THE SQUAMISH LANGUAGE

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STUDIA MEMORIAE
NICOLAI VAN WIJK DEDICATA

edenda curat

C. H. VAN SCHOONEVELD

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THE SQUAMISH LANGUAGE

GRAMMAR, TEXTS, DICTIONARY

by

AERT H. KUIPERS

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To

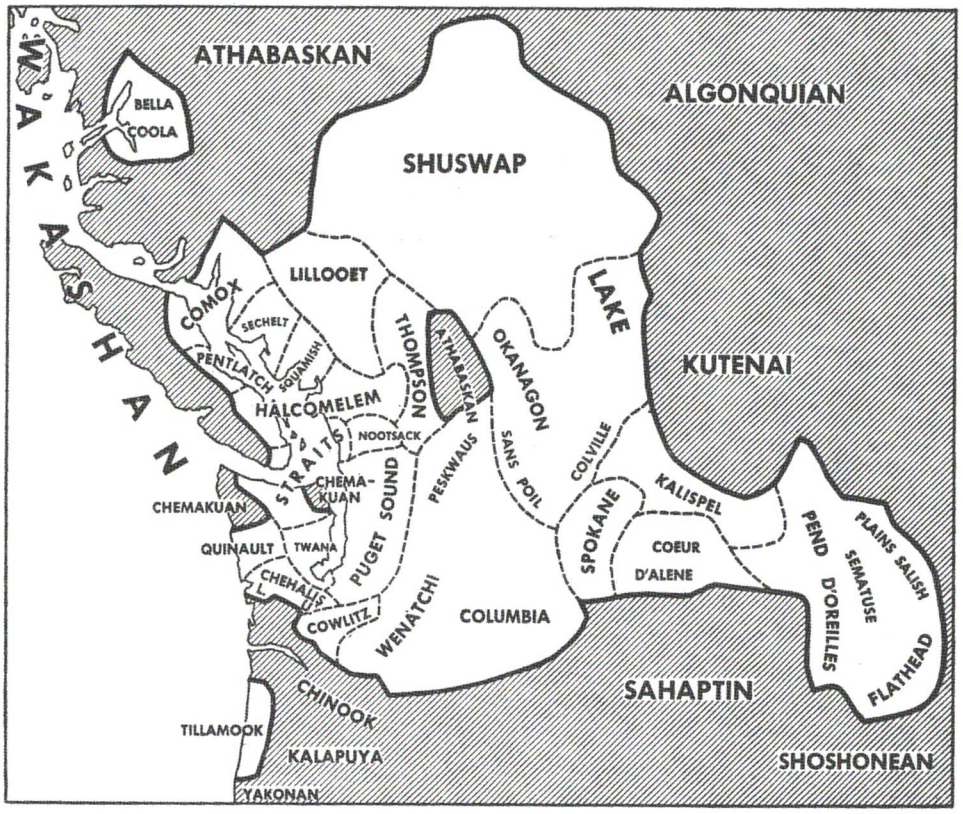
LOUIS MIRANDA

and to the memory of

ISAAC JACOB

and

ALEC PETER



MAP OF THE SALISH LANGUAGE AREA

PREFACE

The Squamish tribe, a subdivision of the Coast Salish stock of North America, at one time inhabited the area around Howe Sound and along the banks of the lower Squamish River and Cheakamus Creek in southern British Columbia. More recently they spread to the shores of English Bay, False Creek and Burrard Inlet as far as Seymour Creek on the northern and Coal Harbour on the southern bank.[1] Their neighbors were the Sechelt in the west, the Lillooet in the north and northeast, and Halcomelem-speaking tribes in the south and southeast. Their first contact with white men occurred in the summer of 1792 when Captain Vancouver sailed into English Bay and Howe Sound, an event still retained by popular memory (see text IV). Early white settlers estimated the number of the Squamish at several thousands.[2] The tribe was decimated by a succession of smallpox epidemics, and was reduced to a few hundred at the end of the 19th century. Though since then the population has increased,[3] the language is now close to extinction: it is spoken only by older people (number unknown) most of whom are living in the Vancouver area.

A classification of the Salish languages was made by Swadesh on the basis of a lexicostatistical analysis of comparative vocabularies in the Boas Collection of the American Philosophical Society.[4] This classification, which progresses from Divisions to Branches, Groups and Languages, is quoted below with some changes and additions. A few alternative designations are given in parentheses. Where Swadesh's groups encompass more than one language, his group-names may cause confusion, being identical with group-member names. In these cases they are replaced by other names where such have been proposed; otherwise they are left out and the group is identified by an Arabic numeral only. In some groups a number of language-names have been added for practical reasons, and the languages within each group are listed without further bracketing. In the case of the Halcomelem (II B2) as well

[1] Hill-Tout 1900:473-475; Barnett 1938:140.
[2] Hill-Tout 1900:473.
[3] Verma 1954:11.
[4] Swadesh 1950.

as of the Lkungen group (II B3) the members are mutually intelligible dialects of languages referred to with one and the same name by all speakers.[5] This may be the case in one or more of the other groups too. For the geographical distribution of the languages see the map on p. 6.

I. Bella Coola

II. Coast Division
  A. North Georgia Branch
    1) Comox (Sliammon)
    2) Sechelt (Sisiatl)
    3) Pentlatch
  B. South Georgia Branch
    1) Squamish
    2) Halcomelem: Nanaimo, Cowichan, Chemainus, Musqueam, Kwantlen, Katzie, Sumas, Chehalis, Chilliwack, Tait (the latter seven referred to as "Lower Fraser")
    3) Lkungen (Straits): Clallam, Songish, Saanich, Semiahmoo, Lummi, Samish
    4) Nootsack
  C. Puget Sound Branch: Skagit, Duwamish, Snoqualmie, Snohomish, Nisqualli
  D. Hood Canal Branch: Twana
  E. Olympic Branch
    1) Cowlitz, Upper Chehalis
    2) Satsop
    3) Lower Chehalis, Quinault

III. Oregon Division: Tillamook, Siletz

IV. Interior Division
    1) Lillooet
    2) Thompson, Shuswap
    3) Okanagon, Colville, Sanpoil, Lake, Spokane, Kalispel, Pend d'Oreille, Flathead, Sematuse, Plains Salish
    4) Wenatchi, Columbia, Peskwaus
    5) Coeur d'Alene

Sapir hypothetically combined Salish with Chemakuan (Chemakum-Quileute) and Wakashan (Kwakiutl-Nootka) into a "Mosan" super-stock[6] and suggested a rela-

[5] Elmendorf-Suttles 1960:3.

[6] The name is based on the numeral 'four', in many Salish languages *mus*, Chemakuan *maʔyas*, Wakashan (Kwakiutl) *mu*.

tionship of this stock to Kutenai and Algonquian.[7] No thorough testing of these hypotheses is possible because of insufficient data.[8]

Of the Salish languages, only a few have received more or less extensive treatments (overall or partial) in recent times: *Halcomelem* (Elmendorf-Suttles 1960: Vocabulary), *Snoqualmie-Duwamish* (Tweddell 1950: Phonology, Morphology), *Upper Chehalis* (Kinkade 1963-64: Phonology, Morphology), *Kalispel* (Vogt 1940: Grammar, Texts, Dictionary), *Coeur d'Alene* (Reichard 1938: Grammar; 1939: Stem-List). For others only sketchy and/or older data are available (see Bibliography).

A sketch of Squamish was published by Hill-Tout as part of an interesting ethnographical description.[9] This material has to be used with caution because of an inadequate and inconsistent notation and various other defects. Nevertheless, it has not lost its value: Hill-Tout's word-list proved useful as a starting-point in obtaining lexical items, his phrases contain valuable syntactic material, and in individual cases his data make it possible to establish an older, fuller word-form than was recorded half a century later.

The material on which the present description is based was collected in the years 1951-54 and in the fall of 1956. — During the first of these periods I was on the staff of the Department of Slavonic Studies of the University of British Columbia in Vancouver. My informants were first Mr. Isaac Jacob (1883-1956): in the text referred to as "IJ") of Capilano Reserve, and later Mr. Alex Peters, known as "Alec Peter" (1881-1964; referred to as "AP") of Musqueam Reserve. Mr. Peters knew Musqueam besides Squamish. The working-sessions were held at the homes of the informants, and occasionally Mrs. Jacob and Mrs. Peters would make comments or volunteer information. During this period a fairly large number of words, short phrases and sentences were collected, and outlines of phonology and morphology were worked out. Much remained problematic; also, I was unable to obtain longer connected texts. — In the fall of 1956 I returned to Vancouver for a short period, in which I had the good fortune of being able to engage the services of Mr. Louis Miranda (born 1892; referred to as "LM") of Mission Indian Reserve. Mr. Miranda, an exceptionally alert informant, was of great assistance in checking and clearing up a number of difficult points. He was furthermore able to dictate texts, which in turn provided additional lexical and grammatical material. Translations and a rapid analysis of these texts were made while I could still dispose of Mr. Miranda's invaluable cooperation.

The material thus obtained was further analysed and classified after my return to Holland. To many questions which arose during the work answers could be found in the available corpus. In a few cases alternative solutions had to be given (the choice depending on Squamish forms not represented in the material). Some questions had to remain open. In such cases I have preferred stating the problem

[7] See Swadesh 1953:28.
[8] See Appendix, p. 401.
[9] HillsTout 1900:495-518 section "Linguistics".

in detail to "streamlining" the description. The present book contains all the material of which I dispose; on matters that are not treated (e.g. sentence-intonation, the expression of ordinal numbers) data are lacking. The categorization of the material is based primarily on formal criteria. Except in trivial cases, all available examples of a given category are quoted (e.g. of a particular type of transitive verb or subordinate clause). In the Dictionary internal and external etymologies are given, the latter take into account only those languages for which more or less extensive word- or stem-lists are available (for details see p. 245f.). A number of uncertain comparisons are included (marked "Cf.?"); here additional data may show whether the question-mark or the comparison itself has to be dropped.

In the course of my work on Squamish I had the pleasure of incurring debts of gratitude to several persons and institutions.

First of all I want to thank Wayne Suttles, who introduced me both to Salish linguistics and to all three of my informants. In the difficult initial stages of the work it was a great advantage to be able to discuss problems with a fellow-linguist interested in the same field. I have also greatly profited from Wayne Suttles' expert ethnographical knowledge of the Coast Salish.

I gratefully acknowledge the help and encouragement given to me by Harry B. Hawthorn. Thanks are also due to the Canadian Social Science Research Council, which, through the good offices of Harry Hawthorn, defrayed my expenses for travel and informant-fees.

I thank Mrs. Ingeborg Houwen-van Driel, Miss Vera Litwinzeff and Miss Sietske Visser for their conscientious assistance in the preparation of the various drafts of the manuscript. I am indebted to the Board of Curators of the University of Leiden for providing secretarial help.

The greatest debt of all I owe to my informants. I dedicate this book to the memory of Isaac Jacob and Alec Peter, who patiently gave their best efforts in what to them was an unfamiliar and difficult job, and to Louis Miranda, whose alert and tireless assistance yielded so much both in material and in insight.

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SYMBOLS, ABBREVIATIONS, REFERENCES

A = full vowel (vowel other than /ə/)
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C = consonant
C_t = non-uvular cons.
C_u = uvular cons.
C_1, C_2 = 1st, 2nd cons. of root
IJ See p. 9
K = plosive or fricative
LM See p. 9
N = nominal predicate
N_a = noun in absolutive case
O = direct object

R (Phonology:) = resonant
(Syntax:) = secondary relatum (complement other than S or O)
R_1 = initiator of action expressed by V_p
R_2 = R other than R_1
S = subject
T = sentence-adjunct
V (Phonology:) = vowel
(Syntax:) = verb
V_i = intransitive verb
V_p = passive verb
V_t = transitive verb

ab. = about
act. = active
approx. = approximately
borr. fr. = borrowed from
caus. = causative
CdA. = Coeur d'Alene
Ch. = Chilliwack
cons. = consonant
Cw. = Cowichan
dimin. = diminutive
fem. = feminine
geogr. = geographical term
Halc. = Halcomelem
itr. = intransitive
Kal. = Kalispel
lge. = language
masc. = masculine
Ms. = Musqueam

obj. = object
orig. = original(ly)
pass. = passive
pers. = person
pl. = plural
poss. = possible, -ly
pref. = prefix
prob. = probable, -ly
rec. = recorded
red. = reduplication, -ted
refl. = reflexive
Sh. = Shuswap
Sq. = Squamish
subj. = subject
suff. = suffix
tr. = transitive
unstr. = unstressed
zool. = zoological term

[...] phonetic notation
/.../ phonemic notation
Ø zero element

* reconstructed form; form not recorded
† conjectured form
√ root (in phonemic notation)

Numbers in italics refer to sections. Roman numbers followed by Arabic ones in Roman type refer to texts and numbered sentences thereof. References to literature are made by name of author, year of publication and page (see Bibliography).

For the *alphabetic order* used in Grammar and Dictionary see p. 245.

PART ONE

PHONOLOGY

I

PHONEMIC DATA

1. Phonemes.— The Squamish sound-system (see chart on p. 22) comprises 29 consonants, 4 vowels, and a feature of glottalization (glottal stop).

The consonants (symbolized "C") are subdivided into 23 consonants proper (*Geräuschlaute*, symbolized "K") and 6 resonants ("sonants" for short, symbolized "R").

The vowels ("V") fall into 3 full vowels ("A") and a *schwa*.

The consonants proper fall into the following series as regards place of articulation: *labial* /p, p'/, *dental* /t, t', c, c', s/, *palatal* /č, č', š/, *lateral* /λ, λ'/, *velar* /k, k°, k', k'°, x°/ and *uvular* /q, q°, q', q'°, x̌, x̌°/.

As for mode of articulation, the *fricatives* /s, š, x°, x̌, x̌°/ are opposed to the *plosives* of the respective series. In the dental series, the *affricates* /c, c'/ are opposed to the *stops* /t, t'/. *Labialization* plays a role in the velar and uvular series, where /k°, k'°, q°, q'°, x̌°/ are opposed to plain consonants, while the velar fricative /x°/ lacks a plain counterpart. The plosives of all series, and also the laterals (where a distinction plos. – fric. is lacking), oppose glottalic members /p', t', c', č', λ', k', k'°, q', q'°/ to plain ones.

The sonants comprise labial and dental *nasals* /m, n/, a lateral *liquid* /l/ and laryngeal, labiovelar and palatal *glides* /h, u̯, i̯/.

The vowel-system opposes *open* /a/ to *close front* /i/ and *back-rounded* /u/; in addition, there is a mid-central vowel /ə/. For a particular type of /i/ written /î/ see *22, 62.*

The consonants /k, k'/ (but not their labialized counterparts) are of markedly rare occurrence in the lexicon (cf. the lack of */x/ *vs.* the presence of /x°/).

It would be wrong to regard /p', q'°/, etc., as sequences */p + ʔ/, */q + ʔ + u̯/, etc. In the first place, glottalic and labialized consonants are as frequent in the lexicon as plain ones (/k°, k'°/ are many times more frequent than /k, k'/, while /c'/ is about twice as frequent as /c/). In the second place, in case of so-called partial reduplication (in general: $C_1VC_2 \rightarrow C_1V\text{-}C_1(V)C_2$), the glottalic and labialized consonants are reduplicated as a whole. In the third place, such an analysis would entail quite arbitrary decisions as to the *order* of the elements of oral closure, glottalization and labialization: */qʔu̯, qu̯ʔ, ʔqu̯/, etc.

	CONSONANTS PROPER				RESONANTS				VOWELS		GLOTT.
	FRONT		BACK		nas.	liqu.	glide				
	Plos.	Fric.	Plos.	Fric.			high	low	high	low	
LONG MOUTH-RESONATOR	labials		uvulars								
	p p'		q° q'° q q'	χ° χ	m		u̯		u		
			velars								
			k° k'° k k'	x°							
						l		h		ə a	ʔ (ˀ)[2]
DIVIDED MOUTH-RESONATOR	dentals		laterals								
	t t'	s	λ λ'		n		i̯		i (î)[1]		
			palatals								
	c c'		č č'	š							

[1] Only in /îʔ/ (see *22*, *62*).
[2] Combination of /ʔ/ and /-/ (see below).

Other symbols:

/ˈ/ Stress (written after stressed vowel: /aˈ/).
/./ Special type of juncture (see *3*); combined with /-/ as /▾/.
/‿/ Connects clitics and full words (see *2*).
/-/ Separates morphemes (no phonetic value); combined with /ʔ/ as /ˀ/ and with /./ as /▾/.

Vowels do not occur initially; if no (con)sonant precedes them, they are preglottalized: /ʔa-, ʔu-, ʔi-, ʔə-/.

The vowel /u/ is much less frequent in the lexicon than the others. This is to a large extent due to the fact that the distinction between /u/ and /əu̯/ has been preserved better than that between /a/ and /əh/, /i/ and /əi̯/, see *14-19*, *31-34*.

Within the limits of the morpheme, the vowels /a, u, i/ cannot be directly opposed to the sonants /h, u̯, i̯/ (see *76*). Furthermore, the distinction of /a, u, i/ on the one hand and /əh, əu̯, əi̯/ on the other hand is precarious (see *14-19*, *31-34*). The presence or absence of /ə/ is to a large extent predictable if the morphological structure of a word is given (see *74*). The presence *vs.* absence of /ʔ/ can distinguish free forms ending in a vowel or sonant, cf. /taiʔ/ 'that one' *vs.* /tai̯/ 'canoe-race', /lamʔ/ 'house' *vs.* /lam/ 'whiskey, liquor'; but morphemes of this type can lose or acquire /ʔ/ as a

result of morphological processes (see *67-73*) and the relation of /ʔ/ to semantic content is not on a level with that of the other phonemes.

2. Stress.— There is a strong expiratory stress, written /ˈ/ after a vowel. Its position is not restricted to any particular part of a word, cf. /č'aˈi̯ai̯ʔ/ 'widow(er) of sibling' *vs.* /č'au̯ʔaˈi̯ʔ/ 'wooden spoon'; /λ'iˈλ'isi/ 'have jaundice' *vs.* /sisiliˈu̯s/ 'get scared'.

A number of words regularly occur without stress; in transcription, these *clitics* are connected with each other and with the word with which they form a stress-unit by means of the symbol /‿/, e.g. /čn‿u̯a‿c'ic'aˈp'/ 'I am (was) working'.

Longer words may have two stresses, e.g. /sməˈq'°aˈʔ/ 'crane' or may allow alternative stresses, e.g. /x̌iˈcqn, x̌icqaˈnʔ/ 'fell (a tree); tr.', or may be pronounced with one or two stresses, e.g. /k°aˈi̯ucmix°n, k°aˈi̯ucmiˈx°n/ 'to murder' (the stress closest to the end of the word usually being the facultative one). A stress-shift towards a later syllable, or the occurrence of a second stress, are particularly common when a word is extended with suffixes, or is followed by a clitic: one says /siˈλaʔaˈn/ or /siλaʔaˈn/ 'buy; tr.', but normally /siλaʔaˈn‿čx°/ '(you) buy it!', cf. also /na‿č'aˈu̯atas/ 'he helped him' *vs.* /na‿č'aˈu̯atasu̯it/ or /na‿č'aˈu̯ataˈsu̯it/ 'they helped him'.

Elements which normally occur as clitics can occasionally receive a stress. This is the case (a) in emphatic statements, e.g. /na‿u̯a‿ʔmʔuˈt/ 'he is at home' *vs.* /naˈʔ u̯a‿ʔmʔuˈt/ '(yes,) he *is* at home'; (b) when the clitic is provided with an adverbial suffix, e.g. /na‿u̯a‿ʔəsx̌iˈc/ 'he is lying down' *vs.* /naˈʔ-x° u̯a‿ʔəsx̌iˈc/ 'he is still /-x°/ lying down'; (c) facultatively in some cases where a clitic follows the word of which it is a satellite, e.g. /haˈʔλ‿čn/ or /haˈʔλ‿čaˈn/ 'I am good' (these cases are probably of the same type as the facultative second stress in certain longer words, and I maintain the symbol /‿/ here).

3. Juncture.— In those cases where two types of juncture are opposed to each other, the symbol /./ is employed to indicate the less frequent type. The cases in question are (a) syllabic *vs.* non-syllabic /./ contact between consonants, see *8*, *39*, *48*, *52*; (b) close *vs.* open /./ contact between consonants, see *46*, or between a sonant and a following /ʔ/, see *28*, *40*. Reading rule: to /C.C/ there corresponds phonetically [CC], *i.e.* consonants are pronounced without intervening [ə] and without coalescing.

II

PHONETIC DATA

A. CONSONANTS

4. Place of Articulation.— The *labials* are bilabial. The *dental* closure is formed with the tongue-tip against the back of the front teeth, but with a larger area of the tongue touching the alveoles than is the case, for instance, in French, so that /n/ sounds slightly more palatal than French /n/, though it is closer to the latter than to French /ñ/. The *palatals* are closer to Russian "soft" /č/ than to "hard" /š, ž/. The *laterals* are bilateral; in /λ, λ'/ the tongue is released approximately from the second molars on, and their acoustic effect is closer to "tl" than to "kl". The sonant /l/ is in between the "mid" variety (as in Dutch) and the velarized type (as in English); it is most strongly velar after a vowel before cons. or at the end of a word, and least so in word-initial position. Of the *velars*, /k, k'/ are slightly more front than /k°, k'°, x°/; they are articulated at the same place as English /k/ in "cat", while the labialized velars are farther back than Engl. /k/ in "cool". The *uvulars* are quite close to the labialized velars, so that /q°, q'°, χ°/ are hard to distinguish from /k°, k'°, x°/, though there is no doubt that they constitute an independent series, cf. /q°əλ/ 'drift ashore' *vs.* /k°əλč/ 'split open; itr.', /t'aˈq'°an/ 'cut, break; tr.' *vs.* /t'aˈk'°an/ 'dig; tr.', /pəˈχ°n/ 'spit at; tr.' *vs.* /spəx°/ 'animal stomach, tripe'.

5. Character of Plosives.— The *dental* affricate /c/ differs from a sequence /ts/ by the shorter duration of its fricative element and by the lesser energy of its explosive component. The difference was observed only immediately before a stressed vowel: /ciʔ/ [ceʔ] 'there is' *vs.* /tsiʔ/ [tseʔ] 'feel cold', /scaˈmi̯as/ [sca·ˈmiɛs] 'Tuesday' *vs.* /stsas/ [stsa·s] 'poor'. In the sequence /tn/ the /t/ normally has a velic release [T], e.g. /λaˈč'tn/ [λa·ˈč'Tn̥] 'knife'. Of the other plosives, the *labials* are stops, the *palatals* are affricates, of the *laterals*, /λ/ varies from an affricate with a weak plosive element [ᵗλ] to a pure fricative [λ], whereas /λ'/ is always an affricate (the two are transcribed [λ, λ'] henceforth). The non-glottalic *velars* and *uvulars* are stops, while the glottalic ones are often affricated, especially before another consonant.

6. Labialization.— In the labialized consonants, the element of rounding is present during the whole articulation of the sound. It starts with the implosion (so that it

can affect a preceding vowel) and it persists after the release, where it is audible as a short u̯-glide before vowels other than /u/. Before /u/ plain uvulars become automatically labialized.

7. Laryngeal Articulation.— The *non-glottalic* plosives are facultatively aspirated before stressed vowels. In the *glottalic* consonants, the oral and glottal releases are simultaneous. The *sonants* are phonetically voiced.

B. SONANTS

8. The sonants /m, n, l/ when preceded by a consonant are pronounced as syllabic [m̩, n̩, l̩] or as [əm, ən, əl] (instead of [ə] also [ɛ, æ, u, ɔ] depending on the preceding cons.), e.g. /tmtaˈlm/ [tm̩taˑˈlm], etc., 'when?', /tmiˈlx°/ [tl̩eˑˈlx°] 'earth, ground', /qliˈlm/ [ql̩eˑˈlm] 'weak'. Where the pronunciation is non-syllabic (i.e. primarily explosive), the symbol /./ is written before the sonant, e.g. /muˈls.məs/ [moˑˈsməs] 'cow', /kʾ°aˈč.nəx°/ [kʾ°aˑˈčnəx°] 'to see; tr.'. Compare: /tʾlmaˈi̯ʔ/ [tʾələmaˑˈi̯ʔˈ] 'wild cherry tree' and /stʾl.muˈʔt/ [stʾəlmoˈʔt] 'old person'.

The sonant /h/ when preceded and not followed by a vowel is produced as a lengthening* (and facultatively opening) of a preceding /i/ or /u/ and as a lengthening and opening of a preceding /ə/ (after /a/ the sonant /h/ does not occur). In other words: the sequences /ih, uh, əh/ before cons. or at the end of a word are produced as long vowels [ɛ:, e:], [ɔ:, o:] and [a:]. In the case of /uh/ and /əh/ there may be a *schwa*-colored offglide [ᵊ] before a consonant. Examples: /č'ihn/ [č'e:n, č'ɛ:n] 'lift, raise; tr.', /puht/ [po:ᵊt, pɔ:ᵊt] 'blow; tr.', /c'əh/ [c'a:] 'be hit, bump', /səhc/ [sa:c] 'be left over'.

C. STRESSED VOWELS

9. The Squamish vowels — especially /ə/ — show more variation than the consonants, and they vary mainly in function of the latter. The following symbols are used for the different timbres (those in parentheses occur in unstressed syllables only):

	Front		Central		Back
	plain		plain	half-rounded	rounded
Low	a			ɑ	
L.-Mid	æ				
Mid	ɛ		ʌ	ö	ɔ
H.-Mid	e	ɪ	(ə)	ø	o
High	(i)			(ü)	(u)

* Three degrees of vowel-length are rendered as follows: short (no indication), half-long [aˑ], ong [a:].

10. Stressed /a/ is a somewhat front [a·], in between the vowels in German *ja* and French *pâte*: /man/ [ma·n] 'father', /qaλ'/ [qa·λ'] 'clouds', /staq°/ [sta·q°] 'water', /x̌°a i̯/ [x̌°a·i̯] 'be senseless'.

In the two words where /a/ occurs after /k/, it has a more palatal timbre [æ·]: /kau̯/ [kæ·u̯] 'descend', /kat/ [kæ·t] 'ascend'. In both words, the vowel can be narrowed to [ɛ] and shortened: [kɛu̯, kɛt]; these must be regarded as phonemically alternative forms /kəu̯, kət/. There are no other words with either /kaˡ-/ or /kəˡ-/; in /k'aˡk'ltx̌/ [k'a·ˡk'ɛɬtx̌] 'gamble' there is the usual [a·], different from /ə/ in /k'əˡx°aʔ/ [k'ɛˡx°aʔ] 'lacrosse'.

Before a final consonant-group, /a/ is shortened from its usual half-length: /nax̌č/ [nax̌č] 'hand', hard to distinguish from the vowel in /c'əx̌t/ [c'æx̌t] 'gravel beach'.

11. Stressed /u/ is pronounced [o·] as in German *Sohn*: /cut/ [co·t] 'say', /t'uk'°/ [t'o·k'°] 'go home', /nuq°/ [no·q°] 'noon', /q'°ui̯/ [q'°o·i̯] 'to die'. Occasionally one hears more open variants, but not regularly, e.g. in /luˡlum/ [lɔ·ˡɬom, lo·ˡɬom] 'sing' (where the medial [ɬ] may be responsible). After /λ, λ'/ the vowel /u/ varies with a diphthong, e.g. /λup/ [λo·p, λöu̯p] 'be out of reach', /λus/ [λo·s, λöu̯s] 'slide down'; there are intermediate variants with a diphthong [öo].

12. The main variants of stressed /i/ are a rather close [e·] as in German *Weh*, [ɛ·] as in English *there* and [ɛi̯] as in Dutch *ei*. The variant [e·] can be a slightly diphthongal [e·ⁱ], approximately as in Dutch *zee*, especially at the end of a word and before dentals and palatals. The variant [ɛ·] may have an open offglide [ɛᵃ], in which case it closely resembles the vocalic part of British English *there*. The choice of variants depends on the surrounding consonants in terms of uvulars and non-initial /l/ (symbolized C_u) versus all others (symbolized C_t) as follows:

(a) /C_tiC_t/ [e·]
(b) /C iC_u/ [ɛ·] (C = any cons.)
(c) /C_uiC_t/ [ɛi̯]

Examples:

(a) /ti/ [te·] 'this', /ʔi/ [ʔe·] 'be here', /cix°/ [ce·x°] 'reach, get there; itr.', /čiλ/ [če·λ] 'top', /k'°in/ [k'°e·n] 'few'.

(b) /λ'iq/ [λ'ɛ·q, λ'ɛᵃq] 'arrive', /t'iq°/ [t'ɛ·q°] 'cold', /u̯ilq'°t/ [u̯ɛ·ɬq'°t] 'ask (a person); tr.', /q'iˡx̌iʔ/ [q'ɛ·ˡx̌ɛi̯ʔ] 'become black', /x̌iq/ [x̌ɛ·q] 'scratch; itr.', /x̌°iq'°/ [x̌°ɛ·q'°] 'be arrested', /nq'iˡlus/ [nəq'ɛ·ˡɬos] 'wise'.

(c) /q'it/ [q'ɛi̯t] 'be morning', /x̌ip'/ [x̌ɛi̯p'] 'get touched, nipped', /x̌iˡc'im/ [x̌ɛi̯ˡc'em] 'itch', /x°aliˡtn/ [x°aɬɛi̯ˡTn̯] 'white man' (but cf. after initial /l-/: /lix°/ [le·x°] 'fall').

In a number of words diphthongal variants [ɛi] were recorded as alternatives of [e·], e.g. in /pi'č'm/ [pe·ˡč'm̩, pɛi̯ˡč'm̩] 'to spark', /čišk°/ [če·šk°, čɛi̯šk°] 'recede, ebb'. See *16.*

The above delimitation of variants is not absolute. A non-adjacent uvular may

influence a vowel in neutral immediate surroundings, e.g. /x̌icq/ 'fallen tree, timber' is pronounced [x̌ɛi̯cq] or [x̌ɛ·cq], cf. also /u̯iˈtax̌/ [u̯ɛ·ˈtæx̌] 'type of canoe', /cʾiˈtʾax̌°/ [cʾɛ·ˈtʾæx̌°] 'diving duck'. On the other hand, in reduplicated forms vowels in different syllables may influence each other: the word /λʾiˈλʾix̌°ai̯/ 'brook trout' is pronounced [λʾɛ·ˈλʾɛx̌°ai̯], with an "irregular" [ɛ·] in the first syllable under the influence of the uvular in the next one (see above), or [λʾe·ˈλʾex̌°ɛi̯], with an "irregular" [e] before uvular in the second syllable due to assimilation by the "regular" [e·] in the first.

13. The vowel /ə/ stands out by being shorter and more variable than /a, u, i/. Its timbre centers around [ʌ] as in British English *but*, and the deviations from this center are determined by the surrounding consonants. The variants are tabulated below, as found in contact with the following consonants, each symbolized by a single phoneme: /i̯/ (stands only for itself); /č/ palatals; /t/ dentals, laterals and preceding /h-/; /p/ labials; /q/ plain uvulars and following /-lʔ/; /k°/ labialized velars and /u̯/; /q°/ labialized uvulars and following /-u̯C/ (C = any cons.).

	/-i̯/	/-č/	/-t/	/-p/	/-q/	/-k°/	/-q°/
/i̯-/	e	ɛ	ɛ	ʌ	ʌ, æ	ɛ, ö	æ, ö, ɑ
/č-/	e, ɛ	ɪ	ɛ	ʌ	ʌ, æ	ö	æ, ö, ɑ
/t-/	e, ɛ	ɛ, ʌ	ʌ	ʌ	ʌ, æ	ö	ö, ɑ
/p-/	e, ɛ	ʌ	ʌ	ʌ	ʌ	ö	ö, ɑ
/q-/	ɛ, æ	ʌ, æ	ʌ, æ	ʌ, æ	ʌ, ɑ	æ, ö	ɑ
/k°-/	ə, ö, ɛ	ə, ö, ɛ	ə, ö, ʌ	ə, ö, ʌ	ə, ɑ	ə, ö	ə, ɑ
/q°-/	ə, ö, ɛ	ə, ö, ɛ	ə, ö, ʌ	ə, ö, ʌ	ə, ɑ	ə, ö	ə, ɑ

The timbre [e] is heard before /i̯/, which has a strong palatalizing effect: /məi̯/ [mɛi̯, me·i̯], also [me·] 'sink; itr.', /λʾəi̯n/ [λʾeˈlĭn, λʾeˈi̯n] 'stop; tr.', /i̯əˈi̯aʔt/ [i̯eˈi̯aʔt, i̯eˈlĭaʔt] 'vomit continuously'.

The timbre [ɛ] is found in the neighborhood of /i̯/ and other palatals: /čʾətx°/ [čʾɛtx°] 'carve; itr.', /λəš/ [λɛš] 'tug-of-war', /qəi̯/ [qɛi̯] 'bad', cf. also /məi̯/ above, but otherwise than before /i̯/ an adjacent labial requires [ʌ], an adjacent uvular requires [ʌ, æ] (see below).

The timbre [ɪ] is heard between palatals (other than /i̯/): /čəˈšaʔ/ [čɪˈšɛʔ] 'mother', /čəˈšn/ [čɪˈšn̩] 'send; tr.'; also after /k, kʾ/ : /kʾəˈx°aʔ/ [kʾɪˈx°aʔ, kʾɛˈx°aʔ] 'lacrosse', /skəmʔc/ [skɪᵐʔc, skɛᵐʔc] 'small clam'.

The timbre [æ] occurs in the neighborhood of plain uvulars, especially if the other adjacent cons. is a dental or palatal: /səqʾ/ [sæqʾ, sʌqʾ] 'crack, split; itr.', /šəq/ [šæq, šʌq] 'be finished', /qəč/ [qæč, qʌč] 'be full', /Pəx̌/ [Pæx̌, Pɑx̌] 'wild goose'; [æ] is particularly common before /x̌/, where it is heard also if another uvular precedes: /qəx̌/ [qæx̌] 'much', /x̌əˈx̌nʔ/ [x̌æˈx̌æⁿʔ] 'frost'; a following /-lʔ/ has the same effect as a uvular: /təlʔt/ [tælˡʲʔt] 'learn; tr.'.

The timbre [ɑ] is heard especially before labialized uvulars, also before plain ones

if another uvular or labialized cons. precedes: /t'əq'°/ [t'ɑq'°] 'break; itr.', /təχ°/ [tɑχ°] 'be settled', /k'°əq/ [k'°ɑq, k'°əq] 'be split'; also between a labiovelar or uvular and a following /-u̯C/: /χəu̯λ'/ [χɑu̯λ', χæu̯λ'] 'break; itr.', /sx°əˈu̯qn/ [sx°ɑˈu̯qn̥] 'white swan', /q'əˈu̯m/ [q'ɑˈu̯m̥, q'ɑˈᵘŭm] 'howl, whistle'; also after /ʔ/: /ʔəχ/ [ʔɑχ, ʔæχ] 'wild goose', /ʔəq°/ [ʔɑq°, ʔəq°] 'fall out (ab. hair)'.

The timbre [ə] is heard after labialized consonants. Between labialized and plain cons. /ə/ is a diphthong in which either the initial [ə]-element predominates, or the delabialized final part; this may be as much a matter of impression as of actual differences in articulation. The word /x°ət/ 'wren' is heard as [x°əᵉt, x°öt, x°ʌt]; the diphthongal articulation creates even the impression /x°ɛt]. The same variation in /x°əi̯/ [x°əi̯, x°öi̯, x°ɛi̯] 'appear'. Before and after uvulars the range of timbres is less wide: /k'°əq/ [k'°əq, k'°ɑq] 'be split', /χ°əs/ [χ°əs, χ°ʌs] 'fat', /q°əq°tq/ [q°əq°tq] 'pass by; itr.'.

The timbre [ö] is heard before labialized velars and /u̯/: /tək'°/ [tök'°] 'tight', /spəx°/ [spöx°] 'animal stomach, tripe', /nəu̯/ [nöu̯] 'thou', /šəˈu̯ai̯/ [šöˈu̯oi̯, šöˈu̯æi̯] 'grow'; also between /i̯/ and a labialized cons.: /i̯əq°/ [i̯öq°] 'clothes', and as an intermediate stage between the variants [ə] and [ʌ, ɛ] after labialized consonants, cf. /x°ət/ above.

The timbre [ʌ] is heard between labials, dentals and laterals: /pəc/ [pʌc] 'bend, fold; itr.', /pəλc/ [pʌλc] 'thick-lipped', /səp/ [sʌp] 'stiff', /təmλ/ [tʌmλ] 'red paint', /c'əls/ [c'ʌɬs] 'shiny, cleaned', /λəs/ [λʌs] 'bitter, sour'; also between a palatal and a labial: /čəmχ/ [čʌmχ] 'pitch', /məˈčn/ [mʌˈčn̥] 'black louse'; also as an alternative for other timbres, cf. /səq', šəq, qəč/ under [æ] and /x°ət, χ°əs/ under [ə] above.

D. VOWEL AND DIPHTHONG I

14. A distinction between /əi̯, əu̯, əh/ on the one hand and /i, u, a/ on the other hand exists, but certain reservations must be made. In the first place, the two types easily merge, especially in more rapid speech. In the second place, the distinction is in many cases a matter of a wider *vs.* a narrower range of variants, the former including the latter. For instance, /məi̯/ 'sink; itr.' is pronounced [mɛi̯] or [meˑ], whereas /mi/ 'come' is pronounced [meˑ] (and not *[mɛi̯]). In the third place, the distinction is in some cases a matter of presence *vs.* absence of a morpheme-border, cf. /pəˈi̯-m/ [peˑˈĭm, peˈi̯m̥] 'fall overboard' *vs.* /ʔəciˈm/ [ʔəceˑˈm] 'small'. In the fourth place, the distinction is limited to certain positions: it is not made before a vowel, and, particularly in the case of /əi̯/ *vs.* /i/, it was not observed in several other positions (see below). Etymologically, /əi̯, əu̯, əh/ and /i, u, a/ are in many cases identical.

15. A distinction between /əi̯/ and /i/ is made consistently only before uvulars, cf. /χəi̯χ/ [χɛi̯χ, χɛĭχ] 'war', /λ'əi̯q'/ [λ'ɛi̯q'] 'get trapped', /səi̯q'qs/ [sɛi̯q'qs] 'pass across a flat surface' *versus* /λiq'/ [λɛᵃq'] 'always', /siqč/ [sɛᵃqč] 'shingles'. The distinction can furthermore be made under the stress at the end of a word, cf. /məi̯/ [mɛi̯, meˑ] 'sink; itr.' *vs.* /mi/ [meˑ] 'come', where a diphthongal variant is lacking; likewise in /ti/

'this', /ʔi/ 'be here'. Where a uvular or labialized cons. precedes, a diphthongal pronunciation is regular at the end of a word, and I write /əi̯/: /qəi̯/ [qɛi̯] 'bad', /q°əi̯/ [q°əi̯, q°ɛi̯] 'be at lowest ebb', /x°əi̯/ [x°əi̯, x°ɛi̯] 'appear'. In the third place, the distinction is made before /-n/ or /-m/ not followed by a vowel (morphologically, these cases concern morphemes /Cəi̯/ followed by the transitivizer /-n/ or the intransitivizer /-m/, as opposed to single morphemes /Cin, Cim/), cf. /x̌əˈi̯n/ [x̌ɛˑˈi̯ĭn, x̌ɛˈi̯n̩] 'stop (people) from fighting; tr.', /λ'əˈi̯n/ [λ'eˑˈi̯ĭn, λ'ei̯n̩] 'stop; tr.', /pəˈi̯m/ [peˑˈi̯ĭm, pei̯m̩] 'fall overboard', with a disyllabic pronunciation different from e.g. monosyllabic /k'°in/ [k'°eˑn] 'how much?', though in rapid speech the former type tends to merge with the latter.

In all other positions no distinction between /əi̯/ and /i/ is maintained, and only /i/ is written, so that morphemes /məi̯, qəi̯/, etc., are written /mi-, qi-/, etc., when they are unstressed, or, if stressed, when not followed by /-n#, -m#/ (# = cons. or zero), e.g. /qəi̯/ 'bad' but /qiˈuʔc/ [qɛˈi̯oʔc] 'blunt' ('bad-edged'), /qis/ [qɛi̯s] 'dislike' ('consider bad') /qiiˈʔ/ [qeie̯ˈʔ, qie̯ˈʔ] 'become bad'; /məi̯/ 'sink' but /miˈmi/ [meˑˈme] 'drown' (reduplication).

16. Note.— Otherwise than before uvulars the distinction of /əi̯/ and /i/ is facultative. LM, with whom the matter was gone into in some detail, did not allow a diphthongal pronunciation in the words /ti, ʔi, mi/ quoted above, and in careful pronunciation distinguished /məi̯/ from /mi/. It is worthy of note that /ti, ʔi, mi/ all three occur as clitics (the latter, also pronounced /mʔi/, is a reduction of /həmʔiˈ/ 'come'); these words do not belong to the "lexical" part of the morpheme-inventory (neither does the article /k°i/, but this does not occur stressed). The simplest favorite form of lexical morphemes is CVC, to this type /məi̯/ belongs, and obviously also /qəi̯/ 'bad', etc., where therefore /əi̯/ is written even though after uvulars the diphthongs [ɛi̯, ɔi̯] cannot be opposed to plain vowels. — IJ and AP used diphthongal variants in more positions than LM, but not consistently, e.g. in the stressed vowel of /piˈč'm/ 'spark; itr.', /p'ic'/ 'get squeezed', /čišk°/ 'recede, ebb', /č'ič'/ 'twist; itr.', /šik°/ 'clam', /λiˈč'm/ 'spark; itr.', /sλiˈšm/ 'cedar-leaf rope', /ʔis/ 'have a good time'; on the other hand, in the material recorded from them I find only [eˑ] in /nsʔi/ [nsʔeˑ] 'loud', /hiiˈ/ [hie̯ˑˈ] 'big' (once pronounced with emphasis with a long-drawn final [ɪː], so that an interpretation /hiiˈh/ is possible). The absence of diphthongal variants in words recorded from IJ and AP may in individual instances be accidental; for instance, the words /ʔis/ and /nsʔi/ quoted above may well contain an etymologically identical element */ʔəi̯/ 'good', though only of the first a diphthongal variant was recorded. My transcription reflects the pronunciation of LM, but where diphthongs were recorded from IJ or AP this is indicated in the Dictionary by [əi̯] after the word concerned.

The non-glottalized variant of the inchoative suffix /-i(ʔ)/ (see *186:34*) allows under the stress a diphthongal pronunciation (LM), e.g. /p'si(ʔ)/ [p'seʔ, p'sɛi̯ʔ, p'seˑ, p'sɛi̯] 'go to shore' (derived from /p'əs/ '*id.*'; for the pronunciation of /iʔ/ see *21*).

17. The distinction of /əu̯/ *vs.* /u/ is phonetically much more clearcut than that between /əi̯/ and /i/. Only after /λ, λ'/ there is free variation of a vowel and a diphthong (see *11*), and here I write /u/. Otherwise, /əu̯/ and /u/ are written as recorded, though it must be noted that the functional yield of the opposition is minimal. Before vowels no distinction is made; I write — conform pronunciation — /əˈu̯/ in stressed and /u/ in unstressed position, e.g. /šəˈu̯ai̯/ [šöˈu̯æi̯] 'grow', /šuaˈλ/ [šuaˈλ] 'trail, door'. In stressed word-final position /əu̯/ was recorded in /nəˈu̯/ 'thou', /u/ in the interjection /ʔu/ 'allright' and in the borrowings /k°ašuˈ/ 'pig' (French *cochon*) and /kapuˈ/ 'coat' (Fr. *capot*). Stressed before cons. there is /əu̯/ in /ǎəu̯λ'/ 'break; itr.', /šx°əˈu̯qn/ 'white swan', /q'əˈu̯m/ 'howl, whistle' ([q'ɑˈu̯m̥, q'ɑˈu̯ŭm], morpholog. /q'əu̯-m/, parallel to /pəi̯-m/ in *14*, *15*), while there is /u/ e.g. in /i̯uλ/ 'burn; itr.', /sǎ°uˈp'aʔn/ 'women's neckwear', /sumʔ/ 'smell; tr.'.

18. The distinction between /əh/ and /a/, in those positions where they are directly opposed to each other, is phonetically a matter of vowel-length. In stressed word-final position /əh/ [a:] was recorded in /c'əˈh/ 'get hit, bump', /q°əˈh/ 'be perforated', /snəˈh/ 'name', /k'°əˈh/ 'maybe so' (interjection expressing doubt); /a/ [a] was recorded only in /naˈ/ 'there you are!' (interjection used when handing over something). The latter word is etymologically identical with the clitic /na/ 'there', so that the distinction of /əh/ *vs.* /a/ parallels that of /əi̯/ *vs.* /i/ as regards its distribution in the lexicon (full stem *vs.* clitic). The distinction /əh/ *vs.* /a/ is also made under the stress before a consonant, cf. /təˈhm/ [taˈ:m] 'to leak' (morphologically parallel to /pəˈi̯m, q'əˈu̯m/ above) *vs.* /staˈm/ [staˑˈm] 'what?', further in /ǎəˈhm/ 'to cry' (also /ǎam/), /səhc/ 'be left over', /sp'əhc'/ 'blackberries', /č'əhλ'am/ 'hunt; itr.'. In productive combinations of roots /Cəh/ with consonantal suffixes the root is usually reduced to /Ca-/, e.g. /q°əh-n, q°a-n/ 'perforate; tr.', /s-q°a-qs/ 'hole through the nose' (cf. /q°əh/ quoted above; the roots of /təˈh-m, ǎəˈh-m/ are not found in isolation). — Before a vowel, only [-æh-] is found (to the exclusion of [-a(:)-, -h-]) and I write /əh/ (note that the transcription /a/ or /h/ would also be unambiguous): /spəhiˈmʔ/ [spæheˑˈmʔ] 'wind', /ǎəǎəhaˈm/ [ǎæǎæhaˑˈm] 'to be crying' (reduplication of /ǎəhm/).

19. The positions where /əi̯, əu̯, əh/ and /i, u, a/ are and are not distinguished, and the transcriptions chosen in the latter case are summed up in a chart on p. 31. These elements usually occur after consonants, and they are quoted in combinations /Cəi̯/, etc.

E. GLOTTALIZATION

20. The glottal stop occurs only in contact with a vowel (V) or a sonant (R); for purposes of phonetic description the possibilities /ʔV, ʔR, Vʔ, Rʔ/ must be distinguished.

The case /ʔV/ calls for few special remarks: the glottal stop has no particular effect

Stressed word-finally	Before Consonant			Before Vowel	
	uvular (C_u)	-n#, -m#	others (C_t)	stressed	unstressed
Cə^{l}i̯	Cə$_{i̯}$$C_u$	Cə$_{i̯}$n#	CiC_t	$Ci^{l}V$	CiV^{l}
Ci^{l}	CiC_u	Cin			
Cə^{l}u̯	Cə$_{u̯}$C			Cə^{l}u̯V	CuV^{l}
Cu^{l}	CuC				
Cə^{l}h	CəhC			(no examples)	$CəhV^{l}$
Ca^{l}	CaC				

Chart Section 19

on a following /a, u, i/, and /i/ has the variant required by a following cons.: /ʔi^{l}tut/ [ʔe·^{l}tot] 'sleep', /ʔiqʼ°/ [ʔɛ·qʼ°, ʔɛ^{a}qʼ°] 'be rubbed'. The variants of /ə/ before uvulars tend to be more open and back after /ʔ/ than after other consonants, cf. /ʔəx̌/ [ʔæx̌, ʔɑx̌] 'wild goose' *vs.* /səqʼ/ [sæqʼ, sʌqʼ] 'crack, split; itr.', /qəx̌/ [qæx̌] 'much'; this must be due to the absence of an oral closure or constriction in /ʔ/.

The case /ʔR/ parallels /CR/; particularly, /ʔm, ʔn, ʔl/ are pronounced [ʔəm, ʔn̩], etc. (see *8*).

The case /Vʔ/ requires little comment as far as /aʔ, uʔ/ are concerned. The vowel is somewhat shorter than before cons. Examples: /naʔ/ [naʔ] 'be on, at', /haʔλ/ [haʔλ] 'good' /λa^{l}ʔn/ [λa^{l}ʔn̩] 'touch; tr.', /cʼuʔ/ [cʼoʔ] 'be pulled out', /k°uʔs/ [k°oʔs] 'spring salmon' /cʼu^{l}ʔn/ [cʼo^{l}ʔn̩] 'pull out; tr.'; a more open variant was recorded in /muʔn/ [mɔ^{l}ʔn̩] 'drop; tr.'. Occasionally an echo-vowel is heard after the glottal stop. In the case of /aʔ/ such a variant was recorded in reduplicative formations of the type /C_1a$^{ʔ}C_1C_2$/ (see *158*): /sca^{l}ʔcqai̯/ [sca^{l}ʔcqai̯, sca^{l}ʔ^{a}cqai̯] 'salmonberry', /λaʔλč/ [λaʔλč, λæʔ^{æ}λč] 'be on top', /čiλ.na^{l}ʔnčʼ/ [čeλna^{l}ʔn̩čʼ, čeλnæ^{l}ʔ^{æ}nčʼ] 'chief's daughter, girl of upper class'. In the case of /uʔ/ such a variant was recorded only in /qʼ°u^{l}ʔnəu̯ʔa^{l}sn/ [qʼ°o^{l}ʔnə^{u}ʔu̯a^{l}sn̩, qʼ°o^{l}ʔ^{o}nəʔu̯a^{l}sn̩, qʼ°o^{l}ʔonʔu̯a^{l}sn̩] 'assemble; tr.'.

21. The sequence /iʔ/ offers a more varied picture than /aʔ, uʔ/, undoubtedly because it is not distinct from */əi̯ʔ/, whereas /aʔ, uʔ/ can be opposed to /əhʔ, əu̯ʔ/ (see *32, 33*). What we transcribe /iʔ/ is pronounced [eʔ] after neutral, [ɛi̯ʔ] after plain uvular and [əi̯ʔ, öi̯ʔ, ɛi̯ʔ] after labialized consonants. The variant [eʔ] may have a brief reflex [^{ɪ}] after the glottal closure; in addition, in word-final position it may be opened to [ɛʔ]. All three variants were recorded in the root /λʼiʔ/ 'dear, expensive, dangerous' and its nominalized form /sλʼiʔ/ 'desire, thing wanted': [λʼeʔ, λʼɛʔ, sλʼeʔ, sλʼe^{ɪ}ʔ] (the last variant may be considered to represent the articulation /sλʼəi̯ʔ/, see *31*.

Word-final examples after uvular and labialized cons.: /sqʼiʔ/ [sqʼɛi̯ʔ] 'slices of dried salmon', /x°iʔ/ [x°əi̯ʔ, x°ɛi̯ʔ] 'be lost'. Medial examples: /niʔč/ [neʔč, ne^{ɪ}ʔč] 'high seas', /k°ciʔc/ [k°ceʔc, k°ce^{ɪ}ʔc] 'person with magic power', /qʼi^{l}šn/ [qʼɛ^{l}i̯ʔšn] 'small mat used in canoe', /nq°i^{l}ʔstn/ [nəq°ə^{l}i̯ʔsTn̩, nəq°ɛ^{l}i̯ʔsTn̩] 'cooking pot',

/k'°iˈʔqtn/ [k'°əˈi̯ʔqTn̯, k'°ɛˈi̯ʔqTn̯] 'fur, skin'. As the last example shows, a following uvular does not affect /iʔ/ the way it does /i/; it may have an opening influence on the initial part of the articulation, however, so that the variant [ɛi] rather than [e] is heard after a plain cons.: /t'iˈʔqi/ [t'ɛˈi̯ʔqɛi̯] 'soak dried salmon in water', /t'iˈʔq°m/ [t'ɛˈi̯ʔq°əm] 'spark', /hiʔq°iˈn/ [heʔq°eˑˈn, hɛi̯ʔq°eˑˈn] 'lamp'.

Before a vowel, /iʔ/ has facultative variants with a glottalized glide written [i̯ʔi̯] (see *28*), e.g. /i̯iˈʔuλ/ [i̯eˈʔoλ, i̯eˈi̯ʔi̯oλ] 'fire', /q'°iˈʔus/ [q'°ɛˈi̯ʔos, q'°eˈi̯ʔi̯os] 'spring (season)'.

22. The rare complex /îʔ/ (to which the occurrence of /î/ is limited) is pronounced [ɛˑʔ], occasionally[ɪˑʔ]. Examples: /q'îʔx̌i̯a/ [q'ɛˑˈʔx̌i̯ɛ] 'Negro', /ʔîʔx̌°/ [ʔɛˑʔx̌°, ʔɛˑˈʔəx̌°] 'all', /k°îʔk°λ/ [k°ɪˑʔk°λ] 'small canoe'. Occasionally a variant [ɛʔᴱ] is heard, e.g. /p'îˈʔnəx°/ [p'ɛˑˈʔnəx°, p'ɛˑˈʔn̯əx°, p'ɛˈʔᴱnəx°] 'to hold; tr.', /sqîˈʔmʔq°/ [sqɛˈʔᴱmʔq°] 'devilfish' (IJ) (according to AP, who pronounced [sqɛˑˈʔm̩əq°], this word is Musqueam and Cowichan, the Squamish equivalent being /st'əlx̌°c'/).

23. It is characteristic of combinations /Rʔ/ that the glottal closure may either fall at the beginning of the articulation of the resonant, or interrupt it briefly at any point between im- and explosion, or come at the end. This variation is in principle free, but the preferred variants depend on the position in the word in terms of final, preconsonantal or prevocalic, and also on the particular sonant involved.

In words like /lamʔ/ 'house', /namʔ/ 'go', where the glottal closure tends to fall at the beginning of the articulation of the sonant, any clear nasal resonance may be lacking, but they remain distinct from words ending in /aʔ/, because the color of the vowel is affected by the implosion of the labial. This variant, with or without clear nasal resonance, is symbolized /aˑᵐʔ], etc. If a consonant follows, e.g. in /lamʔs/ 'his house', the explosive moment of the labial becomes relatively prominent after the silence of [ʔ] and is audible as a weak [ᵖ] which explodes into the fricative: [laˑᵐʔᵖs]. This explosive element is of necessity unobservalbe when a homorganic plosive follows, e.g. in /sq°inʔc/ [sq°ɛiⁿʔc] 'beard'. The extreme variants of the above-mentioned words can easily be mistaken for *[laʔps, sq°ɛi̯ʔc].

In the case of /lʔ, i̯ʔ, u̯ʔ/ such extreme variants do not occur. This is not necessarily due to a different timing of the glottal closure, but rather to the fact that a preceding vowel is more strongly affected by a lateral or glide than by a nasal. An "l"-element is always audible in /lʔ/, though it may be of shorter duration than in /l/, cf. /x̌°ilʔ/ [x̌°ɛˑˈʔ] 'come out, off' *vs.* /slil/ [slɛˑɬ] 'bunch of blankets'. In final or preconsonantal /i̯ʔ, u̯ʔ/, when the glottal closure falls near the beginning, a brief vocalic reflex [ⁱ, ᵘ] is heard after its release, sometimes whispered (in case the vocal chords do not start vibrating again after the release of /ʔ/).

As the preference for a particular variant is not the same in all cases, the nasals, liquid, glides and /h/ are treated separately, first in word-final and preconsonantal position, and then intervocalically.

24. In the case of /mʔ, nʔ/ the preferred variants finally or before cons. have the glottal closure near the beginning: /lamʔ/ [la·^{m}ʔ] 'house', /λimʔ/ [λe·^{m}ʔ] 'be accepted', /hinʔ/ [he·^{n}ʔ] 'be a long time', /sumʔ/ [so·^{m}ʔ] 'smell; itr.', /mənʔ/ [mʌ^{n}ʔ] 'child, offspring'. The same variants before cons.: /lamʔs/ [la·^{m}ʔs] 'his house', /sqʷinʔc/ [sqʷɛi^{n}ʔc] 'beard', /kʷumʔč/ [kʷo·^{m}ʔč] 'go over a hill', /stʼəmʔqʷ/ [stʼʌ^{m}ʔqʷ] 'scalped'.

25. In final /-lʔ/ the liquid is clearly audible and I write [lʔ]: /qʼalʔ/ [qʼa·lʔ] 'consent', /x̌ʷilʔ/ [x̌ʷɛ·lʔ] 'come out, come off' (note the difference from the type /siˈʔl/ [seˈʔəl]), /x̌əlʔ/ [x̌ælʔ] 'write; itr.'. Except in /-ilʔ-/ the preconsonantal variant is the same: /ʔalʔs/ [ʔa·lʔs] 'to pity' /x̌əlʔt/ [x̌ælʔt] 'write; tr.', though sometimes an "l"-resonance is heard after [ʔ] so that the impression is almost [ʔa·ˈʔl̩s, x̌æˈʔl̩t]. The sequence /ilʔC/ is always pronounced [ɛˈʔɛlC], e.g. /x̌ʷilʔt/ [x̌ʷɛˈʔɛlt] 'take out, take off' (a transitive derivation of /x̌ʷilʔ/ quoted above), /x̌ʷiˈlʔm/ [x̌ʷɛˈʔɛlm̩] 'rope'. This sequence is common in reduplicative formations characterized by glottalization: /ʔəs.liˈlʔxʷ/ [ʔəsleˈʔɛlxʷ] 'lying down' (cf. /lixʷ/ [le·xʷ] 'fall down'), /lilʔs/ [lɛˈʔɛls] 'be under, below' (cf. /ləs/ [lʌs] 'bottom'), /sλʼiλʼiˈlʔqm/ [sλʼeλʼɛˈʔɛlqm̩] 'bug' (a diminutive reduplication of /sλʼaˈlqm/ 'monster').

26. Final /-i̯ʔ/ and /-u̯ʔ/ are not parallel phonetically. In /-iʔ/ the resonant is usually interrupted near the beginning, and a brief [^{i}] is heard after the release of the glottal stop: /tai̯ʔ/ [ta·i̯ʔ^{i}, ta·ʔ^{i}] 'that one', /slai̯ʔ/ [sla·i̯ʔ^{i}, sla·ʔ^{i}] 'fir bark'. In /-u̯ʔ/, on the other hand, the glottal stop usually falls quite at the end of the resonant: /šau̯ʔ/ [ša·u̯ʔ] 'bone' /λau̯ʔ/ [λa·u̯ʔ] 'recover; itr.', /cʼiu̯ʔ/ [cʼe·u̯ʔ] 'heal, close' (ab. wound); itr.', /sx̌əu̯ʔ/ [sx̌ɑu̯ʔ] 'salmon backbone'. Both types of variants are possible in both cases, however. Before cons. both resonants have a brief reflex after [ʔ]: /ʔai̯ʔx̌/ [ʔa·(i̯)ʔ^{i}x̌] 'crab', /hui̯ʔs/ [ho·(i̯)ʔ^{i}s] 'eat; tr.', /x̌au̯ʔs/ [x̌a·(u̯)ʔ^{u}s] 'new', /ʔau̯ʔt/ [ʔa·(u̯)ʔ^{u}t 'future'. Before a group of two consonants /-au̯ʔ-/ is usually pronounced [aʔo], *i.e.* the postglottal reflex has become dominant: /šau̯ʔcq/ [šaˈʔocq] 'bony-faced' (cf. /šau̯ʔ/ quoted above), /stau̯ʔxʷλ/ [staˈʔoxʷλ] 'children'.

27. Final /-hʔ/ occurs only in /təhʔ/ [taʔ^{ə}] 'undergo; be located' (a homophonous root means 'mother' (address), cf. also /hatəˈhʔ/ [hataˈʔ^{ə}] 'aunty'), further in /λəhʔ/ [λaʔ^{ə}] 'be touched'. In medial position /əhʔ/ is not distinguished from /aʔ/.

28. Medially before a vowel or syllabic /m, n, l/ variants with glottal closure near the beginning of the sonant are usual in all cases: /naˈmʔn/ [na·ˈ^{m}ʔm̩] 'go and get someone; tr.' (a derivative of /namʔ/ [na·^{m}ʔ] 'go'), /nša ˈu̯ʔus/ [nša·ˈ^{u}ʔu̯os] 'skinny' (a derivative of /šau̯ʔ/ [ša·u̯ʔ] 'bone'), /siˈu̯ʔač/ [se·ˈ^{u}ʔu̯æč] 'foreleg', /tʼx̌aˈi̯ʔus/ [tʼx̌a·ˈ^{i}ʔi̯os] 'lightning'. Deviations from this norm in one direction may create a trisyllabic impression [naˈʔm̩n̩], while in the other direction the sonant may be articulated as a whole before the glottalization, e.g. [tʼx̌ʷa·ˈi̯ʔos]. However, in these cases the pronunciation of /RʔV/ overlaps that of sequences which are phonemically

distinct from it, namely on the one hand that of /ʔRV/ as in /naˈʔnat/ [naˈʔn̥æt] 'evening', /liˈʔlam/ [leˈʔl̥am] 'little house', /šaˈʔi̯u/ [šaˈʔəi̯o] 'corpse', and on the other hand that of /R/ + /ʔV/, written /R.ʔV/ as in /tl.ʔəˈc.nač/ [tl̥ʔʌcnæč] 'east wind' (see 40).

29. In a few words sequences [-i̯ʔu̯-, -u̯ʔi̯-, -i̯ʔi̯-] were recorded, and since these cannot be opposed to any other type of glottalized sequence of two sonants [i̯, u̯], it is in itself immaterial whether one transcribes /-i̯ʔu̯-/, etc., or /-i̯u̯ʔ-/, etc. The former alternative is clearly indicated by those cases of [-i̯ʔi̯-, -u̯ʔi̯-] which involve stems ending in /-i̯ʔ, -u̯ʔ/ followed by the 2nd pers. plur. possessive suffix /-i̯ap/, e.g. /si̯aˈi̯ʔ/ 'friend', /ʔə-si̯aˈi̯ʔ-i̯ap/ 'your pl. friend', and I choose this alternative in all cases, e.g. /i̯aˈi̯ʔu̯as/ 'bed platform', /su̯aˈi̯ʔu̯i/ (geogr. name). — It is probable that a number of cases recorded [-eᵘ̯ʔu̯], transcribed /-iu̯ʔ-/, go back to */-əi̯ʔu̯-/ (e.g. in the suffixes /-iu̯ʔiλ, -iu̯ʔas/). See also *70.*

30. Note.— LM claimed on one occasion that there is a difference in pronunciation between the final part of /lamʔ/ 'house', /sumʔ/ 'smell' on the one hand, and that of /hamʔ/ 'be covered', /pumʔ/ 'swell' on the other hand, pronouncing the former with [ᵐʔ] and the latter with [mʔ]. IJ pronounced [ha·ᵐʔ, po·ᵐʔ] however, and for LM the medial pronunciation in /haˈmʔn/ 'cover; tr.' was the same as that of other medial cases of /-mʔ-/. When a number of cases were checked, LM pronounced [mʔ] (rather than [ᵐʔ]) only in /sx°imʔ/ 'discarded object'. Having mentioned the pertinent cases, I further disregard this distinction, which in any case is not made by all speakers.

F. VOWEL AND DIPHTHONG II

31. The distinction between /əi̯ʔ, əu̯ʔ, əhʔ/ and /iʔ, uʔ, aʔ/ — like that between their non-glottalic counterparts (see *14-19*) — has a low functional yield, and here, too, there often is an etymological equivalence between the two series. It is again the cases with /i̯, i/ where the distinction is weakest, in this case to the extent of being non-existent: /əi̯ʔ/ and /iʔ/ are either in free variation or in complementary distribution, and only /iʔ/ is written (see *21*; the variants [eʔˈ, ɛi̯ʔ, əi̯ʔ] may be considered to represent /əi̯ʔ/, the variants [eʔ, ɛʔ] representing /iʔ/).

32. /əu̯ʔ/ and /uʔ/ are in several cases kept apart, cf. /nəˈu̯ʔn/ [nöˈᵘ̯ʔu̯n̥] 'put in; tr.' *vs.* /cʾuˈʔn/ [cʾoˈʔn̥] 'pull out; tr.', /muˈʔn/ [moˈʔn̥] 'drop; tr.'; however, the root of the first example appears with /uʔ/ in /tx°.nuʔ/ [tx°noˈʔ] '(land) into'. Stressed final /əu̯ʔ/ was recorded in /ʔəsi̯əˈu̯ʔ/ [ʔəsi̯öˈu̯ʔ] 'seer' and /sx̆əu̯ʔ/ [sx̆ɑu̯ʔ] 'salmon backbone', stressed final /uʔ/ in /cʾuʔ/ [cʾoʔ] 'come out (being pulled)' and /tx°.nuʔ/ (see above). In unstressed syllables /əu̯ʔ/ is found before vowels and syllabic sonants, /uʔ/ elsewhere. In a few cases the two are in free variation: /ʔəsqʾəqʾəˈu̯ʔ, ʔəsqʾəq°uˈʔ/ '(be) together with', /x°əu̯ʔaˈx°, x°uʔaˈx°/ 'not yet'.

33. /əhʔ/ and /aʔ/ are distinguished in stressed word-final position only, cf. /təhʔ,

(ha)tə^{l}hʔ, λəhʔ/ quoted in *27*, pronounced with [a^{l}ʔ^{a}] as opposed to [a^{l}ʔ] in /naʔ/ 'be on, at', /tx°ta^{l}ʔ/ '(land) onto'.

34. It is worthy of note that /naʔ, tx°taʔ/ and also /tx°.nuʔ, ʔəsqʾəqʾ°u^{l}ʔ/ quoted in *32* belong to the category of so-called "relator-verbs" (corresponding to English prepositions, see *219*, *220*). This category has /Aʔ/ (A = full vowel) in two cases where related "plain" lexical items have the shape /əRʔ/, namely in /tx°.nuʔ, tx°taʔ/ *vs.* /nə^{l}u̯ʔn, təhʔ/, and if /ʔəsqʾəqʾ°u^{l}ʔ/ has /ʔəsqʾəqʾə^{l}u̯ʔ/ besides it, this is because the plain uvular apparently resists the reduction of a following /əu̯ʔ/ to /uʔ/, before which it becomes automatically labialized (*6*). The tendency of relator-verbs to reduce /əRʔ/ to /Aʔ/ may be due to a less prominent stress of such words in the sentence as a whole. However, a few "plain" lexical items were recorded with stressed final /Aʔ/: /i̯aʔ/ 'be tight', /cʾuʔ/ 'come out', cf. also — with two stresses— /smə^{l}qʾ°a^{l}ʔ/[sm̥ö^{l}qʾ°a^{l}ʔ] 'crane'.

G. UNSTRESSED VOWELS

35. In the unstressed part of a word the consonants do not differ from those in stressed syllables. Of the full vowels, /i/ and /u/ in preaccentual position allow a closer pronunciation than under the stress (extreme variants [i] and [u]), e.g. /hiʔa^{l}mʔ/ [heʔa·^{lm}ʔ, hiʔa·^{lm}ʔ] 'come home', /tuta^{l}u̯ʔ/ [tota·^{l}u̯ʔ, tuta·^{l}u̯ʔ] 'bright'. Unstressed /a/ has the variants [a, æ, ɛ, ɔ] depending on the consonantal environment in terms of neutral [æ], palatal [ɛ] and labialized [ɔ] consonants, the timbre [a] being heard most often before glides and /l/, in the neighborhood of /ʔ/ and, to a lesser extent, of plain uvulars, and also at the end of a word. Unstressed /ə/, and also the facultative vowel is unstressed /Cm, Cn, Cl/ (see *8*) is a *schwa*-type vowel [ə], strongly colored by neighboring palatals [ɪ] and uvulars [ə, æ], by preceding labialized consonants, velar [u] or uvular [u, ɔ] and by following labialized consonants, velar [ü] and uvular [ü, ö]. As these timbres show, uvulars tend to open /ə/, resulting in a pronunciation which largely coincides with that of /a/ (see *38*).

36. Vowel-Reduction.— A striking feature in the pronunciation of longer words is the strong tendency to reduce unstressed vowels to [ə] and its variants, or even to zero. Here follow some examples (optimal and reduced forms are given in this order): /stə^{l}u̯aqin/ [stö^{l}u̯aqɛi̯n, stö^{l}u̯æqɛn, stö^{l}u̯əqən, -qn̯] 'graveyard', /mə^{l}lalus/ [mʌ^{l}lalos, mʌ^{l}lələs] 'raccoon', /ʔu^{l}x°umix°/ [ʔo·^{l}x°omex°, ʔo·^{l}x°umüx°] 'village'; a particular type of reduction in /ai̯(ʔ)/, e.g. /λʾi^{l}λʾix̌°ai̯/ [λʾɛ·^{l}λʾɛx̌°ai̯, λ^{l}e·^{l}λʾex̌°ɛi̯, -x̌°e] 'brook trout', /sli^{l}x̌°ai̯ʔšn/ [slɛ·^{l}x̌°ai̯ʔšn̯, slɛ·^{l}x̌°ə i̯ʔšn] 'foot of mountain', where /ai̯(ʔ)/ tends to merge with /i(ʔ)/. In the neighborhood of uvulars, reduced vowels tend to be more open, and particularly /i/ is often reduced to [ɛ] in this position (cf. /stə^{l}u̯aqin/ quoted above); the same goes for /i(ʔ)/ as a reduction of /ai̯(ʔ)/, e.g. /si^{l}u̯ai̯ʔq/ [se·^{l}u̯ai̯ʔq, se·^{l}u̯eʔq] 'pants'. The unstressed suffixes /-u̯iλ, -u̯as/ reduce to /-uλ, -us/,

e.g. /ča^{l}ʔtu̯iλ/ [ča^{l}ʔtu̯eλ, -u̯ɪλ, -oλ] 'build a canoe', /nq'°i^{l}q'°lu̯as/ [nəq'°ɛ·^{l}q'°l̥u̯æs, -os] 'stick for holding salmon above the fire'.

This tendency to reduce unstressed vowels has had phonemic consequences: many words contain affixes in reduced form even in the most careful pronunciation, so that alternative forms of the affix must be recognized: /-qin, -qn/, /-mix°, -məx°/, /-u̯iλ, -uλ/, etc. As an example may serve the suffix /-qin, -qn/ 'head; hair; throat; language' which occurs stressed in /ns-qi^{l}n-m/ [nsqɛ^{l}i̯nm̥] 'rub oil /ns-/ in one's hair', and unstressed in reduced form in /s-nə^{l}s-qn/ [snʌ^{l}sqn̥] 'hair-oil', in non-reduced form in /č'ix°-i^{l}-qin/ [č'ex°ɛ·^{l}qɛi̯n] 'be thirsty', lit. 'have a dry /č'ix°-/ throat' (of course, the latter word allows also reduced forms with [-qɛn, -qn̥] in the same way as the example /stə^{l}u̯aqin/ quoted above, but /snə^{l}sqn/ does not allow a form with [-qɛi̯n] — it is as if, in English, both "forehead" and "bulkhead" had a form with [-ɪd], which only in the latter case allowed a fuller pronunciation with [-hɛd]).

37. Progressive vowel-assimilation.— The vowel in a stressed syllable exerts an assimilating influence on the vowel(s) following it. For instance, after a stressed /a^{l}/ an /a/ in the next syllable is often pronounced [a] rather than [æ], e.g. /t'a^{l}t'aλ/ [t'a·^{l}t'æλ, t'a·^{l}t'aλ] 'loom' *versus* /mi^{l}x̌aλ/ [mɛ·^{l}x̌æλ] 'black bear'. This tendency to progressive vowel assimilation has had phonemic consequences: certain suffixes often occur with the same vowel as is found in the stem to which they are added, e.g. the transitivizer /-(V)n/, cf. /mə^{l}s-n/ 'put, stick together; tr.', /c'a^{l}q'-an/ 'hit; tr.', /mu^{l}i̯-un/ 'soak; tr.', /λi^{l}k'°-in/ 'hook, hang up; tr.' (see sections *86, 92, 107*). (This is a tendency and not a strict rule, cf. /na^{l}mʔ-n/ 'go and get someone; tr.). For a case of progressive vowel-assimilation involving clitics see *55*.

38. Phonemic transcription of unstressed vowels.— The possible reduction of all unstressed vowels to *schwa* and the possible opening of *schwa*-type vowels to [æ, ɔ], etc., in the neighborhood of uvulars, combined with the fact that reduced forms in many cases have become standardized, causes certain difficulties with regard to the phonemic interpretation of individual recordings. The following principles have been adhered to:

(a) Close vowels [ə, ɪ, u, ü] in their regular positions, of which no open alternative [æ, ɛ, ɔ, ö] was recorded in the same word or grammatical (not lexical!) affix, are transcribed /ə/ (resp. zero before /m, n, l/, see *8*).

(b) Open vowels [a, æ, ɛ, ɔ, ö] in their regular positions are transcribed /a/, except that /ə/ is written in the neighborhood of uvulars in those cases where in an identical morphological formation /ə/ rather than /a/ is found in non-uvular surroundings. For instance, the first vowel in [stæqtaqɛ^{l}i̯u̯] 'horses' is transcribed with /ə/: /stəqtaqi^{l}u̯/ (morphologically /s-təq-taqi^{l}u̯/) because the reduplicated plural has close vowels, *i.e.* /ə/, in neutral surroundings, cf. /s-mn-ma^{l}nit/ [smənma·^{l}net] 'mountains'.

(c) In cases where full and reduced forms were recorded and where the reduced form is very much more common than the full one, or where it was used in deliberately

careful pronunciation, alternative forms are recognized (thus in the case of /nqʾʷiˈqʾʷlus/ quoted in *36*, which is much more common than the form with /-u̯as/).

As far as unstressed vowels are concerned, the possibility of errors in individual cases must especially be taken into account in the case of the following pairs: the variant [u] of /ə/ and the variant [u] of /u/; the variant [ɪ] of /ə/ and the variant [i] of /i/; the variant [æ] of /a/ and the variant [ɛ] of /i/; in addition, certain cases with /ə/ may allow full forms which were not recorded (see *97*, *111*). The account of unstressed vowels given here is certainly incomplete: a special investigation would probably reveal a complex system of neutralizations. For instance, in postaccentual position before /λ, λʾ/ only open vowels were recorded, and according to (b) above I write /a/, e.g., in /miˈx̌aλ/ [mɛːˈx̌æλ] 'black bear', /staˈi̯aλ/ [staːˈi̯ɛλ] 'brother's or sister's child', though a transcription with /ə/ would be just as unambiguous here.

III

SPECIAL QUESTIONS

A. JUNCTURE

39. The distinction between syllabic and non-syllabic juncture between a cons. and a following /m, n, l/ (see *8*) is made more or less consistently only *between syllables, i.e.* in the case /CVC.RVC/ *versus* /CVCRVC/ (where VC may be replaced by syllabic /m, n, l/, as in the examples /st'l.mu^{l}ʔt, t'lma^{l}i̯ʔ/ quoted in *8*), and here /./ is written. In word-initial position there is perhaps a tendency to non-syllabic contact in combinations of the nominalizing prefix /s-/ and stems /RVC.../ when R is represented by /l/, or when the syllable is unstressed. For instance, one normally pronounces [sɱa·^{l}-, sn̯a·^{l}-] in /s-ma^{l}nit/ 'mountain', /s-nat/ 'night'; on the other hand I recorded [sla·^{l}-] rather than [sl̥a·^{l}-] in /slau̯t'/ 'herring', and [smən-, smɳ-] rather than [sɱən-, sɱɳ-] in /s-mn̥-ma^{l}nit/ 'mountains'. But this pattern is not rigidly adhered to; I recorded [sn̯əx°-] in /s-nəx°i^{l}λ/ 'canoe' (reduplicated plural /s-nəx°-nəx°i^{l}λ/). A distinction between /CiV^{l}-, CuV^{l}-/ and /Ci̯V^{l}-, Cu̯V^{l}-/ is not made at all, and I use the latter transcription only where C is represented by /s-/, e.g. in /sjə^{l}cm/ [siɛ^{l}cɱ] 'news', cf. /i̯ə^{l}cm/ [i̯ɛ^{l}cɱ] 'tell, report' (an initial /s-/ so frequently represents the nominalizing prefix (*80*) that in all units /sC.../ where there is no morphological evidence to the contrary it may be regarded as such).

When a vocalic prefix precedes a nominalized unit /s-RVC.../ the tendency to non-syllabic contact when R is represented by /m, n, l/ is somewhat stronger, and here /./ is written, e.g. /ti-s-məq'-mə^{l}q'-m/ [tesmʌq'-] 'overeat'.

A distinction of juncture-types is also problematic in sequences /-VʔR-/: in /p'i^{l}ʔnəx°/ 'have seized' one hears syllabic variants of /n/ much more often than in the morphologically parallel case /k'°a^{l}č.nəx°/ 'see', lit. 'have caught sight of' (cf. also, for an extreme case, the last variant of /q'°u^{l}ʔnəu̯ʔa^{l}sn/ quoted in *20*, end).

40. In a number of words medial sequences of /R/ and /ʔ/ were recorded which differ from those treated in *28* in that the glottal stop clearly falls after the complete articulation of the sonant. In some cases these may be accidental variants, e.g. in /hiu̯ʔi^{l}qn/, recorded [heu̯ʔɛ·^{l}qɳ] 'those sitting in front', where the root itself is

facultatively glottalized (/hiu̯(ʔ)/ 'be upstream'). In others there is a morpheme-border between /R/ and /ʔ/, and the second morpheme is found independently with /ʔ/; in these cases I write /R.ʔ/ or, where morphemes are separated, /R-ʔ/, e.g. /ʔm-ʔiˈmac/ 'grandchildren' (reduplicated plural of /ʔiˈmac/), /tl-ʔəˈc-nač/ [tɬʔʌˈcnɛč] 'east wind' (cf. /ʔəˈc-nač/ 'territory of Indian Reserve no. 3'). Such cases were sometimes also recorded where junctural glottalization (*69*, *70*) is involved, but in most examples of this category one hears the usual variants of /Rʔ/, so that at most the existence of a tendency can be registered; I do not mark these cases with /./.

B. CONSONANTS

41. In several cases a sequence of two identical consonants regularly merges into a single one. For instance, the 3rd. pers. possessive suffix /-s/ is inaudible after stems ending in /s/: the form [tæsʔaˑˈcos] means 'the face' as well as 'his face', and in the latter case I transcribe /ta‿saˈcus(-s)/, on the analogy of /ta‿laˈmʔ-s/ 'his house', etc. In other cases such a merger is frequent, but a pronunciation as geminates is possible. For instance, the relative-case prefix /t-/ often merges with a following article or demonstrative beginning with /t/, e.g. in /timʔaˈ t-taˈi̯ʔ/ 'like that' one hears sometimes [ttaˑˈʔᵗ] with two separate explosions, but also [taˑˈʔᵗ]; in the latter case I write /(t-)taˈi̯ʔ/ in recorded sentences.

42. After /n(ʔ), l(ʔ)/ a distinction of /c/ and /s/ is problematic. I have recorded /ʔəns/ 'I', though comparative evidence (Cw. əˈnθə) points to /c/, and /xʷiˈʔqʷlʔs/ 'steamboat', though a final /-c/ would allow a likely etymology 'fiery-mouthed' (see Dictionary), and so in other cases. A similar problem exists with regard to the distinction of non-initial /c/, /ts/ and /tc/. I have recorded /pʼîˈʔtcka/ [pʼɛˑˈʔtˢckɛ] 'grab me!', with a slightly affricated variant of /t/ followed by a full affricate (morphologically the word consists of the root /pʼîʔ-/, the transitivizer /-t/, the 1 sg. object-suff. /-c/ and the imperative suff. /-ka/). In /pʼîˈʔtcaxʷ/ 'your /-axʷ/ grabbing me /-c-/' the same sequence /-t-c-/ is morphophonemically present, but I doubt if before a vowel /tc/ is distinct from /c/. Words containing the reflexive suffix /-sut/ or /-cut/ were always recorded with [cot], and here the pronunciation was checked carefully: it is identical with that of /cut/ [coˑt] 'to say' where initial /c-/ is distinct from /ts-/ (see *5*). But since trans. verb-stems which take this reflexive suffix have a final /-t-/ before all other personal suffixes (also before passivizing /-m/, see *82*), and particularly since the reflexive form of verbs with the transitivizers /-at, -ut, -it/ has /-acut, -ucut, -icut/, these forms end morphophonemically in /-(V)t-cut/ or /-(V)t-sut/. There is nothing in Squamish itself that points to the former alternative, and for analytical purposes I write /-(V)t-sut/, for practical purposes (texts) /-(V)cut/.

43. A morpheme-initial /h/ is dropped after a consonantal prefix, e.g. /hiu̯/ [heˑu̯] 'be upstream', /s-(h)iu̯/ [seˑu̯] 'upstream region', /txʷ-(h)iu̯/ [txʷeˑu̯] 'move upstream'; /hiiˈ/ [hiɛ̯eˑˈ] 'big', /nəxʷ-(h)iiˈ-qs/ [nüxʷiɛ̯ɛˑˈqs] 'big-nosed' (suff. /-qs/ 'nose').

44. In unstressed syllables a morpheme-initial /ʔ/ is sometimes dropped after a consonant, e.g. /s-(ʔ)əqʷ°iˈlʔtl/ 'siblings and cousins' (also /ʔəqʷ°iˈlʔtl/). I write /(ʔ)/ only in cases where /ʔ/ is usually or always absent. The /ʔ/ in the 1st pers. sing. possessive prefix /ʔn-/ is always dropped after a clitic connected with the word of which it is a part: /ʔn-sɻaˈɻʔ/ '(he is) my friend' *versus* /ta‿n-sɻaˈɻʔ/ 'my friend'; it is usually absent in all other sentence-medial positions. This case is very frequent, and instead of /(ʔ)n-/ I write simply /n-/ here. The 2nd pers. possessive prefix /ʔə-/ is normally dropped in the 2nd pers. subject forms of the factual paradigm (see *133*) after the article /k°i/, and here I write /(ʔə-)/; the use of the prefix may well be artificial.

45. In a few cases glottalic consonants seem to have lost their glottal feature when preceded by /ʔ/. The root-final glottalic cons. in /šičʼ/ 'be all around', /šičʼ-aˈn/ 'circle around; tr.' was recorded /č/ in /šiˈ-šiʔč/ 'round', and /t/ was recorded in /muˈ-mʔt-m/ 'blue grouse', but cf. Cw. miːtʼ '*id.*'. In these cases /ʔ/ is characteristic of reduplicative formations (see *71*). Cf. also /ʔəs-ɻuˈʔkʷ/ 'stingy' *vs.* Cw. ɛwkʷ° 'wealth, property'. On the other hand, an unexpected /kʷ°/ was recorded in /s-ʔə-kʷ°aˈʔ-kʷlaš/ 'wound', probably < */s-ʔaʔ-kʷ°aˈʔ-kʷlaš/, and in any case a reduplicative derivative of /kʷ°əˈlaš/ 'shoot, sting'. To sum up, in two cases /ʔK/ seems to be a secondary development of /ʔKʼ/, in one /Kʼ/ certainly represents an original /ʔK/, and for /ʔəsɻuʔkʷ°/ *vs.* Cw. ɛwkʷ° both interpretations are possible, though Sq. /nəxʷ°-ɻukʷ°-aˈʔmin/ 'what belongs to a stingy person', CdA. duʔukʷ° 'be stingy', Kal. yəyuˈkʷ°eʔ 'stingy' suggest the second one for Cw. ɛwkʷ°. — But cases of /ʔKʼ/ were also recorded, e.g. /scʼiˈɻʔqʼ/ 'elderberry'. It is not impossible that /ʔK/ and /ʔKʼ/ are in free variation in Squamish.

46. In a small number of words geminated or long consonants occur. Where these are found in medial position they are combined with a double stress if one of the adjacent vowels is /ə/, and this /ə/ is in several cases irregular in comparison to non-geminated counterparts of these words (see below). I write these geminates /C.C/, where /./ fulfills the double function of indicating that the consonants do not merge, and that the second one is not syllabic (in the cases with /n.n/). Such geminates occur without double stess in /s-ʔaˈt.tam/ 'things, stuff, belongings' (probably a derivative of /s-tam/ 'what?') and in /ʔač.čaˈɻam/ 'to spawn', /(n-)s-ʔač.čaˈɻam/ 'conger eel'. With double stress they occur in four of the numerals referring to days: /tʼəˈkʼ°.kʷ°usaˈč/ '7 days', with a surprising /ə/ in the first syllable, as compared to /tʼakʷ°usaˈč/ '7', /təˈq.qaˈč/ '8 days', cf. /tqač/ '8', /ʔuˈp.pəˈn/ '10 days', cf. /ʔuˈpn/ '10' and /ciˈɻaˈčis = cəˈɻ.ɻaˈčis/ [-eˑˈɻaˑˈ] '5 days', /s-ciˈɻaˈčis/ 'Friday', cf. /ciˈačis/ 'five'; without double stress in the numeral /ʔaˈn.nʔus/ '2 animals' (possibly a misrecording for */ʔaˈʔnʔus/, see *213*). Further in two non-numerical words: /nəxʷ°-ɻəˈɻ.ɻaˈnm/ [-ɻɑˈɻəɻaˑˈ-] 'be surprised', /tinəˈn.naˈʔt/ in the expression /ɻa‿n.λ‿tinəˈn.naˈʔt/ [ɻʌnλtenɛˈnnaˈʔt] 'my deceased father', lit. 'the past one I am from', cf. /tinaˈʔ/ 'be from' (where /ti-/ means 'from' and /naʔ/ '(be) at').

In a few cases geminates occur word-initially, e.g. in the phrase /u̯a‿λ̓s‿u̯a‿n.naˈʔ/ 'where they (persons) were'; here /n.naˈʔ/ is a form of the morpheme /naʔ/ 'at' mentioned above. Since reference to persons in several cases entails reduplication in Squamish, gemination is considered to be a special type of reduplication (see *162*). In the medial cases, the reduplication is the primary phenomenon, from which the double stress and the appearance of /ə/ in unexpected places result.

C. SVARABHAKTI VOWELS

47. In a few words of the shape /CVR(ʔ)C/ variants with a svarabhakti-vowel between /R/ and /C/ and without glottalization were recorded. The instances are the following:

[CVRəC]	[CVRʔC]	[CVRC]	
[x̌ɛˈi̯ˈx̌]	[x̌ɛi̯ʔx̌]	[x̌ɛi̯x̌]	/x̌iʔx̌, x̌əi̯x̌/ 'war'
[λ̓ʾɛˈi̯ˈq̓]	—	[λ̓ʾɛi̯q̓]	/λ̓ʾəi̯q̓/ 'get trapped'
[sc̓ʾɛ·ˈu̯ˤq̓]	[sc̓ʾɛ·u̯ʔq̓]	[sc̓ʾɛ·u̯q̓-]	/s-c̓ʾiu̯(ʔ)q̓/ 'elderberry'
[λʌˈmˤx°]	[λʌmʔx°]	—	/λəmʔx°/ 'rain'

The variants with svarabhakti-vowel resemble the Halcomelem forms (Cowichan x̌əˈyləx̌, ç̓ʾiˈwəq̓, s-λəˈməx°); since in Squamish a type /CVRəC/ is very rare while /CVRʔC, CVRC/ are common (see *65*), I regard the latter forms as optimal, and in particular the form with glottalization, of which that without may be regarded as a reduction. In the word 'war' the form /x̌əi̯x̌/ is the most frequently used, and alternative forms are recognized; note that /x̌iʔx̌ = x̌əi̯ʔx̌/. Of /λ̓ʾəi̯q̓/ no alternative with glottalization was recorded, but a glottal stop may easily have escaped notice before glottalic /q̓/, see *45*. With 'elderberry' a form CVRC was recorded only in the derivative /s-c̓ʾiˈu̯q̓-ai̯ʔ/ 'elderberry-tree'. In all three cases with glottalization, the variant with [ʔ] after the full sonant was recorded.

48. In word-initial position a sequence of /n/ plus uvular is pronounced with an anaptyctic vowel [ə, æ] in between. All instances concern the prefix /n-/, alternant of /nəx°-/ (locational), see *169ff.* When a clitic ending in a vowel precedes, the anaptyctic vowel is facultative. Examples: /n-q̓ʾaλ̓/ [nəq̓ʾa·ˈλ̓, næq̓ʾa·ˈλ̓] 'be in the way', /n-q°uˈʔus/ [nəq°oˈʔos] 'tears' (cf. before a non-uvular cons. /n-tiˈq̓ʾ°us/ [ntɛ·ˈq̓ʾ°os] 'bump one's head'). Where such a vowel remains absent between /n-/ and a following uvular, the initial /n-/ is secondary and results from /ʔn-/; these cases all concern the 1st pers. sing. possessive prefix /ʔn-/, where /ʔ/ is often dropped, see *44*, and where this prefix in its form /n-/ occurs before uvulars I write /n̆-/ (where /./ indicates the absence of an anaptyctic vowel), e.g. /ta‿n̆-q̓ʾaˈi̯ʔq̓/ 'my chair'.

An anaptyctic vowel is also heard between the combination /n-s-/ (consisting of the abovementioned prefix /n(əx°)-/ and the nominalizer /s-/) and a following consonant proper; the only instances are /n-s-tʾq̓ʾiˈu̯s/ 'side of body' and /n-s-x̌aˈʔx̌m/ 'wild pigeon', pronounced with an initial [nsət'-, nsæx̌-]. Such a vowel remains