəy]<br>~[ƛ̓óx̣ʷay] | /ƛ̓əx̣ʷ-ay/<br>root - ? | 'chum salmon'<br>(MG 6, 184) |
| a". [ƛ̓ə́x̣ʷƛ̓əx̣ʷày] | /ƛ̓əx̣ʷ-ƛ̓əx̣ʷ-ay/<br>CəC pl - root - ? | 'lots of chum salmon'<br>(MG 185, 532) |
| b. [ƛ̓ʌ́ƛ̓x̣ʌỷ] | /ƛ̓a-ƛ̓ax̣-ay-ʔ/<br>CV dim - root - LS - dim gl<br>'person' | 'old person'(MG 231)[8] |
| b'. [ƛ̓áx̣ƛ̓ax̣ʌy] | /ƛ̓ax̣-ƛ̓ax̣-ay/<br>CVC pl - root - LS 'person' | 'old people'(MG 232) |
| c. [q̓ʷáq̓ʷᵊt̓ɛm̓] | /q̓ʷa-q̓ʷat̓-em-ʔ/<br>CV dim - root - ?- dim gl | 'small river, creek'<br>(MG 225) |
| c'. [q̓ʷá>t̓əm] | /q̓ʷat̓-əm/<br>root - ? | 'river'(MG 223) |
| d. [x̣ɛ́x̣aw̓šɪn] | /x̣e-x̣aW-ʔ-šen/<br>Ce - root - gl - LS 'foot, leg' | 'small bone'(MG 599)[9] |
| d'. [x̣áwᵘšɪn] | /x̣aW-šen/<br>root - LS 'foot, leg' | 'bone'(MG 218) |

The Glide Formation analysis must be extended further as shown by the related data presented in section 2.4.4. Since the glottalized obstruents [ǰ', g'] also alternate with their corresponding glottalized glides [ẏ, ẇ], it would be necessary in a Glide Formation approach to posit underlying /ǰ', g'/ in order to maintain a consistent and unified analysis of these facts within a segmental framework. Once the glottalized counterparts are posited in underlying representation, they are the only glottalized obstruents which behave as though they were glottalized resonants. This is not only misleading but misses a significant generalization.

### 2.1.2 Obstruent Formation

In the second segmental solution, which will be referred to as Obstruent Formation Analysis, the glides /y, w/ become their corresponding obstruents [ǰ, g] in syllable-initial position. This Obstruent Formation approach is best exemplified by Harris's (1981) analysis of Island Comox, but can be easily extended to an analysis for Sliammon. Harris's (1981:152-229) analysis for the related dialect of Island Comox parallels the historical developments proposed by Swadesh (1952). Harris claims that ǰ and g contrast only on the surface with y and w respectively.

He maintains that "restructuring has taken place in Comox"[10] (1981:154) and that all instances of surface [ǰ] and [g] are now underlying /y/ and /w/. Harris (1981:223) therefore opts for an analysis in which the glides /y/ and /w/ become their corresponding obstruents in prevocalic (syllable-initial) position. The problem with this type of analysis is that it cannot account for a large number of instances of syllable-initial [y]'s and [w]'s which do not undergo the Glide/Obstruent Alternation. Harris's proposal is that these instances of surface [y] and [w] are /l/ in underlying representations. This scenario can be extended to Sliammon. The Sliammon forms in (3) include several examples of syllable-initial [y] and [w] which do not undergo Glide/Obstruent Alternation. These instances of [y] and [w] in Sliammon (Sl) come from Proto-Salish * l as can be seen by the retention of [l] in the cognate Sechelt (Se) forms. The underlying representations for Sliammon in (3) are those which would be proposed by an advocate of the Obstruent Formation Analysis. This approach implies an abstract analysis whereby these instances of [y] and [w] which do not alternate with their corresponding obstruents are in fact underlying /l/ in the synchronic grammar. These laterals are abbreviated here as /L/.

(3)

| | | | |
|---|---|---|---|
| a. | [q$^{\dot{x}}$áʔom] | /qaL'om/[11] | 'eye' Sl (MG 258) |
| a'. | [q$^{\dot{x}}$ówq$^{\dot{x}}$aẇum] | /qəw-qaL'om/[12] | 'eyes' Sl (MG 259) |
| a''. | [qʌ́lom][13] | /qə́lom/ <k̲élum> | 'eye' Se (RB 1985:273) |
| b. | [q$^{w}$áyegən] | /q$^{w}$aL-eWən/ root - LS 'sentiments' | 'I'll think about it' Sl (MG 363) |
| b'. | [q$^{w}$álewan] | /q$^{w}$al-ewan/ root - LS (inside) 'body' <k̲wáliwan> | 'heart, feelings' Se (RB 1985:33) |
| c. | [x̣áʔǰlṣ] | /x̣aY'-aLs/ root - LS 'rock' | 'rock' Sl (MG 381) |
| c'. | [x̣ɛ́x̣aʔǰeyɨs] | /x̣e-x̣aY'-aL(ə)s/ CV- root - LS 'rock' | 'small rock' Sl (MG 383) |
| c''. | [x̣ʌ́yáls] | /x̣əy-als/ <x̲éyáls> | 'rock, stone' Se (RB 1985:74) |
| d. | [yə́č̓ɛšč̌x$^{w}$] | /Lə̌č̓-aš-č̌x$^{w}$/ root - Tr - 2sg Sb | 'you fill it up' Sl (MG 370) |
| d'. | [lə́č̓aš] | /ləč̓-aš/ <léch'ásh> | 'fill (Tr) Se (RB 1985:274) |

Unfortunately, an Obstruent Formation analysis along these lines implies a necessary counter-feeding ordering relation. The rule which changes the glides /y, w/ into obstruents [ǰ, g] must precede the rule which changes the lateral /L/ into its allophones [y] and [w]. This prevents the glides which are derived from an underlying lateral from undergoing the rule which changes glides into their corresponding obstruents. Harris (1981) does discuss problems with this abstract analysis. He states that if we accept Kiparsky's Alternation Condition, then we are forced to leave the non-alternating cases of [y] and [w] as exceptions to the rule which creates obstruents, since there are no observed cases of [l] alternating with [w] or [y] in the synchronic grammar of Island Comox.

Harris also points out that a [w] which come from Proto Salish (PS)*l does not function like a high consonant, whereas a [w] which alternates with [g] does. He cites the following Island Comox and Pentlatch examples in order to exemplify the first claim:

(4)

| | | |
|---|---|---|
| [wowom gʸʌ] | 'sing' | ICx (Harris 1981:161)[14] |
| [ló:lom] | 'sing' | Pt (Harris 1981:161)[15] |

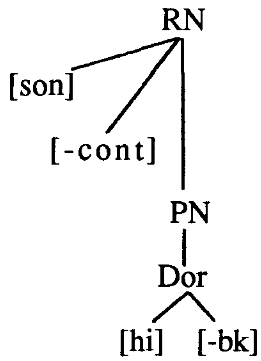
Harris states that one would expect a high rounded vowel [u] in the first syllable between the two [w]'s in an Island Comox form like [wowom]. However this [w] in Island Comox corresponds to an [l] in Pentlatch [ló:lom] and is therefore to be attributed to Proto-Salish*l. In Harris' abstract analysis the [w]'s in [wowom gʸʌ] would come from /l/'s in the synchronic grammar. As Harris concludes, it would seem that there are two kinds of [w] in the synchronic grammar with two different types of influence.[16] Harris argues against a Glide formation analysis like that of Davis (1970) on the basis that his own proposal is able to regularize the reduplicated plural as well as preserve the symmetry of the underlying consonantal inventory. Such an approach would also explain the resonant-like behaviour of the segments [ǰ, g], since within the context of such an analysis, the underlying segments are the resonants /y/ and /w/. Harris also claims that this solution accounts for the absence of height assimilation of the adjacent vowels.

## 2.2.0 Proposed Analysis

The analysis proposed in Sections 2.2 and 2.3 is able to avoid the problems associated with the previous segmental analyses while capturing certain desirable aspects of both proposals. The failure of earlier segmental approaches to provide an adequate solution to the noted alternation is ultimately symptomatic of the theoretical framework which was adopted. The underlying representations proposed in this thesis differ significantly from those posited by Davis (1970) and Harris (1981). Within the framework presented in this thesis phonological representations are not fully specified in UR. It is assumed that representations are underspecified and hierarchically organized instead, as suggested by Archangeli and Pulleyblank (1986, 1987), Archangeli (1988), McCarthy (1988). These representations are in turn dominated by suprasegmental categories of mora and syllable which are assigned by the algorithms discussed in Chapter 1 (also see Hayes (1989), and McCarthy & Prince (1990)). Within a 'principles and parameters' model of phonology, analyses ideally follow as a principled and direct consequence of the correct underlying representations (McCarthy 1988). The intention in this section is to show that by adopting the proposed underlying representations which are underspecified, it is possible to avoid many of the problems associated with the previous segmental solutions while insightfully characterizing the process in question.

Hayes (1989) claims that the notion of syllable rhyme is correctly interpreted as any segment which is dominated by a mora. Hayes (1989) also claims that the notion of syllable onset is interpreted as any nonmoraic segment. This is basically the position which is adopted in this thesis. Since the syllable internal constituents onset and rhyme are unavailable, the rule of Glide/Obstruent Alternation in Sliammon is stated in terms of the moraic or nonmoraic affiliation of the segment in question. It is proposed that the correct underlying representation for the segment which alternates between y~ǰ is the representation given in (5) below. The segment is symbolized as /Y/ in UR.

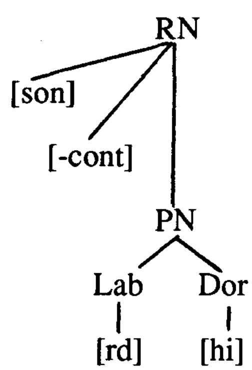
(5) /Y/




/Y/ becomes [ǰ] in nonmoraic (syllable onset) position, without any alteration of the above representation. It is clear that /Y/ is necessarily marked [sonorant] since it functions with the class of resonants as discussed in 2.1.1. Delinking of the feature [-continuant] in moraic (syllable rhyme) position causes /Y/ to become [y]. In the nucleus of a syllable /Y/ becomes [i]. This alternation implies the delinking of the feature [-continuant] as well as assuming that syllabification identifies this segment as the head of the syllable. Finally, in certain contexts (discussed in section 2.4.6) /Y/ also becomes [č], which is construed as the loss of the feature [sonorant] instead of the loss of the feature [-continuant]. Thus, the rule of Glide/Obstruent Alternation deletes the feature [-continuant] from any [sonorant] [high] segment which is dominated by a mora (μ).

The proposed representation for the underlying segment which manifests itself as the w~g alternation is illustrated in (6). This underlying segment is abbreviated as /W/.

(6)

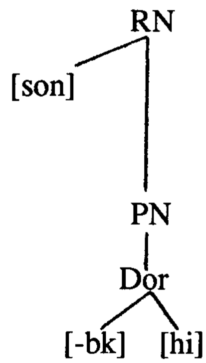


/W/ becomes [g] in nonmoraic position with the loss of the Labial node. When the Labial node is deleted, all melodic material[17] which is immediately dominated by that node is also erased. The underlying segment /W/ becomes [w] in moraic position with the delinking of the feature [-continuant]. In the nucleus of a syllable /W/ becomes [u]. This alternation implies the delinking of the feature [-continuant] as well as identification of this segment as the head of the syllable. Again, this alternation is parallel to the case discussed in relation to (5) in which [-continuant] is delinked from any [sonorant] [high] segment which occurs in a position dominated by μ.

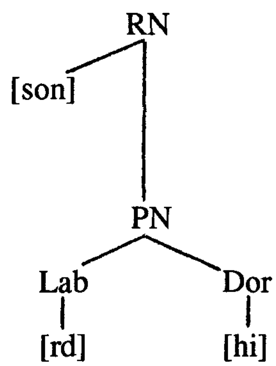
As discussed in section 2.4.3, /W/ becomes [$x^w$] word-finally. This is construed as the loss of the feature [-continuant] in moraic position. In addition, it is also construed as the loss of the feature [sonorant] in word-final position. The feature [sonorant] must be present in underlying representation since /W/ and /Y/ function with the class of resonants in the process of resonant glottalization. The single feature which identifies these segments as a natural class is [sonorant]. The target for the rule of Glide/Obstruent Alternation is always marked [sonorant] [high]. The Glide/Obstruent Alternation is viewed as a conflict[18] brought about by the presence of both the features [sonorant] and [-continuant] in moraic position. The rule which deletes [-continuant] in moraic position resolves this conflict.[19]

The glides [y, w] which appear in syllable onset position and do not alternate with corresponding obstruents, have the following underlying representations. They are /y/ and /w/ respectively in underlying representation.

(7) /y/

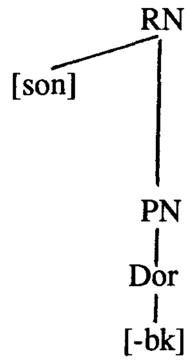



(8) /w/

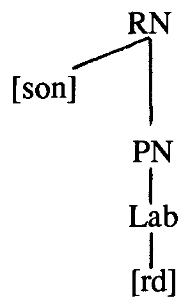



These segments are not specified for [-continuant]. The instances of [y, w] which are derived from /Y,W/ above and alternate with [ǰ, g] end up having the same representation as those glides which do not alternate. There is some indication that the segments in (7) and (8) do not always behave as though they were [high] with respect to the colouration of adjacent vowels. This suggests that the correct representations for these segments may lack the feature [high]. If so, these segments continue to remain distinct from /e, o/ since the vowels are [-consonantal] and the glides have no overt consonantal specification. These alternative representations are those in (9) and (10) respectively.

(9) /y/




(10) /w/




This means that the same surface segment may have several representations, one representation more or less specified than the other. The rule of Glide/Obstruent Formation is formalized in (11); this is interpreted as a unified process.

(11)

Delink: [-cont]

Target: [son] [hi]

Trigger: when the target is dominated by $\mu$ (a mora).

In addition, this rule is subject to constraints on geminate inalterability as shown in section 2.4.6. In the event that the feature [-cont] is shared by the target and an adjacent consonant, creating a partial geminate, then the feature [sonorant] is delinked instead, bringing about an alternative resolution to the simultaneous presence of both [sonorant] and [-continuant] in moraic position. This alternative resolution is formalized in (12):

(12)

Delink: [son]

Target: [-cont][hi]

Trigger: when the target is dominated by μ

iff: [-cont] is in a feature sharing relationship with an adjacent C

The following section addresses the prosodic organization of the syllable with respect to the alternation in question.

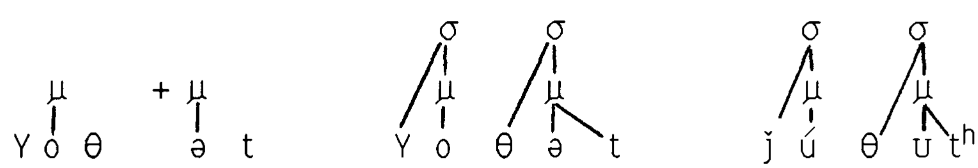
**2.3.0 Glide/Obstruent Alternation and Syllabification**

The phonological rule governing the distribution of glides and obstruents can be shown to be subject to higher prosodic organization. In fact, the purpose of this section is to show that Glide/Obstruent Alternation is specifically sensitive to moraic structure within the syllable. Drawing on the introduction to syllabification and morafication in Sliammon developed in Chapter 1, syllabification of the forms in (13) substantiates the claim that this process is syllable sensitive. The examples in (13) are the same as those in (1).

(13)

a. [ǰúθʊt$^{h}$] /Yoθ -ət/ 'to push' (MG 406)
root - CTr

Morafication | Syllabification | Output

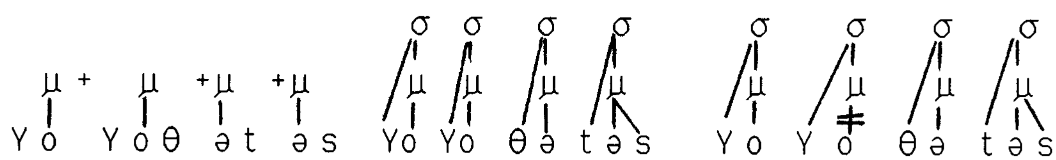


In this example the underlying segment /Y/ is realized as [ǰ] in nonmoraic position. The onset segment [ǰ] is adjoined directly to the syllable node (σ) and is by definition nonmoraic.

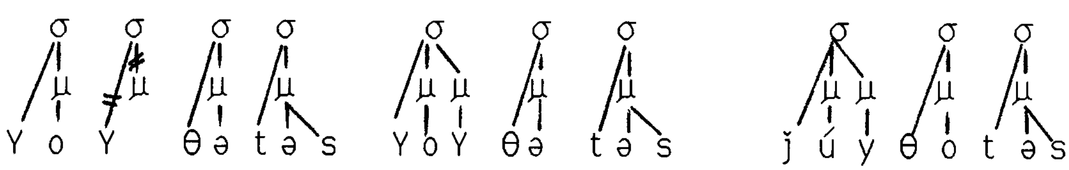
(13)

a'. [ǰúyθotəs] /Yo-Yoθ -ət-əs/ 'pushing it' (MG 408)[20]
CV - root - CTr - 3Sb

Morafication Syllabification Vowel delinking[21]



Parasitic delinking Resyllabification Output

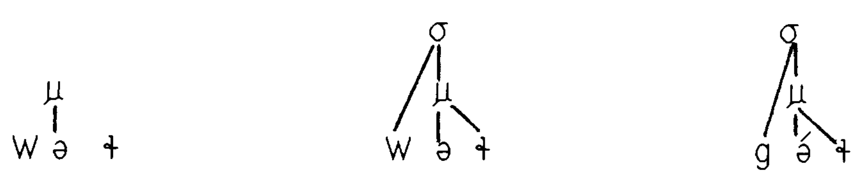


In this example the underlying segment /Y/ is realized as [ǰ] in the nonmoraic (syllable onset) position, whereas the same underlying segment is realized as [y] in moraic position.

(13)

b. [ŋgə́ɬ] /Wəɬ/ 'shiny' (MG 250)
root

Morafication Syllabification Output[22]



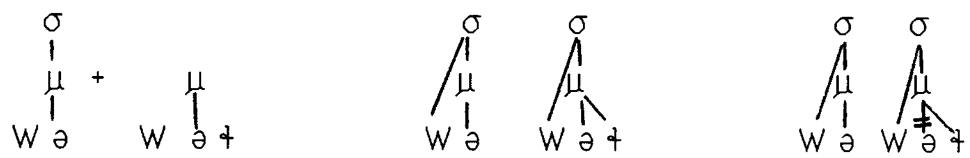
Here the underlying segment /W/ is realized as [g] in nonmoraic position.

(13)

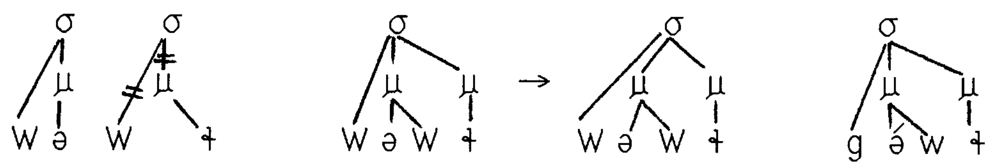
b'. [gə́wɬ] /Wə-Wəɬ/ 'shiny (pl)'(MG 251)

CV - root

Morafication Syllabification Vowel loss



Parasitic delinking Resyllabification Output[23]



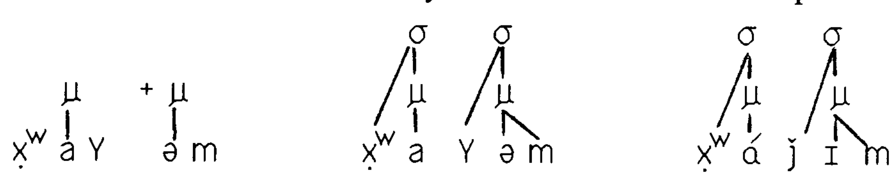
Here the segment /W/ becomes [g] in nonmoraic position and [w] in moraic position.

(13)

c. [x̣ʷáǰɪm] /x̣ʷaY-əm/ 'war club' (MG 245)

root - intr

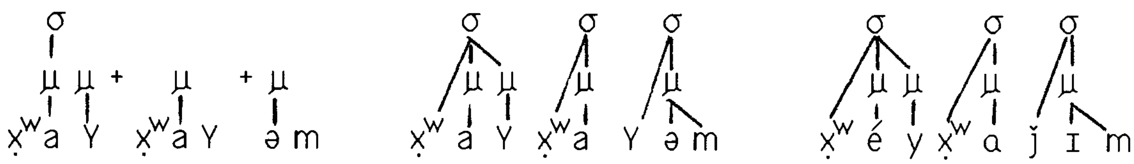
Morafication Syllabification Output



Here the segment /Y/ becomes [ǰ] in nonmoraic (syllable-initial) position.

(13)
c'.   [x̣ʷéyx̣ʷɑǰɪm]   /x̣ʷaY-x̣ʷaY-əm/   'war clubs' (MG 246)
CVC[24] - root - intr

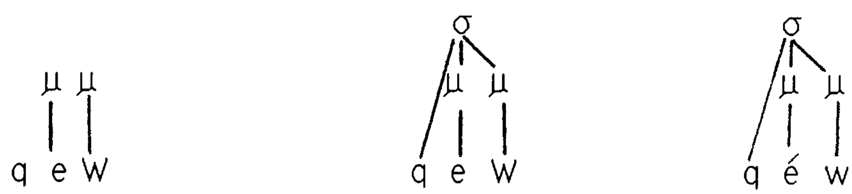
Morafication   Syllabification   Output



In (13c') the segment /Y/ becomes [ǰ] in nonmoraic position and [y] in moraic position. The segment [y] only becomes [i] when it occurs in syllable head position as discussed in section 2.4.2. The head of the syllable is defined as the leftmost moraic segment within the syllable.

(13)
d.   [qéw]   /qeW/   'Deer; mythical name'(JD 1970:13)
(truncated) root

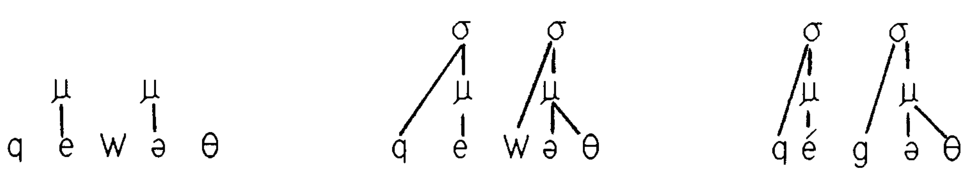
Morafication   Syllabification   Output



Here the underlying segment /W/ becomes [w] in moraic position.

(13)
d'.   [qégəθ]   /qeWəθ/   'deer' (JD 1970:viii)
root

Morafication   Syllabification   Output

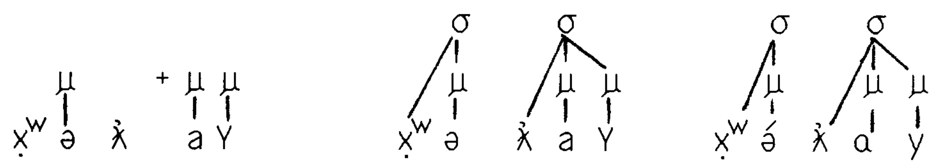


In (13d') the underlying segment /W/ becomes [g] in nonmoraic position.

(13)

e. [x̣ʷə́ƛ̓ay] /x̣ʷəƛ̓-aY/ 'mountain goat'(MG 497)
root - ?

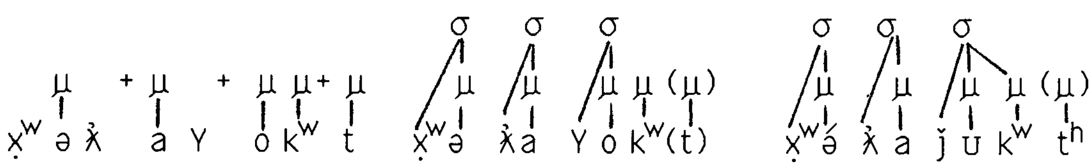
Morafication Syllabification Output



Here the segment /Y/ becomes [y] in moraic position.

e'. [x̣ʷə́ƛ̓aǰukʷʰtʰ] /x̣ʷəƛ̓-aY-okʷ-t/ 'mountain goat blanket'
root - ? - LS skin, - ? (MG 252)
blanket, covering

Morafication Syllabification Output



This last example shows /Y/ becoming [ǰ] in nonmoraic position.

As can be seen from these syllabified examples in (13), the rule which determines the distribution of [ǰ, g] and their corresponding glide counterparts [y, w] is consistently governed by the moraic/nonmoraic status of the segments in question.

### 2.4.0 Related data

In addition to the alternations exemplified by the data in (1)[25], further data which clearly relate to Glide/Obstruent Alternation are now incorporated into the discussion. These alternations need to be discussed in order to characterize Glide/Obstruent Alternation: y~ǰ and w~g. The goal of this section is to provide a unified analysis of the related forms.

### 2.4.1 Glide/Vowel Alternation

As can be seen in (14) the glides y and w also alternate with i and u. The height of these resulting vowels is in turn affected by the adjacent consonants. As noted in Chapter 1, high consonants cause the nonlow vowels /e, o/ to be realized as [i,u], whereas uvulars cause the nonlow vowels to be realized as [ɛˆ/eˇ, ɔˆ/oˇ]. In the default case the nonlow vowels are most often realized as [e, o]. The following data illustrate this alternation between glides and vowels.

(14) y~i/e and w~u/o

| | | | |
|---|---|---|---|
| a. | [čéyɪš.] | /čayəš/ | 'hand, arm'(MG 288) |
| a'. | [číčeyɪš] | /čəy-čayəš/<br>CəC - root | 'hands, arms'(MG 289) |
| b. | [q̓ʷéy̓ᵊx̣] | /q̓ʷey̓əx̣/ | 'wood'(MG198) |
| b'. | [q̓ʷéq̓ʷey̓əx̣] | /q̓ʷəy̓-q̓ʷey̓əx̣/<br>CəC - root | 'wood pl'(MG199) |
| c. | [ŋgʌ́ʔəwt̓ʰ] | | 'oar'(MG 334) |
| c'. | [ŋgə́ʔoʷt̓ʰ] | | 'oar' (MG 243) |

d. [qáwθ] /qaWθ/ 'potato'(MG 420)

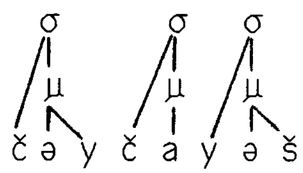
d'. [qóqawθ] /qəW-qaWθ/ 'potatoes'(MG 421)

CəC - root

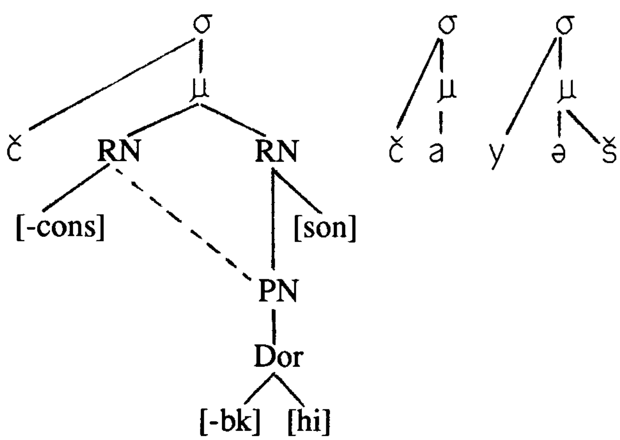
The glide in the examples in (14 a, b, c, d) alternates with the corresponding vowel in each of the examples in (14 a', b', c', d'). The vowel in the x' examples is the result of autosegmental spreading of the glide in a schwa/glide sequence. The resulting vowel is subsequently coloured by the adjacent consonants. The derivation in (15) exemplifies this process.

(15) [číčeyɪš] /čəy-čayəš/ 'hands, arms'(MG 289)

a. Output of Morafication & Syllabification




b. Autosegmental spread of features from y to schwa.




c. Output

[číčeyɪš]

### 2.4.2 Obstruent/Vowel Alternation

Not only do [y] and [w] alternate with [i] and [u] as in (14), but [ǰ] from /Y/ and [g] from /W/ also alternate with [i,e] and [u,o] respectively as illustrated in (16).

(16) ǰ ~i/e and g~u/o

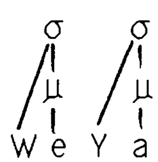
| | | | |
|---|---|---|---|
| a. | [ŋgíǰɛ$^{h}$] | /WeYa/<br>root | 'soil/ground' (MG 341) |
| a'. | [$^{(}$ŋ$^{)}$gí:gìǰɛ$^{h}$] | /WeY-WeYa/<br>CVC - root | 'lots of soil' (MG 342) |
| b. | [góq̓$^{w}$t$^{h}$] | /Wəq̓$^{w}$-t/<br>root - CTr | 'drag it a little'(MG 465) |
| b'. | [gó:q̓$^{w}$ət$^{h}$] | /Wə-Wəq̓$^{w}$-t/<br>CV - root - CTr | 'dragging it'(MG 464) |

The examples in (16a', b') show the loss of the feature [-continuant] in moraic position with subsequent feature sharing on the part of the vowel and following glide. Example (16b') is derived in a fashion similar to the progressive examples that will be discussed in 3.1.3. The derivation of (16a') illustrates this process:

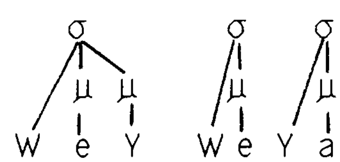
(16c)

[$^{(}$ŋ$^{)}$gí:gìǰɛ$^{h}$] /WeY-WeYa/ 'lots of soil' (MG 342)
CVC - root

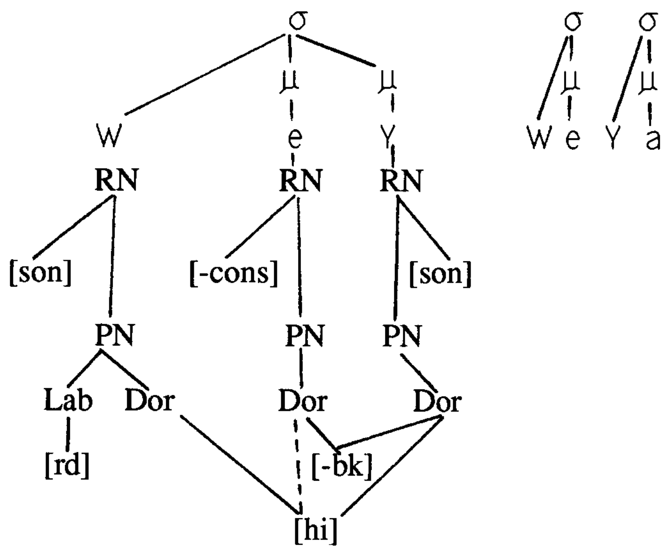
a. morafication/syllabification of root




b. CVC- pl reduplication



c. Feature sharing in reduplicative prefix




Not only do the vowel and glide share a number of features, but also the adjacent consonants are [high]. The prevocalic consonant /W/ and the postvocalic consonant /Y/ share the feature [high]. The value for [high] is also shared with the intervening vowel.

### 2.4.3 Noncontrol Transitive and Causative Suffixes

The Noncontrol Transitive (NTr) and Causative (caus) suffixes both illustrate the alternation [u~əg~əx$^{w}$][26] and therefore provide additional evidence for determining the nature of Glide/Obstruent Alternation. In the proposed underlying representations below, the segment in question is represented by /W/. This is an extension of the alternation given in (1).

(17) [u~əg~əx$^{w}$]

| | | | |
|---|---|---|---|
| a. | k̓$^{w}$ə́num | /k̓$^{w}$ən-nəW-m/[27]<br>root - NTr - PMC | 'someone sees 3rd person'<br>(JD1978:215) |
| a'. | k̓$^{w}$ə́nəgit | /k̓$^{w}$ən-nəW-et/<br>root - NTr - PSC [28] | '(that) someone sees 3Obj'<br>(JD1978:215) |

| | | | |
|---|---|---|---|
| a". | k̓ʷə́nəxʷ | /k̓ʷən-nəW/<br>root - NTr | 'to see 3Obj' (JD1978:215) |
| b. | ʔí‍ɬtənstumš | /ʔeɬtən-stəW-mš/<br>root -caus-1sg Obj | 'to feed me' (JD1978:223) |
| b'. | ʔíɬtənstum | /ʔeɬtən-stəW-m/<br>root - caus - PMC | 'someone feeds 3Obj' (JD1978:216) |
| b''. | ʔíɬtənstəgit | /ʔeɬtən-stəW-et/<br>root - caus - PSC | '(if) someone feeds 3Obj' (JD1978:216) |
| b'''. | ʔíɬtənsxʷ | /ʔeɬtən-stəW/[29]<br>root - caus | 'to feed 3Obj' (JD 1978:216) |

In these examples [u] occurs before another consonant (in this case -m); [əg] occurs before a vowel-initial suffix (such as -et ) and [xʷ] occurs word-finally.

In (17a') the Obligatory Contour Principle (OCP) rules out two identical instances of /n/ which come together as a result of morphological concatenation. The second nasal is deleted and /W/ becomes the onset of the following syllable. In nonmoraic (onset) position /W/ is realized as [g].

In (17b") the schwa of the causative suffix is assigned a mora since it is the only eligible [-cons] segment. With the addition of the passive marker, /W/ is spread over to function as the obligatory onset to the following syllable[30]. This set of alternations is related to the process of Glide/Obstruent Alternation in question since the alternation between g~u, implies the relationships g~w and w~u. The high vowels, which alternate directly with the obstruents, are discussed in relation to (15) and (16).

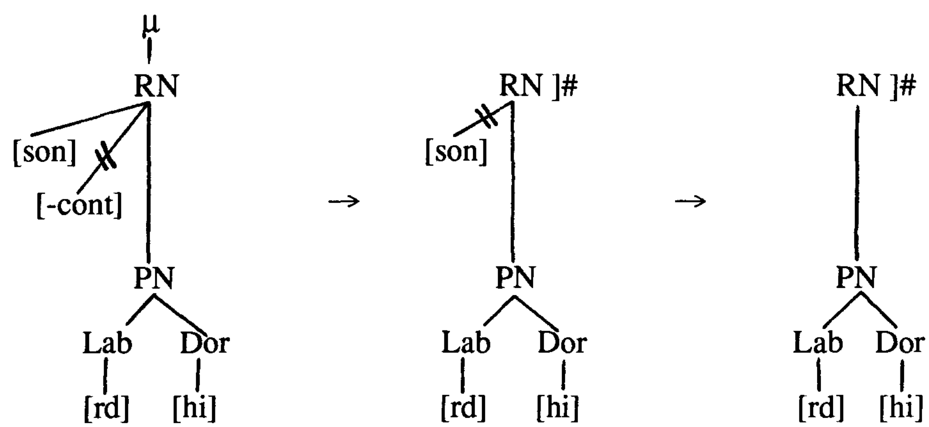
This set of alternations also addresses the locus of the feature [sonorant] within the feature geometry model. McCarthy (1988:97) states that "the two major class features [sonorant] and [consonantal] differ from all other features in one important respect: they arguably never spread, delink, or exhibit OCP effects independently of all other features." He claims that these features are therefore not represented on separate tiers as dependents of the root node but that they actually constitute the root node. As McCarthy suggests, the root node "becomes a feature bundle itself." Kaisse (1992) presents evidence that [-cons] is not part of the root node. It is claimed here, based on the alternation presented in (17), that [sonorant] is also subject to delinking. This provides an argument based on the criteria of delinking that [sonorant] is not an integral part of the root node. Rather it is proposed that [sonorant] is dependent on the root node, as are the features [cont], [nasal], [lateral], and [-cons]. In the alternation in (17), /W/ becomes $[x^{w}]$ with the loss of [-continuant] and [sonorant]. However, the features [hi] and LAB [rd] remain. The rules which delink [-cont] and [son] are separate and unordered with respect to one another. The following two-step derivation shows the alternation between /W/ and $[x^{w}]$.

(18) /W/ → $[x^{w}]$

a. Loss of [-cont] in moraic position

b. Loss of [son] in word-final position

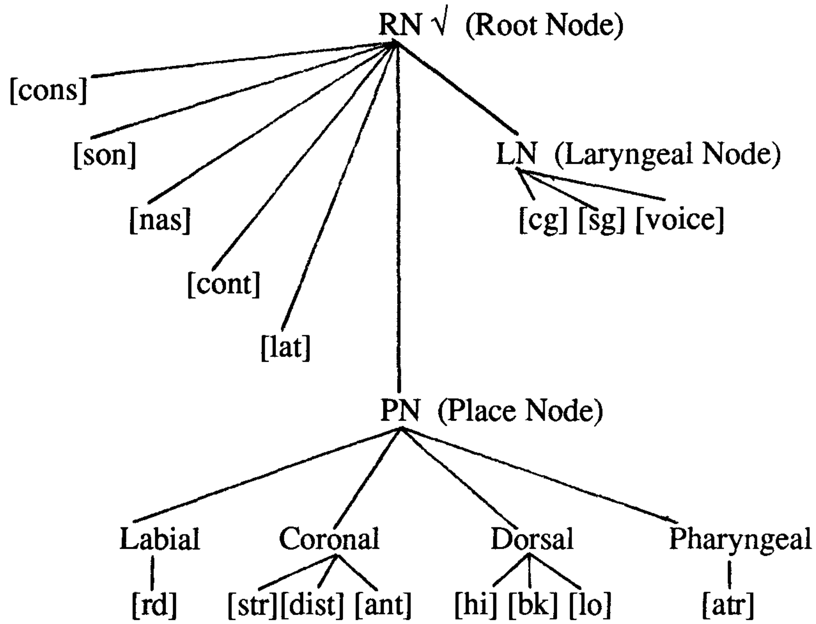
c. Output



As can be seen from the representations in (18) the underlying segment loses both the features [-cont] and [son] in word-final position. The loss of [-cont] is simply the application of the rule of Glide/Obstruent Alternation. The feature [-cont] is delinked in moraic position. The loss of the feature [sonorant], on the other hand, is specific to word-final position. The existence of this rule provides evidence that [son] is an accessible feature which is dependent on the root node and is crucially not an integral part of that node. This necessitates a modification in the structure of the feature geometric model outlined in McCarthy (1988:105), which argues for a hierarchical model with the internal structure in (19)[31].

(19)

**Feature Geometry**




The claim that [sonorant] is dependent on the root node predicts that we should find cases in which [sonorant] spreads and is subject to the OCP. The Sliammon facts provide evidence that [sonorant] is subject to deletion and functions[32] independently of other autosegmental features.

### 2.4.4 Glottalization

An analysis of the Glide/Obstruent Alternation also needs to incorporate the alternations: ỳ~ʔǰ and ẁ~ʔg, which are clearly related to the general process in question. Consider the examples given in (20).

(20) ỳ~ʔǰ and ẁ~g

| | | | |
|---|---|---|---|
| a. | [sʌ́ysəỳ] | /səY'-saY'/[33]<br>CəC - root | 'you're afraid'(MG 414) |
| a'. | [sə́ysàʔǰɨčx^w] | /səY'-saY'-ə-čx^w/<br>CəC - root - ə - 2sgSb | 'are you afraid?'(MG 413) |
| b. | [ɬáwʔ]<br>~ [ɬáʔu] | /ɬaW'/ | 'to leave'(JD1970b:6) |
| b'. | [ɬáʔgit] | /ɬaW'-et/<br>root - Stv | 'he got away'<br>(JD 1970b:6) |
| c. | [mέmmawʔ] | /me-maW'/<br>Ce - root | 'kitten'(JD 1970:43) |
| c'. | ~[mέmma:goɬ][34] | /me-maW'-oɬ/<br>Ce - root - dim | 'kitten' (JD 1970:43) |

Although Davis (1970:24-27) discusses some problems associated with describing glottal constriction in Sliammon, he does not seem to consider glottalization in relation to the rules he proposes of Glide Formation (/ǰ/→[y] and /g/→[w]), although he clearly recognizes the correspondence ẁ ~ ʔg, as can be seen from the following set of examples (JD 1978:219).

(21)

| | |
|---|---|
| tə́ẁ | 'ice/to freeze' |
| tá?git | 'frozen' |

Davis does not discuss how he would handle the examples given in (21), nor does he make it clear whether or not ?g is treated as a single unit /g'/ or a sequence of phonemes /?+g/. Significantly, he does not include any glottalized resonants in the underlying phonemic inventory of Sliammon. This is contrary to the proposal made in this thesis, which claims that glottalized resonants are distinctive in Sliammon. An analysis of the facts in (20, 21) crucially affects an overall analysis of Glide/Obstruent Alternation. The incorporation of these facts is emphasized in this discussion. In each of the examples (20a', b', c') the underlying glottalized [son] [-cont] is restructured so that [ǰ, g] occupy syllable onset positions whereas the glottal stricture remains associated with the preceding syllable, since syllable-initial glottalized resonants are not licensed. The issue of restructuring of glottalized resonants is discussed in 3.5.

In addition, the sequence glottal stop plus obstruent also alternates with the nonlow vowels as exemplified in (22). The resulting height of the nonlow vowels is determined by the nature of the adjacent consonants.

(22) ?ǰ ~i/e and ?g ~u/o

| | | | |
|---|---|---|---|
| a. | [x̣ɑ́?ǰiṣ] | /x̣aY'es/ | 'rock' (MG 381) |
| a'. | [x̣ə́x̣ɑ?ǰiṣ] | /x̣əY'-x̣aY'es/ | 'rocks' (MG 382) |
| b. | [ɬá?gət̓ʰ] | /ɬaW'-ət̓/ | 'herring' (MG 2) |
| b'. | [ɬú:ɬɑgɪt̓ʰ][35] | /ɬəW'-ɬaW'-ət̓/ | 'lots of herring'(MG 338) |

The alternation seems to be the same as the one discussed in 2.4.2. It is noted in 3.3.1, that the example for 'lots of hemlock' provides evidence that glottalization on resonants is copied as part of the reduplicative affix; however, that realization of glottalization is quite restricted.

### 2.4.5 Lateral/glide Alternation

The alternations exemplified in (23) and (24)[36] suggest that the alternation of ɬ with y and w should also be incorporated into the description and analysis of Glide/Obstruent Alternation.

(23) ɬ~y

| | | | |
|---|---|---|---|
| a. | tíxʷθaɬ | /texʷθaL/<br>root | 'tongue'(JD 1978:220) |
| a'. | tíxʷθays | /texʷθaL-s/<br>root - 3Po | 'his tongue'(JD 1978:220) |
| b. | ƛə́mɬaɬ | /ƛəm-ɬaL/<br>root - LS 'mouth' | 'wet throat'(JD 1978:220) |
| b'. | ƛə́mɬayəm | /ƛəm-ɬaL-m/<br>root - LS 'mouth' - PMC | 'to wet one's throat'<br>(JD 1978:220) |

(24) ɬ~w

| | | | |
|---|---|---|---|
| a. | máç'uɬ | /maç'oL/<br>root | 'pus' (JD 1978:220) |
| a'. | máç'uwəm | /maç'oL-əm/<br>root - intr | 'pus forming'(JD 1978:220) |
| b. | níʔuɬ | /neʔ-oL/<br>root - past | 'he was there'(JD1978:220) |
| b'. | s níʔuws | / s neʔ-oL-s/<br>sub root - past - 3Po | '(that) he was there'(JD1978:220) |

The segment /L/ becomes a voiceless lateral fricative in word-final position. This is simply the loss of the feature [sonorant][37]. This is another instance of the loss of the feature [sonorant] in word-final position, analogous to the case discussed in 2.4.3 in which /W/ becomes [$x^w$] in word-final position.

The segment /L/ becomes [w] in the environment of a round vowel, implying the spreading of the Lab node, which dominates the feature [rd]. This also seems to trigger the delinking of the feature [lat], as it would be incompatible with Lab [rd]; labial laterals are not attested.

Finally, /L/ is realized as [y] elsewhere. The notion of elsewhere suggests that autosegmental spreading does not occur.[38] The default [sonorant] is the dorsal [y]. The feature [lateral] is lost in the case of [y]; this may be viewed generally as the loss of [lateral] in the environment of [sonorant]. The loss of the feature [sonorant] in word-final position allows the feature [lateral] to persist there. These examples are mentioned in as much as they relate to an Obstruent Formation analysis along the lines of Harris (1981).

The analysis suggested by Harris (1981) requires that the rule of Obstruent Formation and the rule which changes the underlying liquids into glides are ordered with respect to one another. They occur in a counter-feeding ordering relation. Crucially, Obstruent Formation has to take place before the liquid-to-glide rule can apply. Otherwise the glides, which were derived from the liquid /L/, would feed the rule of Obstruent Formation.

This is where the analysis I propose differs. Sliammon has surface instances of [y] and [w] from two different sources. The rule of Glide/Obstruent Alternation targets a segment which is [sonorant][high] and also [-continuant]. The surface segments [y] and [w] from /Y, W/ are derived by the deletion of [-continuant] in moraic position. The lateral /L/, on the other hand, is unmarked for the feature [-continuant] and therefore simply does not meet the structural description of this rule. The loss of the feature [lateral] in the case of /L/ gives rise to the glides [y] and [w]. The two rules are independent and unrelated from this perspective.

Thus extrinsic ordering of rules (specifically the highly marked counter-feeding order required by Harris's analysis) is unnecessary given the present assumptions regarding a model of underspecification.

### 2.4.6 Status of the feature Sonorant

Included in a discussion of Glide/Obstruent Alternation are also examples such as those in (25) which suggest that č alternates with ǰ.

(25) č~ǰ

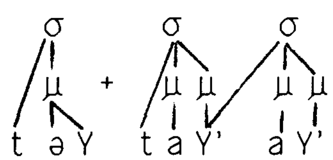
| | | | |
|---|---|---|---|
| a. | [čéyɪš:] | /čayəš/<br>root | 'arm, hand'(MG 288) |
| a'. | [číčeyɪš] | /čəy-čayəš/<br>CəC - root | 'arms, hands (pl)'(MG 289) |
| a''. | [pə́qpəqaɬǰeyɪš]<br>~[pə́qpəqaɬǰiyš] | /pəq-pəq-aɬ-čayəš/<br>CVC - root -CL -hand | 'palms (of the hand)'(MG 323)<br>lit: white & hand |
| b. | [tátaʔǰɪṣ] | /ta-taY'-os/<br>CV - root - LS 'face' | 'cheek'(MG 256) |
| b'. | [tíčtaʔǰeʔǰɪṣ ] | /təY-taY'-aY'-os/<br>CəC - root - VC - LS 'face' | 'cheeks (pl)'(MG 257) |

In the forms in (25a), the morpheme for 'hand' illustrates the alternation between [č] and [ǰ]. There does not seem to be any phonetic motivation however, for the alternation in this position. Why would /č/ become [ǰ] in syllable-initial position, word-medially but not word-initially? The preceding lateral is also non-sonorant, so the preceding environment cannot be proposed as the cause of a change in sonority. The examples in (25a) remain unexplained.

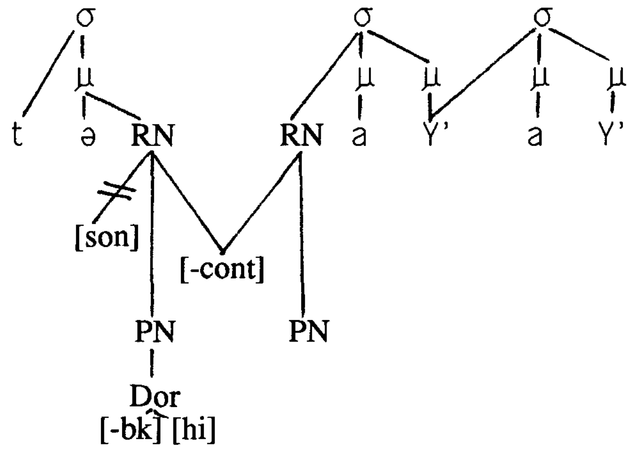
(25b') suggests the opposite direction of change but, significantly, in a phonologically plausible context. It would appear that /Y/ becomes [č] in the environment before t. This analysis also assumes that the second consonant of the reduplicative affix is copied as /Y/, but that the rule which governs the distribution of /Y/ requires some amendments. Normally, in moraic position one would expect /Y/ to become [y]. This essentially means that the rule which delinks the feature [-continuant] does not apply in this context; this may be explained by the presence of the following [-continuant] segment [t]. If the two segments /Y/ and /t/ were to share the feature [-continuant], then they would be partial geminates and would be subject to geminate inalterability. When the feature [-continuant] is not an available candidate for deletion, then the feature [sonorant] is deleted instead, creating the segment [č]. This is the alternative resolution to the simultaneous presence of the features [son] [-cont] in moraic position and is discussed in section 2.2.0 with respect to the formalization of the rule governing Glide/Obstruent Alternation. The following partial derivation illustrates this proposal.

(26) [tíčtaʔǰeʔǰɪṣ] /təY-taY'-aY'-os/ 'cheeks (pl)'(MG 257)
CəC - root - VC - LS 'face'

a.



b.




The conflict is the presence of both the features [sonorant] and [-continuant] in moraic position. In this case, it is resolved by the deletion of the feature [sonorant] since [-continuant] is unavailable.[39] This analysis provides strong evidence for Shaw's (1989, 1991) claim that affricates are specified as [-cont]. This analysis of Glide/Obstruent Alternation has been extended to account for as many related alternations as possible[40].

## 2.5.0 Conclusions

It is concluded that the underlying segments /Y, W/ in the Glide/Obstruent Alteration function with the class of resonants due to their overt [sonorant] specification. As resonants, they are subject to resonant glottalization and decomposition. The rule of Glide/Obstruent Alternation deletes the feature [-continuant] from a target [hi][sonorant] segment in moraic position. The rule effectively resolves this featural incompatability and is clearly sensitive to the prosodic organization of the syllable. In addition, the deletion of the feature [sonorant] in word-final position motivates an amendment to the feature geometry such that [sonorant] is dependent on the root node as an independent autosegmental feature. It is concluded that the analysis presented here in terms of underspecification and feature geometry, in which the underlying representations are the focus of the analysis, is preferable to previous segmental analyses of the same phenomena.

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**Notes to Chapter 2**

[1] These forms are cited as (MG) for Mrs.Mary George, followed by their original elicitation number.

[2] The issue of prenasalization is discussed in section 2.2.0.

[3] The source of these examples is John Davis' (JD) 1970 M.A. Thesis on Sliammon. The abbreviation (JD1970:13) includes the author's initials, the year of the publication, followed by the page reference. All other source abbreviations utilize the same format.

[4] This lexical suffix for (animal) 'skin' is also used to mean 'blanket or covering.'

[5] It will be argued that rule of Glide/Obstruent Alternation requires that feature matrixes contain only a single value for each feature which can be shown to be operative. Phonological representations are therefore necessarily underspecified. Further, Sliammon does not provide any positive evidence of the application of redundancy rules within the phonological component. It is claimed that these representations remain underspecified throughout the phonological component of the grammar and persist as such into the phonetic component. In other words, I will adopt the position that redundancy rules do not apply within the phonology. This is contrary to alternative conceptions of the grammar in which the redundancy rules interact with phonological rules (cf. Archangeli and Pulleyblank 1986) and is therefore an area of current interest and debate. This is a theoretical issue which deserves further consideration, but is beyond the scope of the present paper.

[6] The complete class of resonants is not listed here. These include all segments which are specified as [sonorant].

[7] It is argued that diminutive glottalization is the presence of a floating glottal morpheme which can be associated to the rightmost resonant within the specified domain. The class of resonants includes all segments which are marked [sonorant]. See the representations established in Chapter 1.

[8] This example is included here since it is clearly diminutive in form even though the gloss does not reflect this directly.

[9] Kroeber (1989:110) claims that CəC roots take Ce- rather than Cə- as their diminutive reduplication. It would seem that the root for 'bone' clearly has a full vowel /a/; however, it also takes Ce- diminutive reduplication. Thus this form constitutes a counterexample to Kroeber's generalization.

[10] In Harris's (1981) work, the term Comox is used specifically in reference to the Island dialect of the language. It is used generally in the literature in reference to the language itself. In this thesis in order to avoid confusion, the individual dialects are referred to as Island Comox and Mainland Comox (Sliammon, Klahoose, and Homalco); the language, on the other hand, is referred to here as Comox.

[11] This could also be /qaL'os-m/ judging from the shape of the lexical suffix in Sechelt -alus, as well as considering related Sliammon forms for 'eyelash'. This underlying representation would imply the existence of an s-deletion rule, perhaps before a nasal.

[12] This UR implies a cyclic derivation in which the underlying liquid in the root first becomes a labial glide in the environment of the round vowel. On the next cycle, CəC plural reduplication takes place. The melody which is copied is qəw. The labial glide, with the feature [rd], colours the schwa in the reduplicative prefix. Notice as well that the glottalization in this example is not transferred onto the reduplicative prefix.

[13] I have constructed this phonetic representation using the rules Beaumont presents for pronunciation in section A in the Guide to Pronunciation and Spelling (1985:3-13). The standard orthographic representations appear in angle brackets directly below the URs which are suggested by Beaumont's work. I have written the underlying representations so that they conform to those used in this thesis.

[14] The Sliammon form for 'singing' [ẁúʔᵊwuwəm] is recorded with a high vowel [u] and does not support this claim.

[15] This is a Pentlatch form Harris cites from Boas but does not give the specific reference cited.

16 Unfortunately, Harris does not consider whether or not the treatment of [w] can be extended to [y].

17 The feature [rd] is necessarily specified on /W/, since it alternates with [$x^w$]. /W/ also causes rounding on adjacent vowels. This is in contrast to the labials in the system, which are specified as Labial and unspecified for [rd], since they do not exert a rounding influence on the adjacent vowels.

18 The nature of this conflict is clarified once we place the features [-continuant] and [sonorant] on a sonority scale. These two features occupy extreme positions: [sonorant] located at one end of the scale, and [-continuant] at the other. Once morafication has applied, the simultaneous presence of the features [sonorant] and [-continuant] must be resolved. Since [sonorant] segments occupy moraic positions more readily than [-continuant] segments do, the feature [-continuant] is delinked. Therefore, by appealing to the sonority hierarchy, we have an explanation for the deletion of the feature [-continuant], and the persistence of the feature [sonorant] in moraic position.

19 If this is the case, then why do nasals occur freely in moraic position? This raises the question of the appropriate representation of nasals, since nasals occur in moraic (syllable rhyme) position and in some feature matrixes are both [sonorant] and [-continuant]. Notice, however, that nasals are also specified as [nasal]. The presence of the feature [nasal] may be enough to stabilize the relationship between [sonorant] and [-continuant] in Sliammon. In the case where /W/ becomes [g], the resulting representation is very similar to that of a velar nasal in which both the features [sonorant] and [-continuant] are present. The existence of the prenasalized segment [$^{ŋ}$g] which occurs phonetically in syllable-initial position may be an extension of this notion of stabilization. Prenasalization is exemplified by the following forms.

| | | |
|---|---|---|
| [$^{ŋ}$gíjɛ] | /WeYa/ | 'ground, soil, earth' (MG 341) |
| [$^{ŋ}$gə́ʔo$^{w}$t̓] | /Wəwt̓/ | 'oar'(MG 243) |
| [$^{ŋ}$gə́ɬ] | /Wəɬ/ | 'shiny'(MG 250) |

All of the examples of the prenasalized segment [ᵑg] are cases of root-initial [g] in word-initial position. It is proposed that the addition of the feature [nasal] helps to stabilize the relationship between two competing features: [sonorant] and [-continuant]. However, if this notion of stabilization is given as the explanation for the occurrence of [ᵑg], then one would also expect prenasalized [ᶮǰ]. Since there are no instances of a prenasalized [ǰ] in Sliammon, prenasalization of [g] cannot be attributed to the notion of stabilization. I would like to thank Patricia Shaw for bringing this asymmetry to my attention and for suggesting that prenasalization must therefore be dependent upon place of articulation. Notice also that the target for the rule of Glide/Obstruent Alternation is specified [hi]. Since nasals are not [hi], they are never targetted by the rule. Therefore, nasals may occur freely in moraic position because they are not specified for the feature [hi].

[20] Kroeber (1989:109) claims that CVC roots (i.e. roots with a non-schwa vowel) retain their root vowel when they undergo CV- progressive reduplication. This does not seem to be the case in example (13a') 'pushing it,' where the root vowel /o/ seems to delete. It is proposed here that the vowel simply delinks and that the featural content of this vowel is transferred onto the following schwa. Schwa in this position would normally be deleted; however, the association of the place features of /o/ in effect prevents deletion. Notice that this transfer creates the same appearance as a classical case of metathesis.

[21] This is referred to as vowel delinking rather than deletion since the melodic content ceases to be associated with the root vowel; however, it does not seem to be subject to Stray Erasure. It would seem that the featural content of this vowel is reassociated to the adjacent vowel schwa which is unspecified for place features. The schwa surfaces as [o] due to the acquired place features and is not subject to deletion. See also note 18.

[22] The issue regarding the phonetic prenasalization of [g] ([ᵑg]) is discussed in note 19.

[23] The fact that the output is [əw] rather than [u] suggests that the place node of the following glide has not been spread onto the root node of the preceding schwa.

[24] The colouration of the resultant vowel in the reduplicative affix certainly suggests that the vowel which is copied and associated is schwa; however, the length of the affix would suggest that a bimoraic syllable has been affixed rather than a monomoraic syllable. If it is the case that a bimoraic syllable is copied, then the vowel /a/ of the reduplicative affix /$\dot{x}^{w}$ay/ has been affected by the following tautosyllabic glide.

[25] My intent in (1) was to illustrate the process in question, not to provide an exhaustive set of data.

[26] Note that Thompson (1979:719) notes a similar alternation in Tillamook where $x^{w}$ ~ $g^{w}$ ~ g may all be from Proto-Salish*w.

[27] Although the forms in (16) are cited from Davis (1978), the proposed phonemic representations are my own.

[28] Davis glosses the suffix -et as the passive of a subordinate clause (PSC). This affix has the same phonological shape as the Stative.

[29] The deletion of -tə- remains unexplained.

[30] The astute reader will notice that the derivations in (17a') and (17b") leave schwa in a configuration in which it is not properly licensed. This poses a problem with respect to the licensing conditions outlined in 1.2.1 since it is claimed that schwa does not occur in an unstressed open syllable. It may be necessary to weaken this position. It may be preferable that schwa occur in the configurations outlined in Chapter 1, but not necessary.

[31] This model also appears in Chapter 1 (5). Ewa Czaykowska-Higgins (pc) has suggested that there seem to be "strong similarities in the properties of the Sliammon "voiced" obstruents and the properties of segments that Piggott (1992) characterizes with the Spontaneous Voicing node." Further, she has pointed out that "if the Sliammon facts are amenable to an analysis that makes use of a Spontaneous Voicing node, then the argument that [sonorant] is a dependent of the Root Node, because it can be delinked, disappears." I am grateful to Ewa for this alternative proposal, which requires further consideration. This will be left for future research. I adopt the position argued for in this thesis, since it makes use of the existing theoretical framework, and significantly, it does not require the addition of the Spontaneous Voicing node to the Feature Geometry.

---

[32] The fact that the feature [sonorant] is available for delinking provides an argument for its autosegmental status. The feature [sonorant] also functions as the target for rules of resonant glottalization in Sliammon. This is another example of the role of the feature [sonorant], though not of its being on an independent tier. I have not been able to find any evidence that [son] actively spreads in Sliammon; however, there is evidence from the data in 2.4.3 that [sonorant] is accessible for delinking.

[33] There is evidence from forms like [qʷóːq̓ʷoːʔɑy] /qʷow̓-qʷow̓-ay/ 'lots of hemlock' that glottalization on resonants may be copied as part of the melodic material but that glottalization on resonants cannot be realized within the domain of the reduplicative affix. In the example in (20a') for 'are you afraid?', glottalization is not realized on [s] because glottalized [s'] is not a licit segment in Sliammon.

[34] Long [aː] often corresponds to a sequence of [a] plus glottal stop [ʔ]. This issue is discussed in Chapter 3.

[35] Full vowel lengthening is difficult to explain in this example since the template for CəC- 'pl reduplication' is a maximal monomoraic syllable. The added length may be linked to the presence of glottalization. See section 3.4.

[36] The forms cited in Davis (1978) are **phonemic**; however, they often appear without a morpheme-by-morpheme gloss. Therefore the underlying representations in the left hand column of (23), and (24) are my own proposed URs and do not appear explicitly in Davis's article. I also propose to re-elicit these examples in order to obtain [phonetic] forms.

[37] In Sliammon, the [sonorant] lateral [ɫ] is uvularized. This segment is specified by the presence of the pharyngeal node. The remaining laterals in the system are the nonsonorant segments [ɬ, ƛ̓, ƛ]. The feature [sonorant] is delinked, since Sliammon has no [sonorant] dorsal laterals in surface representations.

---

38 This approach is suggested because [y] surfaces in the context of both /a/ and /e/. There does not seem to be any way simply to spread the Dorsal node without also spreading the features which are dominated by Dorsal—namely, [-bk] in the case of /e/ and [lo] in the case of /a/. This may also suggest that this lateral is in fact velarized, as suggested by Hagège. If it were Dor [hi] then this would explain the existence of the allophone [y] with the loss of the feature lateral. This proposal also makes the following prediction: the lateral fricative [ɬ], which is derived from /L/, should function with the class of [hi] segments with respect to vowel assimilation.

39 There is also some comparative evidence which suggests that [č] in Saanich (Sa) is cognate with [ǰ] in Sliammon (Sl). Consider the following related forms for 'fish'.

| | | | |
|---|---|---|---|
| a. | [ǰɛ́nx$^{w}$] | /Yanx$^{w}$/ | 'fish' (Sl) (MG 4) |
| a'. | [ǰɨ́nǰɛnx$^{wh}$] | /Yən-Yanx$^{w}$/<br>CəC - root | 'lots of fish' (Sl) (MG 524) |
| b. | [sčéenəx$^{w}$] | | 'fish, salmon' (Sa) (Montler 1986:109) |
| b'. | [čiyénəx$^{w}$] | | 'lots of fish' (Sa) (Montler 1986:109) |

Saanich shows the reflex [č] where Sliammon has initial [ǰ]. It is still unclear how these facts can be incorporated into the Glide/Obstruent Analysis since there is still far too little data to draw a convincing set of conclusions.

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[40]There are, however, some questions which remain with respect to Glide/Obstruent Alternation in Sliammon. For example, the following pair seems to be problematic.

(i)

| | | | |
|---|---|---|---|
| a. | [q̓áyɪƛ̓] | /q̓aYəƛ̓/ | 'scar' (MG 304) |
| a'. | [q̓áq̓aǰìƛ̓] | /q̓a-q̓aYəƛ̓/ | 'scars' (MG 305) |

The form in (i.a) seems to be a counterexample to the generalization stated in (1) above. The glide [y] from /Y/ appears in syllable-initial position even though it clearly alternates with the obstruent, as shown by the example in (i.a'). It should be noted that the two examples show different stress placement (as was pointed out to me by Patricia Shaw). The syllable-initial segment in question appears as the glide [y] in unstressed post-tonic position in (i.a), but /Y/ appears as the [sonorant][-continuant] segment [ǰ] in a position which receives secondary stress, as in (i.a'). This difference in stress placement may prove to be a promising account of the apparent differences. Forms like those in (ii), however, show that this is not systematic.

(ii)

| | | | |
|---|---|---|---|
| a. | [x̣ʷáǰɪm] | /x̣ʷaYəm/ | 'war club' (MG 245) |

In light of the evidence from forms like (ii), the form in (i.a) constitutes the sole counterexample to what otherwise is offered here as an integrated analysis of this process. The issue of secondary stress is mentioned here with reference to the above example; however, an analysis of Sliammon stress is beyond the scope of this paper.

# CHAPTER 3

## 3.0 Introduction

The purpose of this chapter is twofold. First, it is argued that Vowel length in Sliammon is not phonemic and that all surface vowel length is predictable.[1] This is contrary to Hagège's (1981) description of Sliammon in which long vowels are claimed to be distinctive. Davis (1971) argues that there is a surface length contrast for the nonlow vowels in Sliammon. According to Davis, this length is derived from schwa-glide sequences which come together as a result of morphological concatenation. Kroeber (1989:107-108) discusses briefly the difficulty of determining the status of vowel length in Mainland Comox. Kroeber adopts the position taken by Davis (1971) but does not argue for his position as such. The position which is adopted here is generally in keeping with the descriptive generalizations of Davis (1971) and Kroeber (1989) but diverges significantly from them with respect to the theoretical framework which is adopted.

Secondly, it is claimed that Sliammon is like the seemingly rare cases of Ilokano and Andalusian Spanish which are discussed by Hayes (1989:290). Hayes claims that languages, such as Ilokano and Andalusian Spanish, which lack a vowel length contrast, but do have a syllable weight contrast, are able to "create surface long vowels through a process essentially equivalent to Compensatory Lengthening"[2] (Hayes 1989:290). It is argued here that Sliammon is another case in point. It will be shown that long vowels in Sliammon are created by the deletion of a moraic coda consonant with the subsequent lengthening of the preceding vowel, constituting a case of "classical" Compensatory Lengthening[3] in a language which does not have distinctively long vowels in underlying representation.

Further, Sliammon vowel lengthening shows that the earlier approach taken by de Chene and Anderson (1979) is untenable. De Chene and Anderson (1979) claim that compensatory lengthening appears to be possible only in languages that have an underlying vowel length contrast. Although this seems to be true of many languages in which compensatory lengthening occurs, their approach is unable to account for languages like

Ilokano, Andalusian Spanish, and in this case Sliammon in which vowel length is entirely predictable.

Thus it is claimed that the correct approach seems to be the one argued for by Hayes in which compensatory lengthening "is a logical possibility in all languages that have bimoraic syllables" (Hayes 1989:289). This moraic approach is able to account for the range of languages in which compensatory lengthening typically occurs (since long vowels are by definition bimoraic) as well as accounting for languages (which allow CVC bimoraic syllables) such as Ilokano, Andalusian Spanish, and Sliammon.

These findings further support Hayes's view that "it is the moraic structure of the language, and not its vowel inventory, that determines whether CL may occur" (Hayes 1989:290). Further investigation of languages which allow bimoraic syllables may reveal that the subset of languages like Ilokano, Andalusian Spanish, and Sliammon may not be as restricted as is presently assumed. The existence of languages which exhibit compensatory lengthening of this type should not be viewed as rare, marginal or exceptional in any sense; rather their existence is in fact predicted by a moraic account of compensatory lengthening.

The remainder of this chapter is organized as follows: Sections 3.1, 3.2 and 3.3 are devoted to developing the central argument showing that vowel length in Sliammon is not phonemic. Once it is established that vowel length is not phonemic, but is in fact derived, this analysis is then extended to other cases of vowel lengthening within the grammar. In section 3.1, CV- Progressive Reduplication is explored with respect to this claim. In sections 3.2 and 3.3, CəC- and CVC- Plural Reduplication are discussed as further evidence that vowel length in Sliammon is derived. There are half-long and long vowels on the surface in Sliammon. It is argued that half-long vowels [V·] are derived from schwa-glide sequences in a monomoraic configuration—branching under the level of the mora is interpreted as half-long. Long vowels [V:], on the other hand, are derived from vowel-glide sequences which have bimoraic status. In section 3.4, long vowels are also derived from vowel-glottal stop sequences. The glottal stop is assigned a mora as a result of the general rules of morafication. The subsequent deletion of this coda consonant creates the environment for Compensatory Lengthening.

Not only is an argument against positing underlying vowel length required, but an argument in favour of the prosodic approach adopted here must also be put forth. The distribution of glottalization for glottalized resonants discussed in section 3.5 provides a compelling argument in favour of the proposed moraic analysis while also providing an explanation of the distribution of glottalization for the class of resonants. Section 3.5 also addresses the issue of glottalization as it relates to vowel length. In section 3.6, additional cases of vocalic and consonantal compensatory lengthening are explored. The examples in 3.7 show long vowels used as a rhetorical device in Sliammon. This is a common process in other Salish languages. The presence of rhetorical/emphatic lengthening in Mainland Comox does not provide an independent argument in favour of positing a phonemic length contrast within the language; instead, in light of the strong evidence against positing underlying long vowels in Sliammon, it seems that rhetorical vowel lengthening should be handled within another component of the grammar[4] and does not bear on the issue of a distinctive length contrast.

## 3.1 Progressive CV- Reduplication

For CVC roots with a full vowel /e, o, a/, the progressive aspect is formed by reduplicating the initial consonant and the vowel of the base with no reduction of the original root vowel. (1.1) to (1.3) contrast progressive forms, given as the (a', b', c') examples, with perfect forms, given as the (a,b,c) examples.

### 3.1.1 CV- Reduplication of Strong Roots

(1.1) /$C_1eC_2$/ Roots

| | | | |
|---|---|---|---|
| a. | [ṗéçʼayiçʼəʰ] | /ṗeçʼ-ay-eçʼə/<br>root - ex[5] - LS 'clothes' | 'wash clothes'(MG 438) |
| a'. | [ṗéṗeçʼayiçʼəʰ] | /ṗe-ṗeçʼ-ay-eçʼə/<br>CV- root - ex - LS 'clothes' | 'washing clothes'(MG 439) |
| b. | [ʔɛ́ɬq̇ay] | /ʔelq̇ay/ | 'barbecue deer meat'(MG 478) |
| b'. | [ʔɛ́ʔɛɬq̇ày] | /ʔe-ʔelq̇ay/<br>CV - root ?[6] | 'barbecuing deer meat'(MG 478) |
| c. | [ʔɛ́m·aˆš] | /ʔemaš/<br>root | '(to) walk'(MG 212) |
| c'. | [ʔɛ́ʔɛmɛˆgiš] | /ʔe-ʔem-aWaš/<br>CV - root - ? | 'people walking' (MG 213) |

(1.2) /$C_1oC_2$/ Roots

| | | | |
|---|---|---|---|
| a. | [ǰúθutʰ] | /Yoθ-ət/<br>root - CTr | '(to) push'(MG 406) |
| a'. | [ǰúǰuθotəs] | /Yo-Yoθ-ət-as/<br>CV - root - CTr - 3 Sb | 'He/she/they is/are pushing it' (MG 409) |
| b. | [sóṗəm] | /soṗ-əm/<br>root - intr[7] | '(to) chop (wood)'(MG 552) |
| b'. | [sósoṗəm] | /so-soṗ-əm/<br>CV - root - intr | 'chopping'(MG 553) |

| | | | |
|---|---|---|---|
| c. | [gʷúxʷum] | /Woxʷ-əm/<br>root - intr | 'bark (of a dog)'<br>(JD1970:88) |
| c'. | [gʷúgʷuxʷùm] | /Wo-Woxʷ-əm/<br>CV - root - intr | 'barking'(JD 1970:88) |

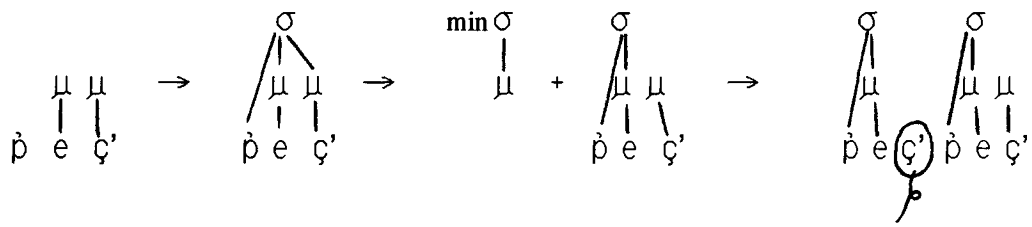
(1.3) /$C_1aC_2$/ Roots

| | | | |
|---|---|---|---|
| a. | [č̓ɛ́gᵊnʌq̓ˣʰ] | /č̓aW-nəq/<br>root - ? | '(to) help'(MG 356) |
| a'. | [č̓ɛ́č̓egᵊnəq̓ˣʰ] | /č̓a-č̓aW-nəq/<br>CV - root - ? | 'helping'(MG 358) |
| b. | [háy-ɬʌm̓] | /hay-ɬ-əm-ʔ/<br>root - st ex- intr - gl | '(to) flirt'(MG 623) |
| b'. | [háhayɬʌm̓] | /ha-hay-ɬ-əm-ʔ/<br>CV - root - st ex - intr - gl | 'flirting'(MG 624) |
| c. | [ʔáǰušəm̓ɒàwɬ] | /ʔaYoš-ʔəm-t-awɬ/<br>root - ? - CTr - recip | 'exchange gifts' (MG471) |
| c'. | [ʔáʔaǰušəm̓ɒàwɬ] | /ʔa-ʔaYoš-ʔəm-t-awɬ/<br>CV - root - ? - CTr - recip | 'exchanging gifts'<br>(MG472) |

As can be observed from the progressive examples in (a',b',c'), the second consonant of the root is never copied. Formally, initial CV-Progressive reduplication can be viewed as the prefixation of a minimal monomoraic syllable[8] to the base. The entire root is copied but only the first consonant and vowel are associated to the template since a minimal monomoraic syllable is maximally CV. The use of the minimal parameter ensures that only the first consonant and vowel of the base are associated to the template in order to achieve template satisfaction. This is adopted primarily to account for the behaviour of CəC roots discussed in 3.3.2, which only allow association of an initial Cə- sequence even though CəC constitutes a licit monomoraic syllable. A CəC sequence, on the other hand, is a maximal monomoraic syllable. Melodic material which is copied and remains unassociated is then subject to Stray Erasure (Itô 1986). Directionality of mapping for prefixes is left to right. In the unmarked case, derivations are subject to the Principle of Maximality (McCarthy and Prince 1986, 1990) whereas for CV- Progressive Reduplication association is minimal.

The following partial derivation of (1.1.a') 'washing clothes' given in (2) is an example of how CV- reduplication takes place.

(2) a. b. c. d.




(2a) shows morafication of the CVC root /ṗeç'/; note that the consonant [ç'] is moraic.[9] (2b) shows syllabification of the same root. The reduplicative template, which is a monomoraic syllable, is affixed to the base in (2c). In (2d) the entire base /ṗeç'/ is copied; however, only the first consonant and the vowel are associated to the template since the syllable of the reduplicative affix is maximally monomoraic. This constitutes a typical case of CV- reduplication in Sliammon.

### 3.1.2 CV- Reduplication of Weak roots

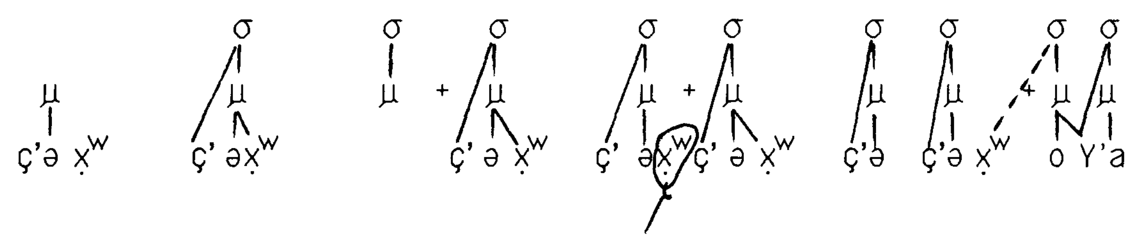
This analysis of progressive reduplication is now extended to weak roots in Sliammon; these seem to behave differently from the strong roots discussed above. Nonetheless, the process can be unified. Weak roots of the form CəC also undergo initial CV- reduplication but with the subsequent deletion of the original root vowel. The following sets of examples compare the perfect forms given as (a, b, c, d) and the progressive forms given as (a', b', c', d').

(3.0) /C₁əC₂/ Roots

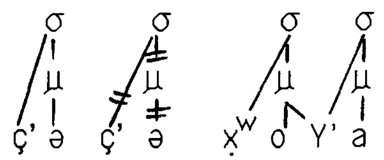
| | | | |
|---|---|---|---|
| a. | [ç'ə́x̣ʷoẙəm] | /ç'əx̣ʷ-oY'a-əm/<br>root - LS 'hand'[10] - intr | 'go wash your hands'(MG 442) |
| a'. | [ç'ə́ç'x̣ʷoẙəm] | /ç'ə-ç'əx̣ʷ-oY'a-əm/<br>CV - root -LS 'hand' - intr | 'washing your hands'(MG 443) |
| b. | [ƛ̣ə́pxʷ] | /ƛ̣əpxʷ/<br>root | 'to break'(MG 147) |
| b'. | [ƛ̣ə́ƛ̣pxʷəč] | /ƛ̣ə-ƛ̣əpxʷ-ət-č/<br>CV - root - CTr - 1sg Sb | 'I'm breaking it'(MG 152a) |
| c. | [x̣ʷɑ́(ʔ)ƛ̣̓egən][11] | /x̣ʷəƛ̣̓-eWan/<br>root - LS 'size' | 'half full'(MG 373) |
| c'. | [x̣ʷɑ́x̣ʷƛ̣̓egən] | /x̣ʷə-x̣ʷəƛ̣̓-eWan/<br>CV - root - LS 'size' | 'half filling things'(MG 374) |

In the analysis proposed here, the schwa of the original root undergoes deletion via Stray Erasure because once stress falls on the reduplicative prefix, rather than on the root vowel, it fails to be prosodically licensed. The conditions on the proper licensing of schwa were established in 1.2.1. The partial derivation of 'washing your hands' in (4) (from 3.a') illustrates how CV - Progressive Reduplication proceeds in CəC roots.

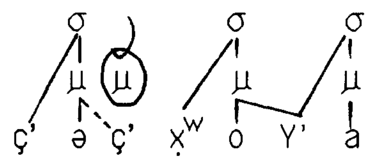
(4) a. b. c. d. e.



f.



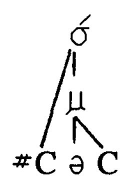
g.



In (4a) the root vowel receives a mora by the process of morafication. In (4b) schwa is recognized as the head of the syllable and projects the syllable node σ. Onset creation and coda adjunction also take place. (4c) shows progressive reduplication as the prefixation of a monomoraic syllable to the base. In (4d) the melodic content of the root is copied and associated to the template. Since the reduplicative affix is a minimal monomoraic syllable and there are no complex onsets in Sliammon, the unaffiliated consonant x̣$^{w}$ is subject to Stray Erasure. Without the use of the minimal/maximal parameter, it is not clear how the final consonant of the copied melody would be prevented from adjoining to the reduplicative affix, since a CəC syllable of the form [ç'əx̣$^{w}$] is a licit monomoraic syllable, as discussed in Chapter 1.

In (4e), with the addition of the vowel initial suffix for 'hand' - oY'a, the final consonant of the root x̣$^{w}$ spreads over to become the onset of the following syllable in order to satisfy the Obligatory Onset Condition. Stress assignment places primary stress on the reduplicative prefix. This process in turn leaves the root schwa in an unstressed post-tonic position, a position in which schwa is deleted. This step is illustrated in (4f). With the deletion of the original root vowel schwa, the syllable is subject to the process of Parasitic Delinking (Hayes 1989:268) which frees the vocalic mora as well as the onset consonant. The consonant ç' spreads over becoming a sister to schwa, thus strengthening the prosodic licensing of schwa. The root mora is subject to Stray Erasure[12] since it is in a position which cannot be filled due to constraints on possible syllable types. This final restructuring is pictured in (4g). We may now reconsider the derivation in (4) with respect to the prosodic licensing of schwa. As discussed in Chapter 1, when a consonant plus schwa is prefixed in order to mark the progressive aspect, for example, this prefixed syllable will ultimately receive primary stress. In the case of an example like [ç'ə́ç'x̣ʷoỳəm], after CV- reduplication the original root vowel schwa is left in an (unstressed) open syllable in post-tonic position. In Sliammon, this is a position in which schwa is not properly licensed. As previously noted, the deletion of the original root vowel schwa also causes the initial root consonant ç' to resyllabify into the preceding syllable in order to avoid violating the language specific constraint which bars complex onsets. In doing so, this consonant ç' functions to strengthen the prosodic licensing of the preceding stressed schwa. Stressed schwa is now licensed by both licensing conditions (24) and (25) discussed in Chapter 1.[13] The structure which incorporates both licensing conditions is repeated in (5):

(5)




Notice that the deletion of root schwa and the subsequent restructuring illustrated in (4) creates a single maximal syllable out of two adjacent open syllables[14].

### 3.1.3 Progressive CV- Reduplication - some apparent counter-examples

The following progressive forms at first look like exceptions to the established pattern of CV- reduplication discussed above. Rather than being marked by reduplication, progressive aspect in the first example in each pair appears to be marked by a long vowel.

(6)

| | | | |
|---|---|---|---|
| a. | [gú:ɬaq̓əm] | /Wə-Wəɬaq̓-əm/<br>CV - root - intr | 'it's opening'(MG 476) |
| b. | [gó:q̓ʷətʰ]<br>~[gú:q̓ʷətʰ] | /Wə-Wəq̓ʷ-ət/<br>CV - root - CTr | 'dragging it'(MG 464) |
| b'. | [góq̓ʷtʰ] | /Wəq̓ʷ-t/<br>root - CTr | 'drag it (a little way)'(MG 465) |
| c. | [ǰí:ƛ̓] | /Yə-Yəƛ̓/<br>CV - root | 'running'(JD 1970:89) |
| c'. | [ǰíƛ̓] | /Yəƛ̓/<br>root | 'run'(JD 1970:89) |
| d. | [ǰí:qɛⁱš][15] | /Yə-Yəq-e-aš/<br>CV - root - stv - intr | 'crawling'(JD 1970:89) |
| d'. | [ǰʌ́qɛⁱš]<br>~ [ǰɛ́qɛš] | /Yəq-e-aš/<br>root - stv - intr | 'crawl'(JD 1970:89) |
| e. | [yí:maʔàm] | /yə-yəm-əm-ʔ/<br>CV - root - intr - gl | 'kicking'(JD 1970:89) |
| e'. | [yíməm]<br>~[yímʌm] | /yəm-əm/<br>root - intr | 'kick'(JD 1970:89) |

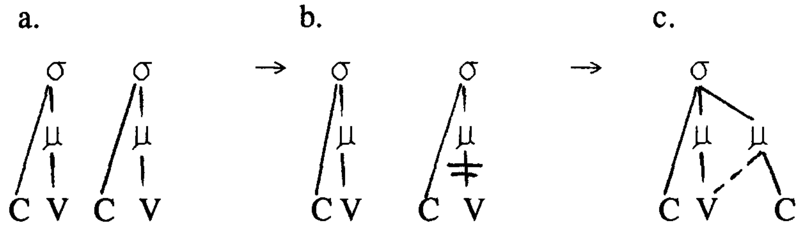
The purpose of this section is to show that the vowel length is in fact derived via regular CV- reduplication. Vowel lengthening occurs when a weak root of the form $C_1əC_2$, where $C_1$ = /w, y, W or Y/, undergoes CV-reduplication with the subsequent loss of the root vowel schwa. Schwa-deletion, which creates the environment for Compensatory Lengthening, is governed by Proper Licensing of schwa.

The structure of the argument proceeds as follows: progressive[16] aspect is regularly marked by initial CV- reduplication with the loss of the root vowel in weak roots. Formally, this is the prefixation of a monomoraic minimal syllable to the base. This is shown in the forms in (1.1, 1.2, 1.3) and (3.0). On the surface, the progressive forms in (6) look like counter-examples to this well-established pattern. If we adopt the position that long vowels are distinctive, then the examples in (6) in which long vowels appear (in order to mark this aspectual category) need to be marked as exceptions to the regular pattern of CV- reduplication. In addition, the approach which opts for exceptional marking of the forms in (6) fails to account for the fact that this exceptionality only occurs in roots of the form $C_1əC_2$ where $C_1$ is a glide, and that the resulting long vowel of each exceptional form happens to be the vowel which corresponds to the glide of the initial root consonant. In other words, not only does this approach require that the cases in (6) be treated as exceptional, but it also fails to capture certain significant generalizations regarding the environment in which this exceptionality occurs. The plural reduplication discussed in section 3.2 provides further support for this argument.

The approach taken here is that long vowels in the progressive and plural are derived from schwa-glide sequences. This explains the limitation of this class of apparent counterexamples and also explains the quality and length of the resulting surface vowels. This is a strong argument in favour of deriving vowel length in Sliammon.

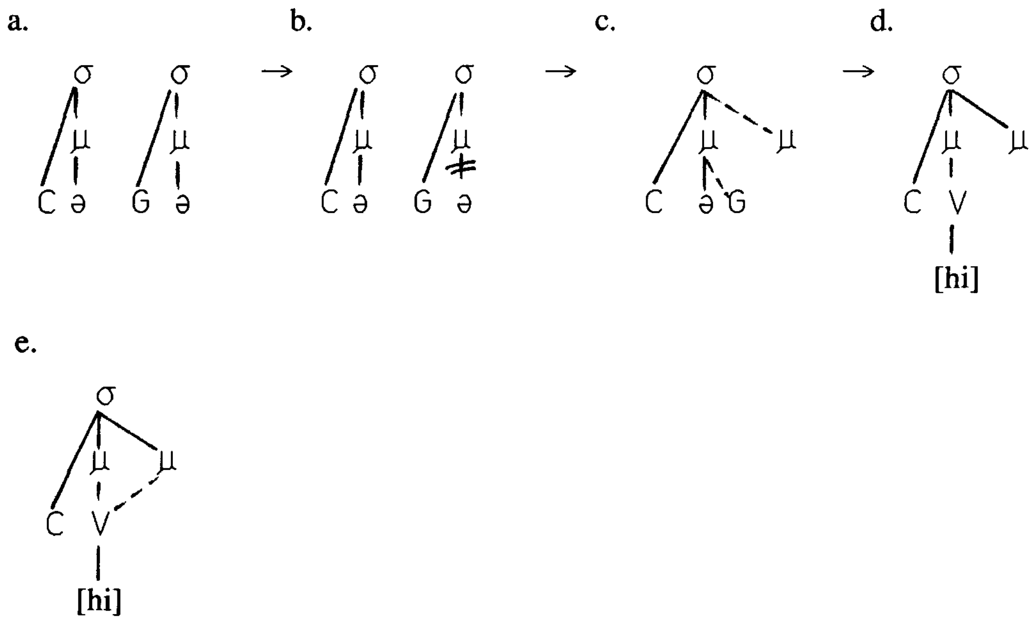
The progressive forms in the examples in (6) are marked by full vowel lengthening. This would suggest that the featural content of the stem vowel is deleted, but that the mora to which the stem vowel is attached remains. On the surface, examples in (6) appear to be similar to cases of Compensatory Lengthening(CL) described by Hayes (1989:280) as "Vowel Loss." This process is illustrated in (7) and is based on Hayes's (1989:268) analysis of Middle English:

(7)



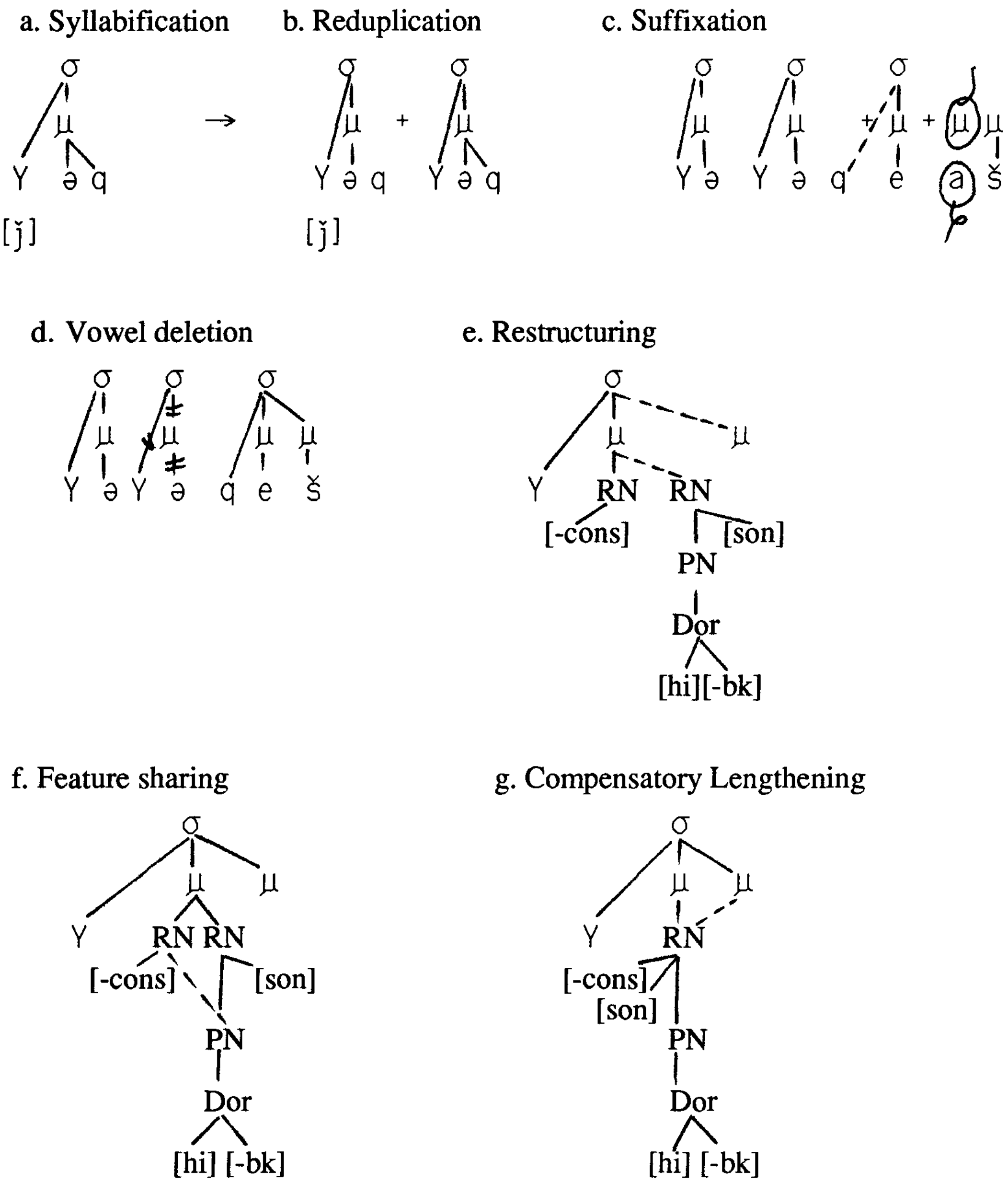

In the cases described by Hayes there is a sequence of vowel, consonant, vowel (VCV) in which the final vowel is lost with Compensatory Lengthening of the preceding nucleus. Melodically, the Sliammon case in (8) differs from the Middle English example, in that the initial glide of the second syllable vocalizes, and determines the quality of the schwa of the prefix. Prosodically, however, these two examples are parallel. In Sliammon, root schwa is lost with Compensatory Lengthening of the preceding nonlow vowel. This is represented schematically below:

(8)




The following derivation of 'crawling' (from 6.d) is representative of the examples in which full vowel lengthening occurs.[17]

(9)




Morafication and syllabification of the root occur in (9a). In (9b) reduplication takes place. A monomoraic minimal syllable is prefixed to the base. The entire base is copied and associated maximally. The final consonant of the copied melody is deleted via Stray Erasure. Stress assignment places primary stress on the leftmost syllable; in this case primary stress falls on the reduplicative prefix. Stress placement in conjunction with resyllabification of the root-final consonant q causes post-tonic schwa deletion.[18] The deletion of the post-tonic vowel causes parasitic delinking of the associated syllable node. Parasitic delinking of the syllable frees both the mora which immediately dominated the root-vowel schwa, as well as the root-initial consonant Y as shown in (9d). The segment Y spreads over to become a sister to schwa thus strengthening the prosodic licensing of the stressed vowel. The segment /Y/ is realized as a glide [y] in moraic position as in (9e). The high front glide [y] shares its place features with schwa, which is completely underspecified for place features, by leftward spreading of the place node (PN) onto the adjacent root node (RN) as depicted in (9f). The resulting vowel spreads to fill the empty mora as in (9g). This constitutes a case of Compensatory Lengthening since it is the deletion of the root vowel which creates the environment for CL. The final output results from the syncope of the stem vowel as well as from resyllabification and the subsequent application of phonological rules driven by the principles of Prosodic Licensing.

### 3.2 Plural CəC Reduplication

The purpose of this section is to show that vowel length must also be derived in the formation of the CəC plural. The regular pattern of CəC plural reduplication is established in section 3.2.1. Cases which look like exceptions to this general CəC pattern are then examined in section 3.2.2.

#### 3.2.1 Regular CəC Reduplication

Plural reduplication, exemplified in (10-13), is a copy of the first consonant of the base, followed by schwa and a copy of the second consonant of the base. The vowel of the reduplicative prefix is always schwa regardless of the quality of the root vowel. This is best illustrated by the plurals of strong roots given in (10a - 12g). In a number of cases schwa[19] is subject to colouration by adjacent consonants; this obscures the quality of the vowel in the reduplicative affix, although the clearest examples have been selected here for purposes of exposition.

Formally, CəC reduplication is viewed as the prefixation of a maximal monomoraic syllable to the base. This is in contrast to the minimal monomoraic syllable which is affixed for CV- progressive reduplication. In the following examples the first member of each pair (x) is the singular form and the second member of each pair (x') is the plural form:

(10) /$C_1eC_2$/ Roots

| | | | |
|---|---|---|---|
| a. | [ƛ̓ɛ́qʷᵒʔɑnɑʰ] | /ƛ̓eqʷ-aṅa/<br>root - LS 'ear' | 'earlobe'(MG 272) |
| a'. | [ƛ̓ə́qʷƛ̓ɛqʷʔɑnɑʰ] | /ƛ̓əqʷ-ƛ̓eqʷ-aṅa/<br>CəC pl - root - LS 'ear' | 'earlobes'(MG 273) |
| b | [mɛ́x̣ʌɬ] | /mex̣əL/<br>root | 'black bear'(MG 107) |
| b'. | [mə́x̣mɛx̣əɬ] | /məx̣-mex̣əL/<br>CəC pl - root | 'black bears'(MG 108) |
| c. | [t̓éʔnəqʷʰ] | /t̓eṅ-eqʷ/<br>root - ? | 'salmonberry'(MG 100) |
| c'. | [t̓ə́nt̓ɛʔᵋnɛqʷ] | /t̓əṅ-t̓eṅ-eqʷ/<br>CəC pl - root - ? | 'salmonberries'(HW 46.1) |

(11) /$C_1oC_2$/ Roots

| | | | |
|---|---|---|---|
| a. | [ç'óx̣o] | /ç'ox̣o/<br>root | 'cod fish'(MG 7) |
| a'. | [ç'ə̠́x̣ç'əx̣o] | /ç'əx̣-ç'ox̣o/<br>CəC pl - root | 'lots of cod'(MG 490) |
| b. | [sóṗənæčəmɪ̀n] | /soṗ - nač - men/<br>root 'chop'- LS 'base' - instr | 'stump (of a tree)'(MG 200) |
| b'. | [sə́psopənəčmɪ̀n] | /səp-sop-nač-men/<br>CəC pl - root - LS 'base' - instr | 'stumps' (MG 201) |

c. [θóθɪn] /θoθen/ 'lip, lips'(MG 276)
root

c'. [ṣ̈íṣ̈ṣ̈oθɪn] /θəθ-θoθen/ 'lips (pl)'(MG 277)
CəC pl - root

(12) /$C_1aC_2$/ Roots

a. [čúy? sáɬtx$^w$] /čoẏ # saɬ-tx$^w$/ 'young woman'(MG 143)
young # root - LS 'house'

a'. [čùy? sə́ɬsaɬtx$^w$] /čoẏ # səɬ-saɬ-tx$^w$/ 'young women'
young # CəC pl - root -LS 'house' (MG 144)

b. [mɑ́sɛ?q$^w$] /mas-eq̓$^w$/ 'purple sea urchin'
root - LS 'elongated objects' (MG 41)

b'. [mʌ́sməsɛq$^{wh}$] /məs-mas-eq̓$^w$/ 'purple sea urchins'
CəC pl - root - LS 'elongated objects' (MG 583)

c. [mɑ́č̓ɪn] /mač̓ən/ 'louse'(MG 156)
root

c'. [mə́č̓mač̓ɪn] /məč̓-mač̓ən/ 'lice'(MG 157)
CəC pl - root

d. [q̓$^w$ɑ́ɬəṣ] /q̓$^w$alas/ 'raccoon'(MG 26)
root

d'. [q̓$^w$ʌ́ɬq̓$^w$ɑɬəṣ] /q̓$^w$əl-q̓$^w$alas/ 'raccoons'(MG 27)
CəC pl - root

e. [tɑ́tn̩ɑǰɨp$^h$] /tač-ən-aɣəp/ 'whole leg, hip'(MG 311)
root - ? - LS 'thigh'

e'. [tɪ́čtɑčɨnɑǰɪp$^h$] /təč-tač-ən-aɣəp/ 'legs, hips'(MG 312)
CəC pl - root - ? - LS 'thigh'

f. [ʔápʼtən] /ʔapʼ-tən/ 'green sea urchin'
root - instr (MG 40)

f'. [ʔʌ́pʼʔapʼtən] /ʔəpʼ-ʔapʼ-tən/ 'green sea urchins'
CəC pl - root - instr (MG 585)

g. [ʔásxʷ] /ʔasxʷ/ 'seal'(MG 18)
root

g'. [ʔə́sʔasxʷ] /ʔəs-ʔasxʷ/ 'seals'(MG 19)
CəC pl - root

(13) /$C_1əC_2$/ Roots

a. [qʷáʔᵃnʊqʷɬa] /qʷan-ʔəqʷɬa/ 'knee'(MG 313)
root - LS 'knee'

a'. [qʷə́nqʷaʔᵃnʊqʷɬa]/qʷən-qʷan-ʔəqʷɬa/ 'knees'(MG 314)
CəC pl - root - LS 'knee'

b. [çʼə́kʷa] /çʼəkʷa/ 'edible rootstalks'
root (MG 12)

b'. [çʼə́kʷʰçʼəkʷa][20] /çʼəkʷ-çʼəkʷa/ 'lots of rootstalks'
CəC pl - root (MG 487)

c. [mʌ́qsɨn] /məqsen/ 'nose'(MG 204)
root

c'. [mʌ́qᵊmʌqsɨn] /məq-məqsen/ 'noses'(MG 205)
CəC pl - root

d. [sʌ́x̣ʌm] /səx̣-əm/ 'racing canoe'(MG 63)
root - intr ?

d'. [sʌ́x̣səx̣ʌm][21] /səx̣-səx̣-əm/ 'racing canoes'(MG 658)
CəC pl - root - intr ?

Analyses of reduplicative patterns of this sort, in which the vowel of the affix remains constant, have appealed to the notion of "melodic overwriting" in order to achieve this effect. Melodic overwriting, as described by McCarthy and Prince (1990:245), is the application of a melody in a feature changing manner, essentially "overwriting the original melodic material of the base" (McCarthy and Prince 1990:245). In Sliammon, if the full vowels /e, o, a/ were to undergo melodic overwriting, they would be supplanted by the vowel schwa, which is totally underspecified for place features. The application of a melody in a feature changing manner, in this case, would have to be construed as the delinking of all associated place features, not as the replacing or overwriting of them with any others. This account does not therefore seem motivated. Therefore it would be preferable if the fact that the vowel of the affix is always schwa could be derived from something else.

It is suggested here that CəC- reduplication utilizes the notion of "edge-in association" in order to obtain the desired results. Since CəC- reduplication is a prefix, and directionality for prefixes in universally left to right, when the copied full vowel melody (CVC) is associated to the monomoraic syllable template there is no well-motivated reason why the second consonant would ever be allowed to associate, since monomoraic CVC syllables are not permissible. Yet as can be seen from the surface forms which result, the second consonant ($C_2$) must be associated. Therefore it is proposed that $C_2$ is associated first, in accordance with the principles of "edge linking" (following Shaw 1991a)[22]. The Edge Linking mapping procedure in (14) is taken directly from Shaw (1991a:5):

(14) a. Edge Linking (Shaw 1991; (cf."Edge-In Association" e.g. Yip 1988; Hewitt & Prince 1989; Lombardi & McCarthy 1991)):

Consider the "unmarked" edge of a domain to be the edge from which association will proceed following universal principles of directionality of association.

Consider the "marked" edge to be the opposite edge of that domain.

Link a single peripheral melodic element at the marked edge of an association domain one-to-one with the marked edge of the prosodic template. Then proceed with regular association from the unmarked edge.

b. Directionality: L→R (unmarked: prefix domain)

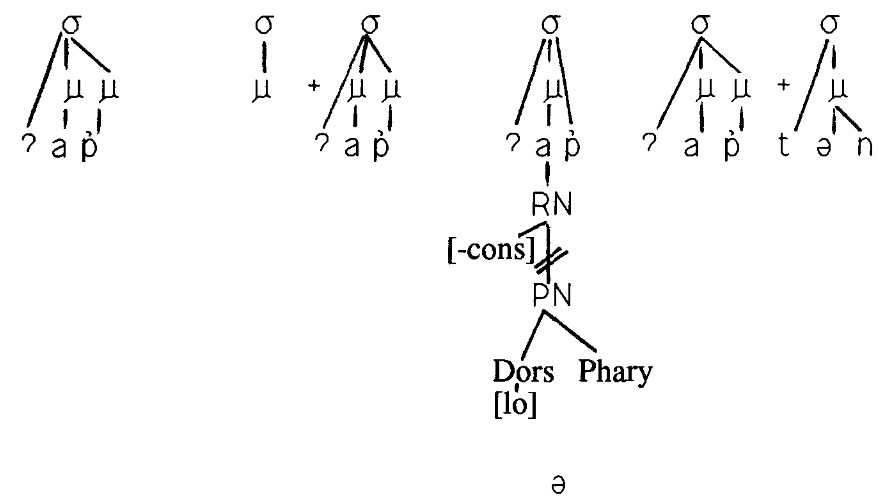
c. Maximal (up to licit maximum of moraic or adjoined content, but extrasyllabic content would not be licensed)

In the case of CəC- plural reduplication for strong roots in Sliammon, this means that $C_2$ is first associated via edge linking, then the first consonant is associated. The full vowel is barred from association, since in Sliammon monomoraic closed syllables containing a full vowel are ruled out. The syllable nonetheless requires a vowel in order to be properly licensed. A root node, specified only for [-cons] is adjoined in order to license the mora.[23] Schwa is the only vowel which can occupy this structural configuration. By adopting edge-in association the fact that the vowel of the reduplicative prefix is always schwa follows from general principles. The derivation of (12f') 'green sea urchins' given in (15) provides this plausible alternative to melodic overwriting.

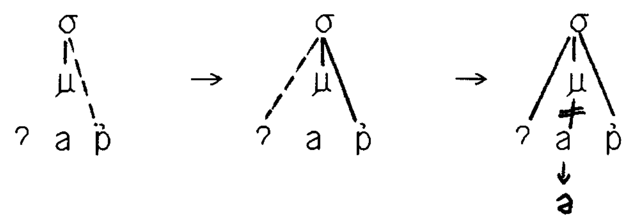
| | | | |
|---|---|---|---|
| f. | [ʔáp̓tən] | /ʔap̓-tən/<br>root - instr | 'green sea urchin'(MG 40) |
| f'. | [ʔʌ́p̓ʔap̓tən] | /ʔəp̓-ʔap̓-tən/<br>CəC pl - root - instr | 'green sea urchins'(MG 585) |

(15)

a. Syllabification b. Prefixation c. Edge linking

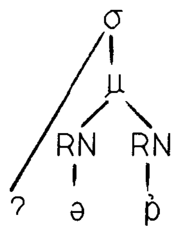



d. Edge Linking (step-by-step)




In (15a) morafication and syllabification of the root take place. The diagram in (15b) illustrates the prefixation of a monomoraic syllable to the base. In (15c) the base is copied and associated maximally to the template in accordance with edge linking. The diagram in (15d) provides a step-by-step derivation of edge linking. The reduplicative affix is necessarily a maximal monomoraic syllable. The only vowel which is permitted in this structural configuration is schwa. This is the configuration given in (16).

(16)




Therefore the fact that the vowel quality of the reduplicative affix is always schwa follows from the permissable configurations in which schwa may occur. The full vowels /a, e, o/ may not occur in this configuration. An explanation based on the limited structural configurations in which schwa may occur is a better explanation of the observed phenomena than appealing to the notion of melodic overwriting since overwriting seems to be simply inappropriate in the case of schwa.

This concludes this section which establishes the formation of CəC plural reduplication. Now consider the following cases which look like exceptions to this established pattern.

### 3.2.2 Some apparent exceptions to CəC Plural Reduplication

The plural forms in (17) are cases of apparent counter-examples to the established pattern of reduplication. In fact, it will be shown that these cases of vowel length are derived in a regular fashion. More specifically, vowel lengthening occurs when a root of the form $C_1VC_2$ undergoes $C_1əC_2$ plural reduplication, and where $C_2$ = /w, y, W, or Y/. The schwa of the reduplicative affix along with the following glide form a branching structure as in (17a', 17b', 17c'). This branching structure contains two root nodes dominated by a single mora and is realized as a half-long vowel. Consider the following singular and plural pairs.

(17)

a. [ç'ágətɛ̀q̓ʷojɪtən] /ç'aW-at̓-eq̓ʷ-oY'a-tən/ 'ring' (MG 306)
root - ? - LS 'long obj' - LS 'hand' - instr

a'. [ç'ú·ç'agətɛq̓ʷojɪtən] /ç'əW-ç'aW-at̓-eq̓ʷ-oY'a-tən/ 'rings' (MG 307)
CəC pl - root - ? - LS 'long obj' - LS 'hand' - instr

b. [sʌ́yᵊqən] /say-qen/ 'mouth' (MG 280)
root - LS 'mouth/language'

b'. [sí·seyqˣ·ən] /səy-say-qen/ 'mouths'
CəC pl - root - LS 'mouth' (MG 281)

c. [ʔáyhoṣ] /ʔay-h-os/ 'sea serpent'
root - ? - LS 'head'[24] (MG 495)

c'. [ʔí·ʔayhoṣ] /ʔəy-ʔay-h-os/ 'sea serpents'
CəC pl - root - ?- LS 'head' (MG 496)

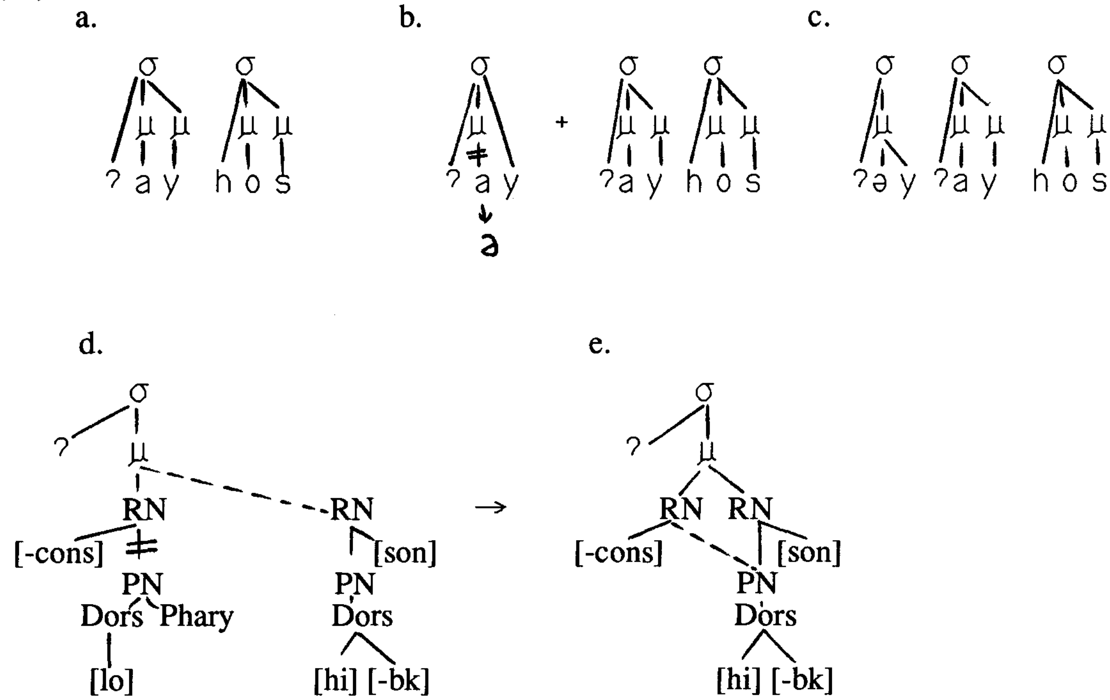
Formally, half-long vowels are the result of the spreading of the place features of the glide to the root node (RN) of the vowel schwa. This is illustrated in the diagram in (18):

(18)


ə w [u·]

The derivation of (17c') 'sea serpents' given in (19) further illustrates this pattern.

(19)




In (19a) morafication and syllabification have taken place. In (19b) a monomoraic maximal syllable is prefixed in order to mark CəC plural reduplication. The diagram in (19d) shows edge linking followed by cropping of the place features of the vowel /a/. The following glide then spreads leftward to share its features with schwa. The vowel schwa is coloured by the adjacent glide resulting in the sharing of autosegmental features. This creates the branching structure in (19e). The schwa/glide sequence is realized as the half-long vowel [i·].

### 3.3 CVC- Plural Reduplication

In addition to CəC plural formation (which is extremely productive), it is clear that other plural patterns also exist. There also seems to be a large number of roots which take CVC reduplication. Many of these are animal names and may belong to the same class of roots designated by Montler (1986) as roots which undergo "characteristic" reduplication. In the following plural forms the reduplicative affix is an exact CVC copy of the base.

(20)

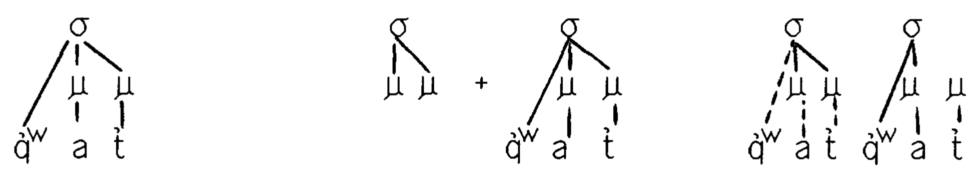
| | | | |
|---|---|---|---|
| a. | [hóm ʔhom] | /hom̓hom/[25]<br>root | 'blue grouse'(MG 121) |
| a'. | [hómhom ʔhom] | /hom̓-hom̓hom/<br>CVC pl - root | 'lots of grouse'(MG 122) |
| b. | [x̣ʷáƛ̓egən] | /x̣ʷaƛ̓-eWan/<br>root - LS 'size' | 'half full'(MG 373) |
| b'. | [x̣ʷáƛ̓x̣ʷaƛ̓egən] | /x̣ʷaƛ̓-x̣ʷaƛ̓-eWan/<br>CVC pl - root - LS 'size' | 'half filled things'(MG 374) |
| c. | [kʷúm̓tʰ] | /kʷom̓t/<br>root | 'kelp'(MG 16) |
| c'. | [kʷúmkʷum̓tʰ] | /kʷom-kʷom̓t/<br>CVC pl - root | 'lots of kelp' (MG 543) |
| d. | [ƛ̓ʌ́ƛ̓x̣ʌy̓] | /ƛ̓a-ƛ̓ax̣-ay-ʔ/[26]<br>CV - root - LS 'person'- gl | 'old person'(MG 231) |
| d'. | [ƛ̓áx̣ƛ̓ax̣ʌy] | /ƛ̓ax̣-ƛ̓ax̣-ay/<br>CVC pl - root - LS 'people' | 'old people(pl)'(MG 232) |

| | | | |
|---|---|---|---|
| e. | [q̓ʷá>t̓əm] | /q̓ʷat̓-əm/<br>root - ? | ‘river’(MG 223) |
| e'. | [q̓ʷát̓q̓ʷat̓əm] | /q̓ʷat̓-q̓ʷat̓-əm/<br>CVC pl - root - ? | ‘rivers’(MG 224) |
| f. | [kʷíškʷiš] | /kʷeškʷeš/<br>root | ‘Steller's jay’(MG 123) |
| f'. | [kʷíškʷiškʷiš] | /kʷeš-kʷeškʷeš/<br>CVC pl - root | ‘Steller's jays’(pl)(MG 124) |

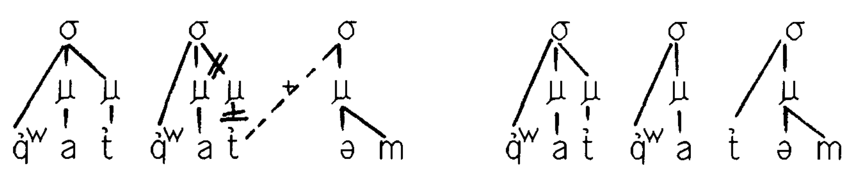
In these examples there is no change in the quality of the vowel in the affix. It is suggested that CVC plural formation is the prefixation of a bimoraic syllable to the base. The derivation of (20e') ‘rivers’ is given in (21).

(21)

a. b. c.



d. e.



The derivation in (21a) shows morafication and syllabification of the root. (21b) shows the prefixation of a bimoraic syllable to the root. The root is copied and associated maximally as in (21c).

### 3.3.1 Apparent exceptions to CVC- Reduplication

The examples in (22a') and (22b'), on the other hand, appear to be exceptions to regular CVC- reduplication discussed above. These forms contain a surface long vowel and seem to lack the second consonant of the root. This long vowel is derived by feature sharing[27] and is similar to the progressive examples discussed in 3.1.3.

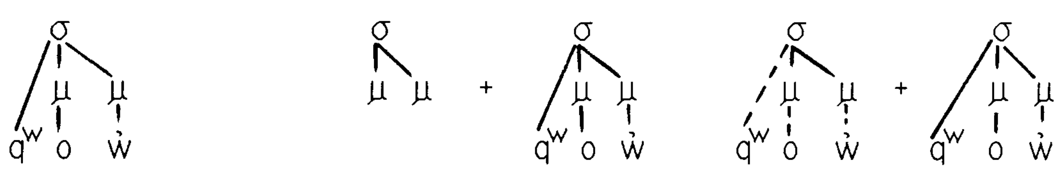
(22)

| | | | |
|---|---|---|---|
| a. | [ɬáʔgət̓ʰ] | /ɬaWət̓/<br>root | 'herring'(MG 2) |
| a'. | [ɬú:ɬɑgɪt̓ʰ] | /ɬaW-ɬaWət̓/[28]<br>CVC pl - root | 'lots of herring'(MG 338) |
| b. | [qʷó:ʔəy]<br>~ [qʷó:ʔʌy] | /qʷow̓-ay/<br>root - LS 'tree' | 'hemlock'(MG 57;190) |
| b'. | [qʷó:q̓ʷo:ʔəy] | /qʷow̓-qʷow̓-ay/<br>CVC pl - root - LS 'tree' | 'lots of hemlock' (MG 191) |

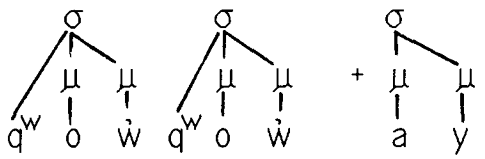
The derivation of 'lots of hemlock' in (23) is an illustration of Vowel Lengthening.

(23)

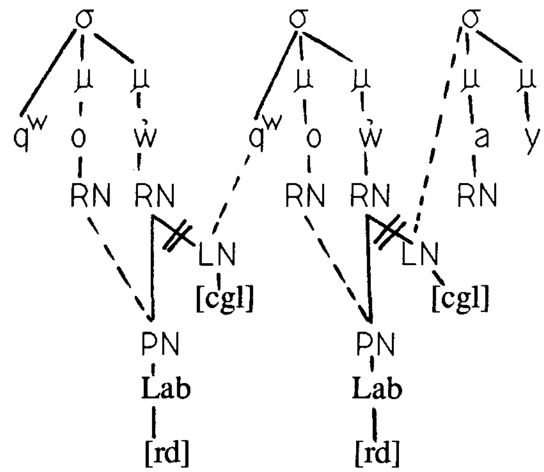
a. morafication & syllabification b. reduplicative prefix c. copy &association



d. suffixation




e. restructuring




[qʷó:q̓ʷo:ʔəy]

The derivation in (23) shows CVC reduplication, which is the prefixation of a bimoraic syllable. In (23c) the base is copied and associated maximally to the reduplicative template. Notice that the form in (23e) provides evidence that the laryngeal features associated with the glottalized resonant are copied as part of the reduplicative affix. It seems, however, that the glottalization of a glottalized resonant cannot be licensed within the reduplicative domain. Nonetheless the laryngeal feature is able to dock onto the following obstruent, creating the licit segment - [q̓ʷ]. The presence of this segment provides evidence for such a claim. The resulting long vowel in this example is the result of the sharing of features. It would seem that the glottalized /w̓/ does not behave as though it were [high] in this position. The presence of the preceding uvular in this instance may simply take precedence. Notice also that in all of the previously considered examples of restructuring of glottalized resonants, the glottal portion remains affiliated with the first syllable and the root node of the consonant is adjoined as the obligatory onset to the following syllable. In this example exactly the opposite seems to take place. It is suggested that the fact that the vowel and the following glide share the place features

Lab [rd] means that they are partial geminates and are therefore inalterable. The laryngeal features associated with /ẇ/ are spread onto $q^w$, since glottalized resonants are not tolerated within the domain of the reduplicative prefix.

Not only are long vowels derived in reduplicative forms, but long vowels can be shown to arise from vowel-glottal stop sequences. The next section extends the analysis of Compensatory Lengthening in Sliammon.

### 3.4 Long vowels alternate with vowel-glottal stop sequences

The examples in (24) show alternating pairs in which the first member of each pair (x) contains a vowel-glottal stop sequence. This sequence alternates with a long vowel in the second member of each pair (x'). Consider the following examples.

(24)

| | | | |
|---|---|---|---|
| a. | [ᵑgɑ́ʔgɑʔç'əpʰ] | /Waʔ-Waʔ-ç'əp/<br>CVC - root - ? | 'he's gone driving'<br>(MG 345) |
| a'. | [ᵑgɑ́:ç'əpʰ] | /Waʔ-ç'əp/<br>root - ? | 'drive, steer'(MG 344) |
| b. | [ʔɑ́ʔǰumš] | /ʔa-ʔaY-omeš/<br>CV- root - LS 'appearance' | 'pretty, beautiful'<br>(MG 427) |
| b'. | [ʔɑ́:ǰumìš] | /ʔa-ʔaY-omeš/<br>CV- root - LS 'appearance'<br>'good' | 'nice, pretty'(JD 1970:ix) |
| c. | [mɛ́mmɑwʔ] | /me-maW'/<br>Ce - root | 'kitten'(JD 1970:43) |
| c'. | [mɛ́mmɑ:goɬ] | /me-maW'-oɬ/<br>Ce - root - dim | 'kitten'(JD 1970:43) |

| | | | |
|---|---|---|---|
| d. | [q̓áʔtəm] | /q̓aʔtəm/ | 'deer liver'(MG 125) |
| d'. | [q̓á:təm] | /q̓aʔtəm/ | 'liver'(JD 1970:79) |
| e. | [tóʔqʷ] | /toʔqʷ/<br>root ? [29] | 'Squirrel Cove'<br>(K&B:155) |
| e'. | [tó:qʷ] | /toʔqʷ/ | 'Squirrel Cove'<br>(JD 1970:90) |
| f. | [t̓éʔnəqʷʰ] | /t̓eň-eqʷ/<br>root - ? | 'salmonberry'(MG 100) |
| f'. | [t̓έ:nεqʷ] | /t̓eň-eqʷ/<br>root - ? | 'salmonberries'<br>(JD 1970:54) |
| g. | [ʔóʔp] | /ʔo-ʔop/<br>CV - root [30] | 'Church House'<br>(K&B:149) |
| g'. | [ʔó:p] | /ʔo-ʔop/<br>CV - root | 'Church House'<br>(the new place name)<br>(JD 1970:90) |
| h. | [máʔqʷç'] | /maʔqʷç' / | 'onions'(JD 1970:30) |
| h'. | ~[má:qʷç'] | root ? | |

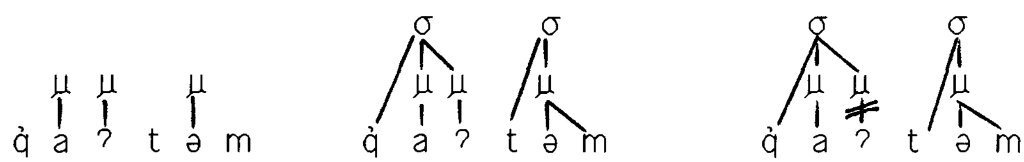
In each of these examples glottal stop is either assigned a mora by the rules of morafication or it is restructured in such a way that it occupies a moraic position. The glottal stop is then lost[31] with Compensatory Lengthening of the preceding vowel. Vowel length within this approach is derived and need not be encoded in underlying representations. If we were to adopt the opposite point of view and claim that vowel length is in fact phonemic and that the vowel-glottal stop sequences in (24) are derived instead, then we would require phonemic vowel length just for these examples, and crucially not for the reduplicative affixes discussed above. This would effectively build unneeded redundancy into the grammar. Any model which values simplicity and economy would disallow redundancies of this type.

In summary, the strongest arguments against positing phonemic long vowels are those which relate directly to the different established patterns of reduplication discussed in sections 3.1, 3.2 and 3.3 above. Once we have established that vowel length must be derived for the reduplicative affixes, then there is no motivation to claim that vowel length is distinctive only for the cases in (24), since deriving vowel length provides us with descriptive adequacy as well as a considerable degree of explanatory power.

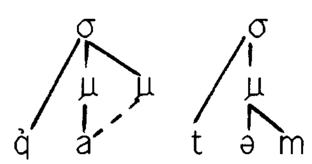
The hypothesis in this case is that bimoraic syllables of the type CVC are the source of long vowels. The melody of the final consonant is lost with subsequent compensatory lengthening of the preceding vowel. The derivation of the following form for 'liver' in (25) (from 24d) is representative of this process.

(25)

a. morafication b. syllabification c. loss of glottal stop



d. Compensatory Lengthening



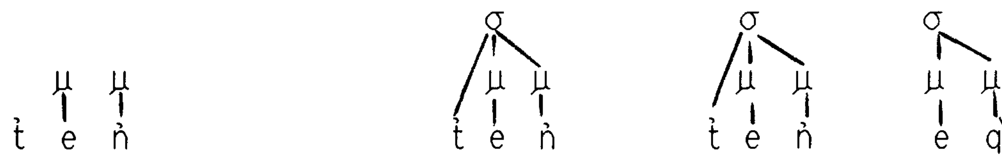
[q̓á:təm]

In (25a) glottal stop is assigned a mora via the language specific rule of Weight by Position. (25b) illustrates syllabification. In (25c) glottal stop is deleted. The mora to which this consonant was attached remains in accordance with the principle of moraic conservation (see Hayes 1989). The representation in (25d) shows the vowel /a/ spreading rightward in order to fill the empty mora. This constitutes a classic case of CL (cf. Hayes 1989:279).

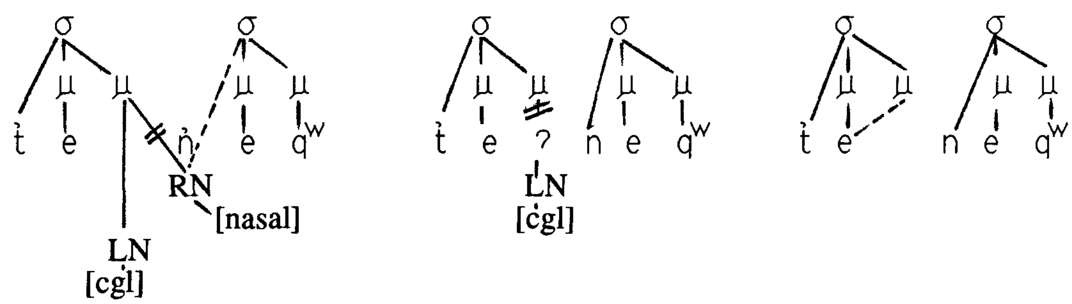
In the derivation of (24) given in (26) restructuring occurs.

(26)

a. morafication b. syllabification c. suffixation



d. re-syllabification/restructuring e. loss of [cgl] f. Compensatory Lengthening




The derivation in (26) involves an additional step. The glottalized resonant /n̓/ is restructured in (26d). With the addition of the vowel-initial suffix /-eq$^{w}$/, the nasal is resyllabified as the onset to the following syllable. The glottal portion of this segment /n̓/ remains affiliated to the original mora of the root since glottalized resonants are not permitted in syllable onset position. (26e) then shows the loss of glottal stop followed by Compensatory Lengthening of the preceding vowel in (26f).

The structural representations attributed to schwa rule out the possibility of compensatory lengthening of this vowel. There are no instances of long schwa in Sliammon. The sequence schwa-glottal stop[32] is monomoraic and would not be a context in which CL would occur. In addition, as seen from the contexts in which schwa is properly licensed, it needs either the support of a following consonant or the presence of stress in order to maintain its simple monomoraic status.

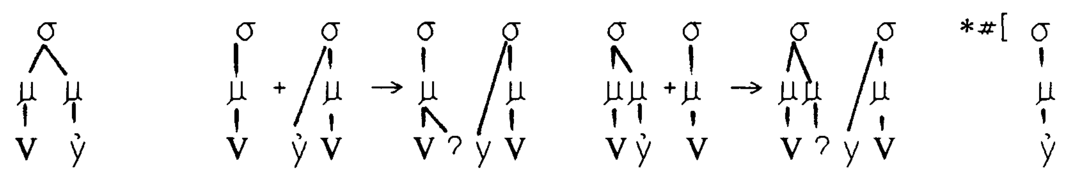
### 3.5 Distribution of Glottalization of Glottalized Resonants

In Sliammon there is a constraint which does not allow glottalized resonants ([sonorant][cgl]) to occur in syllable-initial position. Word internally, the appropriate repair strategy seems to be that glottalization is allowed to spread onto the preceding vowel, thus avoiding the illicit configuration. The target vowel will be marked for the laryngeal feature [constricted glottis]. Glottalized resonants can occur freely in syllable-final position either word-finally or word-internally. If a syllable-final glottalized resonant is required to resyllabify into the onset of a following syllable, then the glottal portion of the resonant continues to occupy its original moraic position in the preceding bimoraic syllable, since resyllabification of the entire glottalized resonant into onset position would be a violation of the observed constraint. In word-initial position, however, there is no previous mora onto which the glottalization can attach. Not only would word-initial glottalized resonants be nonmoraic, but they would also be located on the left edge of the word domain, and therefore would not have access to a preceding mora within the lexical phonology. This moraic approach offers a principled and explanatory account of the condition barring word-initial glottalized resonants in Sliammon. These different configurations are represented in (27):

(27)

a. syllable-final word final — b. syllable-initial, word internal — c. syllable-final word internal — d.syllable-initial word initial

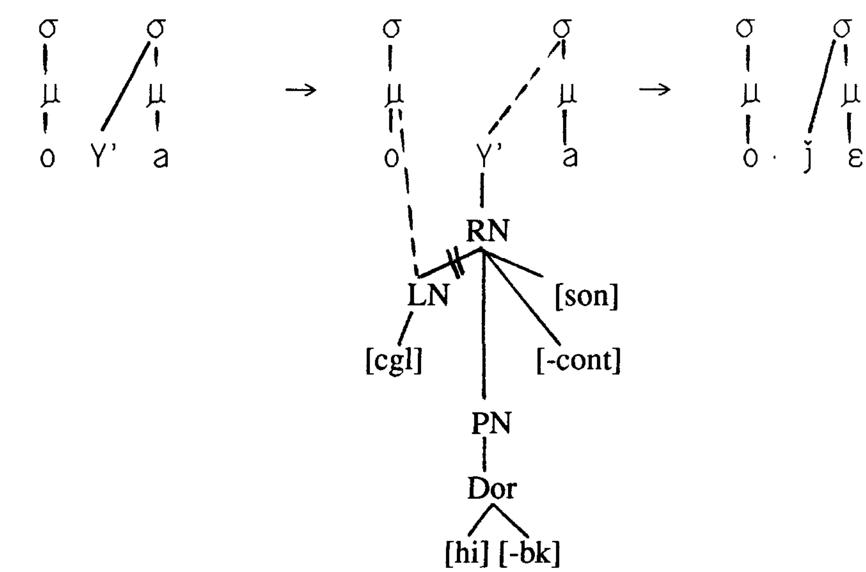
a. b. c. d.



In (27b) the resulting structure would be a vowel with associated laryngeal features. The branching structure below the mora is may be realized phonetically as a half-long vowel. In the configuration in (27c) on the other hand, the glottalized resonant is moraic in its original position. The plain resonant becomes the onset of the following syllable leaving a glottal stop associated with the final mora of the preceding syllable. The deletion of the syllable-final glottal stop in (27c) results in full compensatory lengthening. The configuration in (27d) is barred since there is no access to a preceding mora within the lexical phonology. Since glottalized resonants are not licensed in syllable-initial position and there is no available target site for the associated laryngeal feature, the configuration is unlicensed.

The lexical suffix for 'hand' is /oY'a/. This vowel-initial, bimoraic, bisyllabic suffix is a case in which the glottalized resonant /Y'/ is in the onset position of the second syllable in underlying representation. This glottalized resonant is therefore, by virtue of its position, nonmoraic. The representation of this affix is given in (28).

(28) a. Syllabification b. Restructuring of LN c. Output



The sequence of the round vowel /o/ plus the laryngeal feature [constricted glottis] may be realized as a half-long vowel, as illustrated in (28c). This variant realization appears in the forms in (29a) and (29a'), both with this lexical suffix. This is an example in which partial lengthening occurs.

(29)

a. [x̣ʷáç'ɛq̓ʷò ʔǰɛ] /x̣ʷaç'-eq̓ʷ-oY'a/ 'joint'(MG 302)
root - LS long objects - LS hand

a'. [x̣ʷə́ç'q̓ʷo·ǰɛ] /x̣ʷəç'-eq̓ʷ-oY'a/ 'wrist'(MG 298)
root - LS long objects - LS hand

In the derivation given in (31) of the forms in (30a) and (30a') full lengthening occurs.

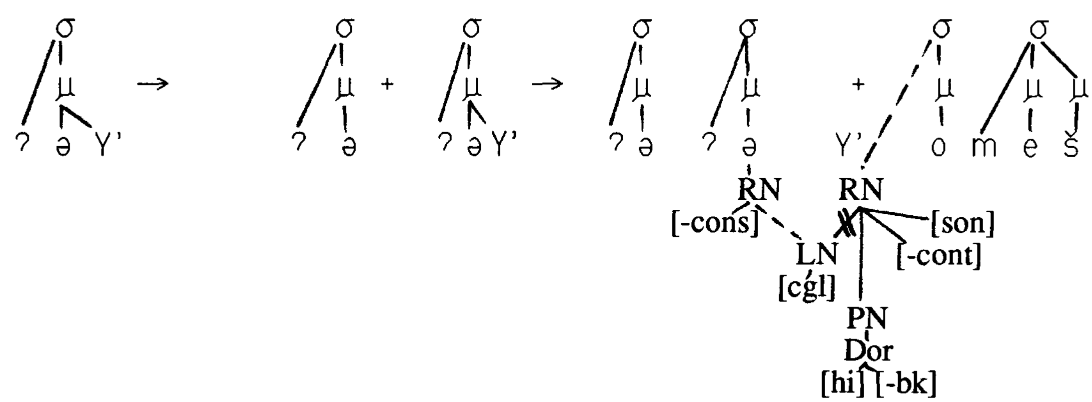
(30)

a. [ʔáʔǰumš] /ʔəY'-omeš/ 'pretty, beautiful'(MG 427)
root - LS 'appearance'

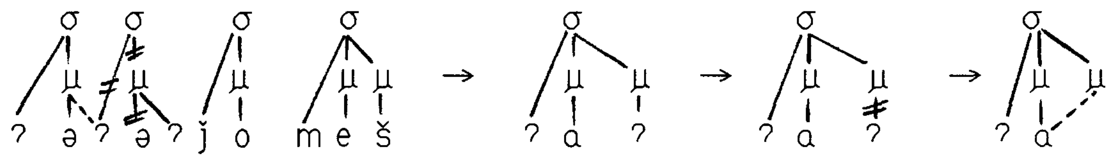
a'. [ʔá:ǰumìš] /ʔə-ʔəY'-omeš/ 'nice, pretty'(JD 1970:ix)
root 'good'- LS 'appearance'

(31)

a. root b. CV- reduplication c. Suffixation



d. Vowel loss/Parasitic delinking e. restructuring f. Loss ʔ g. CL



The derivation in (31a) shows morafication and syllabification of the root. CV-reduplication is illustrated in (31b). In (31c) with the addition of a vowel-initial suffix such as /omeš/, the glide portion (of /Y'/) /Y/ spreads rightward to fill the unoccupied syllable-onset position (becoming [ǰ]) in order to satisfy an independent language constraint which requires that all syllables in Sliammon have onsets. The laryngeal feature of [constricted glottis], on the other hand, remains affiliated with the mora of the root syllable, since glottalized resonants are not tolerated in syllable-initial position in Sliammon. In (31d) the root vowel schwa is lost with parasitic delinking of the associated syllable structure. The initial glottal stop of the root spreads over and is adjoined as a sister to schwa in the reduplicative prefix. This seems to be an environment in which schwa becomes the low vowel [ɑ]. The glottal closure remains associated with the mora of the root and is realized as a full glottal stop. This mora is adjoined to the first syllable creating a maximal bimoraic syllable. The features associated with glottal stop may then be deleted as in (31f) with subsequent Compensatory Lengthening of the preceding vowel [ɑ] as in (31g). The vowel-glottal stop sequence may be in free variation with the long vowel or may in fact be a dialect variant.[33]

The moraic perspective adopted in this section has allowed us to account not only for the difference in half-long vowels as compared to long vowels but also allows us to account for the overall distribution of the glottal portion of glottalized resonants in Sliammon. This is a significant generalization.

## 3.6 Compensatory Lengthening

In this section, other examples of CL are provided in order to show that this process is not restricted to the examples discussed above. Additional cases of the compensatory lengthening of vowels are considered followed by examples of lengthening of consonants.

### 3.6.1 CL of Vowels

(32)

| | | | |
|---|---|---|---|
| a. | [č̓í·četʲy̓əx̣] | /č̓ət-četey̓əx̣/<br>CəC pl - root ? | 'sandpipers'(MG 578) |
| a'. | [č̓íčtʲy̓ə̀x̣] | /č̓e-četey̓əx̣/<br>CV dim - root | 'sandpiper'(MG 34) |

### 3.6.2 CL of Consonants

(33)

| | | | |
|---|---|---|---|
| a. | [ʔɑ́tʰnoʙɛ̀l] | /ʔatnopel/ | 'car'(MG 348) |
| a'. | [ʔʌ́tʰʔɑtnoʙɛ̀l] | /ʔat-ʔatnopel/ | 'cars'(MG 349) |
| a". | ~[ʔʌ́t̓:ɑtnoʙɛ̀l] | | |
| b. | [č̓ɛ́č̓æt̓ən] | | 'mouse'(MG 161) |
| b'. | [č̓íč̓:ɛt̓æt̓ən] | | 'mice'(MG 162) |

### 3.7 Rhetorical/Emphatic Lengthening

As mentioned in the introduction to this chapter, the occurrence of rhetorical lengthening in Sliammon does not provide evidence in favour of positing a phonemic length contrast in the language. Instead, in light of all of the evidence that vowel length is in fact derived, it is suggested that rhetorical lengthening is a device, outside of the domain of the investigation of lexical phonological phenomena.

(34)

| | | | |
|---|---|---|---|
| a. | [qɑ́:qɑ] | /qa-a-qa/<br>root + length | 'tide's way out'(JD 1970:53) |
| a'. | [qɑ́qɑ] | /qaqa/<br>root | 'tide's out'(JD 1970:53) |
| b. | [θᵊó::] | /θəw-əw-əw/<br>root + length | 'he went and went'(JD 1970:53) |
| b'. | [θó] ~ [θə́w] | /θəw/ | 'go; he goes'(JD 1970:53) |
| c. | [xʸí:ƛ̓ɪt] | /xeeƛ̓-ət/<br>root + length - CTr | 'raise it more!'(JD 1970:61) |
| c'. | [xʸíƛ̓ɪt] | /xeƛ̓-ət/<br>root - CTr | 'to raise something'(JD 1970:61) |

Rhetorical lengthening occurs on the stressed vowel in each of the above examples. It is concluded that rhetorical lengthening does not provide evidence for a distinctive length contrast in Sliammon since it is simply not lexically relevant.

## 3.8 Conclusions

It is concluded that vowel length in Sliammon is predictable. It is derived from vowel-consonant sequences in bimoraic syllables by the process of Compensatory Lengthening. Further, these findings support Hayes's claim that "it is the moraic structure of a language and not the vowel inventory that determines whether Compensatory Lengthening may occur" (1989:290). The analysis of the regular and apparently irregular reduplicative patterns provides the strongest arguments for this claim. Even these apparent exceptions conform to the regular reduplicative patterns, given an analysis in which vowel length is not underlying.

It was also argued that CV- Progressive Reduplication in Sliammon is prefixation of a monomoraic minimal syllable to the base. CəC- plurals are formed by the affixation of a monomoraic maximal syllable to the base and associated in accordance with the principles of edge linking. It is concluded that such an approach provides a plausible alternative to the process of melodic overwriting, which in the case of schwa is ineffective.

CVC- Plural Reduplication is analyzed as prefixation of a bimoraic syllable to the base. It is also concluded that a moraic analysis of the Sliammon facts provides an explanation for the distribution of glottalization of glottalized resonants. It was argued that in syllable-initial position, glottalized resonants are restructured; however, in word-initial position, glottalized resonants are not licensed, since restructuring requires access to the previous mora within the lexical phonology.

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**Notes to Chapter 3**

[1] This discussion will focus primarily on phonological lengthening; however, it is clear from the following body of data that phonetic vowel-lengthening also occurrs. Consider the following variant forms as representative of partial phonetic lengthening in stressed open syllables.

Vowels are variably half-long in stressed open syllables:

| | | | |
|---|---|---|---|
| a. | [pɑ́·ʔɑ] | /paʔa/ | 'one'(JD 1970:80) |
| a'. | [pɑ́ʔɑ] | /paʔa/ | 'one'(MG 111) |
| b. | [sɑ́·ʔɑ] | /saʔa/ | 'two'(JD 1970:81) |
| b'. | [sɑ́ʔɑ] | /saʔa/ | 'two'(MG 112) |
| c. | [tú·mɪš] | /toməš/ | 'man'(JD 1970:79) |
| c'. | [čúyʔtom$^{I}$š] | /čoy̓-t-omeš/<br>young - male - LS 'appearance' | 'young man'(MG 141) |

[2] Compensatory lengthening is "the lengthening of a segment triggered by the deletion or shortening of a nearby segment" (Hayes 1989:260).

[3] See Hayes's typology of compensatory lengthening (1989:279).

[4] It is suggested here that rhetorical lengthening may be handled by the semantic/phonetic interface; however, this is beyond the scope of the present discussion.

[5] The element /-ay/ is one of a set of extensions that precede many of the lexical suffixes. I thank M.D. Kinkade for bringing this point to my attention.

[6] The question mark (?) is used to indicate morphemes which remain unidentified.

[7] Kroeber (1989) calls this suffix the "active intransitive" and gives its form as -(ʔ)əm. If this is the case, the root for 'to chop' may be /sop/ with glottal absorption of the suffix-initial glottal stop. The

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variation between the related forms for 'stump' [sóṗənæčəmìn] and 'stumps' [sə́psopənəčmɨ̀n] does not provide conclusive evidence in favour of one position or the other.

[8] McCarthy and Prince (1986:8) emphasize the role of open, light (CV) syllables in many languages.

[9] The fact that glottal stop deletion (discussed later in the chapter) causes compensatory lengthening is positive evidence that at least this coda consonant receives weight by position. It is assumed therefore, in the absence of evidence to the contrary, that all consonants which follow a full vowel are moraic in this position. They are assigned a mora by the language specific rule of Weight by Position.

[10] The surface shape of this suffix requires explanation since it regularly surfaces as [oʔjɛ] or [o:jɛ]. It may be a fossilized or borrowed form, since its meaning clearly seems to be that of 'hand' and the phonological form is clearly related.

[11] This pair of examples clearly shows that this is a weak root since the original root vowel deletes in the progressive form. Schwa is regularly lowered following a uvular.

[12] A derivation in which this original root mora is not deleted would be a violation of Structure Preservation since bimoraic CəC syllables are not permitted. Notice however that in the case of CəG (where G = glide) sequences, CL does occur. Perhaps the mora of the root is still present, but is simply not realized for independent reasons. Since geminate consonants occur across syllable boundaries and Sliammon does not permit complex onsets there is no possible version of CL for this example which would be licensed. *ç'ə́ç'ç'x̣ʷoỳəm, *ç'ə́ç'x̣ʷx̣ʷoỳəm.

[13] As pointed out to me by Dr. Patricia A. Shaw, the deletion of the unstressed post-tonic vowel in effect feeds this two-sided tautosyllabic operation. I have also noted this effect with respect to the colouration of schwa. The vowel height/value which is realized is often dependent on whether schwa receives features from a single consonant or from consonants on both sides of the vowel in question.

[14] It may be possible simply to appeal to the notion of maximization of syllable size in order to derive the proper licensing of schwa from this more general principle.

---

15 I have the following form recorded: [ǰíᵊqeš] 'crawling' /Yə-Yəq-e-aš/ (MG 454). The underlying representations which appear in (9) and elsewhere are my own, unless otherwise stated.

16 This aspectual class is also refered to as the 'imperfective' or 'continuative' in the literature on Salish. I have adopted Kroeber's (1989) terminology.

17 It would seem that when two vowels come together across a morphological boundary, one of the vowels is deleted since adjacent non-identical nuclei are generally not tolerated. In this particular example it is difficult to tell which vowel is deleted since phonetically /e/ is lowered to [ɛ] after a uvular and /a/ is fronted and raised slightly to [ɛ] before a tautosyllabic alveopalatal. Thus it is unclear whether either the preceding or the following consonant exerts a stronger influence.

18 Notice that root schwa is deleted in the form (6c) for 'running' even though the second consonant (ƛ̇) of the root is not subject to resyllabification. This suggests that post-tonic schwa deletion may occur regardless of whether or not the syllable is open or closed; or it may be the case that the final consonant is extrasyllabic. This issue requires further investigation.

19 See 1.1.5 and 1.1.6, which discusses the surface realizations of schwa.

20 Schwa appears in this form in an unstressed open syllable. This would seem to be a violation of the proposed principles of Prosodic Licensing for schwa. I suggest that this root vowel must be retained in order to syllabify the string of consonants [kʷç' kʷ]. Schwa-deletion is in effect prevented. This is a case in which syllabification must take precedence over the prosodic licensing of schwa. Example (13d') appears to be another case in point.

21 The presence of stem schwa in this form in an unstressed open syllable needs to be explained. It may well be retained in order to syllabify the sequence of consonants x̣sx̣; this would make this explanation analogous to the one given for example (13b).

22 I would like to thank Patricia Shaw for bringing this solution to my attention.

[23] It is conceivable that this vocalic root node is simply a cropped version of the full vowel which is left unassociated, since it is argued in Chapter 1 that schwa epenthesis is not a mechanism generally available as a repair strategy in Sliammon. Cropping, therefore, is the deletion of all associated place features, leaving simply the [-consonantal] specification behind.

[24] Apparently Mrs. George recognized the LS 'head' in this form. Thanks to Honoré Watanabe (pc) for bringing this to my attention.

[25] The root for 'blue grouse' is clearly already reduplicated in the singular form. It is an onomatopoetic word which Mrs. Mary George says imitates "the drum-like noise the grouse makes when it beats its wings". Example (20f) for 'Steller's jay' seems to behave similarily.

[26] This glottalization looks like continuative/diminutive glottalization of the resonant. Glottalization does not appear in the related plural form which follows. The lexical suffix for 'person' may be the same as the lexical suffix for 'tree'—perhaps better glossed as 'long or standing upright object'.

[27]Hayes (1989:279) states that "total assimilation of consonants is not always viewed as CL, though in a prosodic theory it is formally equivalent to it." Feature sharing achieves the same surface results as do the examples of true compensatory lengthening, in which there is the loss of a nearby segment with compensatory lengthening of an adjacent vowel.

[28] This example is somewhat problematic, since the length of the surface form clearly indicates that the reduplicative template should be a bimoraic syllable. However, it is unclear why /aw/ should surface as [u:], since long vowels usually come from schwa-glide sequences. I have ruled out cases of plural reduplication which prefix a bimoraic CəC- syllable, since the creation of this syllable type is not Structure Preserving. Therefore, I assume an analysis in which /a/ is first raised to schwa, perhaps in the environment of /ɬ_w/, and is then coloured by the adjacent glide.

[29] The meaning of the place name 'Squirrel Cove' is currently unknown according to Kennedy and Bouchard (1983:155).

[30] As Kennedy and Bouchard (1983:149) indicate, the meaning of this word for 'Church House' is also unknown. The proposed underlying representation is based on the behaviour of roots as well as full vowel deletion in CV- reduplication, although at the present point in time there is no additional evidence to substantiate this claim.

[31] It is interesting to note, that in Ilokano, surface long vowels are also derived from CVʔ- syllables (Hayes 1989:290). Glottal stop is not tolerated in syllable final position in Ilokano, and therefore deletes with compensatory lengthening of the preceding vowel.

[32] This sequence is rare. There is some indication that Ca- plurals may in fact be Cəʔ- reduplication which surface as Ca- . This again raises the issue of the relationship between the low vowel [ɑ] and glottal stop.

[33] The forms which I have collected are exclusively from a single speaker of Mainland Comox from Sliammon. These examples are identified as (MG), and all have a glottal stop present. There seems to be a systematic difference between Davis's data and my own in that he records vowel length where I have recorded a sequence of vowel plus glottal stop. Davis elicited materials not only from speakers from Sliammon but also from speakers of Mainland Comox from Church House and Squirrel Cove. Unfortunately, the forms he cites in his thesis and elsewhere are not encoded such that they distinguish one speaker from another. Therefore, it is difficult at the present time to determine whether or not this discrepancy can in fact be attributed to consistent dialectal variation.

## Symbols used

B = intermediate and variable in voicing between p and b[1]

ç' = glottalized (ejective) interdental affricate [t̓θ]

D = intermediate and variable in voicing between t and d

ṣ = retracted s

s̤ = interdental s, retracted θ

ƛ̓ = glottalized (ejective) lateral affricate [t̓ɬ]

ɬ = voiceless lateral fricative

ɫ = dark resonant 'l'

L = sonorant lateral which alternates between ɬ~y~w (~ʔ)

ə̤ = rounded schwa pronounced slightly further back in the mouth than regular ə

---

1 Dr Patricia A. Shaw has suggested to me that these may be 'voiceless unaspirated' stops which to English speakers simply sound partially voiced.

**Abbreviations**

1sg Ob - 1st person singular Object - 'me'

1sg Po - 1st person singular possessive -'my'

1sg Sb - 1st person singular subject - 'I'

2nd sg Sb - 2nd person singular subject - 'you'

3 Po - 3rd person possessive -'his, hers, theirs'

3 Sb - 3rd person subject

art - article

C - Consonant

caus - causative

cl - compound ligature,

CL - Compensatory Lengthening

CTr - Control Transitive

CV- reduplicative prefix for the diminutive and for the progressive

CəC- reduplicative prefix for the CəC plural

CVC- reduplicative prefix for the CVC plural

dim - diminutive

ex - extension

fut - future

G - glide

gl - glottalization

imper - imperative

instr - instrumental

intr - intransitive

LS - Lexical Suffix

lv - linking vowel

MC - main clause

NTr - Noncontrol Transitive

Obj - object

OCP - Obligatory Contour Principle

part - particle

past - past tense marker

pl - plural

PMC - Passive predicate in a main clause

prog - progressive

PSC - Passive predicate in a subordinate clause

recip - reciprocal

reflex - reflexive

SC - Subordinate Clause

sg - singular

st ex - stem extender

stv - stative

UR - Underlying Representation

V - vowel

-VC - reduplicative affix for the inchoative

vd - voiced

vls - voiceless

# Appendix[1]

***A***

**accident**

| | | |
|---|---|---|
| 'an accident'(MG 347) | [mɑ́ʔmʊqʷɬkʷʊ̀ʰ] | |

**afraid - to be scared**

| | | |
|---|---|---|
| 'are you scared ?' | [sə́ysɑ̀ʔǰɨčxʷ] | /səY'-saY'-et-čxʷ/[2] |
| (MG 413) | | CəC pl - root - stv - 2sg Sb |
| 'you're afraid'(MG 414) | [sʌ́ysəỷ] | /səY'-saY'/ |
| (he/they're afraid?) | | CəC - root |
| 'they're scared' | [sɪ́sɪsəỷ] | /səY'-səY'-saY'/ |
| (MG 415) | | CəC - CəC - root |
| 'alder (tree)'(MG 192) | [p̓éỷᵊx̣əy] | /p̓eyx̣-ay/ |
| | | /p̓eỷəx̣-ay/ |
| | | root - LS 'tree' |
| 'alder (pl)'(MG 193) | [p̓ɪ́p̓ɪyx̣əy] | /p̓əy-p̓eyx̣-ay/ |
| | | CəCpl - root - LS 'tree' |
| 'ankle'(MG 315) | [x̣ʷə́ç'q̓ʷɑyəqɨn] | |

[1] This is an appendix of the Sliammon data which I recorded over a period of several visits to Sliammon; the exact dates are listed as follows: July 19, 1988, July 26, 1988, October 23, 1988, January 27, 1989, January 28, 1989, January 29, 1989, July 5, 1991, July 6, 1991, July 7, 1991, July 8, 1991, July 9, 1991. The data was recorded from a single speaker of Sliammon, Mrs Mary George. The first column is the English gloss, followed by the phonetic forms in brackets, and the proposed phonemic representations between slant lines. Morphemes which are marked with a question mark are not yet identified. Entries which do not include a phonemic representation are included for the sake of completeness even though I have no present proposal for the UR of these forms. The motivation for including this data base is twofold. First, I would like to make this data available to anyone who is interested in consulting it and secondly, it is my hope that others will be encouraged to build on the materials presented here, as well as challenge the proposed analyses.

[2] The proposed UR assumes a rule which deletes /t/ in the environment before /č/.

| | | |
|---|---|---|
| 'arbutus tree'(MG 55) | [qʷúmqʷʊmʔaˆy][3] | /qʷVm-qʷVm-(ʔ)ay/<br>CVC pl - root - LS 'tree' |
| 'arm, hand'(MG 288) | [čéyɪš·] | /čayəš/<br>root |
| 'arms, hands (pl)'<br>(MG 289) | [číčeyɪš] | /čəy-čayəš/<br>CəC pl - root |
| 'small arm, hand'<br>(MG 502) | [čéčɛy̓ɪ̵š] | /ča-čay-ʔ-əš/<br>CV dim - root - gl - root |
| 'small arms, small hands'<br>(MG 504) | [číčičeyɪš] | /či-čəy-čayəš/<br>CV - CəC - root |
| 'arrow' (MG 134) | [ɬə̰́q̓ʷ] | /ɬəq̓ʷ/<br>root |
| 'arrows (pl)'(MG 135) | [ɬə̰́q̓ʷɬə̰q̓ʷ] | /ɬəq̓ʷ- ɬəq̓ʷ/<br>CəC - root |
| 'ask for it!' (MG 416) | [gáyit gə̀] | /Wal-et Wə/<br>root - Stv - imper |
| 'asking all the time'<br>(MG 417) | [gə́ge·ɬtən] | /Wa-WaL-tən/<br>CV - root - ? |
| 'I asked him/her/them'<br>(MG 617) | [gágayɛtʊ̀ɬčʰ] | /Wa-WaL-at-oɬ-č/<br>CV - root - CTr - past - 1sg Sb |
| 'they used to keep<br>asking me'(MG 618) | [gágayɛθàs̩ɔɬ] | /Wa-WaL-aθ-as-oɬ/<br>CV - root - 1sg Ob - 3sg Sb - past |

[3] The height of the vowel [ʊ] is particularily difficult to explain in the environment of the uvular consonant [qʷ]. It may be possible that the consonant is /kʷ/; however, without additional related forms this is difficult to determine. It may be derived from the root /kʷom/ for 'red'.

| | | |
|---|---|---|
| 'awl'(MG 96)[4] | [x̣ʷóx̣ʷṗ] ~ [x̣ʷóʔx̣ʷṗ] | /x̣ʷo-x̣ʷoṗ/<br>CV - root |

***B***

| | | |
|---|---|---|
| 'back of the hand'<br>(MG 292) | [q̇ʷəq̇ʷítinəjo·jɛ] | /q̇ʷə-q̇ʷət-en-aY-oY'a/<br>CV - root - ? - ex - LS 'hand' |
| | ~[q̇ʷítɪnejo·jɛʔᵊ] | /q̇ʷət-en-aY-oY'a-ʔ/[5] |
| | ~[q̇ʷítənejo·jɛʔᵊ] | root - ?- ex -LS 'hand' - stv |
| 'backs of the hands'<br>(MG 297) | [q̇ʷə́tq̇ʷətinojɛ] | /q̇ʷət-q̇ʷət-en-oY'a/<br>CəC - root - ? - LS 'hand' |
| 'back (of torso)'(MG 327) | [ʔáyyɪčìn][6] | |

**backbone**

| | | |
|---|---|---|
| 'whole backbone (human)'<br>(MG 284) | [x̣ʌ́ʔgəɬagɪčʰ] | /x̣əW'- aɬ-aWəč/<br>'bone' - cl - LS 'back, spine' |
| 'lots of backbones (pl)'<br>(MG 285) | [x̣óx̣əʔgəɬàʔgɪčʰ] | /x̣əW-x̣əW'-aɬ-aW'əč/<br>CəC pl - root - cl - LS 'spine' |
| 'bald (partially)'(MG 268) | [gʌ́čɛqʷən] | /Wəč-eqʷən/[7]<br>root - LS 'top of head' |

---

[4] This small sharp implement is used in basket making for poking holes. See the plural form for 'hummingbirds' which may be related, although the other related forms for 'hummingbird' contain a nonglottalized /p/ .

[5] Kroeber (1985:12) states that some lexical suffixes (LS) which end in either a vowel or a resonant have stative forms which involve the addition of glottal stop. The alternate form in question seems to show similar patterning. Therefore the LS for 'hand' has the stative form [o·j ɛʔᵊ] versus the nonstative form [o·jɛ].

[6] Beaumont (1985:266) records <ʔil-ichen> 'back of body' for Sechelt. Other morphologically related forms are required to determine the correct UR in Sliammon.

[7] Hagège (1981:61) records =eqʷan- 'tête'.

| | | |
|---|---|---|
| 'completely bald'(MG 269) | [gówčɛˆqʷən] | /Wə-Wəč̓-eqʷən/<br>CV - root - LS 'top of head' |

**barbecue**

| | | |
|---|---|---|
| 'to barbecue'(MG 434) | [ṫɛ́nʔəm] | /ṫen-(ʔ)əm/<br>root - intr |
| 'barbecued fish'(MG 432) | [ṫɛ́n] | /ṫen/<br>root |
| 'barbecuing'(MG 433) | [ṫɛ́ṫɛnʔəm] | /ṫe-ṫen-(ʔ)əm/<br>CV - root - intr |
| 'barbecue (deer meat)'<br>(MG 478) | [ʔɛ́ɬq̇ay] | /ʔel-q̇ay/<br>root - rt |
| 'barbecuing'(MG 478) | [ʔɛ́ʔɛɬq̇ày] | /ʔe-ʔel-q̇ay/<br>CV - root - rt |
| 'barnacle'(MG 48) | [ç'ó·maʔǰu] | /ç'om-aY'o/<br>root - LS ? |
| 'barnacles (pl)'(MG 49) | [ç'ʌ́mç'o·maʔǰuʷʰ] | /ç'əm-ç'om-aY'o/<br>CəC pl - root - LS ? |
| 'small barnacle'<br>(MG 634) | [ç'óç'ᵊmaǰuʔòɨ]<br>~[ç'óç'ᵊmaǰuʔùɨ] | /ç'o-ç'om-aY'o-oɨ/<br>CV - root - LS ? - dim |
| 'small barnacles'<br>(MG 635) | [ç'ə́mç'amaǰuʔùɨ] | /ç'əm-ç'om-aY'o-oɨ/<br>CəC pl - root - LS - dim |

**basket**

| | | |
|---|---|---|
| 'basket (berry picking)'<br>(MG 91) | [píčuʰ] | /pečo/<br>root |

| | | |
|---|---|---|
| 'basket (carrying)' (MG 239)[8] | [ƛ̓ə́patɪɬ] | /ƛ̓əpateɬ/<br>root |
| 'baskets (pl)'(MG 240) | [ƛ̓ə́pƛ̓əpatɪɬ] | /ƛ̓əp-ƛ̓əpateɬ/<br>CəC pl - root |
| 'clam basket'(MG 93)[9] | [yʌ́x̣ʌy]<br>~[yɑ́ˆx̣ʌy] | /yax̣ay/ |
| 'papoose basket'[10] (MG 95) | [x̣ɑ́p̓] | /x̣ap̓/ |
| 'bat' - animal [11] (MG 136) | [qɛ́qap̓ɑwᵁs] | /qe-qap̓-aws/<br>Ce - root - LS 'eye' |
| 'bats (pl)'(MG 137) | [qʌ́p̓qap̓ɑwᵊs] | /qəp̓-qap̓-aws/<br>CəC pl - root - LS 'eye' |
| **bear** | | |
| 'black bear'(MG 107) | [mɛ́x̣ʌɬ] | /mex̣əL/<br>root |
| 'black bears (pl)' (MG 108) | [mə́x̣mɛx̣əɬ] | /məx̣-mex̣əL/<br>CəC pl - root |
| 'black bear cub' (MG 109) | [mɛ́mx̣ɑ·ɬoɬ] | /me-mex̣əL-ʔ-oɬ/<br>CV - root - gl - dim |

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8 This type of carrying basket was made from cedar bark strips two fingers in width and was waterproof. It was used for carrying clothes or food.

9 This is an open weave basket made from split cedar branches used to wash clams off at the water's edge.

10 This is the basket used for carrying a child on one's back or it was used as a cradle.Smaller replicas were made for children to play with. Each basket was equiped with a handmade rag doll.

11 Mrs. George said that the Sliammon people believe that if a bat gets you and puts its wings over your eyes you won't be able to see; you'll be blinded. This is the reason why you're not supposed to make fun of bats.

| | | |
|---|---|---|
| 'black bear cubs' (MG 110) | [mɛ́ʔᵊmx̣ɑɬɔ̀ɬ] | /me-m̓ex̣əL-oɬ/ CV - root + gl - dim |
| 'belly button, navel' (MG 309) | [mɔ́x̣ʷwaʔᵃju] ~[mɔ́x̣ʷwaʔᵊju] | /mox̣ʷ-waY'o/ root - LS 'navel' |
| 'belly buttons (pl)' (MG 310) | [mɔ́x̣ʷᵊmox̣ʷwaʔᵃju] | /mox̣ʷ-mox̣ʷ-waY'o/ CVC pl - root - LS 'navel' |
| **belongings** | | |
| 'personal belongings'[12] (MG 651) | [čʼéʔčʼeʔə̰xʷʰ] | /čʼeʔ-čʼeʔ-əxʷ/ CVC pl - root - ? |
| 'biscuit'(MG 587) | [pə́skɪtʰ] | /pəskət/ root |
| 'biscuits (pl)'(MG 588) | [pə́spəskɪtʰ] | /pəs-pəskət/ CəC pl - root |
| 'small biscuit (dim)' (MG589) | [pɛ́pskʸi·tɔ̀ɬ] | /pe-pəsket-oɬ/[13] Ce - root - dim |
| 'blackberry'(MG 61) | [čʼítuxʷən] ~ [čʼítuxʷəd] | /četoxʷən/ root |
| 'blackberries (pl)' (MG 505) | [čʼɪ́tʰčɪtuxʷən] | /čət-četoxʷən/ CəC pl - root |
| 'blackberry bush/cane' (MG 506) | [čʼítuxʷənʎy] ~[čʼítuxʷənàˆy] | /četoxʷən-(ʔ)ay/ root - LS 'bush/tree' |

[12] This is also the word currently used to mean 'woman's genitals.'

[13] The occurrence and phonological shape of the -e- infix which occurs in diminutives is similar to that of the stative. Kroeber (1989:114) mentions this " -e- infix [which] occurs in diminutives" but attributes them to another process. It is suggested here that diminutives take the stative suffix -e-.

| | | |
|---|---|---|
| 'bad blackberry' (MG 507) | [ɬʌ́x̣ čítuxʷən] | /ɬəx̣ četoxʷən/ 'bad' 'blackberry' |
| **blanket** | | |
| 'red blanket'(MG 498) | [kʷúmʊkʷʰtʰ] | /kʷom-okʷ-t/ root - LS 'blanket' - ? |
| 'red blanket '(MG 499) | [t̓áʔç'emʊkʷʰtʰ] | /t̓aç'em-okʷ-t/ root - LS 'blanket' - ? |
| 'bone'(MG 218) | [x̣áwᵁšɪn] | /x̣aW-šen/ root - LS 'foot, leg' |
| 'bones (pl)'(MG 219) | [x̣áwx̣ʌwšɪn] | /x̣aW-x̣aW-šen/ CVC pl - root - LS 'foot, leg' |
| 'small bone (dim)' (MG 220) | [títoʔ x̣áwšɪn] | |
| 'small bone (dim)' (MG 220) | [x̣éx̣awšin] | /x̣e-x̣aW-šen/ Ce - root - LS 'foot, leg' |
| 'lots of small bones' (MG 600) | [x̣éx̣awšinɔ̀ɬ] | /x̣e-x̣aW-šen-oɬ/ Ce - root - LS 'foot' - dim |
| 'bone up the back of one's neck'(MG 283) | [x̣ʌ́ʔgəɬaʔnə] | /x̣əW'- aɬ-aĥa/ 'bone' - cl - LS 'neck' |
| 'bottom, backside' (MG 326) | [q̓ʷítowsnəč] | /q̓ʷət - eWs-nač/ root - LS 'body' - LS 'bottom' |
| 'box (for food storage)'[14] (MG 237) | [q̓ʷə̰x̣ʷɑ] | |
| 'boxes (pl)'(MG 238) | [q̓ʷúx̣ʷq̓ʷə̰x̣ʷə] | |
| **(to) break** | | |
| 'break'(MG 147) | [ƛ̓ə́pxʷ] | /ƛ̓əpxʷ/ root |

[14] These food storage boxes were made from cedar sticks and bark.

| | | |
|---|---|---|
| 'breaking'(MG 148) | [ƛáƛapə̰̀x$^{w}$] | |
| 'it's already broken' (MG 149) | [ƛə́pə̰x$^{w}$] ~ [ƛə́px$^{w}$it$^{h}$] | /ƛəpx$^{w}$-et/<br>root - stv |
| 'become broken' (MG 150) | [ƛə́ƛəpx$^{w}$] | /ƛə-ƛəpx$^{w}$/<br>CV - root |
| 'become broken (pl)' (MG 151) | [ƛáƛapʊx$^{w}$] ~ [ƛáƛapə̰x$^{w}$] | |
| 'I broke it'(MG 152) | [ƛə́px$^{w}$ɑtuɬč] | /ƛəpx$^{w}$-at-oɬ-č/<br>root - CTr - past - 1sg Sb |
| 'I'm breaking it'(MG 153) | [ƛə́ƛpx$^{w}$əč] | /ƛə-ƛəpx$^{w}$-ət-č/<br>CV - root - CTr - 1 sg Sb |
| 'brother (older)'[15] (MG 590) | [nə̱́ẁɬ] | /nəW'ɬ/<br>root |
| 'brothers (pl)'(MG 591) | [nə̱́ẁnoʔɬ] | /nəW'-nəW'ɬ/<br>CəC pl - root |
| 'small brother '(MG 592) | [nán$^{a}$ʔgɪɬ] | /na-nəW'-e-ɬ/<br>Ca - root - dim - root |
| 'my brother (now deceased)' (MG 593) | [ç' nə̱́ẁɬɔ̀ɬ] | /ç' nəW'ɬ-oɬ/<br>1st Po root - past |

**bullhead**

| | | |
|---|---|---|
| 'tidepool sculpin, bullhead' (MG 11) | [x̣$^{w}$ɑ́x̣$^{wə}$nɛʔ] | /x̣$^{w}$a-x̣$^{w}$aṅe/<br>CV - root |
| 'lots of bullheads (pl)' (MG 539) | [x̣$^{w}$ə́nx̣$^{w}$ɑṅi] | /x̣$^{w}$əṅ-x̣$^{w}$aṅe/<br>CəC pl - root |

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[15] This term is used for any 'older sibling' - 'older brother' as well as for 'older sister'.

| | | |
|---|---|---|
| 'small bullhead (dim)' | [x̣$^{w}$ɑ́x̣$^{w}$əneʔə̀ɬ] | /x̣$^{w}$a-x̣$^{w}$aṅe-(ʔ)oɬ/ |
| (MG 540) | ~[x̣$^{w}$ɑ́x̣$^{w}$əneʔə̀ɬ] | CV - root - dim |
| **buy** | | |
| 'I'm buying it'(MG 610) | [yɛ́q̓ʌmt$^{h}$č$^{h}$] | /yaq̓-am-t-č/ |
| | | root - st ex? - CTr - 1sg Sb |
| 'they're all going buying' (MG 611) | [yɛ́q̓yɛq̓a·m̓ə̰x$^{wh}$] | /yaq̓-yaq̓-am̓əx$^{w}$/ |
| | | CVC pl - root - ? |

***C***

| | | |
|---|---|---|
| 'calf, thigh'(MG 324) | [ƛ̓ə́q$^{w}$šᵻn] | /ƛ̓əq$^{w}$-šen/ |
| | | root - LS 'foot, leg' |
| 'calf, thighs (pl)' | [ƛ̓$^{w}$ə̰́q$^{w}$ƛ̓ʌq$^{w}$šɨn] | /ƛ̓əq$^{w}$-ƛ̓əq$^{w}$-šen/ |
| (MG 325) | ~ [ƛ̓$^{w}$ə̰́q$^{w}$ƛ̓əq$^{w}$šɨn] | CəC pl - root - LS 'foot' |
| 'calm (of water)' (MG 673) | [mʌ́ƛ̓$^{h}$] | /maƛ̓/ |
| | | root |
| 'very calm'(MG 674) | [mʌ́ƛ̓$^{ə}$mòt$^{h}$] | /maƛ̓-mot/ |
| | | root - 'very' |
| 'always calm'(MG 675) | [máʔ$^{a}$ƛ̓$^{ə}$mʌƛ̓$^{h}$] | /maƛ̓-maƛ̓/ |
| | | CVC pl - root |
| **canoe** | | |
| 'dugout canoe, boat'(MG 62) | [núx$^{w}$ɪɬ] | /nox$^{w}$əɬ/ |
| | | root |

| | | |
|---|---|---|
| 'canoes, boats'(MG 655) | [nə́xʷnə̤xʷèɬ][16]<br>~[náʔan̩xʷɪ̀ɬ][17] | /nəxʷ-noxʷəɬ/<br>CəC pl - root |
| 'small canoe'(MG 656) | [nínxʷɪɬ] | /ne-noxʷəɬ/<br>Ce - root |
| 'small canoes (dim pl)'<br>(MG 657) | [nə́xʷnə̤xʷeɬòɬ] | /nəxʷ-nəxʷ-e-ɬ-oɬ/<br>CəC pl - root - dim - root - dim |
| 'racing canoe'(MG 63) | [sʌ́x̣ʌm] | /səx̣-əm/<br>root - ? |
| 'racing canoes(pl)'<br>(MG 658) | [sʌ́x̣sʌx̣ʌm] | /səx̣-səx̣-əm/<br>CəC pl - root - ? |
| 'small racing canoe (dim)'<br>(MG 659) | [sɪ́sx̣ɛm] | /se-səx̣-e-əm/<br>Ce - root - dim - ? |
| 'small racing canoes'<br>(MG 660) | [sʌ́x̣sʌx̣əmòɬ]<br>~[sʌ́x̣sʌx̣əmʊ̀ɬ] | /səx̣-səx̣-əm-oɬ/<br>CəC pl - root - ? - dim |
| 'car, automobile'<br>(MG 348) | [ʔɑ́tʰnoʙɛ̀l]<br>~[ʔɑ́t°n̩opɛ̀l] | /ʔatnopel/<br>root |
| 'cars, automobiles (pl)'<br>(MG 349) | [ʔʌ́tʰʔɑt°noʙɛ̀l]<br>~[ʔʌ́t̀ːɑt°noʙɛ̀l] | /ʔət-ʔatnopel/<br>CəC pl - root |
| 'small car (dim)'<br>(MG 350) | [ʔɑ́ʔtʰənoʙɛ̀ˆl]<br>~[ʔɑ́ʔtʰᵊnoʙɛ̀ˆl] | /ʔa-ʔatnopel/<br>CV - root |

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16 Mrs. George maintains that this is the "new way" to form the plural.

17 This is the older plural formation according to Mrs. George.

**cedar**

| | | |
|---|---|---|
| 'red cedar tree'[18] (MG 89,188) | [tə́x̣əm̓əy] ~[tʌ́x̣əmʔəy] | /təx̣-əm̓-ay/ root - ? - LS 'tree' |
| 'lots of red cedar trees' (MG 189) | [tə́x̣təx̣əm̓əy] | /təx̣-təx̣-əm̓-ay/ CəC pl - root - ? - LS 'tree' |
| 'cedar bark'(MG 90) | [sú·q̓ʷəm̓] | |
| 'cedar plank/board'[19] (MG 242) | [x̣ʷóʔx̣ʷƛ̓ə] | |
| 'cedar roots'(MG 90a)[20] | [kʷə́ʔᵊmnɪčʰ] | /-nač/ LS 'root, base, bottom' |
| 'cedar sticks'(MG 97) | [t̓ɑ́ɬˡəm] ~[t̓áɬˡəm] | |
| 'cheek'(MG 256) | [tɑ́tɑʔǰɪṣ] | /ta-taY'-os/ CV - root - LS 'face' |
| 'cheeks (pl)'(MG 257) | [tɪ́čtɑʔǰeʔǰɪṣ] | /təY-taY'-aY'-os/ CəC pl - root - VC - LS 'face' |

**cherry**

| | | |
|---|---|---|
| 'wild cherry bark' (MG 92) | [t̓éyʔəm] | /t̓ey̓-əm/ root - ? |
| 'wild cherry bush/tree' (MG 194) | [t̓íy̓ᵊməy] | /t̓ey̓-əm-ay/ root - ? - LS 'tree, bush' |

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[18] The red cedar was used extensively by the Sliammon. Mrs. George said the red cedar is used especially in basket making and that the yellow cedar is used instead for totems and paddles.

[19] This is the term used to refer to the split cedar boards used to build traditional plank houses.

[20] These are the cleaned roots which are ready for weaving.

| | | |
|---|---|---|
| 'wild cherry trees(pl)' (MG 195) | [t̓ít̓iy̓ᵊməˇy] | /t̓əy̓-t̓ey̓-əm-ay/<br>CəC pl - root - ? - LS 'tree' |
| 'chest, torso'(MG 308) | [ʔéyyɨnɑs:] | |
| 'chief'(MG 352) | [héˇgus]<br>~[héˇgʊs] | /heW-os/<br>root - LS 'face' |
| 'chiefs (pl)'(MG 353) | [hʌ́wegʊs] | /həW-heW-os/<br>CəC pl - root - LS 'face' |
| 'small chief'(MG 354) | [hɛ́həgus][21]<br>~[hɛ́həgʊs] | /he-heW-os/<br>CV - root - LS 'face' |
| 'lots of small chiefs' (MG 355) | [hɛ́həwhègʊs]<br>~[héhəwhègʊs] | /he-həW-heW-os/<br>CV - CəC pl -root - LS |
| 'chiton; barnacle, that to the rocks'(MG 47) | [ʔámamɔ̀ʔ] | /ʔam-am-oʔ/<br>root - VC - root |
| 'chitons (pl)'(MG 632) | [ʔʌ́mʔamamɔ̀ʔᵓ] | /ʔəm-ʔam-am-oʔ/<br>CəC pl - root - VC - root |
| 'small chiton (dim)' (MG 633) | [ʔáʔᵊmoʔʊ̀ł] | /ʔa-ʔamoʔ-ož/ → /ʔa-ʔamoʔ-oł/<br>CV - root - dim |
| 'chop; to chop (wood)' (MG 552) | [sóp̓əm] | /sop̓-əm/<br>root - intr |
| 'chopping'(MG 553) | [sósop̓əm] | /so-sop̓-əm/<br>CV - root - intr |

[21] See the related form for 'supervising'(MG 375).

| | | |
|---|---|---|
| 'get chopped'(MG 554) | [só·ṗitʰ] ~[só·ṗetʰ] | /soṗ-et/ root - stv |

**clam**

| | | |
|---|---|---|
| 'clam'(MG 53)[22] | [x̣áʔa] | /x̣aʔa/ |
| 'lots and lots of clams' (MG 643) | [qʌ́x̣ᵊmotʰ x̣àʔa] | /qəx̣-mot x̣aʔa/ many - very clam |
| 'small clam (dim)' (MG 644) | [títoʔɬ x̣àʔa] | |
| 'small clams (dim pl)' (MG 645) | [qʌ́x̣ᵊmutʰ títɬ̩tòʔ(ɬ) x̣áʔa] | |
| 'horse clam, geoduck' (MG 50) | [máʔṫeʸ] ~[máʔṫiʸ] | /maṫ-ay/ root - ? |
| 'geoducks (pl)'(MG 636) | [mʌ́ṫᵊmaṫay] | /məṫ-maṫ-ay/ CəC pl - root - ? |
| 'small geoduck' (MG 637) | [mɛ́maṫày̓] | /me-maṫ-ay-ʔ/ Ce - root - ? - dim gl |
| 'littleneck clam'(MG 52) | [ɬóɬmə̀m̓] ~ [ɬóɬmʊ̀m̓] | /ɬoɬməm̓/ |
| 'littleneck clams (pl)' (MG 641) | [qʌ́x̣ ɬóɬᵊmom̓] | /qəx̣ ɬoɬmom̓/ |
| 'lots of small clams' (MG 642) | [qʌ́x̣ ɬóɬmomʊ̀ɬ] | /qəx̣ ɬoɬmom-oɬ/ many root ? - dim |

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22 This is the large 'butterclam' which is usually harvested when the shell measures about 3" across. Mrs. George on several occations refused to form the reduplicative plural of this form — the plural is the old word for 'woman's genitals.'

| | | |
|---|---|---|
| ‘cloud’(MG 392) | [ç’ámqʷɬ] | /ç’amqʷɬ/<br>root |
| ‘clouds (pl)’(MG 393) | [ç’ə́mç’əmqʷɬ] | /ç’əm-ç’amqʷɬ/<br>CəC pl - root |
| ‘very cloudy, thick clouds’ (MG 391) | [nɛ́ʔaetᵻn] | |
| ‘club; war club’(MG 245) | [x̣ʷáǰɪm] | /x̣ʷaY-əm/[23]<br>root - ? |
| ‘clubs; war clubs’ (MG 246) | [x̣ʷéyx̣ʷaǰɪm] | /x̣ʷəY-x̣ʷaY-əm/<br>CəC pl - root - ? |
| ‘cockle’(MG 54) | [ƛ̓í·ʔəm] | /ƛ̓əy̓-əm/<br>root - ? |
| ‘cockles (pl)’(MG 646) | [ƛ̓íƛ̓iʔəm]<br>~[ƛ̓íƛ̓iy̓əm] | /ƛ̓əy̓-ƛ̓əy̓-əm/<br>CəC pl - root - ? |
| ‘small cockle’(MG 647) | [ƛ̓áƛ̓iʔɛ̀m̓] | /ƛ̓a-ƛ̓əy̓-e-m-ʔ/<br>Ca - root - dim - ? - dim gl |
| also alternate: | ~[ƛ̓áƛ̓iʔemòɬ] | /ƛ̓a-ƛ̓əy̓-e-m-oɬ/<br>Ca - root - dim - ? - dim |
| ‘lots of small cockles ’ (dim pl)(MG 648) | [ƛ̓íƛ̓iʔɛmòɬ]<br>~[ƛ̓íƛ̓iʔɛmʊ̀ɬ] | /ƛ̓əy̓-ƛ̓əy̓-e-m-oɬ/<br>CəC pl - root - dim - ? - dim |

23 Davis (1978:15) states that "the suffix /-əm/ occurs often in Sliammon and in other Salish languages. It has been glossed ‘mediopassive’, though it has a wide range of meanings." Kroeber (1989) distinguishes between two different suffixes. He cites the ‘active intransitive’ as -(ʔ)əm and the ‘main clause passive’ as -(ə)m. In the case of ‘war club’ it is unclear which suffix is used.

**cod**

| | | |
|---|---|---|
| 'ling cod (fish)'(MG 7) | [ç'óx̣o] | /ç'ox̣əw/<br>root |
| 'lots of cod (pl)(MG 490)' | [ç'ə́x̣ç'əx̣o] | /ç'əx̣-ç'ox̣əw/<br>CəC pl - root |
| 'small cod (dim)'<br>(MG 491) | [ç'ɪ́ç'x̣$^{w}$oʔ$^{o}$] | /ç'e-ç'ox̣əw-ʔ/<br>Ce - root - dim gl |
| 'lots of small cod'<br>(MG 492) | [ç'ɪ́ç'əx̣ç'əx̣$^{w}$oʔ$^{o}$]<br>~[ç'ɪ́ç'ʌx̣ç'əx̣$^{w}$oʔ$^{o}$] | /ç'e-ç'əx̣-ç'ox̣əw-ʔ/<br>Ce - CəC pl- root - dim gl |
| 'cold hands'(MG 572)[24] | [č̓éʔ$^{ə}$moʔǰɛ$^{h}$] | /č̓am̓-oY'a/<br>root - LS 'hand' |
| 'getting cold hands'<br>(MG 573) | [č̓ɨ́č̓əmoʔǰɛ$^{h}$] | /č̓ə-č̓am-oY'a/<br>Cə - root - LS 'hand' |
| 'cougar'(MG 103) | [mʌ́g·ə] | /maWə/<br>root |
| 'cougars (pl)'(MG 104) | [mə́wmʌ́g·ə] | /məW-maWə/<br>CəC pl - root |
| 'small cougar '(MG 105) | [mʌ́mʌgòwəɬ]<br>~[mʌ́ˇmʌgòwəɬ] | /ma-maW-aW-oɬ/<br>CV - root - VC - dim |
| 'lots of small cougar '<br>(dim pl)(MG 106) | [mú·mʌgowəɬ] | /məW-maW-aW-oɬ/<br>CəC pl - root - VC - dim |
| 'cough'(MG 450) | [t̓ó:q̓$^{w}$ʌt$^{h}$] | /t̓ow-q̓$^{w}$-ət/<br>root - st ex - CTr |
| 'he coughs' (a cough?)<br>(MG 451) | [t̓ó:q̓$^{w}$et$^{h}$]<br>~[t̓ó:q̓$^{w}$ɛt$^{h}$] | /t̓ow-q̓$^{w}$-et/<br>root - st ex - stv |

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24 This is said of hands immersed in water.

| | | |
|---|---|---|
| 'he's got a cold'(MG 452) | [t̓ót̓oq̓ʷə̤m] | /t̓o-t̓ow-q̓ʷ-əm/<br>CV - root - st ex - PMC |
| 'to count'(MG 403) | [k̓ʷɨ́št̓ʰ] | |
| 'counting (now)'(MG 404) | [k̓ʷɨ́šʔəm] | |
| 'we're already counting' (MG 405) | [k̓ʷúk̓ʷšeʔəm] | |
| 'crab'(MG 45) | [x̣ɛ́x̣iʸᵊq̓] | |
| 'crabs'(MG 46) | [x̣éᵊx̣ɑyᵊq̓ə̣] | |
| 'small crab (dim)' (MG 631) | [x̣ɛ́x̣ⁱyɛq̓ɔ̀ɬ] | |
| 'crawling; anyone on their hands & knees'(MG 454) | [ǰíᵊqeš] | /Yə-Yəq-e-aš/[25]<br>CV - root - stv - intr |
| 'crow'(MG 71) | [k̓ʸí·k̓ʸɛk̓ʸ] | /k̓e-k̓ak̓/<br>Ce - root |
| 'crows' (pl)(MG 72) | [k̓ʸík̓ʸe·k̓ʸek̓ʸ] | /k̓e-k̓ak̓-ak̓/<br>Ce - root - VC |
| 'cut; to cut (in kitchen)' (MG 556) | [č̓ɪ́t̓əm] | /č̓ət̓-əm/<br>root - intr |
| 'cut one's hand' (MG 557) | [č̓ɪ́t̓oʔǰɛʰ] | /č̓ət̓-oY'a/<br>root - LS 'hand' |
| 'cutting'(MG 555) | [č̓ɛ́č̓ɛᵊt̓əm] | /č̓a-č̓at̓-əm/<br>CV - root - intr |
| 'cutting it'(MG 555) | [č̓ɛ́č̓ɛᵊt̓ɑtʰ] | /č̓a-č̓at̓-ət/<br>CV - root - CTr |

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25 Kroeber (1989:112) states that there are a number of verbal suffixes of the shape -Vš. Some of these are apparently intransitive (for example /ʔem-aš/), while others are transitive.

***D***

| | | |
|---|---|---|
| 'deer'(MG 87)[26] | [qé·gʌṣ̥] | /qeWaθ/ |
| 'deer skin, mountain goat skin'(MG 517) | [ɬáʔᵃnʊkʷʰ] ~[ɬáʔᵃnukʷʰ] | /ɬan̓-okʷ/ root - LS 'covering, pelt' |
| 'lots of deer skin' (MG 519) | [ɬɪ́nɬaʔᵃnʊkʷʰ] | /ɬən̓-ɬan̓-okʷ/ CəC pl - root - LS 'covering' |
| 'to dig clams'(MG 343a) | [ʔóˇɬqʷo] | /ʔoɬ-qʷo/ root - LS 'water' |
| 'dishes, all the plates' (MG 445) | [q̓ʷə́ɬq̓ʷɑɬtʰ] | /q̓ʷəɬ-q̓ʷaɬ-t/ CəC pl - root - ? |
| 'dogfish'(MG 1) | [k̓ʷɑ́č̓] | /k̓ʷač̓/ root |
| 'dogfish (pl)'(MG 511) | [k̓ʷɪ́č̓ʰk̓ʷɑč̓ʰ] | /k̓ʷəč̓-k̓ʷač̓/ CəC pl - root |
| 'small dogfish' (MG 512) | [k̓ʷéᵊk̓ʷɑč̓ʰ] | /k̓ʷa-k̓ʷač̓/ CV - root |
| 'lots of small dogfish ' (dim pl)(MG 513) | [k̓ʷík̓ʷɑč̓oɬʊ̀ɬ] ~[k̓ʷík̓ʷɪč̓ʰk̓ʷɑč̓ʰ] | |
| 'drag it (a little way)' (MG 465) | [góq̓ʷtʰ] | /Wəq̓ʷ-t/ root - CTr |

[26] This term is used to refer specifically to the 'female deer or doe' as well as being used as the generic term for 'deer.' The Chinook jargon word [mɑ́wɪčʰ] is used to refer to the 'male deer or buck.'

| | | |
|---|---|---|
| 'dragging it'(MG 464) | [gó·q̓ʷətʰ]<br>~[gú·q̓ʷətʰ] | /Wə-Wəq̓ʷ-ət/<br>CV - root - CTr |
| 'dragging it, a little at a time, over & over (MG 466) | [gígaʔq̓ʷətʰ] | /We-Wəq̓ʷ-ət/<br>Ce - root - CTr |
| 'duck'(MG 130) | [qʷʌ́qʷᵊwəx̣]<br>~[qʷʌ́qʷw̩əx̣] | |

***E***

| | | |
|---|---|---|
| 'eagle, bald'(MG 31) | [q̓ˣ̣ə́ykʷʰ] | /q̓aykʷ/<br>root |
| 'eagles (pl)'(MG 32) | [q̓ˣ̣éʸq̓ˣ̣ɑykʷʰ] | /q̓əy-q̓aykʷ/<br>CəC pl - root |
| | ~ [qʌ́x̣ q̓ˣ̣ə́ykʷʰ][27] | /qəx̣ q̓aykʷ/<br>many root |
| 'small eagle (dim)' (MG 576) | [q̓ɑ́q̓ɑykʷùɬ] | /q̓a-q̓aykʷ-oɬ/<br>CV dim - root - dim |
| 'lots of small eagles' (dim pl)(MG 577) | [q̓ˣ̣éʸq̓ˣ̣ɑykʷùɬ] | /q̓əy-q̓aykʷ-oɬ/<br>CəC pl - root - dim |
| 'ear'(MG 270) | [q̓ʷówᵊʔɑnɑʰ] | /q̓ʷow-an̓a/<br>root - LS 'ear' |
| 'ears (pl)'(MG 271) | [q̓ʷóq̓ʷowᵊʔɑnɑʰ] | /q̓ʷəw-q̓ʷow-an̓a/<br>CəC pl - root - LS 'ear' |

[27] This form literally means "many eagles" and is often used by younger speakers as a means of forming the plural rather than using the reduplicative prefix. It illustrates the increase in use of analytical constructions of this type which are gradually replacing the use of reduplication amongst younger speakers of Sliammon.

| | | |
|---|---|---|
| 'earring'(MG 274) | [ɬə́qʷʔanaᴅɨn] | /ɬəqʷ-aṅa-tən/<br>root - LS 'ear' - instr |
| 'earrings (pl)'(MG 275) | [ɬʌ́qʷɬʌqʷʔanaᴅɨn] | /ɬəqʷ-ɬəqʷ-aṅa-tən/<br>CəC pl - root - LS 'ear' - instr |
| 'earlobe'(MG 272) | [ƛ̓ɛ́qʷoʔanaʰ] | /ƛ̓eqʷ-aṅa/<br>root - LS 'ear' |
| 'earlobes (pl)'(MG 273) | [ƛ̓ə́qʷƛ̓ɛqʷʔanaʰ] | /ƛ̓əqʷ-ƛ̓eqʷ-aṅa/<br>CəC pl - root - LS 'ear' |
| **egg** | | |
| 'bird's egg'(MG 562)[28] | [x̣ʷá·x̣ʷʔɛtʰ] | |
| 'lots of eggs(pl)' (MG 563) | [x̣ʷóx̣ʷax̣ʷʔɛtʰ] | |
| 'small egg (dim)' (MG 564) | [x̣ʷáx̣ʷʔe·ᴅʊ̀ɬ]<br>~[x̣ʷáx̣ʷʔe·tʊ̀ɬ] | |
| 'lots of small eggs' (MG 565) | [x̣ʷóx̣ʷʔax̣ʷʔe·tʊ̀ɬ] | |
| 'eight (cardinal number)' (MG 118) | [táʔačɪš] | /taʔačəs/[29] |
| 'eighty'(MG 494) | [táʔačɪsaɬšʸèʔᵊ] | /taʔačəs-aɬ-šaʔ/<br>root 'eight' - cl - 'tens' |
| 'elbow'(MG 290) | [sáỳaᴵỳəx̣ən] | /saỳ-aỳ-əx̣ən/<br>root - VC ? - LS 'elbow' |

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[28] This refers to sea gull's eggs and wild duck's eggs. Nowadays it also refers to commercially purchased eggs.

[29] The related form for 'eighty' suggests that /s/ becomes [š] in word-final position.

| | | |
|---|---|---|
| 'elbows (pl)'(MG 291) | [sísay̓ayəx̣ən] | /səy̓-say̓-ay-əx̣ən/<br>CəC pl - root - ex -LS 'elbow' |
| 'empty, it's empty'[30] (MG 372) | [tí·nəčʰ] | /təy-nač/<br>root 'big' - LS 'root, bottom' |
| 'exchange (it)'(MG 472) | [ʔájustʰ]<br>~[ʔá·justʰ] | /ʔaYoš-t/[31]<br>root - CTr |
| 'exchange gifts' (MG 471) | [ʔáǰʊšəm̓ᴅàwɬ]<br>~[ʔáǰʊšəm̓ᴅàw̓ɬ] | /ʔaYoš-ʔəm-t-awɬ/<br>root - ? - CTr - recip |
| 'exchanging gifts' (MG 471a) | [ʔáʔaǰʊšəm̓ᴅàwɬ]<br>~[ʔáʔaǰɨšəm̓ᴅàwɬ] | /ʔa-ʔaYoš-ʔəm-t-awɬ/<br>CV - root - ? - CTr - recip |
| 'eye'(MG 258) | [qˣ̣áʔom] | /qaw̓-əm/<br>root - ? |
| 'eyes (pl)'(MG 259) | [qˣ̣ówqˣ̣aw̓ʊm] | /qəw-qaw̓-əm/<br>CəC pl - root - ? |
| 'eyebrow'(MG 260) | [θómən] | /θom-ən/<br>root - ? |
| 'eyebrows (pl)'(MG 261) | [θə́mθomən] | /θəm-θom-ən/<br>CəC pl - root - ? |
| 'eyelash'(MG 262) | [qʷópawᵘs]<br>~[qʷópawᵊs] | /qʷop-awəs/<br>root - LS 'eye' |
| 'eyelashes'(MG 263) | [qʷópʰqʷopáwᵘs] | /qʷop-qʷop-awəs/<br>CVC pl - root - LS 'eye' |

[30] This expression would be used to refer to a pail or container to be filled with berries, clams or water.

[31] This example suggests that /š/ becomes [s] in the environment before /t/.

***F***

| | | |
|---|---|---|
| 'Fall , Autumn'(MG 84)[32] | [x̣éč̓ič̓$^{h}$] | /x̣eč̓-eč̓/<br>root - VC |
| 'fast handed; fast picker'[33]<br>(MG 574) | [ƛ̓$^{w}$óʔoʔ$^{o}$ǰɛ$^{h}$] | /ƛ̓oʔ - oY'a/<br>root - LS 'hand' |
| 'lots of fast pickers (pl)'<br>(MG 575) | [ƛ̓áƛ̓$^{ə}$ʔoʔǰɛ$^{h}$] | /ƛ̓əʔ-ƛ̓oʔ-oY'a/<br>CəC pl - root - LS 'hand' |
| 'fat'(MG 331)[34] | [t$^{h}$íx$^{w}$omɪš]<br>~ [t$^{h}$íx$^{w}$om$^{ɪ}$š] | /təy-x$^{w}$-omeš/<br>root - st ex - LS 'appearance' |
| 'fat, animal fat or lard'[35]<br>(MG 332) | [x̣$^{w}$ʌ́s·] | /x̣$^{w}$as/<br>root |
| 'the fat'(MG 486)[36] | [x̣$^{w}$ástən] | /x̣$^{w}$as-tən/<br>root - instr |
| 'feather'(MG 168) | [ç' $^{w}$óç' $^{w}$oq̓$^{w}$] | /ç'o-ç'oq̓$^{w}$/<br>CV - root |
| 'feathers (pl)'(MG 169) | [ç'áç'ɔç'oq̓$^{w}$] | /ç'a-ç'oç'-oq̓$^{w}$/<br>Ca - root - ? |
| 'feather mattress'(MG 594) | [ç' $^{w}$óç'oq̓$^{w}$àʔ$^{a}$ɬ] | /ç'oç'-oq̓$^{w}$-aʔaɬ/<br>root - ? - LS 'mattress' |

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32 Mrs. George said that this indicated the "time when the leaves fall from the trees".

33 This is used to refer to someone picking berries or fruit.

34 Literally this means "large, big appearance" and is used to describe people.

35 This usually refers to 'seal fat' but can also be used for the fat from dogfish and other sea mammals.

36 This form can be used to refer to 'deer fat' as well.

| | | |
|---|---|---|
| ‘lots of mattresses’ | [ç’ə́ç’ç’oq̓ʷɑʔaɬʌɬ] | /ç’əç’-ç’oç’-oq̓ʷ-aʔaɬ-aɬ/ |
| (MG 595) | ~[ç’ə́ç’ᵊç’oq̓ʷɑʔaɬʌɬ] | CəC pl - root - ? - LS ‘mattress’ - VC |
| ‘fern’(MG 102)[37] | [č̓ɛ́t̓ʌy] | /čat̓-ay/ |
| | ~[č̓éᵊt̓ʌy] | root - LS ‘tree, bush’ |
| ‘fight ; to fight’[38] | [x̣ʷɑ́ǰeᵊtə̀wɬ] | /x̣ʷaY-at-awɬ/ |
| (MG 619) | ~[x̣ʷɑ́ǰeᵊtòwɬ] | root - CTr - recip |
| | ~[x̣ʷɑ́ǰeᵊtòɬ] | |
| ‘fighting’(MG 620) | [x̣ʷɑ́x̣ʷᵊǰetòɬ] | /x̣ʷa-x̣ʷaY-at-awɬ/ |
| | [x̣ʷɑx̣ʷᵊǰetòʷɬ] | CV - root - CTr - recip |
| ‘they're all really fighting’ | [x̣ʷéx̣ʷɑǰɛtə̀wɬ] | /x̣ʷəY-x̣ʷaY-at-awɬ/ |
| (MG 621) | ~[x̣ʷéˆx̣ʷɑǰɛtə̀wɬ] | CəC pl - root - CTr - recip |

**fill**

| | | |
|---|---|---|
| ‘full’(MG 370) | [yɨ́č̓] ~ [ᵊyɨ́č̓] | /yəč̓/ |
| | | root |
| ‘you fill it up (to the top)’ (MG 371) | [yə́č̓ɛščxʷ] | /yəč̓-aš-čxʷ/ |
| | | root - Tr - 2nd sg Sb |

**fine**

| | | |
|---|---|---|
| ‘I'm fine’(MG 482) | [ʔí:čɛn̓oˆtʰ] | /ʔey-čan+ʔ-mot/?[39] |
| | ~[ʔí:čɛn̓ʊtʰ] | ‘good’ - 1 sg Sb + gl - very |

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[37] Mrs George did not remember the English name for this type of fern. It was apparently used for medicinal purposes. The centre stem was boiled and the resulting tonic used for rheumatism and bathing.

[38] See the form for ‘war club.’

[39] The proposed UR suggests that there is a nasal deletion rule whereby /m/ deletes when it follows another nasal.

| | | |
|---|---|---|
| 'finger'(MG 293) | [x̣ʷáˀɑwɑq̓ʷojɛ] | /x̣ʷaw-aq̓ʷ-oYa/<br>root - LS 'elongated - LS 'hand'<br>objects' |
| 'fingers (pl)'(MG 294) | [x̣ʷóx̣ʷɑwɑq̓ʷojɛ] | /x̣ʷəw-x̣ʷaw-aq̓ʷ-oYa/<br>CəC pl - root - LS - LS 'hand' |
| 'fingernail'(MG 300) | [q̓x̣ʌ́p̓ɛəq̓ʷò?jɛ] | /q̓əp̓-eq̓ʷ-oY'a/<br>root - LS 'elongated - LS 'hand'<br>objects' |
| 'fingernails (pl)'<br>(MG 301) | [q̓ə́p̓q̓əp̓ɛəq̓ʷò?je]<br>~[q̓ə́p̓q̓əp̓ɛəq̓ʷò?jɛ] | /q̓əp̓-q̓əp̓-eq̓ʷ-oY'a/<br>CəC pl - root - LS - LS |
| 'small finger, pinky'<br>(MG 221) | [kʸɛ́?t̓ɛ̂?qʷo?jɛʰ] | /kat̓-eq̓ʷ-oY'a/<br>root - LS - LS 'hand' |
| 'small fingers (pl)'<br>(MG 222) | [kʸɪ́t̓kʸɛt̓ɛqʷojɛʰ] | /kət̓-kat̓-eqʷ-oYa/<br>CəC pl - root - LS - LS |
| 'fire'(MG 174) | [x̣ʷáˀɑwɪ̀tʰ] | /x̣ʷaw-et/<br>root - stv |
| 'fires (pl)'(MG 175) | [x̣ʷéəx̣ʷwɪtʰ] | /x̣ʷəy-x̣ʷaw-et/[40]<br>Cəy - root - stv |
| 'big fire'(MG 176) | [tíʰ x̣ʷáˀɑwɪtʰ] | /təy x̣ʷaw-et/<br>'big' root 'fire' - stv |

[40] This plural form does not conform to the normal pattern of CəC- pl reduplication discussed in Chapter 3. It may be formed by analogy with other plural forms that have a resonant in $C_2$ position.

| | | |
|---|---|---|
| 'fish (generic)'(MG 4) | [ǰέnxʷ] | /Yanxʷ/<br>root |
| 'lots of fish (pl)'<br>(MG 524) | [ǰɨ́nǰɛnxʷʰ] | /Yən-Yanxʷ/<br>CəC pl - root |
| 'small fish (dim)'<br>(MG 525) | [ǰέǰᵊnexʷʊ̀ɬ]<br>~[ǰέǰᵊnexʷʊ̀ɬ] | /Ya-Yan-e-xʷ-oɬ/<br>CV - root- dim - root - dim |
| 'lots of small fish'<br>(MG 526) | [ǰɨ́nǰɛnxʷʊ̀ɬ] | /Yən-Yanxʷ-oɬ/<br>CəC pl - root - dim |
| 'my fish'(MG 527) | [tə́tθᵊ ǰέnxʷʰ] | /tə-tθ Yanxʷ/<br>art - 1sg Po root |
| 'his fish'(MG 528) | [tə ǰέnxʷṣ] | /tə Yan-s/<br>art root - 3 Po |
| 'small salt water fish'<br>(MG 639) | [ṫéṫšʸoṣ][41] | /ṫe-ṫeš-oš/? |
| 'fish egg'(MG 534) | [qéyᵊx̣] | /qey-x̣/<br>root - st ex |
| 'fish eggs (pl)'<br>(MG 535) | [qéʸqeyx̣] | /qəy-qey-x̣/<br>CəC pl - root - st ex |
| 'fishing or gathering<br>food in salt water'<br>(MG 138) | [ç'ʌ́x̣ɬawʊm]<br>~(ƛ̀) | /ç'əx̣-ɬawəm/[42]<br>root - LS 'food' |
| 'they're all gone fishing;<br>gathering all kinds of food<br>in salt water'(MG 484) | [ç'ʌ́x̣ç'ʌx̣ɬàwᵁm̩]<br>~[ç'ə́x̣ç'ʌx̣ɬàwᵁm̩] | /ç'əx̣-ç'əx̣-ɬawəm/<br>CəC pl - root - LS 'food' |

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[41] There is a large tidepool in front of Sliammon which contains this small fish and according to Mrs. George is the source of the old name for Sliammon: [ṫéšošəm] (MG 65).

[42] Hagège (1981:62) records =ɬawəm- 'nourriture'.

| | | |
|---|---|---|
| 'five (cardinal number)' (MG 115) | [θíɛčʊ̀ṣ] | /θəya-čəs/<br>root - ? |
| 'fifth day of the week; Friday'(MG 80) | [θíečəṣ:] | /θəya-čəs-s/<br>root ? - ? - LS 'day' |
| 'flirt ; to flirt'(MG 623) | [háyɬʌ̀ṁ] | /haY-ɬ-əm-ʔ/<br>root - st ex - intr - gl |
| 'flirting'(MG 624) | [háhayɬʌ̀ṁ] | /ha-haY-ɬ-əm-ʔ/<br>CV - root - st ex - intr - gl |
| 'everybody's flirting' (MG 625) | [háyhəǰɨ̀ɬ] | /haY-haY-e-ɬ/<br>CVC pl - root - stv - st ex |
| 'fly (insect)'(MG 163) | [x̣$^{w}$áx̣$^{w}$ayʊmʔ] | |
| 'flies (pl)'(MG 164) | [x̣$^{w}$ó·x̣$^{w}$ayayʊmʔ] | |
| 'foot'(MG 206) | [ǰɨ́šɨn] | /Yəš-en/<br>root - rt |
| 'feet (pl)'(MG 207) | [ǰɨ́šǰɨšɨn] | /Yəš-Yəš-en/<br>CəC pl - root - rt |
| 'four (cardinal number)' (MG 114) | [mós] | /mos/<br>root |
| 'fourth day of the week; Thursday'(MG 79) | [móṣṣ] | /mos-s/<br>root - LS 'day' |

***G***

**genitals**

| | | |
|---|---|---|
| 'woman's genitals' (MG 650) | [x̣ɑ́ʔx̣ɑ][43] | |
| 'grass clothing'(MG 518) | [ƛ̓ʌ́q̓ɑʔmɛ̀ç'əʰ] | /ƛ̓aq̓-am̓-eç'a/<br>root - ? - LS 'clothing' |
| 'lots of grass clothing (pl)' (MG 520) | [ƛ̓ə́q̓ƛ̓ʌq̓ɑʔmɛç'əʰ]<br>~[ƛ̓ʌ́q̓ƛ̓ʌq̓ɑʔmɛç'əʰ] | /ƛ̓əq̓-ƛ̓aq̓-am̓-eç'a /<br>CəC pl - root - ? - LS |
| 'ground, soil, earth, dirt' (MG 341) | [ŋgíǰɛ] | /WeYa/<br>root |
| 'lots of ground, soil, earth, dirt (pl)'(MG 342) | [⁽ŋ⁾gí:gìǰɛʰ] | /WeY-WeYa/<br>CVC pl - root |
| 'a little bit of ground or soil' (MG 343) | [gʌ́gʌˀəǰɛʰ]<br>~[gʌ́gɑ̂ˀəǰɛʰ] | /Wa-WaY'a/?<br>CV - root |

**grouse**

| | | |
|---|---|---|
| 'grouse, blue'(MG 121) | [hóḿʔhom][44] | /hom̓hom/<br>root |

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[43] Structurally this appears to be the reduplicative plural of 'clam' and is clearly the reason why 'clam' is not reduplicated. Mrs. George said that this old word for 'woman's genitals' was used widely when she was growing up but that today it is considered profane. It has been replaced in usage by the word meaning 'personal belongings.'

[44] Mrs. George says that this word represents "the drum-like noise that the grouse makes when it flaps its wings". The Sliammon people listened for this beating sound in order to sneak up on this bird. It is reduplicated in the singular form as well as in the plural.

| | | |
|---|---|---|
| 'lots of blue grouse' | [hómhomʔhom] | /hom̓-hom̓hom/ |
| (MG 122) | ~[hó˂mhomʔhom] | CVC pl - root |
| 'woolly grouse' | [q$^{w}$ə́səˆm]~[q$^{w}$ə́sɨm] | /q$^{w}$əs-əm/ |
| (MG 181) | | root - ? |
| 'lots of woolly grouse (pl)' | [q$^{w}$ə́sq$^{w}$əsəm] | /q$^{w}$əs-q$^{w}$əs-əm/ |
| (MG 182) | | CəC pl - root - ? |

***H***

| | | |
|---|---|---|
| 'hail'(MG 159) | [ç'ʌ́ç'ɑwəšin] | |
| 'lots of hail (pl)'(MG 160) | [ç'ə́ç'ç'əç'ɑwəšin] | |
| 'hair (of head)'(MG 266) | [mɑ́qɛn] | /maq-en/ |
| | | root - rt |
| 'lots of hair (pl)' | [mʌ́q$^{h}$mɑqən] | /məq-maq-en/ |
| (MG 267) | | CəC pl - root - rt |
| 'half full'(MG 373) | [x̣$^{w}$ɑ́ƛ̓egən] | /x̣$^{w}$aƛ̓-eWan/ |
| | ~[x̣$^{w}$ɑ́ƛ̓egn̩] | root - LS 'size' |
| 'lots of half filled things' | [x̣$^{w}$ɑ́x̣$^{w}$ƛ̓egən] | |
| (MG 374) | ~[x̣$^{w}$ɑ́ƛ̓x̣$^{w}$ɑƛ̓egən] | /x̣$^{w}$aƛ̓-x̣$^{w}$aƛ̓-eWan/ |
| | | CVC pl - root - LS 'size' |
| 'hard'(MG 680) | [ƛ̓ə́q$^{wh}$]~[ƛ̓ʌ́q$^{wh}$] | /ƛ̓əq$^{w}$/ |
| | | root |
| 'hard to get going; stubborn' | [ƛ̓ə́q$^{w}$egən] | /ƛ̓əq$^{w}$-eWan/ |
| (MG 681) | ~[ƛ̓ʌ́q$^{w}$egən] | root - LS 'spirit, sentiment' |
| 'Harwood Island'(MG 67) | [ʔá·ʔgeqsən] | |

| | | |
|---|---|---|
| 'head'(MG 254)[45] | [móʔoṣ] | /moʔ-os/<br>root - LS 'face' |
| 'heads (pl)'(MG 255) | [mámòʔoṣ] | /məʔ-moʔ-os/<br>CəC pl - root - LS 'face' |
| 'heart (human)'<br>(MG 210) | [ƛ̓áqʷenəs]<br>~[ƛ̓áqʷenʌs] | /ƛ̓əqʷ-enas/<br>root - LS |
| 'hearts (pl)'(MG 211) | [ƛ̓ə̣́qʷƛ̓ə̣qʷenəs] | /ƛ̓əqʷ-ƛ̓əqʷ-enas/<br>CəC pl - root - LS |
| 'to help'(MG 356) | [č̓ɛ́gᵊnʌqx̣ʰ] | /č̓aW-nəq/<br>root - ? |
| 'helping'(MG 358) | [č̓éč̓egᵊnəqx̣ʰ] | /č̓a-č̓aW-nəq/<br>CV - root - ? |
| 'help somebody'<br>(MG 357) | [č̓ɛ́gətʰ] | /č̓aW-ət/<br>root - ? |
| 'he got help'(MG 359) | [č̓ɛ́gᵊɒ̀mʊɬ] | /č̓aW-ət-əm-oɬ/<br>root - ? - PMC - past |
| 'he'll get help'(MG 360) | [č̓ɛ́gətəmsəmt̓] | /č̓aW-ət-əm-səm-t̓/<br>root - ? - PMC - fut - ? |
| 'hemlock (tree)(MG 190) | [qʷó:ʔəy] | /qʷow̓-ay/<br>root - LS 'tree' |
| 'lots of hemlock'(MG 191) | [qʷó:q̓ʷo:ʔəy] | /qʷow̓-qʷow̓-ay/<br>CVC pl - root - LS 'tree' |
| 'Hernando Island'(MG 70) | [kʷú·pƛ̓əč̓] | /kʷop-ƛ̓ač̓/[46] |

[45] This term can be used to refer to 'fish heads' as well.

[46] See the form for 'hill' and the LS for 'abdomen, belly'.

| | | |
|---|---|---|
| 'heron'(MG 30) | [pɑ́łʔ] | /pal̓/<br>root |
| 'lots of heron (pl)'<br>(MG 559) | [pʌ́łpɑłʔ] | /pəl̓-pal̓/<br>CəC pl - root |
| 'small heron (dim)'<br>(MG 560) | [pépɑłʔ] | /pe-pal̓/<br>Ce - root |
| 'lots of small heron'<br>(MG 561) | [pépɑłòɬ] | /pe-pal-oɬ/<br>Ce - root - dim |
| also alternative: | [pʌ́łpɑłòɬ] | /pəl-pal-oɬ/<br>CəC pl - root - dim |
| 'herring'(MG 2) | [ɬáʔgət̓ʰ] | /ɬaWət̓/ |
| 'lots of herring'(MG 338) | [ɬú:ɬɑgɪt̓ʰ] | /ɬaW-ɬaWət̓/<br>CVC pl - root |
| 'small herring'(MG 339) | [ɬɑ́ɬᵊgət̓ʰ] | /ɬa-ɬaWət̓/<br>CV - root |
| 'small herring'(MG 340) | [ɬɑ́ɬgɑt̓ɔ̀ɬ] | /ɬa-ɬaWət̓-oɬ/<br>CV - root - dim |
| 'hill'(MG 229) | [kʷúpɪtʰ] | /kʷop-et/<br>root - stv |
| 'hills (pl)'(MG 230) | [kʷíw̓kʷpɪtʰ] | |
| 'hole; a hole'(MG 607)[47] | [t̓ʌ́ł·ɪk̓ʸʰ] | /t̓əl-e-k̓/<br>root - stv - rt |

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[47] This refers to a hole in a wall or a piece of wood. See the related verbal form cited by Kroeber (1989:114) /t̓əlk̓-ɑ-t/ 'make a hole in it'.

| | | |
|---|---|---|
| 'lots of holes (pl)' (MG 608) | [ṫáṫɬ̩ɪk̇ʸʰ] | /ṫa-ṫəl-e-k̇/ Ca - root - stv - rt |
| 'small hole (dim)' (MG 609) | [ṫɛ́ṫɬ̩ɪk̇ʸʰ] | /ṫe-ṫəl-e-k̇/ Ce - root - stv - rt |
| 'holy day'(MG 649) | [x̣áʔx̣a ç'òk̇ʷʰ] | /x̣aʔ-x̣a ç'ok̇ʷ/ root 'holy' 'day' |
| 'house'(MG 233)[48] | [ƛ̇ʌ́mstan] | /ƛ̇am-s-tan/ root - ? - LS 'enclosure' |
| 'houses (pl)'(MG 235) | [ƛ̇ʌ́mƛ̇ʌmstʌn] ~[ƛ̇ʌ́mƛʌmṣtʌn] | /ƛ̇əm-ƛ̇am-s-tan/ CəC pl - root - ? - LS |
| 'house (new word)' (MG 234) | [ʔáyɛʔ] | /ʔayaʔ/ |
| 'houses (pl)'(MG 236) | [ʔíʔayɛʔ] | /ʔəy-ʔayaʔ/ CəC pl - root |
| 'how are you?'(MG 481) | [ʔáʔᵊǰɪčʰxʷʊ̀tʰ] ~[ʔʌ́ʔᵊǰeᵛčʰxʷʊ̀tʰ] | |
| 'huckleberry '(MG 60)[49] | [ṗóq̓ʷṗoq̓ʷ] | /ṗoq̓ʷ-ṗoq̓ʷ/ CVC pl - root |
| 'huckleberry (red)' (MG 58) | [ṫúxʷuʔəm] | /ṫoxʷ-ʔəm/ root - ? |

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[48] According to Mrs George this is the old word for "house." Beaumont records [ƛ̇əmstan] for Sechelt . The suffix -tan (p.17) means 'container or enclosure.' Thus [ƛ̇əmstan] is 'an enclosure for dwelling' (a house).

[49] This was originally glossed 'small wild grey blueberry.' It is described by Mrs. George as a type of berry typically found in the mountains and at the head of a river. The gloss remains uncertain.

| | | |
|---|---|---|
| 'lots of huckleberries (pl)' (MG 652) | [t̓úx$^{w}$t̓ux$^{wu}$ʔʊm] | /t̓ox$^{w}$-t̓ox$^{w}$-ʔəm/ CVC pl - root - ? |
| 'small huckleberry (dim)' (MG 653) | [t̓át̓x$^{w}$eʔəm̓] | /t̓a-t̓ox$^{w}$-e-ʔəm-ʔ/ Ca - root - e - ? - dim gl |
| also alternate: | [t̓át̓$^{h}$x$^{w}$eʔemòɬ] | /t̓a-t̓ox$^{w}$-e-ʔəm-oɬ/ Ca - root - e - ? - dim |
| 'small huckleberries' (MG 654) | [t̓úx$^{w}$t̓ux$^{wo}$ʔəmʊ̀ɬ] | /t̓ox$^{w}$-t̓ox$^{w}$-ʔəm-oɬ/ CVC pl - root - ? - dim |
| 'red huckleberry bush' (MG 59) | [t̓úx$^{wu}$ʔa·ʔmʌy] | /t̓ox$^{w}$-ʔəm-(ʔ)ay/ root - ? - LS 'tree, bush' |
| 'hummingbird'(MG 73) | [x̣$^{w}$óp$^{h}$x̣$^{w}$òp$^{h}$] | /x̣$^{w}$op-x̣$^{w}$op/ CVC - root |
| 'lots of hummingbirds (pl)' (MG 183) | [x̣$^{w}$óp̓x̣$^{w}$op̓x̣$^{w}$op̓][50] | /x̣$^{w}$op̓-x̣$^{w}$op̓-x̣$^{w}$op̓/ CVC - CVC - root |
| 'small hummingbird (dim)' (MG 74) | [x̣$^{w}$ópx̣$^{w}$ò·poɬ] ~[x̣$^{w}$ópx̣$^{w}$ò·pʊɬ] | /x̣$^{w}$op-x̣$^{w}$op-oɬ/ CVC pl - root - dim |

***I***

| | | |
|---|---|---|
| 'island'(MG 68) | [k$^{w}$ʊ́s̤ʌys] ~[k$^{w}$ʊ́θayṣ] | /k$^{w}$əθ-ays/ root - LS 'rock' |
| 'lots of islands'(MG 661) | [k$^{w}$ʊ́θk$^{w}$ʊθayṣ] | /k$^{w}$əθ-k$^{w}$əθ-ays/ CəC pl - root - LS 'rock' |
| 'small island (dim)' (MG 662) | [k$^{w}$ə́k$^{wh}$θayɪṣ] | /k$^{w}$ə-k$^{w}$əθ-ay(ə)s/ CV - root - LS 'rock' |

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50 The glottalization on this plural form remains unexplained.

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|---|---|---|
| 'small islands (dim pl)' (MG 663) | [kʷʊ́ṣkʷʊṣɑyᵊθɔ̀ɬ] | /kʷəθ-kʷəθ-ayəs-oɬ/ CəC pl - root - LS - dim |
| 'to invite for dinner' (MG 418) | [nɔ́x̣ʷʊm] | /nox̣ʷ-əm/ root - intr |
| 'everybody's invited' (MG 419) | [nɔ́nx̣ʷotɔ̀ʔɬ] | /no-nox̣ʷ-ət-oʔɬ/ CV - root - CTr - past ? |

***J***

**jay**

| | | |
|---|---|---|
| 'Steller's jay'[51] (MG 123) | [kʷíškʷiš] | /kʷiš-kʷiš/ CVC pl - root |
| 'Steller's jays (pl)' (MG 124) | [kʷíškʷiškʷiš] | /kʷiš-kʷiš-kʷiš/ CVC pl - CVC - root |

**jigger**

| | | |
|---|---|---|
| 'cod jigger'(MG 8) | [θɑ́ç'əmtən] | /θaç'-əm-tən/ root - intr - instr |
| 'jigging (for codfish)' (MG 9) | [θə́θç'ʌm] | /θə-θəç'-əm/ CV - root - intr |
| 'joint (anatomy)' (MG 302) | [x̣ʷɑ́ç'ɛq̓ʷɔ̀ǰɛ] | /x̣ʷaç'-eq̓ʷ-oʏ'a/ root - LS - LS 'hand' |
| 'joints (pl)'(MG 303) | [x̣ʷə́ç'x̣ʷəç'ɛᵊq̓ʷɔ̀ʔǰɛ] ~[x̣ʷʊ́ç'x̣ʷəç'ɛᵊq̓ʷɔ̀ʔǰɛ] | /x̣ʷəç' -x̣ʷaç' -eq̓ʷ- oʏ'a/ CəC pl-root-LS 'elongated-LS 'hand' objects' |

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51 Cyanocitta stelleri

| | | |
|---|---|---|
| 'jump'(MG 215) | [q̓ʷéç'əm]<br>~[q̓ʷéˇç'əm] | /q̓ʷeç'-əm/<br>root - intr |
| 'jumping'(MG 216) | [q̓ʷíq̓ʷç'ɛm] | /q̓ʷe-q̓ʷeç'-əm/[52]<br>CV - root - intr |
| 'I am jumping' (MG 217) | [q̓ʷíq̓ʷç'ɛm̓čʰ] | /q̓ʷe-q̓ʷeç' -əm-ʔ-č/<br>CV - root - intr - gl - 1sg Sb |

***K***

| | | |
|---|---|---|
| 'kelp'(MG 16) | [kʷúm̓tʰ][53] | /kʷom̓t/<br>root |
| 'lots of kelp (pl)' (MG 543) | [kʷúmkʷum̓tʰ] | /kʷom-kʷom̓t/<br>CVC pl - root |
| 'small kelp (dim)' (MG 544) | [kʷúkʷumᴅʊ̀ɬ]<br>~[kʷúkʷumtʊ̀ɬ] | /kʷo-kʷom̓t-oɬ/<br>CV - root - dim |
| 'lots of small kelp' (MG 545) | [kʷúmkʷumᴅʊ̀ɬ]<br>~[kʷúmkʷumtʊ̀ɬ] | /kʷom-kʷom̓t-oɬ/<br>CVC pl - root - dim |
| 'kick'(MG 455) | [yɪ́m̓əm] | /y̓əm̓-əm/[54]<br>root - intr |
| 'kicking (all the time)' (MG 456) | [yíy̓ɪm̓əm] | /y̓ə-y̓əm̓-əm/<br>CV - root - intr |

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52 The resulting vowel quality [i] in the reduplicative affix of these progressive forms suggests that the first consonant of the root is perhaps /k̓ʷ/ and not /q̓ʷ/.

53 This word is used to refer to the wide "leaves" at the top of the kelp bulb. These wide strips of seaweed were used for covering fish as well as functioning as a "lid" for steaming clams over a rock-pit fire.

54 These examples show that the restructuring of word internal syllable-initial glottalized resonants is perhaps preferable but not compulsory. Notice that the word-initial glottalized resonant is not realized.

| | | |
|---|---|---|
| 'kingfisher'(MG 132) | [ç'íčɛɫʔe][55] | /ç'əč-al̓e/ |
| 'kingfishers (pl)' (MG 133) | [ç'íčç'ɪčɛɫ'e] | /ç'əč-ç'əč-al̓e/ CəC pl - root - ? |
| 'Klahoose band; kind of fish'(MG 485)[56] | [ƛ̓ə́x̣oṣ] ~[ƛ̓ʌ́x̣oṣ] | /ƛ̓əx̣os/ |
| 'knee'(MG 313) | [qʷáʔɑnʊqʷɬa] | /qʷan-ʔəqʷɬa/[57] root - LS 'knee' |
| 'knees (pl)'(MG 314) | [qʷə́nqʷɑʔɑnʊqʷɬa] | /qʷən-qʷan-ʔəqʷɬa/ CəC pl - root - LS 'knee' |
| 'knife; pocket knife' (MG 145) | [x̣áx̣əpxʷ][58] ~[x̣áx̣əʔpxʷ] | /x̣a-x̣ap-xʷ/ CV - root - st ex |
| 'knives; pocket knives' (MG 146) | [x̣ə̣px̣apə̰xʷ] | /x̣əp-x̣ap-xʷ/ CəC pl - root - st ex |
| 'knife'(MG 248) | [č̓ít̓qamɪn] | /č̓ət̓-qa-men/ root - ? - instr |

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55 The dark l [ɫ] is pronounced with the tip of the tongue down behind the front bottom teeth and the body of the tongue raised toward the velum. Mrs. George was insistant that my own pronunciation could be improved by getting the location of the tongue tip correct.

56 This was described by Mrs. George as "the fish that gets caught in your net while fishing for Spring salmon."

57 Hagège (1981:61) claims that the LS for 'knee' is =ʔeqʷɬɑ- 'genou'. The form which is cited above suggests, however, that the suffix is reduced to /ʔəqʷɬa/ since the schwa is coloured by the following labialized consonant.

58 See the root "to break".

| | | |
|---|---|---|
| 'knives (pl)'(MG 249) | [č̓ít̓č̓ɪt̓qamɪn]<br>~[č̓ít$^{(\cdot)}$č̓ɪt̓qamɪn] | /č̓ət̓-č̓ət̓-qa-men/<br>CəC pl - root - ? - instr |

***L***

| | | |
|---|---|---|
| 'leaf'(MG 56) | [sáʔyǰə] | /saẏ-Ya/<br>root - ? |
| 'lots of leaves (pl)' (MG 665) | [sísaẏǰɛ$^{h}$] | /səẏ-saẏ-Ya/<br>CəC pl - root - ? |
| 'small leaf (dim)'(MG 666) | [sási·ǰɛ̀ʔ$^{ɛh}$] | /sa-saẏ-Ya/<br>CV - root - ? |
| 'lots of small leaves' (MG 667) | [síseǰəʔòɬ] | /səẏ-saẏ-Ya-oɬ/<br>CəC pl - root - ? - dim |
| 'left handed'(MG 503) | [ç'ɛ́q̇$^{w}$o·ǰɛʔ$^{ə}$]<br>~[ç'ɛ́q̇$^{w}$o·ǰeʔ$^{ə}$] | /ç'eq̇$^{w}$-oY'a/<br>root - LS 'hand' |
| 'leg, hip'(MG 311) | [tátn̩aǰɨp$^{h}$] | /tač-ən-aYəp/<br>root - ? - LS 'upper leg, thigh' |
| 'legs, hips (pl)'(MG 312) | [tíčtačɨnaǰᵻp$^{h}$] | /təč-tač-ən-aYəp/<br>CəC pl - root - ? - LS 'thigh' |

**like**

| | | |
|---|---|---|
| 'I like it a lot'[59] (MG 379) | [tʌ́təməšč$^{h}$]<br>~[tʌ́təmʌšč$^{h}$] | /ta-tam-aš-č/<br>CV - root - Tr - 1sg Sb |
| '(I) feel like it'(MG 380) | [tə́məšč$^{h}$] | /tam-aš-č/<br>root - Tr - 1sg Sb |

59 This can be said of food or of people: 'I like it/him/her/them a lot.'

| | | |
|---|---|---|
| 'I like it'(MG 379) | [ʔíšxʷčɨn] | /ʔešxʷ čən/<br>1sg Sb |
| 'lips'(MG 276) | [θóθɪn] | /θoθən/ |
| 'lots of lips (pl)'<br>(MG 277) | [s̺ís̺s̺oθɪn] | /θəθ-θoθən/<br>CəC pl - root |
| 'liver (deer)'(MG 125) | [q̓á̆ʔtəm] | |
| 'liver (fish)'(MG 126) | [ɬə́x̣ʷɑ] | /ɬəx̣ʷa/ |
| 'liver (human)'(MG 127)<br>(MG 479) | [qʷʌ́sƛ̓ač]<br>~[qʷə́s̩ʔɑy] | /qʷəs-ƛ̓ač/<br>root - LS 'abdomen, belly'<br>/qʷəs-ʔay/<br>root - LS 'human' |
| 'livers (pl)'(MG 128)<br>(MG 480) | [qʷʌ́sqʷʌsƛ̓ač]<br>~[qʷə́s̩qʷəs̩ʔɑy] | /qʷəs-qʷəs-ƛ̓ač/<br>CəC pl - root - LS 'belly'<br>/qʷəs-qʷəs-ʔay/<br>CəC pl - root - LS 'human' |
| 'louse'(MG 156) | [mɑ́č̓ɪn] | /mač̓ən/<br>root |
| 'lice (pl)'(MG 157) | [mə́č̓mɑč̓ɪn] | /məč̓-mač̓ən/<br>CəC pl - root |

***M***

**man**

| | | |
|---|---|---|
| 'young man'(MG 141) | [čúyʔtomᶦš] | /čoy̓ t-oməš/<br>young ? - LS 'appearance' |
| 'young men (pl)'(MG 142) | [čúyʔtəmtomᶦš] | /čoy̓ təm-toməš/<br>young CəC pl - root |

**mat**

| | | |
|---|---|---|
| 'rush mat'[60] (MG 170) | [qáʔqa] | /qaʔqa/? <br> root ? |
| 'rush mats (pl)' (MG 171) | [qə́x̣ qaʔqa] | /qəx̣ qaʔqa/ <br> many root |

**meet**

| | | |
|---|---|---|
| 'I met/saw someone unexpectedly'(MG 615) | [xʷə́ʔč̓ʰ ᵊ gàynɪxʷən] | |
| 'mink'(MG 22) | [mʌ́ṣ ] <br> ~[mʌ́s·] | /mas/ <br> root |
| 'lots of mink (pl)' (MG 23) | [mʌ́sᵊmʌsòɬ] | /məs-mas-oɬ/[61] <br> CəC - root - dim? |
| 'little mink (dim)' (MG 24) | [mɛ́ʔᵋmsuɬ] | /me-m̓as-oɬ/ <br> Ce - root - dim |
| 'lots of small mink' (MG 558) | [mʌ́ṣmʌṣòɬ] | /məs-mas-oɬ/ <br> CəC pl - root - dim |
| 'Mink (mythical name)' (MG 612) | [qáyx̣] | /qay-x̣/ <br> root - st ex |
| 'lots of Mink (pl)' (MG 613) | [qéqayᵊx̣] | /qəy-qay-x̣/ <br> CəC pl - root - st ex |
| 'small Mink (dim)' (MG 614) | [qáqex̣ʷùɬ] | /qa-qay-x̣-oɬ/ <br> CV - root - st ex - dim |

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60 The rush mat was made out of lake grass. It could be folded and taken along for camping trips providing a "waterproof bed."

61 This form appears to contain the diminutive suffix even though it is not glossed as such.

| | | |
|---|---|---|
| 'Mitlenatch Island'(MG 69) | [mʌ́ƛ̓$^{ə}$nəč$^{h}$] | /maƛ̓-nač/[62]<br>'calm' - LS 'end, root' |
| 'Monday'(MG 76) | [yɛ́ʔ$^{ə}$yʌw][63] | /yay̓aw/ |
| 'mountain goat'(MG 497) | [x̣$^{w}$ə́ƛ̓ɑy] | /x̣$^{w}$əƛ̓-aY/<br>root - ? |
| 'lots of mountain goats'<br>(MG 501) | [x̣$^{w}$ə́ƛ̓x̣$^{w}$əƛ̓àˆy][64]<br>~[x̣$^{w}$ə́ƛ̓x̣$^{w}$əƛ̓ʌ̀y] | /x̣$^{w}$əƛ̓-x̣$^{w}$əƛ̓-aY/<br>CəC pl - root - ? |
| 'mountain goat blanket'<br>(MG 252) | [x̣$^{w}$ə́ƛ̓ajʊk$^{wh}$t$^{h}$] | /x̣$^{w}$əƛ̓-aY-ok$^{w}$-t/<br>root - ? - LS 'blanket' - ? |
| 'mountain goat blankets'<br>(MG 253) | [x̣$^{w}$é$^{ə}$x̣$^{w}$əƛ̓ajʊk$^{wh}$t$^{h}$] | /x̣$^{w}$əy-x̣$^{w}$əƛ̓-aY-ok$^{w}$-t/<br>Cəy pl - root - ? - LS - ? |
| 'mouse'(MG 161) | [č̓ɛ́č̓æt̓ən] | /č̓a-č̓at̓-ən/<br>CV - root - ? |
| 'mice (pl)'(MG 162) | [č̓ɪ́č̓:ɛt̓æt̓ən] | /č̓ət̓-č̓at̓-at̓-ən/<br>CəC pl - root - VC - ? |
| 'mouth'(MG 280) | [sə́y$^{ə}$qən]<br>~[sʌ́y$^{ə}$qən] | /say-qen/[65]<br>root - LS 'mouth' |

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[62] Literally this name means "calm back end." Mitlenatch is described by Kennedy and Bouchard as an "anglicization of Métl̀nech, which refers to the fact that the sheltered areas at either end of the island provide safe moorage, no matter which way the wind is blowing" (1983:161).

[63] See Sechelt [yélάw] or [yél$^{ʔ}$άw] which means "something is past"; in the context of 'Monday' it means "Sunday is past." See Beaumont (1985:84).

[64] Mrs. George said that this is also the name used for Goat Lake located north of Powell River.

[65] This lexical suffix also means 'tongue, language' (Hagège 1981:61).

| | | |
|---|---|---|
| 'mouths (pl)'(MG 281) | [síseyqˣ̣ən] | /səy-say-qen/<br>CəC pl - root - LS |
| 'moving up the beach'<br>(MG 580) | [q̓ʷíq̓ʷeƛ̓šin][66] | |
| 'mussel, blue'(MG 51) | [sáʔmɑ] | /sam̓a/<br>root |
| 'mussels (pl)'(MG 51a) | [sə́msɑʔmɑ] | /səm̓-sam̓-a/<br>CəC pl - root - rt |
| 'small blue mussel'<br>(MG 640) | [sɪ́sm̓ɑʔòɬ][67] | /s-sam̓-a-(ʔ)oɬ/<br>CV - root - rt - dim |
| | ***N*** | |
| **name** | | |
| 'Mrs. George's name'[68]<br>(MG 547) | [θóʔᵒwɑyᵊqən] | |
| 'neck'(MG 282) | [sʌ́yɛʔnə] | /say-an̓a/<br>root - LS 'neck' |
| **nest** | | |
| 'bird's nest'(MG 566) | [ǰɪ́m·ən] | /Yəmən/[69]<br>root |
| 'lots of nests (pl)'<br>(MG 567) | [ǰɪ́mǰɪmən] | /Yəm-Yəmən/<br>CəC pl - root |
| 'small nest (dim)'<br>(MG 568) | [ǰɨ́ǰɨmənòɬ] | /Yə-Yəmən-oɬ/<br>CV - root - dim |

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[66] See the related form for 'starfish.'

[67] This nasal is phonetically creaky or laryngealized rather than having a full glottal release. See Davis (1970: 24-27) for a discussion of problems of describing glottalization in Sliammon.

[68] This traditional Sliammon name was given to Mrs. George by her grandfather.

[69] The suffix -ən seems to occur frequently; however, its meaning still remains uncertain.

| | | |
|---|---|---|
| 'night'(MG 82) | [-nʌtʰ] | /nat/ |
| 'nine'(MG 119) | [tígʸʊxʷ] | /teWəxʷ/ |
| 'nit '(MG 154) | [x̣áx̣ʌy] | |
| 'nits (pl)'(MG 155) | [x̣áx̣ax̣ʌy] | |
| 'nose'(MG 204) | [mʌ́qsɨn] | /məqsen/<br>root |
| 'noses (pl)'(MG 205) | [mʌ́qᵊmʌqsɨn] | /məq-məqsen/<br>CəC pl - root |
| 'nostril'(MG 264) | [t̓ʌ́ɬk̓ʸɛqʷʰ] | /t̓əlk̓-eqʷ/[70]<br>root - LS 'nose' |
| 'nostrils (pl)'(MG 265) | [t̓ʌ́ɬt̓ʌɬk̓ʸɛqʷʰ] | /t̓əl-t̓əlk̓-eqʷ/<br>CəC pl - root - LS 'nose' |

***o***

| | | |
|---|---|---|
| 'oar'(MG 243) | [ᵑgə́ʔoʷt̓] | /WəW't̓/ |
| (MG334) | ~[ᵑgʌ́ʔəwt̓ʰ] | |
| 'oars (pl)'(MG 244) | [gú·goʷt̓] | |
| (MG 335) | ~[gú:gəwt̓ʰ] | |
| 'small oar (dim)'<br>(MG 336) | [ᵑgágɪt̓ʰ] ~[gá:gɪt̓ʰ] | |
| 'lots of small oars (dim pl)'<br>(MG 337) | [gígʌt̓] ~ [gíga:gɪt̓ʰ] | |

[70] Hagège (1981:61) claims that the LS for 'nose' is =ʔeq̓ʷ. The meaning is also extended to 'promontory, elongated objects'. I have recorded -eqʷ for 'nose' and -eq̓ʷ for 'elongated objects'.

| | | |
|---|---|---|
| 'old person'(MG 231) | [ƛ̓ʌ́ƛ̓x̣ʌy̓] | /ƛ̓a-ƛ̓ax̣-ay-ʔ/<br>**CV - root - LS 'person' - dim gl** |
| 'old people (pl)'<br>(MG 232) | [ƛ̓ɑ́x̣ƛ̓ɑx̣ʌy] | /ƛ̓ax̣-ƛ̓ax̣-ay/<br>**CVC pl - root - LS person** |
| 'old stump'(MG 202) | [x̣ɑ́ʔʌynɪčʰ] | /x̣aʔ-ay-nač/<br>**root - LS tree - LS 'root, bottom'** |
| 'old stumps (pl)'<br>(MG 203) | [x̣ɑ́ʔx̣ɑʔᵊenɪčʰ] | /x̣aʔ-x̣aʔ-ay-nač/<br>**CVC pl - root - LS 'tree' - LS 'root'** |
| 'one (number)'(MG 111) | [pɑ́ʔɑ] | /paʔa/[71] |
| **open** | | |
| 'its opening'(MG 476) | [gú·ɬaq̓əm] | /Wə-Wəɬaq̓-əm/<br>**CV - root - intr** |
| 'opening (new word)'<br>(MG477) | [góq̓ɑyč̓ìn̓əm]<br>~[gúq̓ɑyč̓ìn̓əm] | |
| 'owl '(MG 13) | [x̣ɛ́x̣ənɛ̀q̓] | /x̣e-x̣an-eq̓/?<br>**CV - root - LS ?**<br>/x̣ex̣-an-eq̓/<br>**root - ? - LS** |
| 'owls (pl)'(MG 14, 541) | [x̣ɛ́x̣ewnɛ̀q̓əm] | /x̣e-x̣ n-eq̓-əm/?<br>/x̣ex̣-ew-n-eq̓-əm/ |
| 'small owl (dim)'<br>(MG 542) | [x̣ɛ́x̣ɑʔᵅnɛq̓ʷʊ̀ɬ]<br>~[x̣ɛ́x̣ʌʔᶺnɛq̓ʷʊ̀ɬ] | /x̣e-x̣an+ʔ-eq̓-oɬ/<br>**Ce - root + dim gl - LS ? - dim**<br>/x̣ex̣-an+ʔ-eq̓-oɬ/ |

[71] The cognate form in Sechelt is <pala> 'one' (Beaumont 1985:14). This suggests that PS*l became glottal stop in the environment of /a/.

***p***

| | | |
|---|---|---|
| 'paddling(with one paddle)' (MG 351) | [héhəwčìsʸmaʰ][72] | /he-heW-česma/<br>CV - root - ? |
| 'palm (of the hand)' (MG 322) | [pʌ́qaɬǰiyš] | /pəq-aɬ-čayəš/<br>'white' - cl - root 'hand' |
| 'palms (pl)'(MG 323) | [pə́qpəqaɬǰeyɪš]<br>~[pə́qpəqaɬǰiyš] | /pəq-pəq-aɬ-čayəš/<br>CəC pl - root - cl - 'hand' |
| 'perspire, sweat' (MG 367) | [ǰέq̓ʷəm] ~ [ǰέq̓ʷəb] | /Yaq̓ʷ-əm/<br>root - intr |
| 'he's always sweating' (MG 369) | [ǰíǰʌq̓ʷǰεq̓ʷəm] | /Ye-Yəq̓ʷ-Yaq̓ʷ-əm/<br>Ce - CəC pl - root - intr |
| 'plank, long board' (MG 241) | [lápˡlàš] | /laplaš/<br>root |
| 'planks, long boards (pl)' (MG 247) | [ɬə́pɬəpɬaš] | /ləp-laplaš/<br>CəC pl - root |
| 'pointed'(MG 671) | [ç'éᵊp̓εtʰ] | /ç'ep̓-et/<br>root - Stv |
| 'very pointed'(MG 672) | [ç'éᵊp̓εtʰmʊ̀tʰ] | /ç'ep̓-et-mot/<br>root - stv - very |
| 'pointed head'(MG 669) | [ç'ép̓eᵊqʷən] | /ç'ep̓-eqʷən/[73]<br>root - LS 'head' |

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[72] Notice the resemblence to the word for 'chief.'

[73] Hagège (1981:61) records =eqʷan- 'tête' (arrière du crâne).

| | | |
|---|---|---|
| 'pointed nose'(MG 668) | [ç'é$^{ə}$ṗe$^{ə}$q$^{wh}$] | /ç'eṗ-eq$^{w}$/<br>root - LS 'nose' |
| 'pointed tail'(MG 670) | [ç'é$^{ə}$ṗ$^{ə}$nəč$^{h}$]<br>~[ç'é$^{ə}$ṗ$^{ə}$nač$^{h}$] | /ç'eṗ-nač/<br>root - LS 'root, tail' |
| 'potato'(MG 420) | [qáwθ] | /qaWθ/<br>root |
| 'lots of potatoes (pl)'<br>(MG 421) | [qó(w)qawθ] | /qəW-qaWθ/<br>CəC pl - root |
| 'small potato (dim)'<br>(MG 422) | [qáqəg$^{y}$i$^{ə}$θotł] | /qa-qaW-e-θ-ət-oł/<br>CV - root - e - root - ? - dim |
| 'small potatoes (dim pl)'<br>(MG 423) | [qóqawθoł]<br>~[qə́wqawθoł] | /qəW-qaWθ-oł/<br>CəC pl - root - dim |
| 'pretty, beautiful'(MG 427) | [ʔáʔǰumš] | /ʔa-ʔaY-oməš/<br>CV - root - LS 'appearance' |
| 'very pretty'(MG 428) | [ʔíʔaǰum$^{(ɨ)}$š] | /ʔəY-ʔaY-oməš/<br>CəC pl - root - LS 'appearance' |
| 'become pretty'(MG 429) | [ʔáʔǰumisθʊ̀t$^{h}$] | /ʔa-ʔaY-oməš-θot/<br>CV - root - LS - reflex |
| 'pretty, beautiful (old word)'<br>(MG 430) | [ʔɛ́ʔi$^{y}$] | /ʔe-ʔaY/ |
| 'very beautiful'(MG 431) | [ʔɛ́ʔaǰumɨš] | /ʔe-ʔaY-oməš/<br>Ce - root - LS 'look' |
| 'pry ; to pry '[74](MG 627) | [$^{(ŋ)}$gáṫəṁ] | /Waṫ-əṁ/ |

[74] This is used in the sense to 'pry a log or rock.'

| | | |
|---|---|---|
| 'lock/block your door' (MG 626) | [gáˆt̓šewə̳m̓] | /Wat̓-šaw-əm̓/ |
| 'pull'(MG 410) | [túk̓ʷtʰ] | /tək̓ʷ-t/[75]<br>root - CTr |
| 'he's pulling it'(MG 411) | [tə́tk̓ʷtʌs] ~[tə́tk̓ʷtɑs] | /tə-tək̓ʷ-t-as/<br>CV - root - CTr - 3p Sb |
| 'they're all pulling it' (MG 412) | [tɑ́k̓ʷtuk̓ʷtɑs]<br>~[tʌ́k̓ʷtuk̓ʷtɑs]<br>~[tə́k̓ʷtuk̓ʷtɑs] | /tak̓ʷ-tək̓ʷ-t-as/<br>/tək̓ʷ-tək̓ʷ-t-as/ |
| 'pupil, dark part of the eye' (MG 328) | [mɑ́ˆpəlowᵊs] | |
| 'to push (it)'(MG 406) | [ǰúθʊtʰ] | /Yoθ-ət/<br>root - CTr |
| 'they are all pushing it' (MG 409) | [ʔúk̓ʷ ǰúǰuθotəs] | /ʔok̓ʷ Yo-Yoθ-ət-as/<br>CV - root -CTr - 3p Sb |
| 'trying to push it ; keep on pushing it' (MG 408) | [ǰúyθotəs] | /Yo-Yoθ-ət-as/<br>CV - root - CTr - 3p Sb |
| 'pushing'(MG 407) | [ǰúǰuθotəs] | /Yo-Yoθ-ət-as/<br>CV - root - CTr - 3p Sb |

[75] The fact that the transitive suffix /-t/ is affixed without a linking vowel suggests that the vowel of the base is schwa. In citation form, schwa becomes coloured by the adjacent labialized consonant yielding [u]. The related progressive forms also support this hypothesis. The presence of the vowel [u] in the plural forms however, is more difficult to explain. Perhaps there are two different roots - one with the full vowel /o/ - /tok̓ʷ/ and the other with the "reduced" vowel schwa - /tək̓ʷ/. Further data is required to clarify this issue.

***R***

| | | |
|---|---|---|
| 'raccoon'(MG 26) | [q̇ʷáɬəṣ] | /q̇ʷalas/<br>root |
| 'raccoons (pl)'(MG 27) | [q̇ʷʌ́ɬq̇ʷɑɬəṣ] | /q̇ʷəl-q̇ʷalas/<br>CəC pl - root |
| 'little raccoon (dim)'<br>(MG 28) | [q̇ʷə́q̇ʷəɬɑṣòŧ] | /q̇ʷə-q̇ʷal-as-oŧ/<br>Cə - root - dim |
| 'small raccoons (dim pl)'<br>(MG 29) | [qʌ́x̣ q̇ʷə́q̇ʷəɬɑṣòŧ] | /qəx̣ /<br>many |
| 'raven' (MG 676) | [ṗóx̣oʔ] | /ṗəx̣-oʔ/<br>root - rt ? |
| 'lots of ravens (pl)'<br>(MG 677) | [ṗáx̣ṗᵊx̣ò] | /ṗax̣-ṗəx̣-o/ |
| also: (MG 677a) | [ṗɑ́x̣ṗᵊx̣òŧ] | CaC - root - rt |
| 'small raven (dim)'<br>(MG 678) | [ṗéṗx̣oʔʊ̀ŧ] | /ṗe-ṗəx̣-oʔ-oŧ/<br>Ce - root - rt - dim |
| 'lots of small ravens'<br>(MG 679) | [ṗʌ́x̣ṗʌx̣òŧ] | /ṗəx̣-ṗəx̣-oŧ/<br>CəC pl - root - dim |
| 'reddish colour ; red snapper'<br>(MG 537) | [kʷʊ́kʷəm̓egʸɪṣ] | |
| 'red snapper (cod)'(MG 10) | [kʷúmews] | /kʷom-eWs/<br>root - LS 'body' |
| 'lots of red snapper (pl)'<br>(MG 536) | [kʷúmkʷəmewṣ]<br>~[kʷʊ́mkʷəmewṣ] | /kʷom-kʷom-eWs/<br>CVC pl - root - LS 'body' |

| | | |
|---|---|---|
| 'small red snapper (dim)' (MG 546) | [kʷík̓ʷəmaʔṣaʔgiʔłɔ̀ł] | /kʷe-kʷom- ? -oł/<br>Ce - root - ? - dim |
| 'lots of small snapper' (MG 538) | [kʷúkʷam̓ewṣù̓ł] | /kʷo-kʷam̓-eWs-oł/<br>CV - kʷam̓ - LS 'body' - dim |
| 'ring (on finger)' (MG 306) | [ç'ágət̓èq̓ʷoǰɪtən]<br>~[ç'ágət̓èq̓ʷoǰɪtɨn] | /ç'aW-at̓-eq̓ʷ- oYa-tən/<br>root - ? - LS 'elongated - LS 'hand' - instr object ' |
| 'rings (pl)' (MG 307) | [ç'ú·ç'agət̓ɛq̓ʷoǰɪtən]<br>~[ç'ú·ç'agət̓ɛq̓ʷoǰɪtɪn] | /ç'əW-ç'aW-at̓-eq̓ʷ-oYa-tən/<br>CəC pl - root - ? - LS - LS hand - instr |
| 'river '(MG 223) | [q̓ʷá>t̓əm] | /q̓ʷat̓-əm/<br>root - ? |
| 'rivers (pl)'(MG 224) | [q̓ʷát̓q̓ʷat̓əm] | /q̓ʷat̓-q̓ʷat̓-əm/<br>CVC pl - root - ? |
| 'small river; creek (dim)' (MG 225) | [q̓ʷáq̓ʷᵊt̓ɛm̓] | /q̓ʷa-q̓ʷat̓-e-m-ʔ/<br>CV - root - dim - ? - dim gl |
| 'small rivers; creeks' (MG 226) | [q̓ʷáʔaq̓ʷt̓ɛm̓] | /q̓ʷa-ʔa-q̓ʷat̓-e-m-ʔ/<br>CV- ? - root - dim - ? - dim gl |
| 'rock'(MG 381) | [x̣áʔǰiṣ] | /x̣aY'-ays/<br>root - LS 'rock' |
| 'rocks (pl)'(MG 382) | [x̣éx̣aʔǰiṣ·] | /x̣əY'-x̣aY'-ays/<br>CəC pl - root - LS 'rock' |
| 'small rock (dim)' (MG 383) | [x̣ɛ́x̣aʔǰeyɨṣ] | /x̣e-x̣aY'-ays/<br>Ce - root - LS 'rock' |
| 'small rocks (dim pl)' (MG 384) | [x̣ɛ́x̣ex̣aʔǰèyɨṣ·] | /x̣e-x̣əY'-x̣aY'-ays/<br>CV - CəC pl - root - LS 'rock' |

**root**

| | | |
|---|---|---|
| 'yellow edible root'[76] (MG 12) | [ç'ə́kʷɑ] | /ç'əkʷa/ root |
| 'yellow roots' (pl) (MG 487) | [ç'ə́kʷʰç'əkʷɑ] | /ç'əkʷ-ç'əkʷa/ CəC pl - root |
| 'small root' (dim) (MG 488) | [ç'ɪ́ç'kʷɑx̣ʷə̀ɬ] ~[ç'ɪ́ç'kʷʌx̣ʷə̀ɬ] | /ç'ə-ç'əkʷa-x̣ʷ-oɬ/ CV - root - ? - dim |
| 'lots of small roots' (dim pl) (MG 489) | [qʌ́x̣ ç'ɪ́ç'kʷɑx̣ʷə̀ɬ] ~[qʌ́x̣ ç'ɪ́ç'kʷəx̣ʷə̀ɬ] | /qəx̣ ç'ə-ç'əkʷa-x̣ʷ-oɬ/ many CV - root - ? - dim |
| 'rotten fish'(MG 457) | [mɑ́ʔɑƛ̓ʰ] | /maƛ̓/ root |
| 'lots of rotten fish' (MG 458) | [mə́ƛ̓ʰᵊmɑƛ̓ʰ] | /məƛ̓-maƛ̓/ CəC pl - root |
| 'runner ; jogger'[77] (MG 453) | [ǰíʔiƛ̓ə̀ɬ] | |

***S***

| | | |
|---|---|---|
| 'salal (berry)' (MG 99) | [ƛ̓ɑ́qɑ] | /ƛ̓aqa/ root |
| 'salal (bush)' (MG 98) | [ƛ̓ɑ́qʰᵊʔi] | /ƛ̓aqa-(ʔ)ay/ root - LS 'tree, bush' |

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[76] This edible root grows in clumps and is prepared in a traditional rock pit fire. It is steamed, peeled, and eaten. Mrs. George calls them "Indian bananas" due to their characteristic yellow colour, clustering bunches and the fact that they are easily peeled (once cooked). This root, along with sea urchin, is considered a delicacy. The plant itself is a fine stemed fern. These roots may well be the rhizomes of the spiny woodfern.

[77] See 'crawling; anybody on hands and knees'

**salmon**

| | | |
|---|---|---|
| 'chum/ dog salmon'(MG 6) | [ƛ̓ʷə̱́x̣ʷəy] | /ƛ̓ox̣ʷ-ay/[78] |
| (MG 184) | ~[ƛ̓óx̣ʷɑy] | root - ? |
| 'chum /dog salmon (pl)' | [ƛ̓ʷə̱́x̣ʷƛ̓ʷə̱x̣ʷəy] | /ƛ̓əx̣ʷ-ƛ̓ox̣ʷ-ay/ |
| (MG 185,532) | ~[ƛ̓ə́x̣ʷƛ̓əx̣ʷɑ̀y] | CəC pl - root - ? |
| 'small dog salmon (dim)' | [ƛ̓ɨ́ƛ̓x̣ʷɑyʊ̀ɬ] | /ƛ̓e-ƛ̓ox̣ʷ-ay-oɬ/ |
| (MG 533) | | Ce - root - ? - dim |
| also alternate: | [ƛ̓ɨƛ̓x̣ʷɑy̓] | /ƛ̓e-ƛ̓ox̣ʷ-ay-ʔ/ |
| | | Ce - root - ? - dim gl |
| 'cohoe, salmon'(MG 186) | [θɑ́ʔən] | /θaʔən/ |
| | ~ [s̪ɑ́ʔən] | root |
| 'cohoe (pl)'(MG 187) | [θɑ́ʔθɑʔən] | /θaʔ-θaʔən/ |
| | ~ [s̪ɑ́ʔs̪ɑʔən] | CVC pl - root |
| 'Pink salmon'[79] | [q̓ʷɑ́tičɨn] | /q̓ʷat-ečən/ |
| (MG 529) | | root - LS 'back' |
| 'lots of Pink salmon (pl)' | [q̓ʷʌ́tʰq̓ʷʌtičɨn] | /q̓ʷət-q̓ʷat-ečən/ |
| (MG 530) | | CəC pl - root - LS 'back' |
| 'small Pink salmon (dim)' | [q̓ʷɛ́q̓ʷʰteʸčɨn] | /q̓ʷe-q̓ʷat-ečən/ |
| (MG 531) | | Ce - root - LS 'back' |
| 'Spring/Chinook salmon' | [θáç'əm] | /θaç'-əm/ |
| (MG 521) | | root - ? |

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78 The suffix -ay appears frequently attached to animal names; however, it is unclear whether or not it is an extension of either the LS for 'human' (i.e.'animate') or perhaps the LS 'tree, long objects'.

79 This is also refered to as the humpback or "eating" salmon (i.e. salmon for eating).

| | | |
|---|---|---|
| 'lots of Spring salmon(pl)' (MG 522) | [θə́ç'θaç'əm] | /θəç'-θaç'-əm/ CəC pl - root - ? |
| 'small Spring salmon (dim)' (MG 523) | [θáθaç'e·mù̆ɬ] ~[θáθaç'ɛ·mù̆ɬ] | /θa-θaç'-e-m-ʔ-oɬ/ CV - root - dim - ? -dim gl - dim |
| 'salmonberry' (MG 100) | [t̓éʔnəqʷʰ] | /t̓eń-eqʷ/ root - ? |
| 'salmonberry bush' (MG 101) | [t̓éʔnɨqʷʌ̀y] ~[t̓éʔnɨqʷʌ̀̌y] | /t̓eń-eqʷ-ay/ root - ? - LS 'tree, bush' |
| 'salt water' (MG 139) | [q̓ʷóƛ̓qʷo] | /q̓ʷoƛ̓-qʷo/ root - LS 'water' |
| 'lots of salt water (pl)' (MG 140) | [q̓ʷóƛ̓q̓ʷoƛ̓qʷo] | /q̓ʷoƛ̓-q̓ʷoƛ̓-qʷo/ CVC pl - root - LS 'water' |
| 'sand dollar'[80] (MG 42) | [qʷéyᵊqʷəy pɛ̀pskɪ̀tʰ] | |
| 'sandpiper' (MG 34) | [č̓íč̓tʲy̓ə̀x̣] | /č̓e-č̓etey̓əx̣/ |
| 'sandpipers (pl)' (MG 578) | [č̓í·č̓etʲyəx̣] | /č̓ət-č̓etey̓əx̣/ |
| 'small sandpiper'(MG 579) | [č̓íč̓tiʸɑx̣òɬ] | |
| 'Saturday' (MG 81) | [t̓ə́q̓ʷtəm][81] ~[t̓ə́̌q̓ʷtəm] | |
| 'scar' (MG 304) | [q̓ɑyɪƛ̓] | /q̓aʸəƛ̓/ root |

80 According to Mrs. George this means literally "sand biscuit or wafer." I assume that the second part is a recent borrowing from English "biscuit."

81 See the Sechelt root - t̓eq̓ʷ - 'break.' Saturday is the day when the work-week "breaks or ends" Beaumont (1985:84).

| | | |
|---|---|---|
| 'scars (pl)' (MG 305) | [q̓áq̓ajɪ̀ƛ̓] | /q̓a-q̓aYəƛ̓/ Ca - root |
| 'sea cucumber' (MG 44) | [ʔáʔɬʌs] ~[ʔáʔɬ̩ʌs] | /ʔal̓as/ root |
| 'sea cucumbers (pl)' (MG 628) | [ʔʌ́ɬʔaɬ'ʌṣ] | /ʔəl̓-ʔal̓as/ CəC pl - root |
| 'small sea cucumber' (MG 629) | [ʔáʔɬaṣòɬ] ~[ʔáʔɬaṣòɬ] | /ʔa-ʔal̓as-oɬ/ CV - root - dim |
| 'small sea cucumbers' (MG 630) | [ʔʌ́ɬʔaɬ'ʌṣòɬ] | /ʔəl̓-ʔal̓as-oɬ/ CəC pl - root - dim |
| 'sea lion' (MG 177) | [kʷúmaqɪn] ~ [kʷúmaqᵻn][82] | /kʷom-aqen/ root - LS 'head' ? |
| 'sea lions (pl)'(MG 178) | [kʷúmkʷumàqɪn] | /kʷom-kʷom-aqen/ CVC pl - root - LS 'head' |
| 'seagull' (MG 35) | [héyum̓] | /hey-om-ʔ/ root - ? - gl |
| 'seagulls (pl)' (MG 36) | [híyᵊheyoˀmʔ] | /həy-hey-om-ʔ/ CəC pl - root - ? - gl |
| 'little seagull (dim)' (MG 37) | [hɛ́hiyùməɬ] | /he-hey-om-oɬ/ CV- root - ? - dim |
| 'little seagulls (dim pl)' (MG 38) | [hɛ́yiyumuɬ] | /hey-hey-om-oɬ/ CVC - root - ? - dim |

[82] When I asked Mrs. George what this word meant, she said "it sounds like the sea lion has a lump or something on his head."

| | | |
|---|---|---|
| 'seal' (MG 18) | [ʔásxʷ] | /ʔasxʷ/<br>root |
| 'seals (pl)' (MG 19) | [ʔə́sʔasxʷ] | /ʔəs-ʔasxʷ/<br>CəC pl - root |
| little seal (dim)'<br>(MG 20) | [ʔáʔseᵊxʷùɬ] | /ʔa-ʔas-e-xʷ-oɬ/<br>CV - root - dim - root - dim |
| 'little seals (dim pl)'<br>(MG 21) | [ʔə́sʔasxʷùɬ] | /ʔəs-ʔasxʷ-oɬ/<br>CəC pl - root - dim |
| **sea urchin** | | |
| 'green sea urchin'<br>(MG 40) | [ʔáp̓tən] | /ʔap̓-tan/<br>root - LS 'enclosure, container' |
| 'green sea urchins (pl)'<br>(MG 585) | [ʔʌ́p̓ʔap̓tən] | /ʔəp̓-ʔap̓-tan /<br>CəC pl - root - LS 'enclosure' |
| 'small sea urchin (dim)'<br>(MG 586) | [ʔáʔp̓ətənòɬ][83] | /ʔa-ʔap̓-ə-tan-oɬ/<br>CV-root - lv -LS enclosure-dim |
| 'purple sea urchin'<br>(MG 41,583) | [másɛʔqʷ][84]<br>~[másɛqʷ] | /mas-eq̓ʷ/<br>/mas-eqʷ/<br>root - LS |
| 'lots of purple sea urchins'<br>(MG 583a) | [mʌ́sməsɛqʷʰ] | /məs-mas-eqʷ/<br>CəC pl -root - LS |
| 'small purple sea urchin'<br>(MG 584) | [mɛ́mseᵊqʷòɬ] | /me-mas-e-eqʷ-oɬ/<br>Ce - root - dim - LS - dim |

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83 The second glottal stop is fully released in this form.

84 The glottalization is not consistant in this form. A glottal stop is present in the first instance on the tape recording but is not there in the subsequent repetitions. See 'bald' with =eqʷən 'head' for a plausible alternative to the meaning of this lexical suffix.

| | | |
|---|---|---|
| 'sea serpent '(MG 495) | [ʔáyᵊhoṣ][85] | /ʔay-h-os/<br>root - ? - LS 'head' |
| 'sea serpents (pl)'<br>(MG 496) | [ʔíʔayᵊhoṣ]<br>~[ʔí·ʔayᵊhoṣ] | /ʔəy-ʔay-h-os/<br>CəC pl - root - ? - LS 'head' |
| 'seven' (MG 117) | [ç'óʔčiṣ]<br>~ [ç'óʔčɪṣ] | /ç'o-čes/<br>root - hand (truncated)? |
| 'seventy' (MG 493) | [ç'óčɪsaɬšʸèʔᵉʰ]<br>~[ç'óčɪsaɬšʸɛ̀ʔᵋʰ] | /ç'očes-aɬ- šaʔə/<br>'seven' - cl - 'tens' |
| 'shark'[86] (MG 514) | [k̓ʷɒ́·č̓ɛqʌ̀ɬ]<br>~[k̓ʷɒ́·č̓æˆqə̀ɬ] | /k̓ʷač̓-aqəɬ/<br>root - ? |
| 'lots of sharks (pl)'<br>(MG 515) | [k̓ʷɪ́č̓ʰk̓ʷa·č̓ɛˇqʌɬ]<br>~[k̓ʷɪ́č̓ʰk̓ʷa·č̓æˆqʌɬ] | /k̓ʷəč̓-k̓ʷač̓-aqəɬ/<br>CəC pl - root - ? |
| 'small shark (dim)'<br>(MG 516) | [k̓ʷík̓ʷač̓æqʌɬòɬ] | /k̓ʷe-k̓ʷač̓-aqəɬ-oɬ/<br>Ce - root - ? - dim |
| 'shiny' (MG 250) | [ᵑgə́ɬ] | /Wəɬ/<br>root |
| 'shiny (pl)' (MG 251) | [gə́wɬ] | /Wə-Wəɬ/<br>CV - root |
| 'shoes' (MG 94) | [qʷʌ́ɬeʔšɨn] | |

85 This is also the name given to Savary Island.

86 See the related form 'dogfish.'

| | | |
|---|---|---|
| 'shoulder (human)' (MG 286) | [ṗí^əqən] | /ṗəy-qən/[87] root - LS ? |
| 'shoulders (pl)' (MG 287) | [ṗíṗi^əq^x·ən] | /ṗəy-ṗəy-qən/ CəC pl - root - LS |
| 'singing' (MG 622) | [ẇúʔ^əwuwəm] ~[ẇ̩wuwəm][88] | /ẇo-ẇow-əm/ CV - root - intr |
| 'sink; to sink (in water)' (MG 365) | [θáʔ^əyɨm] | |
| 'sinking' (MG 366) | [θʌ́θiyɨm] | |
| 'six' (MG 116) | [t̓ʌ́x̣əm] ~ [t̓áx̣əm] | /t̓ax̣əm/ |
| 'Sliammon (old place name)' (MG 65) | [t̓éšošəm][89] | /t̓eš-oš-əm/? |
| 'Sliammon (people)' (MG 64) | [ɬáʔamɪn] | /ɬam̓-ən / root - ? |
| 'lots of Sliammon people' (MG 638) | [ɬʌ́mɬaʔàmɪn] ~[ɬʌ́mɬaʔàmɪn] | /ɬəm̓-ɬam̓-ən/ CəC pl - root - ? |
| 'Sliammon language' (MG 66) | [ɬáʔamɪnqən] | /ɬam̓-ən-qen/ root - ? - LS 'language' |

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87 Kroeber (1985) cites /-aʔyax̣an/ as the LS for 'upper arm'; the related stative form is /-aʔyax̣anʔ/. Hagège (1981:61) gives =ay-ex-ən 'shoulder blade'.

88 It is unclear whether or not the word-final m is glottalized—[m̓] or [m]. Notice also that this example provides a single counterexample to the hypothesis that glottalized resonants do not occur in syllable-initial position. In this example [ẇ] is syllable-initial as well as word-initial. This example does provide some evidence, however, for the placement of glottalized resonants on the Sonority Hierarchy in Chapter 1.

89 This [š] is peculiar. It is almost a retroflex [ʂ] and may be attributed to a distinction between a slit and a groove articulation.

| | | |
|---|---|---|
| 'slim; slender' (MG 333) | [tík̓ʸ] | /tek̓/ |

**sole**

| | | |
|---|---|---|
| 'sole, bottom of foot' (MG 320) | [pʌ́qaɬšɪn] | /pəq-aɬ-šen/ 'white' - cl - LS 'foot, leg' |
| 'soles, bottoms of feet' (MG 321) | [pə́qpəqaɬšɪn] | /pəq-pəq-aɬ-šen/ CəC pl - root - cl - LS 'foot, leg' |
| 'spill; tip over' (MG 459) | [q̓ʷə̱́ɬ] | |
| 'spilling' (MG 460) | [q̓ʷúq̓ʷɬ] | |
| 'Spring (time of year)'[90] (MG 86) | [ƛ̓ʌ́q̓əyʔəmʔ] | /ƛ̓əq̓-y̓əm̓/ root - ? |
| 'Spring (pl)' (MG 227) | [ƛ̓ʌ́q̓ƛ̓ʌq̓èy̓əm] | /ƛ̓əq̓-ƛ̓əq̓- y̓əm/ CəC pl - root - ? |
| 'starfish'[91] (MG 39) | [qʷíƛ̓šɪn][92] | |
| 'lots of starfish (pl)' (MG 581) | [q̓ʷʊ́ƛ̓q̓ʷɛƛ̓šìn] | |
| 'small starfish (dim)' (MG 582) | [q̓ʷíq̓ʷᵊƛ̓ši·nòɬ] | |
| 'steer, drive' (MG 344) | [ᵑgá:ç'əpʰ] | /Waʔ-ç'əp/ |

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90 This literally means the "time when all the buds are coming out."

91 Mrs. George did not seem to have a separate name for the 'sunfish'—the variety of starfish with many more than five legs.

92 This singular form seems to lack glottalization on the initial consonant. Judging from the related plural and diminutive forms this may simply be an error in transcription or may be a systematic difference which still requires explanation.

| | | |
|---|---|---|
| 'steer (car, boat, sailboat)'[93] (MG 345) | [ᵑgá ʔga ʔç'əpʰ] | /Waʔ-Waʔ-ç'əp/<br>CVC pl - root - ? |
| 'he's gone steering' (MG 346) | [hóˇkʷu gá:ç'ə̀pʰ] | /Waʔ-ç'əp/ |
| 'stomach' (MG 330) | [q̓ʷʌ́ʔᵊwəʰ] | |
| 'stump (of a tree)' (MG 200) | [sóp̓ənæčəmɪ̀n] | /sop-ʔ-nač-ə-men/<br>root - gl - LS 'bottom' - lv - instr |
| 'stumps (pl)' (MG 201) | [sə́psopənəčmɨ̀n] | /səp-sop-ə-nač-men/<br>CəCpl - root - lv - LS - instr |
| 'summer' (MG 83) | [ƛ̓ə́qʷo·yɛ] | /ƛ̓əqʷ-oy̓a/[94]<br>root - LS ? |
| 'Sunday (lit: holy night)' (MG 82) | [x̣áx̣ᵃ ʔaɬnʌtʰ] | /x̣a-x̣aʔ-aɬ-nat/<br>CV - root - CL - 'night' |
| 'supervising;[95] watching over' (MG 375) | [héhegùsθutʰ] | /he-heW-os-θot/<br>CV - root 'chief' - LS face - reflex |
| 'swim' (MG 165) | [nɪ́šʸəm] | /nəš-Vm/<br>root - intr |

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93 Mrs. George remembers a time when they used to travel by "sailboat"—a dugout canoe rigged with a blanket-sized sail and mast . It was steered by means of a paddle which functioned as the rudder.

94 Notice the similarity between the root for 'summer' and the forms Kroeber (1988:149) records as the root for 'tough' ƛ̓əqʷ and the form for 'get tough' ƛ̓əqʷ-əqʷ.

95 See the related forms for 'chief.'

***T***

**tail**

| | | |
|---|---|---|
| ‘it's tail’(MG 551) (of an animal/fish) | [sópənʌčʰṣ][96] | /sop-nač-s/ root - LS ‘root, tail’- 3 Po |
| ‘take it ’ (MG 435) | [mɑ́ʔtʰ] | /maʔ-t/ root - CTr |
| ‘take it’ (MG 436) | [mɑ́ʔəm] | /maʔ-əm/ |
| ‘I'm taking it’ (MG 437) | [mɑ́ʔmɑtəṣ] | /ma-m̓aʔ-t-əs/? |
| ‘talk’ (MG 596) | [q̓ʷɑ́yi] | /q̓ʷaye/ |
| ‘talking’ (MG 597) | [q̓ʷɑ́q̓ʷɑy'ⁱ] | /q̓ʷa-q̓ʷay+ʔ+e/ |
| ‘talk too much’ (MG 43, 598) | [q̓ʷéyᵊqʷey] ~[q̓ʷéy̓ᵊq̓ʷɑy] | |
| ‘ten (cardinal number)’ (MG 120) | [ʔópɑn] ~ [ʔópʌn] | /ʔopan/ |
| ‘thank you’ (MG 483) | [ʔí:motʰ] | /ʔey-mot/ root - very |
| ‘thin; not fat’ (MG 332) | [q̓ˣ·ɑ́yɛmɪtʰ] ~[q̓ˣ·ɑ́yæ·mɪtʰ] | |
| ‘thinking’ (MG 361) | [nónpegɑ̀ʔnəm] ~[nónpegɑ̀ʔnəm] | /no-nop-eWan-ʔ-əm/ CV - root - LS ‘sentiments’ - gl - intr |
| ‘I thought about it’ (MG 362) | [nónpeganᵊmičʰ] | /no-nop-eWan-əm-et-č/ CV - root - LS ‘sentiments’-stv-1 sg Sb |

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[96] See the word for 'stump(s)' above.

| | | |
|---|---|---|
| 'I'll think about it'[97] (MG 363) | [qʷáyegən] | /qʷay-eWan/ root - LS |
| 'three' (MG 113) | [čʰʸǽˆɬʌṣ] | /čalas/ root ? |
| 'third day of the week; Wednesday' (MG 78) | [čʸέɬʌṣ:] | /čalas-s/ root - LS 'day of week' |
| 'thumb' (MG 295) | [ƛ̓ʌ́x̣εq̓ʷoǰε] | /ƛ̓əx̣-eq̓ʷ-oYa/ root - LS - LS 'hand' |
| 'thumbs (pl)' (MG 296) | [ƛ̓ə́x̣ƛ̓əx̣εq̓ʷoǰe] ~[ƛ̓ə́x̣ƛ̓əx̣εq̓ʷoǰε] | /ƛ̓əx̣-ƛ̓əx̣-eq̓ʷ-oYa/ CəC pl - root - LS - LS 'hand' |

**tide**

| | | |
|---|---|---|
| 'tide's coming in' (MG 398) | [ƛ̓ə́ƛ̓q̓ʷoq̓ʷ] | |
| 'tide's very high' (MG 402) | [ƛ̓έq̓ʷomutʰ] | |
| 'tide's going out' (MG 399) | [x̣ʌ́x̣is·] | |
| 'the tide's way out' (MG401) | [xʷə́·xʷiyoẇ] | |
| 'low tide' (MG 397) | [qɑ́·qɑ] | /qaqa/ |
| 'very low tide; tide's way out' (MG 400) | [qɑ́qɑ·mutʰ] | /qaqa-mot/ root - 'very' |

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97 Mrs George describes this as "a different kind of thinking: it is to think in your own heart but never tell anyone." The form 'I'll think about it' expresses real doubt about the possible outcome, completion, or participation of the person who is considering it.

| | | |
|---|---|---|
| 'tip over (old word)'<br>(MG 364) | [qʌ́mq̓ʷ] | /qəmq̓ʷ/<br>root |
| 'tobacco' (MG 196) | [ʔə́ʷwəkʷʰ][98]<br>[ʔə́wʔəwəkʷʰ] | 'lots of tobacco (pl)' |
| (MG 197) | ~[ʔúʔəwəkʷʰ] | |
| 'toe' (MG 316) | [x̣ʷáʔwɑwɨšɨn]<br>~[x̣ʷáʔᵃwɑwɨšɨn] | /x̣ʷaw̓-aw-ə-šen/<br>root - VC -lv- LS 'foot' |
| 'toes (pl)' (MG 317) | [x̣ʷóx̣ʷɑʔwɑwɨšɨn] | /x̣ʷəw̓-x̣ʷaw̓-aw-ə-šen/<br>CəC pl - root - VC - lv- LS 'foot' |
| 'tongue'[99] (MG 278) | [tɪ́xʷsəɬ] | /texʷ-ɬaɬ/<br>root - LS 'throat, tongue' |
| 'tongues (pl)'<br>(MG 279) | [túxʷtixʷsəɬ] | /təxʷ-texʷ-ɬaɬ/<br>CəC pl - root - LS |
| 'tooth' (MG 208) | [ǰɨ́nɨs·] | /Yənəs/[100]<br>root |
| 'teeth (pl)' (MG 209) | [ǰɨ́nǰɨnɨs·] | /Yən-Yənəs/<br>CəC pl - root |
| 'top of the foot' (MG 318) | [q̓ʷɪ́t̓ɪǰɪnšɪn] | |
| 'tops (of feet (pl))'<br>(MG 319) | [q̓ʷɨ́t̓q̓ʷət̓ɪǰɪnšɪn] | |

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98 This word is pronounced with continual lip protrusion and rounding; a point upon which Mrs. George insisted.

99 This word is used to refer to 'deer's tongue' as well.

100 Hagège (1981) records -nəs as the lexical suffix for 'tooth, tip, cutting edge.'

| | | |
|---|---|---|
| 'tree (generic)' (MG 172) | [ǰéʔᵊǰè] ~ [ǰέʔᵊǰɛ̀] ~[ǰέʔᵊǰè] | /YaYa/ |
| 'trees (pl)' (MG 173, 425) | [ǰeǰí:ʔəm] ~ [ǰɨ́ǰiʔəm] ~[ǰέǰiʔəm] | |
| 'small tree (dim)' (MG 424) | [ǰɨ́ǰǰɛʔ] | |
| 'lots and lots of trees; forest; treed area' (MG 426) | [ǰɨ́ǰɛǰìʔəm] | |
| 'true; it's true' (MG 467) | [tóx̣ʷetʰ] | /tox̣ʷ-et/ root - stv |
| 'really true; the truth' (MG 468) | [tóx̣ʷaytᵊmʊtʰ] | /tox̣ʷ-et-mot/ root - stv - very |
| 'turn over, to flip (as of bread, fish, eggs)' (MG 469) | [p̓í·č̓ətʰ] | /p̓əyč̓-ət/ root - CTr |
| 'I'm turning it over' (MG 470) | [p̓ə́p̓iᵊč̓ətʰ] | /p̓ə-p̓əyč̓-ət/ CV - root - CTr |
| 'You turn it around; you spin it (circular motion)' [101] (MG 473) | [ṣʌ́ɬčxʷʰ] | /sal-čxʷ/ root - 2 sg Sb |
| 'turning, keep on turning' (MG 474) | [ṣə́ṣəɬʌm] | /sa-sal-əm/ CV - root - intr |
| 'turning all the time' (MG 475) | [ṣʌ́ɬṣɬ̩ᵊm] | /səl-sal-əm/ CəC pl - root - intr |

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[101] The motion is a circular motion, as you would turn a glass or the continual rotation of a Ferriswheel.

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|---|---|---|
| 'two ' (MG 112) | [sá?a] | /sa?a/ |
| 'second day of the week; Tuesday' (MG 77) | [sá?aṣ ] | /sa?a-s/ root 'two' - LS day of week |

***U***

| | | |
|---|---|---|
| 'untie; untangle (it)' (MG 461) | [$k^w$ə́ɬ($t^h$)] | /$k^w$əɬ-t/ root - CTr |
| 'untying, untangling' (MG 462) | [$k^w$ú$k^w$ɬ$t^h$] | /$k^w$ə-$k^w$əɬ-t/ CV - root - CTr |
| 'untying, untangling roots' (MG 463) | [č̓ə́č̓$^i$yəq̓$^h$] | |
| 'use it (a shovel, wheelbarrow)' (MG 376) | [yə́q̓əš] | /yəq̓-aš/ root - Tr |
| 'using it' (MG 377) | [yíq̓ašəs] | /yə-yəq̓-aš-as/ CV - root - Tr - 3p Sb |
| 'somebody used it' (MG 378) | [yə́q̓amuɬ č̓ɛ] | /yəq̓-am-oɬ č̓a/ root - ? - past ? |

***W***

| | | |
|---|---|---|
| 'walk; to walk' (MG 212) | [?ɛ́m·aˆš] | /?emaš/ root |
| 'people walking' (MG 213) | [?ɛ́?ɛmɛˆgiš] | /?e-?em-aWeš/ CV - root |
| 'walking' (MG 214) | [?ám?ɛməš] | /?am-?emaš/ CaC - root |
| 'wash' (MG 438) | [p̓ɛ́ç'ə$t^h$] ~[p̓é˅ç'ə$t^h$] | /p̓eç'-ət/ root - CTr |
| 'I washed it already' (MG 441) | [p̓ɛ́ç'aytoˆɬ$č^h$] ~[p̓ɛ́ç'aytuɬ$č^h$] | /p̓eç'-ay-t-oɬ-č/ root - ? - CTr - past - 1 sg Sb |

| | | |
|---|---|---|
| 'wash clothes' (MG 438a) | [ṗéç'ayiç'əʰ] | /ṗeç'-ay-eç'a/<br>root - ex - LS 'clothing' |
| 'washing clothes' (MG 439) | [ṗéṗeç'ayiç'əʰ] | /ṗe-ṗeç'-ay-eç'a/<br>CV - root - ex - LS 'clothing' |
| wash (of hands, dishes) | | |
| 'go wash your hands' (MG 442) | [ç'ə́x̣ʷoy̓əm] | /ç'əx̣ʷ-oY'a-əm/<br>root - LS 'hand' - intr |
| 'washing your hands' (MG 443) | [ç'ə́ç'x̣ʷoy̓əm] | /ç'ə-ç'əx̣ʷ-oY'a-əm/<br>CV - root - LS 'hand' - intr |
| 'washing dishes' (MG 444) | [ç'ə́ç'x̣ʷɔṁm̩] | /ç'ə-ç'əx̣ʷ-oṁ-m/ |
| 'washroom, toilet' (MG 446) | [wá(·)čuʔtʰxʷʰ] | /wač-ẁ-txʷ/ |
| 'water' (MG 447) | [qˣ·áˀəyɛʰ] | /qay̓a/<br>root |
| 'lots of water (pl)' (MG 448) | [qˣ·éqˣ·ay̓ɛʰ]<br>~[qˣ·éqˣ·ay̓əʰ] | /qəy̓-qay̓a/<br>CəC pl - root |
| 'a little bit of water (dim)' (MG 449) | [qˣ·ɛ́qˣ·ɨy̓ɛʰ] | /qe-qay̓a/<br>Ce - root |
| 'wave (of water)' (MG 394) | [ǰúw(ə)kʷʰ] | /Yowəkʷ/ |
| 'waves (pl)' (MG 395) | [ǰúwǰuwkʷʰ] | /Yow-Yowəkʷ/<br>CVC pl - root |
| 'small waves (dim pl)' (MG 396) | [ǰúǰɛẁəkʷə̀ɬ] | /Yo-Yew-ʔ-əkʷ-oɬ/<br>CV - CeC root - gl - root - dim |

**weather**

| | | |
|---|---|---|
| 'bad weather' (MG 390) | [ɬáx̣eyɨm] | /ɬax̣-a/ey-əm/ |
| 'Westerly (wind)' (MG 386) | [túumàỷə] | /tow-maỷə/ |
| 'west wind' (MG 387) | [tútuumàỷə] | /to-tow-maỷə/ |

**whale**

| | | |
|---|---|---|
| 'humpback whale'(MG 179) | [q$^{w}$ʌ́nɪsː] | |
| 'humpback whales (pl)' (MG 180) | [q$^{w}$ʌ́nq$^{w}$ʌnɪsː] | |
| 'killer whale, black fish'[102] (MG 17) | [nə́nq̇ʌm] | /nə-nəq̇-əm/ CV - root - intr |
| 'lots of killer whales (pl)' (MG 549) | [qʌ́x̣ $^{ə}$ nə́nqʌm] | /qəx̣ nə-nəq-əm/ many CV - root - intr |
| 'small killer whale (dim)' (MG 550) | [nə́nqʌmʊ̀ɬ] | /nə-nəq-əm-oɬ/ CV - root - intr - dim |
| 'what's your name?' (MG 548) | [k$^{w}$ə́θ q$^{x}$·áymex$^{w}$òɬ nán][103] | |

**white**

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|---|---|---|
| 'all white '[104] (MG 129) | [pʌ́q$^{h}$pʌq$^{h}$] | /pəq-pəq/ CəC pl - root |

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[102] Mrs. George said this also means 'diving.'

[103] This phrase has rising intonation, typical of questions. It also appears to contain the past marker, which indicates that the phrase may be more appropriately translated: 'What was your Indian name?'

[104] Mrs. George explained the context in which this word might be used: if you were asked what colour your dog or your house was, you could respond with [pʌ́q$^{h}$pʌq$^{h}$]: 'it's all white.'

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|---|---|---|
| 'white blanket'(MG 500) | [pʌ́qokʷʰtʰ] | /pəq-okʷ-t/ 'white' - LS 'blanket' - ? |

**wind**

| | | |
|---|---|---|
| 'wind from the north' (MG 388) | [q̓ʷə́ytᵊʔɑqʰ] | /-ʔaq/ -LS 'wind' |
| 'wind from the south' (MG 389) | [ɬɑ́yišᴵʔɑqʰ] | /ɬayeš-ʔaq/ root ? - LS 'wind' |
| 'south-east wind' (MG 385) | [tə́ɬ̀qɑʔɑ̆qʰ] | |

**wing**

| | | |
|---|---|---|
| 'bird's wing'(MG 569) | [ǰɨ́mʔɑy] | /Yəm-(ʔ)ay/ root - LS 'tree; wing' |
| 'lots of wings (pl)' (MG 570) | [ǰɨ́mǰɨmʔɑyɔɬ] | /Yəm-Yəm-(ʔ)ay-oɬ/ CəC pl - root - LS wing - dim |
| | ~[ǰɨ́mǰɨmʔɑỳ] | /Yəm-Yəm-(ʔ)ay-ʔ/ CəC pl - root - LS wing - gl |
| 'small wing (dim)' (MG 571) | [ǰɨ́ǰəmɑyʔɔ̀ɬ] | /Yə-Yəm-ay-(ʔ)oɬ/ CV - root - LS - dim |
| 'small wings '(MG 571) | [ǰɨ́mǰɨmʔɑỳɔ̀ɬ] | /Yəm-Yəm-(ʔ)ay-ʔ-oɬ/ CəC pl - root - LS 'wing' - dim gl - dim |
| 'winter' (MG 85) | [sɔ́wtičʰ]~[sɔ́tɪčʰ] | /səw-teč/ root - ? |
| 'winter; start of winter (pl)' (MG 228) | [ṣɔ́ṣotĭčʰ]~[ṣɔ́ṣotɪčʰ] | /səw-səw-teč/ CəC pl - root - ? |
| 'without clothes' (MG 603) | [ɬɑ́ʔᵃgìç'aʰ] | /ɬaW-eç'a/ root - LS 'clothing' |

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|---|---|---|
| 'everybody's without clothes' (MG 604) | [ɬáɬgiç'aʰ] | /ɬa-ɬaW-eç'a/ CV - root - LS 'clothing' |
| 'without a hat' (MG 605) | [ɬə́guṣ] ~ [ɬə́goṣ] | /ɬaW-os/ root - LS 'face, head' |
| 'everybody's without a hat' (MG 606) | [ɬáɬᵊguṣ] | /ɬa-ɬaW-os/ CV - root - LS 'face' |
| 'without shoes; barefoot' (MG 601) | [ɬúwšɪn]~[ɬúwšin] | /ɬəW-šen/ root - LS 'foot, leg' |
| 'everybody's without shoes' (MG 602) | [ɬíɬᵊgɪšɪn̓] | /ɬə-ɬəW-šen-ʔ/? |
| 'wolf'[105] (MG 508) | [ƛ̓áʔɬʔomʔ] | /ƛ̓aɬʔom̓/ root |
| 'wolves (pl)'(MG 509) | [ƛ̓íɬƛ̓aɬʔoʔb°] | /ƛ̓əɬ-ƛ̓aɬʔom̓/ CəC pl - root |
| 'small wolf (dim)' (MG 510) | [ƛ̓ɨ́ƛ̓aɬʔòmòtùɬ] | /ƛ̓ə-ƛ̓aɬʔom-ot-oɬ/ |

**woman**

| | | |
|---|---|---|
| 'young woman' (MG 143) | [čúyʔsàɬtxʷ] | /čoy̓-saɬ-txʷ/ 'young'- 'woman'-LS 'house' |
| 'young women (pl)' (MG 144) | [čùyʔ sə́ɬsaɬtxʷ] | /čoy̓ səɬ-saɬ-txʷ/ 'young' CəC pl - root - LS 'house' |
| 'wood' (MG 198) | [q̓ʷéy̓ᵊx̣] | /q̓ʷey̓x̣/ root |
| 'wood (pl)' (MG 199) | [q̓ʷéq̓ʷey̓ᵊx̣] ~[q̓ʷéq̓ʷex̣] | /q̓ʷəy̓-q̓ʷey̓x̣/ CəC pl - root |

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105 The gloss originally given this word was 'coyote.'

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|---|---|---|
| **'woodpecker' (MG 75)** | [q̓ʷáq̓ʷɑq̓ʷɑ̀wadɪ́xʷ] | |
| **'wrinkle' (MG 329)** | [q̓ʷó˘q̓ʷ⁰pɔs] | /q̓ʷo-q̓ʷop-os/ <br> **CV - root - LS 'face, head'** |
| **'wrist' (MG 298)** | [x̣ʷə́ç'q̓ʷo·ǰɛ] | /x̣ʷəç' -(e)q̓ʷ-oY'a/ <br> **root - LS elongated - LS 'hand' object** |
| **'wrists (pl)' (MG 299)** | [x̣ʷɑ́ç'ɛᵊq̓ʷò·ǰe] <br> ~[x̣ʷɑ́ç'ɛᵊq̓ʷò·ǰɛ] | /x̣ʷaç'-eq̓ʷ-oY'a/ <br> **root - LS - LS 'hand'** |

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