

Some Remarks on the Phonology of Tahltan

Hank F. Nater
Iskut, British Columbia
Canada VOJIKU

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(0) Tahltan is a Dene¹ language spoken in several villages in northern British Columbia and the southern Yukon. One of these communities is Iskut, where I am observing this moribund tongue². The Iskut variant of Tahltan is identical with the native idiom in Telegraph Creek, B.C., but there may exist dialectal differences between Iskut-Telegraph Tahltan and the language as spoken on other reserves³. However, such possible diversity is of no immediate relevance to the contents of this paper.

According to Michael E. Krauss, "at least some" Tahltan is a "lilca" language, meaning that proto-Dene *c/ɛ/k/kʷ is continued in Tahltan as respectively c/ɛ/ɛ/ɛ⁴. In my experience, however, Tahltan - that is, at least for the majority of regional speakers - appears to belong to the type "llc": ɛ/c/ɛ/c (which is confirmed in other publications on this language⁵). Furthermore, it is unfortunate that in previous reports on Tahltan linguistics little mention is made of some important facets of Tahltan phonology, to wit: degrees of vowel length, tones and unpredictable stress, heavy phonemes, and the role and origin of a number of marginal phonemes. In this article, I attempt to fill these gaps in the literature on Tahltan. In particular, I show that vowel length often has nasal and/or tonal reflexes in other Dene. Attention is also given to morphological operations, and I demonstrate how such processes have contributed to the emergence of the marginal phonemes.

(1) The phonetic parameters of the Tahltan consonants are:

<u>place of articulation</u>	<u>articulatory manner</u>
1: bilabial	a: stops
2: dental	I: plain (voiced)
3: coronal	II: aspirated
A: interdental	III: glottalized
B: alveolar	b: continuants (fricatives)
C: palatal	I: voiceless
4: lateral	II: voiced
5: velar	III: glottalized
A: palatal	
B: pure velar	
C: uvular	
D: rounded	
6: laryngeal (glottal)	

In tabular fashion, then, we list the consonants as follows:

	al	all	alll	bl	bll	blll
1	b [b]				m [m]	
2	d [d]	t [t ^h]	t' [t̥]	n [N]	n [n]	n' [n̥]
3A	ʃ [d̥]	ɬ [t̥ ^h]	ɬ' [t̥̥]	ʃ [θ]	ʃ [ð]	
3B	ʒ [d̥ ^z]	c [t̥ ^z]	c' [t̥̥ ^z]	s [s]	z [z]	
3C	ʒ [d̥ ^j]	ɕ [t̥ ^j]	ɕ' [t̥̥ ^j]	ʃ [ʃ]	ʒ [ʒ]	
4	ʃ [d̥ ^l]	ɕ [t̥ ^l]	ɕ' [t̥̥ ^l]	ɬ [ɬ]	ɬ [ɬ]	
5A				j [h ^j]	y [j, γ ^j]	
5B	g [g]	k [k ^h]	k' [k̥]	x [x]	g [γ]	
5C	g [g]	q [q ^x]	q' [q̥]	x [x]	g [γ]	
5D	g ^w [g ^w]	k ^w [k ^{hw}]	k' ^w [k̥ ^w]	x ^w [x ^w]	w [w, γ ^w]	
6			ʔ [ʔ]	h [h]		

Rounded velars are in free variation with rounded uvulars: [g^w ~ ɣ^w], [x^w ~ χ^w], etc. Note also, that after back vowels (ō, o, ū, u) the distinction between pure and rounded velars is neutralized: -ʃok^w = -ʃok TO LAUGH (verb stem), kūx^w = kūx RICE. Here, I always spell k, x, etc. See further (2.3.2) and (4.2).

(1.1) The consonants enumerated in (1) are found pre- and postvocally as illustrated below. V = vowel, V' = stressed vowel, \bar{V} = long vowel, # = morpheme or syllable boundary, - precedes bound stems, triple asterisks appear where phonotactic rules prohibit the occurrence of certain phonemes (see at the end of this section), and --- signals the absence of data.

#-V		V-#	
b ⁶ :	be'de	FOOD	---
	bēs	KNIFE	liyā'b
m:	men	LAKE	---
	mē'da	WHO?	---
d:	'eda''	BEAK	---
	'edā''	EYE	---
t:	tas	ARROW	k'at
	tāzē	BROTH	bāt
t':	t'o'je	BREAST	---
	'et'a'ne	LEAF	---
n:	---	ten	ICE
	---	gūn	GOLD
n:	nagā'	WOLVERINE	-gan
	nā'āi	KISS MY POSTERIOR!	ān
n':	---	don'	STAR
	---	-d'ān'	TO LISTEN
β:	βenē'β	DAY	---
	---	---	---
ɖ:	'eɖe'n'	MEAT	-deɖ
	ɖē	ROCK	-'eɖ
ɖ':	ɖ'a'	DISH	---
	ɖ'āɖ	MOSS	---
ʂ:	ʂeɬ	SWEAT	beʂ
	ʂā	SAND	βenē'β
ʂ:	ʂaʂ	SNOW	---
	'eʂā't	MOUTH	-gēɬ
ʒ:	ʒI'me	BIRD	---
	ʒI'yā'	NECKLACE	---
c:	ca'	BEAVER	-bec
	-cān	TO SMELL	k'āc

#-V		V-#	
c':	c'ah	HAT	---
	c'ū	SPRUCE	---
s:	sas	BLACK BEAR	xos
	sēk	SALIVA	bēs
z:	-zeh	TO SPIT	---
	zās	RUSTLING NOISE	-'āz
ʒ:	ʒI'je	BERRIES	---
	-ʒān	MATURE	---
ɖ:	'eɖe''	TAIL	'eɖI'ɖ
	-ɖō	BIG	-dɖɖ
ɖ':	ɖ'oh	QUILL	---
	ɖ'ās	NIGHTLINE	---
ʂ:	ʂa'xk'et	BEADS	ɖoʂ
	---	---	ɖ'ās
ʒ':	-ʒe''e	MAN'S BROTHER'S SON	---
	-ʒā'ne	MALE ANIMAL	-ɖūɬ
I:	-Iok	TO LAUGH	---
	Iū'ne	MOUSE	---
ʒ:	ʒej	GREASE	ɖ'eɬ
	'uʒā'n	MUCH	ɖ'āɬ
ʒ':	ʒ'a'	BOTTOM	---
	ʒ'ūɬ	ROPE	---
ɬ:	ɬet	SMOKE	beɬ
	ɬūt	SCAB	ʒ'ūɬ
I:	'ela''	HAND	---
	'elI'ɬe	BLADDER	ɬāsāI
g:	guh	RABBIT	---
	gūh	BUG, WORM	---
k:	kon'	FIRE	k'Ik
	kē	FOOT-WEAR	sēk
k':	k'a'ye	WILLOW	---
	k'āc	WHETSTONE	---
x:	xas	SCAR	ʒ'ox
	xēɬ	PACK	kūx

#-V		V-#	
g:	'egu'' TOOTH	-ceg	TO CRY
	nagā' WOLVERINE	---	
j ^u :	'Injo'f BLOW IT UP!	f'o ^j	GRASS
	c'e'nejē SEED	---	
y:	ya' LOUSE	defo'y	SOMETHING YELLOW
	yē'da WHAT?	---	
g ^w :	---	***	
	g ^w ēt SACK	***	
k ^w :	---	-Iok ^w	TO LAUGH (= -Iok)
	tak ^w ē' TWICE	nā'nāk ^w	A CHIEF'S NAME
k ^w :	ša'xk ^w et BEADS	***	
	k ^w ā'ga OLD SALMON	***	
x ^w :	see (4.2)	-fox ^w	TO SWEEP (= -fox)
	kex ^w ā'n SILVER FOX	kūx ^w	RICE (= kūx)
w:	nā'wi HARD LIQUOR	-fow	TO SWEEP (= -fog)
	---	gāw	DRUM
g:	dega'y SWAN	***	
	gāf PILOT BREAD	***	
q:	c'eqo'hge MOOSE SKIN CANOE	---	
	qā'tū CHICKADEE	f'Iq	TOBACCO
q':	q'axā'dī DOOR	***	
	'eq'ā'dī ANIMAL'S WOMB	***	
x:	---	ša'xk ^w et	BEADS
	q'axā'dī DOOR	tōx	WHITEFISH
g:	ga'nje GOOSE (= ga'nje)	---	
	qlf'axōgēt FRYING PAN	---	
':	'ečo's PADDLE	'ega''	HAIR
	'āh SNOWSHOES	'egā''	HALF
h:	ho3ih CARIBOU	dih	HEN, GROUSE
	---	'āh	SNOWSHOES

The main phonotactic restrictions are: (1a) word-initially and -finally, consonant clusters are not allowed⁹; (1b) clusters of over two consonants are not tolerated word-internally⁹; (2) in word-final position, stops are always lenis-voiceless (spelled t, k, f, etc.); (3) in stems containing two or more coronal consonants, there is agreement as to place of articulation between these consonants (see further (2.1)).

(2) A Tahltan word is characterized by one or more of the following suprasegmental and sandhi phenomena:

- (1) articulatory agreement between 3A-C consonants - see (2.1);
- (2) distinctive stress or tone - see (2.2.1-2);
- (3) distinctive vowel length - see (2.2.3);
- (4) alternation of stem-final and -initial consonants - see (2.3).

(2.1) Most Tahltan stems contain a CVC sequence. If both consonants in such stems belong to a coronal (3A-C) series, they always agree as regards place of articulation¹⁰. Thus, *čVz, *čVs, *sVš, *čVš, and the like, are not found in the language. It appears that progressive assimilation has eliminated such possibilities from Tahltan. Consider: -čūz TO HANDLE A SHEET(-LIKE OBJECT) = Chiricahua Apache -čō.z, Chipewyan -čūz, central Carrier -čuz; 'ečo's PADDLE = southern Carrier coš'. More examples of such phonetic harmony are: -čef TO EAT, čāf EDIBLE ROOT, cec FIREWOOD, č'ās NIGHTLINE, sas BLACK BEAR, čoš FEATHERS, 'ečl'č AWL, čl'je BERRIES, čāf SNOW, zās RUSTLING NOISE.

(2.2) Tahltan vowels are described in terms of qualitative and quantitative features:

	front-flat	mid-flat	mid	mid-round	back-round
short-lax	i [i]	I [ɪ]	e [ɛ]	a [ɑ]	o [ɔ]
long-tense	ī [i']	ē [ɛ']	ā [a']	ō [o']	ū [u']

The position of I is, as this chart indicates, somewhat problematic. In the first place, this vowel has no long-tense counterpart. Secondly, I is in near-complementary distribution with i. Furthermore, I varies freely with e in certain ^{words,} environments. I shall first show how i and e both contrast with I in similar surroundings:

<u>i</u> vs. <u>I</u> :	di'nen THIS LAND	vs. dedI'ni HE, HIM
	'a'c'ila IT HAS BEEN FIXED	vs. cI'li GOPHER
<u>e</u> vs. <u>I</u> :	tl'ge ONE	vs. de'ge BE OFF!
	-gl'je ROUND	vs. -ce'je SMALL

Next, we consider the distribution of i and I, neutralization of the i-I distinction in closed syllables, and free variation between I and e.

In open syllables we encounter both i and I (see the examples given above). However, stressed I is in near-complementary distribution with unstressed i in this position (unstressed I and stressed i being very rare), and directly before ' and h, i is found

with the exclusion of I. Examples:

unstressed i

'a'c'ila IT HAS BEEN FIXED
tine'áidē WE HAVE LEFT
sik'a's I BIT IT

i'V

'ec'i''e GUTS
-ti''e GOOD
'esli''e MY DOG

stressed I

cI'li GOPHER
'esgl'ne MY SONG
dI'di THIS

ihV

ǀ'i'he MOSQUITO
ǀe'dihā IS IT SWEET?
nust'i'he MARTEN

Rare instances of stressed i (other than before ' or h) are: ni'dus'ā I MAY BUY IT, xi'na SLAVE, di'ǀ'ā AFTER THIS. Note, that di'- THIS is inherently stressed.

Most occurrences of unstressed I are due either to addition of one of the regularly stressed deictic prefixes di'- THIS and 'e'(y)- THAT (di'klme THIS HOUSE, 'e'cili THAT GOPHER) or to free variation between unstressed e and I (see further below).

In closed syllables, the i-I contrast is neutralized. Unless followed by ' or h, i/I is pronounced I after 3C palatals: -ǀǀ TO TIE, -ǀ'ǀ TO CUMB, 'eǀǀ'ǀ AWL, -ǀǀt TO STINK. Before ' and h we hear i only: -ǀih TO LIVE, BREATHE, xih ANIMAL, ǀe'dih SWEET, 'esdi'' MY MIND, 'eni'' FACE. In all other positions, I and i alternate freely: k'ik/k'ik CURED FISHHEADS, k'is/k'is RED ALDER, 'in-/In- THOU, THY, disdū'sde/disdū'sde SNIPE, -ǀic/-ǀic TO WRITE, xit/xit HOUSE.

Both in open and closed syllables, unstressed e frequently varies with I: debē'he/debē'hI MOUNTAIN SHEEP, 'ibā''e/'ibā''I WEASEL, kenā''et/kenā''It/kInā''et/kInā''It COAT, ǀa'ǀk'et/ǀa'ǀk'et BEADS, etc.

Orthographically, I consistently distinguish i from I in open syllables. In closed syllables, I spell i only before ' and h. Where i and I are in free variation, we are compelled to write I, since inflected forms do not allow a pronunciation with i: besides k'ǀⁱ/k, k'ǀⁱ/ǀs, xǀⁱ/ǀt we find the bound (possessed) forms -k'I'ge, -k'I'se, -ǀI'de (never *-i-).

The I variant of unstressed e is rendered as ǀ: debē'hǀ, 'ibā''ǀ, kǀnā''ǀ, ǀa'ǀk'ǀet. The distinction between e and ǀ is necessitated by items such as de'ne MAN, -ti''e GOOD, which never appear as *de'nI, *-ti''I.

(2.2.1) In polysyllabic words, one vowel often appears more prominent than others. Such prominence is achieved through the concomitance of high tone, expiratory strength (loudness), and/or slight lengthening. Unstressed vowels tend to be phonetically shorter than accented vowels; phonemically long vowels, in particular, are pronounced perceptibly shorter in unstressed syllables than when stressed, without, however, losing their tense character. Stress, when present, is marked (with a raised period after the vowel) in polysyllabic words only. In monosyllabic words, on the other hand, high tone is left unmarked, whereas distinctive low tone is indicated by a period following a low-toned vowel. Some examples: ho'nāzē CHIPMUNK, hozā'ze BUCKBRUSH, 'āh SNOWSHOE, 'ā.h FOG. See further (2.2.2).

In his report on Tahltan stress phenomena, Eung-Do Cook formulates a number of rules that seem to make stress predictable in most positions in polysyllabic forms¹¹. However, he also admits that there are some exceptions to his stress rules¹². The percentage of such exceptions in my field notes leads me to consider stress-tone a distinctive trait in Tahltan. Consider the following data:

CVCVC: ǀe'dih IT IS SWEET, 'e'dih THAT GROUSE vs. keye'h TOWN, 'uǀo'h IT IS BIG

CVCVC: nā'ǀ'et IT FELL OFF, tǀ'dek TOUGH MEAT vs. 'Iyo'ǀ IT IS SWOLLEN, tǀq'a'ǀ NEEDLE

CVCV(C): 'u'nā GUN, 'a'dI ON PURPOSE vs. ǀ'ǀǀǀ CLOTH, sadǀ'' SUN

CVCV: ǀ'I'nā CANDLE vs. c'Iyū' BRACELET

CVCVCV: 'e'ze/ǀe THAT ONE ONLY, de'gena BE OFF!, ni''iya GET UP! vs. 'eǀ'ǀ'de GRISTLE,

ǀet'e'hi COOKED, taǀ'I'le KINGFISHER vs. noho'e HE IS PLAYING

CVCVCV: 'ǀ'seda STEELHEAD, 'ǀ'wet'e ALWAYS vs. 'ǀ'e'ǀi FOR US TO EAT, ǀǀǀ'ǀ'de TOILET PAPER

CVCVCV(C): kI'ǀǀk'eh YESTERDAY, kI'mǀc'ih AWAY FROM THE HOUSE, na'dāceǀ HE IS GOING TO CRY AGAIN vs. kazū'ne OTTER, kenā''et COAT, 'etǀ'le PANCREAS vs. yekāgo't SOME-BODY BAWLED HIM OUT, q'anāǀa'n FENCE

CVCVCV: ho'desǀ I SAY, TALK, c'e'neǀē SEED, me'nedū DOMESTIC SHEEP vs. baǀili' A WOMAN'S NICKNAME, ket'ǀǀā AWL, k'ǀenasā I AM WALKING AROUND, k'e'ihǀ' CHEAPER

CVCVCV: ho'nāzē CHIPMUNK, k'u'nāyǀē ROSEHIPS, ǀI'dāt'ǀǀ KERCHIEF vs. 'eq'ǀ'ǀI ANIMAL'S WOMB, q'ǀǀǀ'ǀ DOOR

In addition, there are some bisyllabic words where neither syllable has distinctive prominence. In these, stress either is absent, fluctuates, or occurs in both syllables: hoǀih = ho'ǀih = hoǀi'h = ho'ǀi'h CARIBOU, dānā = dā'nā = dānā' = dā'nā' MONEY. Hr I do not indicate stress at all. In compound words, both members are as a rule accentuated: deko'ǀno'ne COUGH MEDICINE (deko'ǀ COUGH, non' MEDICINE), ǀi'ǀǀǀ'ǀ CURRANT < "dog

(ʃi') berry (ʃi'ʃe)", 'eʒā'hʃ'ū'le BRIDLE < "mouth ('eʒā'h-) rope (ʃ'ūʃ)", dā'htu'' TEARS < "eye (dāh-) water (tū)".

(2.2.2) Tone distinguishes a small number of monosyllabic words:

<u>low tone</u>	<u>high tone</u>
xI.ʃ KNOLL	xIʃ PUS
xē.ʃ STEEL TRAP	xēʃ PACK
'ā.h FOG	'āh SNOWSHOES

Note, that the high-pitched peaks in 'āh and xēʃ sound shorter than the low-toned ones in 'ā.h and xē.ʃ. This is an indication that Tahltan (like, e.g., Dogrib) is historically a language with low-marked tone¹³. Otherwise, tonal contrast does not play a role in affixal derivations of these minimal pairs: 'esgē'le¹⁴ can mean either MY PACK or MY STEEL TRAP.

(2.2.3) Phonemic vowel length is distinctive in pairs such as:

<u>short vowel</u>	<u>long vowel</u>
'ega'' HAIR	'egā'' HALF
'eda'' BEAK	'edā'' EYE
kene'ʃ RAFT	kenē'ʃ CROSS
'ah I HEARD SOMETHING!	'āh SNOWSHOES
-3edo'ne CHEST	'edō'ne CHILD

In verbal forms, phonemically unstressed long vowels are often marked by a falling pitch contour (marked V'.) - here, a difference in vowel length can mark the difference between present and past tense. Examples:

<u>present</u>	<u>past</u>
k'Ina'nahdeʃ YOU CHASE HIM	k'Ina'nā'.hdeʃ YOU CHASED HIM
ho'dIndē YOU TALK	ho'dī'.ndē YOU TALKED
dInko'ʃ YOU COUGH	dī'.nko'ʃ YOU COUGHED
'ahlī'n YOU DANCE	'ā'.hlī'n YOU DANCED

This secondary stress-tone pattern is, however, optional, and it is not necessary to indicate it in transcriptions.

(2.3) Nouns can be used as syntactically independent forms: xIt (A) HOUSE, bāt GLOVE(S), SLEEVE(S), ʃej GREASE, xIn SONG, etc. Besides these, we find affixal formations: 'es-gl'de MY HOUSE, 'ē'čbā'de SHIRT SLEEVE(S), 'esʃe'ye MY GREASE, ce'jgl'ne FUNERAL DIRGE. We observe that the bound nominal stems differ from the free forms in that stem-initial and -final voiceless consonants often alternate with voiced consonants. I have recorded the following alternations:

	<u>stem-final</u>		<u>stem-initial</u>	
	<u>free</u>	<u>bound</u>	<u>free</u>	<u>bound</u>
1	-t	-d-		
2	-n	-n-		
3	-n'	-n('n)-		
4	-ʃ	-ʃ-		
5	-ʃ	-ʃ-	ʃ-	-ʃ-
6	-c	-3-		
7	-s	-z-	s-	-z-
8	-č	-ʃ-		
9	-ʃ	-ʃ-	ʃ-	-ʃ-
10	-ʃ	-ʃ-	ʃ-	-ʃ-
11	-k	-g-		
12	-x	-g-	x-	-g-
13	-j	-y-		
14	-q	-g-		
15	-ʃ	-ʃ-	y-	-ʃ-

Two other, quite marginal, alternations are:

(2.3.1) An illustration of the consonant alternations follows below. In the examples given, I cite, where possible, possessive forms: 'es...e MY ... Thus, we read, e.g., 10: ʃet SMOKE - 'esle'de (the latter meaning MY SMOKE).

1: bāt GLOVES - 'esbā'de; 2: xIn SONG - 'esgl'ne; 3: ʃon' STAK - 'eʃʃo'n'ne, non' MEDICINE - 'esno'ne; 4: -ʃeʃ TO EAT - 'ūʃe'ʃi FOR US TO EAT; 5: ʃē BELT - 'eʃʃe'..¹⁵, ʃaʃ SNOW - 'eʃʃa'ʃe; 6: k'āc WHETSTONE - 'esk'ā'ʃe; 7: seʃ HOOK - 'esze'te, bēs KNIFE - 'esbē'ze; 8: 'ēʃ SHIRT - 'es'ē'ʃe; 9: ʃi' DOG - 'esli'..¹⁶, ʃi'ā'ʃ PILLOW - 'eʃʃi'ā'ʃe; 10: ʃet SMOKE - 'esle'de, mīʃ SNARE - 'esmī'le; 11: sēk SALIVA - 'esze'ge; 12: xos THORN - 'esgo'se, kūx RICE - 'eskū'ge; 13: ʃej GREASE - 'esʃe'ye; 14: t'ōq WART - 'es-

-t'o'ge; 15: 'eye''e MAN'S BROTHER'S SON - 'ešye''e/'ešže''e¹⁷, -člš = -čūž TO HANDLE A SHEET(-LIKE OBJECT)¹⁸.

(2.3.2) In a limited number of stems, pure velar continuants alternate with palatal ones, that is, some speakers pronounce x and g, some j and y, and others consider both variants acceptable. I have recorded this fluctuation in:

	-x	-g	-j	-y
FROSTY		-zog		-zoy
GRASS	ʃ'ox	-ʃ'o'ge	ʃ'oj	-ʃ'o'ye
SNUFF		'eʃ'a'gi		'eʃ'a'yi
TO WEEP	-cex	-ceg	-cej	-cey

The occurrence of these doublets appears to be due to older dialectal (now idiolectal) differences; in one dialect, g was tolerated before all vowels, whereas in the other, g became y before front vowels. Subsequently, secondary stems (ʃ'o'j, -cej) were formed (j already being in the phoneme inventory), restoring the balance (x : g = j : y)¹⁹. The stems -zog, -zoy, -ceg, and -cey continue formations with suffixal -i²⁰ (cf. the optional vowels discussed in (3.3.5)); -ʃ'o'ge and -ʃ'o'ye are possessive forms.

(2.3.3) Not all Tahltan stems are sensitive to the sandhi processes described in (2.3). The first (limited) category of such "immune" stems comprises items such as ʃaš SNOW, ga'nʃe GOOSE, -la' HAND, which contain inherently voiced initial consonants, and dega'y SWAN, ʃən HERE, gāw DRUM, whose voiced final continuants never vary with voiceless ones. Secondly, there is a relatively small class of stems with a voiceless initial and/or final consonant that remains voiceless in morphological derivations:

	<u>nominal simplex</u>	<u>possessive form</u>
<u>initial</u>		
	ʃa SAND	'eʃʃa'e ²¹ MY SAND
	saš BLACK BEAR	'essa'se MY BLACK BEAR
	xas SCAR	'esxa'se MY SCAR
	ʃon' STAR	'eʃʃo'n'ne MY STAR
<u>final</u>		
	taš ARROW	'esta'se MY ARROW
	kene'ʃ RAFT	'eskene'ʃe MY RAFT
	xat CLUB	'esga'ʃe MY CLUB
	č'āš NIGHTLINE	'ešč'ā'še MY NIGHTLINE ²²

Those stem-final consonants that resist voicing are all continuants - the low frequency of immune stems is doubtless correlated with the fact that intervocalic voiceless continuants are generally rare²³. The only example in my notes of a change-immune stem-final non-continuant is gō'sk'āč SHADOW ('esgō'sk'āče MY SHADOW).

(3) In this section, I compare Tahltan vowels and nasals with their reflexes in other Dene²⁴. Comparative-historical evidence is based on data from central and southern Carrier (cCa, resp. sCa), Chiricahua Apache (Ap), Chipewyan (Cp), Sarcee (Sa), Rae Dogrib (Do), and Chilcotin (Cl); the proto-Dene reconstructions are from M.F. Hardwicke Tahltan Phonology and Morphology²⁵.

(3.1) Tahltan V' and reflexes in other Dene:

	<u>proto-Dene</u>	<u>Tahltan</u>	<u>low tone</u>	<u>high tone</u>
ARROW	q'a'	k'a'	Ap k'a. cCa k'a. ^{a)}	Cp k'a. Cl k'ʃ'
BEAVER	ča'	ca'	Ap ča. cCa ca.	Cp ca. Cl cʃ' Do ca'
DISH	c'ak'	č'a'	Ap c'a. ^{b)} sCa c'a.y	Cl c'ai'. ^{c)}
HAIR	ga'	'ega''	Ap bi.-gā. ^{d)} cCa -ga.'	
HAND	???	'ela''	cCa 'əla.	Cp si ⁿ la'. ^{e)} Cl sEłʃ'. ^{f)}
HEAD	ci'	'eč'i''	Ap bi.-cI.-i'. ^{g)} cCa 'əč'i.	Cp nEč'i'. ^{h)} Cl sEč'i'. ⁱ⁾
LOUSE	ya'	ya'	Ap yā. cCa ya. Do ʒa.	Cp ya. Cl yʃ'
TAIL	ke'	'eče''	Ap bi.-cē. ^{j)} cCa 'əče. ^{l)} Do weče. ^{l)}	Cl bEč'i'. ^{k)}
TEETH	gu'	'egu''	Ap bi.-gō. ^{m)} cCa 'əgu.	Cp sEgu'. ⁿ⁾ Cl segwo'. ^{o)}

a) BULLET b) SHALLOW BASKET c) PLATE d) ITS WOOL e) MY HAND f) MY HAND g) THAT WHICH IS HIS HEAD h) YOUR HEAD i) MY HEAD j) HIS TAIL k) ITS TAIL l) ITS TAIL m) HIS TEETH n) MY TOOTH o) MY TOOTH

In Tahltan, prefixal 'e- ONE'S is compulsory in nouns referring to body parts when no possessive affixes are added.

The regularity of the above correspondences is obvious: where proto-Dene and Tahltan have V', we observe low tone in Ap (+ vowel length), cCa, and Do, and high tone in Cp and Cl (with one exception: Do ca' BEAVER). Note further, that Cl c'ai' PLATE has irregular c' instead of t'.²⁶

3.2) Next, we consider the counterparts of Tahltan \bar{V} :

	proto-Dene	Tahltan	low tone	high tone
BELT	???	šē	cCa šē.	Cl šē'
CHARCOAL	t'ēš ^w	t'ēs	Ap t'ē.š cCa t'ē.s Cl t'i.s	
CRANE	???	dēł	cCa de.ł	
TO HANDLE A SHEET	???	-čūł	Ap -cō.z Cp -čū.ł Sa -cu.z cCa -čū.z	
GLOVES	wāt'	bāt	cCa ba.t	Cl bā't
GREY	???	de-bā'-e	cCa bai.	Ap ʃi.ł-ba'
TO HANG	wāl	-bāł	Ap -ba.ł, -bā.ł	
HEART	ʃ ^w eyə'	'e-3ē''	cCa 'əʃi' Cl bEʃi. a)	Ap bi.-3ē'i' a)
KNIFE	wēš ^w	bēs	Cp be.s	Ap bē'š
LEAF	t'ān'	'e-t'ā'n-e	cCa 'ət'a.n	Cl 'Et'ā'n
MOSS *)	c'āł'	č'āł	cCa č'a.l	
PACK	xēł	xēł	cCa xe.ł Cl xe.ł	Ap xē'ł
RIBS	kānq'đ	'e-čā'g-e	sCa -čak Cp bE-čā'n.g-a'n. b) Cl nEnčē'n.	
ROCK	cē	čē	Cp čē. Cl čē.	
SCAB	łūt'	łūt	Cp łu.r cCa łu.t Cl sElu.t c)	Ap ło'
SHEEP	dəwē	debē'(he)	cCa dəbe. d) Cl dEbi.	Ap di.be'

*) Tahltan č'ał has specific reference to a pink kind of moss, the generic term for MOSS being nī'.

a) HIS HEART b) HIS RIBS c) MY SCAB d) GOAT

	proto-Dene	Tahltan	low tone	high tone
SKY	yā	yā	Cp ya. cCa ya.-	
SUN	š ^w ā	sā	Cp sa. cCa sa. Cl sš.	Ap ša' Do sa'
TO TAN	-zē	-šē	Cp -šē.	
THREE	???	tā'-t'e	cCa ta. Cp ta.-	Ap tā'-i' Cl te'i
WATER	tū	tū	Cp, Cl tu. cCa tu.	Ap to'

In terms of regular correspondences, we note that the Ca (and most Cp) reflexes of proto-Dene and Tahltan \bar{V} are low-toned. On the other hand, where the Ap reflexes have low pitch, the vowel is long, whereas the Ap high-pitched vowels are short (except in KNIFE and PACK). This is an indication that not all cited proto-Dene reconstructions are warranted.

Other instances of Tahltan \bar{V} appear to continue proto-Dene \bar{V} + nasal(ity), \bar{V} + continuant, or \bar{V} + glottalized stop (note RIBS in the preceding list). Other Dene languages have here \bar{V} + (mostly voiced) continuant and/or nasality. The state of affairs is illustrated in the table below²⁷.

	proto-Dene	Tahltan	continuant	nasal(ity)
EAR	???	3ē(h)-	cCa 'əʃo (< *-3əʃg) Cp sE-3əʃ-a. a) Cl sE3əʃ a)	
EDGE	wān'-ə (H)	-mā''e		Ap bi.-bā'n.-i' b) Cp ba'n'-E
EYE	nā(x) (H)	'e-dā'', ²⁸	Cp sE-nag-a' c) Cl sEnag c)	
FOG	'āq' (H)	'ā.h	Cl ex	
GOAT	???	'iđbā'	sCa sbay Cl šEbai	
PITCH	ʃēq' (H) ʃe'q' (S)	3ēh	Cp -3Eg- Cl 3a'x cCa 3eh	
RAIN	kān (H)	čā		cCa čān Ap n'čān.

	proto-Dene	Tahltan	continuant	nasality
SAND	sāx (H)	ṣā	cCa ṣai Ap sa'i	
I SAY	???	ho'-desē		Cp dEsi ⁿ Do re.si ⁿ
SNOWSHOES	'āx (H)	'āh	cCa 'aih	
TO VOMIT	quy (H)	-kū	Cp -kui Sa ku.y	

a) MY EAR b) THAT WHICH IS ITS EDGE c) MY EYE

Note proto-Dene quy, with short -u-.

(3.3) In (3.2) we saw that Tahltan \bar{V} continues proto-Dene $\bar{V} + \text{nasal}$ in a few cases (EDGE, RAIN, RIBS). Much more often, however, proto-Dene nasals have been retained. In (3.3.1-4) I compare Tahltan $\bar{V} + \text{nasal}$ with reflexes in other Dene, and I discuss the status and origin of the nasal consonants n, ɲ, and n' in (3.3.5).

(3.3.1) First, we consider Tahltan $V_n(V)\#$ and $V_nV\#$:

	proto-Dene	Tahltan	$V + \text{nasal}$	nasal vowel
DAY	ṣ'en ⁴ (S)	ṣen-ē'ṣ	cCa, Cl 3in sCa 3en	Cp 3i ⁿ Do 3e ⁿ
HOUSE	qāw'ā (H)	kI'me		Cl nEnko ⁿ Cp ku ⁿ -E ⁿ
NOSE	-čix (H)	'e-ci'h, 'e-ci'n-		Ap go'-čix ⁿ a) Cl sEci ⁿ x b)
TRAIL	tān(ā) (H)	te'ne	Cl EtE'n Cp ten-E	
WRIST, ANKLE	???	-čI'ne	Ap -ci'n' sCa -čān-	

It appears that nasals have been preserved intervocalically. Proto-Dene n (or nasality) must have been optional in HOUSE and NOSE, as suggested by the modern reflexes, and the Tahltan (petrified) noun kū (in kū'-sesdah "I am sitting at the house" = I AM MARRIED), cf. sCa ku HOUSE, Ap kō.- CAMP.

(3.3.2) The reflexes of Tahltan $V_n\#$ are:

(3.3.2) The reflexes of Tahltan $V_n\#$ are:

	proto-Dene	Tahltan	$V + \text{nasal}$	nasal vowel
EXCREMENT	???	can'	cCa can Cl cā'n Sa ca.n	Cp ca ⁿ , -ca ⁿ - Ap -čā ⁿ . Do co ⁿ
FIRE	q'ān' (H)	kon'	cCa k'ān Cl kō'n Cp ku'n	Ap ko ⁿ . Do ko ⁿ .
MEAT	cān' (H) -cāy' (S)	'e-če'n'	cCa 'āčān Cl EčE'n Cp -če'n	
STAR	sāw' (H)	ṣon'	cCa ṣāw Cl ṣE'n	Ap so ⁿ s

Here, Tahltan is more conservative than other Dene in that it has preserved glottalization of nasals. Note further the regularity in tonal reflexes: high tone in Cl and Cp, low in Ap and cCa.

(3.3.3) Tahltan $\bar{V}_n(V)\#$ has the following reflexes:

	proto-Dene	Tahltan	$V + \text{nasal}$	nasal vowel
TO BE	-lēn (H)	-līn	Sa -li'n	Ap -li ⁿ . Cp -li ⁿ
TO BURN	???	-k'ān	cCa -k'ān Sa -k'a'n-	Cp -k'a ⁿ
TO DRINK	-nān ₂ (H)	-dān ²⁸	Sa -da'n-	Cp -da ⁿ
EDGE	wān'-ā (H)	-mā'ne	cCa ba, hāban	Cp ba ⁿ -
HERE	???	ṣān	cCa n ¹ an Cl in ³ ān	Ap 3a ⁿ . Cp 3a ⁿ .
TO KILL	gān (H)	-xīn		Ap -xi ⁿ .
LEAF	t'ān' (H)	'e-t'ā'ne	cCa 'āt'an Cl Et'ā'n	
TO LIE DOWN	-tēn (H)	-tīn		Ap -ti ⁿ . Cp -ti ⁿ
MANY	ṣān (H)	ṣān	cCa ṣa(n)- Sa ṣa.n	Cl ṣā ⁿ Cp ṣa ⁿ Do ṣo ⁿ
TO SWIM	-wēn (H)	-bīn		Ap -bi ⁿ . Cp -bi ⁿ
TO TAN	-zān (H)	-ṣān		Cp -ṣa ⁿ

Of special interest are -mā'ne EDGE and 'e-t'ā'ne LEAF. These forms appear irregular insofar as proto-Dene glottalization seems to have been discontinued. However, besides -mā'ne and 'e-t'ā'ne I have also recorded -mā''e (cf. (3.2)), resp. 'e-t'ā'', with only minor differences in meaning. I infer that, at some stage(s) intermediate between proto-Dene and contemporary Tahltan,

- (1) ān' / > āⁿ' > ā'
 (2a) ān'ə > āne
 (2b) ān'ə > āⁿ'e > ā'e

The separate developments proposed in (2a) and (2b) entail a phonemic split (dialectal in origin?). For n'ə > ne see (2.3.1).

The postulated shifts account for the modern Tahltan forms as follows:

proto-Dene	Tahltan
-t'ān' = -t'ān' > -t'ā ⁿ ' > -t'ā'	
> -t'ān'-ə > -t'ā'ne = -t'ā'ne	
-wān'-ə = -wān'ə > -mā'ne = -mā'ne	
= -wān'ə > -mā ⁿ 'e > -mā'e	

As regards phonemic-dialectal splits in earlier stages of Tahltan, cf. (2.3.2), and consider, in general, the wave (rather than Stammbaum) relation between members of the Dene linguistic continuum, where dialectal separations followed by reunions are not uncommon.

(3.3.4) Finally, we consider Tahltan Vn#.

	proto-Dene	Tahltan	V + nasal	nasal vowel
BONE	c'ən (H)	'e-ɛ'e'n	cCa 'əɛ'ən Cp ɛ'en	
TO GROWL	g'ən (H) -gʊn (S)	-gon	Cp -gun (-gu ⁿ)	Cp -gu ⁿ (-gun)
ICE	tən (H)	ten	cCa tən Cl tEn	
LAKE	wən (H)	men	cCa bən-	Cl bi ⁿ
LAND	ŋən' (H)	nen	cCa yən Cp ne'n (ni ⁿ -) Cl nE'n	Cp ni ⁿ - (ne'n)

	proto-Dene	Tahltan	V + nasal	nasal vowel
SONG	gən (H)	xIn	cCa šən Cl šEn Cp šen Sa xi'n	Ap gi ⁿ - Cp ši ⁿ - Do ši ⁿ
STICK	də-kən (H)	deɛl'n	cCa dəɛlən Cl dEɛEn Cp dEɛin	Ap di.ci ⁿ
MATURE	-gəŋ (H)	-yan	cCa hənyan Sa yən-	Ap -ya ⁿ . Cp niya ⁿ

Irregular Tahltan reflexes are LAND and MATURE (see further (3.3.5)).

(3.3.5) Some remarks on the phonemic status and origin of n, n, n' are called for. In modern Tahltan, the continuants n and n pattern as fricatives morphologically: n relates to n in the same way as, e.g., x does to g (see (2.3)). The glottalized nasal n', however, stands out by being the only glottalized non-plosive phoneme in the language. It is of rare occurrence, and there is no predictable alternation pattern - n' / varies with either n'ne or ne (see (2.3.1), and cf. (2.3.3)).

In word-final position, n is more frequent than n (this is true for voiceless vs. voiced continuants in general). Word-final voiced continuants are usually the result of vowel deletion (for exceptional cases see (2.3.3)): nadē'n/nadē'ni GHOST, -cey/-ceye TO WEEP, 'egadē'n/'egadē'ni WOMAN, etc.; I spell such items with a slash through the optional vowel: nadē'n/, -cey/, 'egadē'n/. Due to the alternation voiceless-voiced and the optional deletion of final e and i, doublets with n# and n# exist: -gan/-gan/ DRY, -'In/-'In/ TO SEE, etc.

The verbal augment -h- ("h-classifier"²⁹) regularly devoices⁵ contiguous n- (and -y): me'sēndI SHOW ME HOW TO DO IT! (< me'-s-ē-n-h-dI "it-me-request-thou-verbal augment-inform"), 'Injo'ɛ BLOW IT UP! (< 'In-h-yo'ɛ "thou-verbal augment-inflate").

From the data presented in (3.3.1-4) we can reconstruct the origin of Tahltan stem-final n, n, and n':

proto-Dene	Tahltan
n', ŷ', ʷ', ŋ'	n'
Vn'(V), Vŋ, Vŋ ₂	Vn(V)
n	n

In addition, Vn' > Vⁿ' > V' and Vn'ə > V'ne > Vne (cf. (3.3.3)).

Tahltan *nen* LAND must be a back-formation: ***nān*' > **nen*' > -*ne*'*ne* (possessed) > *nen* (free form). This innovative -*n* compares to the secondary -*j* discussed in (2.3.2). Another apparently irregular Tahltan form is -*yan* MATURE (probably < -*gan* or -*gan*, rather than -*gān*), which may be related to -*yāne* MATURE MALE ANIMAL (? < -*gānā*).

(4) I label a Tahltan phoneme *X1* heavy, if it can be replaced optionally by the phonetically close *X2* (but not vice versa). Such one-way variance has been observed in the interdental and uvular series, and is of an idiolectal nature. On the one hand, we must distinguish between (*ɬ/c*) and (*c*) speakers (the latter merge the interdental and alveolar series), and on the other, between (*q/k*) and (*k*) speakers (the latter having no uvulars in their phoneme inventory). The (*ɬ/c*) > (*c*) and (*q/k*) > (*k*) mergers do not necessarily co-exist in the different idiolects, so that there are (*ɬ/c*, *q/k*), (*ɬ/c*, *k*), (*c*, *q/k*), and (*c*, *k*) speakers. Thus, I have recorded, e.g., *ɬ'iq*, *ɬ'ik*, *c'iq*, and *c'ik* for TOBACCO, depending on which merger(s) has (have), or has (have) not, been completed in the informant's speech variant. For uvulars in particular, see (4.3). The disappearance (in certain idiolects) of the distinction between interdental and alveolar consonants is probably due to Kaska, Sekani, and, to a lesser degree, Gitksan and Tlingit linguistic pressure³⁰; cf. (4.3).

(4.1) I have recorded the phoneme *ɬ* only in *šahzā'ne* MATURE RAM, -*čūž* TO HANDLE A SHEET-LIKE OBJECT, and 'ešze'e = 'ešye'e MY BROTHER'S SON (said by men)¹⁷. In each of these items, *ɬ* has evolved through progressive assimilation: following (within one word), but ^{not} necessarily in adjacency to, a 3C palatal consonant, *y* and *z* > *ɬ*. Thus, -*žā'ne* goes back to -*yā'ne*, cf. 'išbā'yā'ne MATURE BILLY GOAT ('išbā' MOUNTAIN GOAT) (*šah- as such being a petrified root); -*čūž* continues older -*čūz* (or -*čūž*); -*že'e* is the free variant of -*ye'e* after 'eš- MY (which is itself the, positionally determined, allomorph of 'es- directly before *y* and 3C consonants¹⁰). The rare phoneme *ɬ* is marginal also in that it has not been recorded word-initially.

The voiceless palatalized velar continuant *j*, too, has limited distribution: like *ɬ*, it does not occur word-initially. Word-final *ij* is not opposed to *ih* (and I spell *ih*). The origin of *j* is diverse:

(1) -*ih* continues proto-Dene -*əx* or -*ix*: *dih* GROUSE < -*dəx*, 'ide'nih BEARBERRIES < -*dənəx*, 'e-ci'h NOSE < -*čix*, *ɬ'ih* MOSQUITO < *c'ix*;

(2) the verbal augment -*h*- merges with following *y* to produce *j*: 'Injo'ž BLOW IT UP! (see (3.3.5)), *c'e'nejē* SEED < "what one causes to grow" (*c'e*- ONE, -*ne*- (no clear meaning), -*h*- VERBAL AUGMENT (causative), -*yē* TO GROW);

(3) there are stems with secondary *j* (see (2.3.2));

(4) *x* has an allophone [*h*^j] before front vowels, as in, e.g., *xIm* SONG, *xIt* HOUSE, *xēš* PACK. Here, *#x*- alternates with, slightly palatal, -*g*- (rather than with -*y*-) in the possessed forms (and 'es- MY does not become 'eš-): 'esgI'ne, 'esgI'de, 'esgē'le. Most consultants, however, pronounce *x* before front vowels with rather more friction than *j*, i.e., [*x*^j]: [*x*^jIN], [*x*^jIt], [*x*^jē'š].

(4.2) The rounded velar series is semi-defective in that very few words contain such consonants were actually recorded. Some of these are: *g'ēš* SACK, *šak'ē* TWI, *k'āga* OLD COHO SALMON, *wa'xdānā* GLASSES, *gāw* DRUM. The voiceless continuant *x*^w is found in *kex'ā'n* SILVER FOX, and verbal forms containing the direct object prefix -*tx*^w- US (as in *ne'tx'edehkIn* HE TOOK US ACROSS, *ke'tx'ehdI* HE IS TEACHING US THE WAY). Note, that -*tx*^w- appears to be the reduced and incorporated (i.e., bound) variant of *daxu'ni* WE, US, that is, *daxu*- > -*dax*^w(u)- > -*dx*^w- > -*tx*^w-. According to at least two consultants, -*tx*^w- can be replaced freely by -*dax*- (which may be a contamination of *dah*- OUR and (older) -*dax*^w(u)-): *ne'daxedehkIn*, *ke'daxehdI*.

(4.3) In (4) I pointed out that many speakers of Iskut Tahltan do not include uvular consonants in their phoneme inventory. These informants substitute *g*, *k*, etc. for *g*, *q*, etc. - uvularized velars are heavy, because the feature uvularization/retraction is omissible. The marginal status of uvulars in Tahltan is further attested by the fact that none of the neighboring Dene languages possess a uvular series. The closest Dene idiom with uvulars in its phoneme inventory is Babine³¹, but I have not found any cognates shared by Tahltan and Babine that feature uvular phonemes. Another geographically close, but linguistically very remote³² neighbor is Tlingit. Here we find the source of most Tahltan uvulars. Some loans from Tlingit involving uvulars are: *q'axā'dī* DOOR, *c'eqo'hge* SKIN CANOE, *ɬ'iq* TOBACCO, *qūq* BOX, *to'gatāš* PANTS. The interaction with the Tlingits must have commenced at a time when the disappearance of the uvular series as such (in one or several dialects) was only incipient³³. This also accounts for the preservation of a small number of native uvular consonants. I have recorded uvulars in a few stems of proto-Dene origin:

	proto-Dene	Tahltan
THROAT	<i>q'əč'</i>	<i>q'as-</i>
WILLOW	<i>q'əy'</i>	<i>q'a'ye</i>
CLOUD	<i>q'wəš</i>	<i>q'oš</i>

FOOTNOTES

1. The customary term among linguists is "Athabaskan", also spelled "Athabaskan", "Athapascan", or "Athapaskan". My preference for "Dene" is based on several considerations: (a) there is lack of agreement on the spelling of the traditional label; (b) the term "Atha^b/_pas^c/_kan is a misnomer (since it should refer strictly to Amerindians residing in the vicinity of Lake Athabasca), and is often totally alien, or offensive, to speakers of Dene languages; (c) the designation "Dene" is commonly used in both native and non-native television broadcasts; (d) there is no reason why the Dene cannot follow the example set by the Inuit, who have successfully convinced the public that the former epithet "Eskimo" is inappropriate.

2. The large majority of my data has been obtained from Mr. Steven Louie of Iskut; I hereby express my gratitude for his assistance. Whenever we meet, Mr. Robert Quock, manager of the local Co-op store, also helps by volunteering Tahltan words and expressions, which is highly appreciated. In addition, I often double-check my field notes with my wife, Mrs. Greta Nater, and with her parents. On a less regular basis, numerous other persons provide information on their language.

The Tahltan language appears to be nearing extinction, despite the Band's efforts to maintain it by means of formal education. Instruction in the native language is now given, but many students lack the necessary incentive, and the Tahltan language instructor, Mr. Charles Quock, desperately needs more community support, as well as guidance in the development of his teaching methods. Generally speaking, those persons who have a first-hand command of Tahltan are in their thirties and over; I estimate that, at Iskut, there are only some twenty fluent speakers of Tahltan. However, positive developments are under way: a practical orthography has been proposed, and Mr. Charles Quock is trying to improve his teaching skills through a course offered in Whitehorse, Yukon.

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3. Eung-Do Cook's and Rev. T.P. Thorman's data indicate that such differences must exist, c.q. have existed. Otherwise, discrepancies between speakers of Tahltan at Iskut (and probably also at Telegraph Creek) must now be considered to be sub-dialectal in nature. The near-idiolectal character of the linguistic diversity is evidenced

in certain families, where sibling₁ uses a different form of Tahltan than sibling₂. For instance, Mr. Robert Quock is a (ɛ/c, k) speaker (with a "lisped" ɛ-series - cf. footnote 5), whereas his full brother, Mr. Charles Quock, is a (ɛ/c, q/k) speaker. My impression is that both different life styles and intermarriage are responsible for such, seemingly anomalous, idiomatic differences.

In following sections, I use the term "idiolectal" when discussing phonetic-phonemic differences between Tahltan speakers. I remain intrigued by the transition from dialectal to idiolectal plurality in this village.

4. For the transcription of non-Tahltan items, see footnote 25.

Note, that I have simplified the transcription of some proto-Dene phonemes as follows: (1) ' (as in ɛ, ɟ) replaces haček; (2) k, k^h, ŋ, etc. replace k, k^h, ŋ, etc. Note further, that in more recent articles on proto-Dene, Jeff Leer and Michael E. Krauss posit tɬ^r, ɬ^r, etc. in favor of k^h, ɬ^h, etc.

5. So far, I have not encountered any "IIlca" speakers in the village of Iskut. Certain idiolects, however, lack interdental, and in others, the ɛ-series is "lisped" rather than truly interdental.

6. The labial plosive occurs, as a rule, only in non-syllable-final position. The one exception to this restriction, liyā'b DEVIL, is a loan from French. This word cannot be rendered as *liyā'p, because an aspirated labial stop *p is non-existent in Tahltan.

7. See section (4.1).

8. See sections (2.3.2) and (4.1).

9. I have, however, recorded a few words with an initial consonant cluster, viz. ska'di CRAZY and sgo'h³e SOAPBERRIES (also heard as 'isgo'h³e). The one word with a syllable-final cluster is k'unc POTATOES (borrowed from a coastal language, possibly Tlingit). The absence of medial C₁C₂C₃ clusters may be a consequence of limitation la.

10. For a more detailed discussion of this phenomenon, read chapter 7 of Hardwick's thesis. In adjacency to stems beginning in a 3A-C consonant, prefixal ...s- is always assimilated to the contiguous coronal.

11. Cook's basic stress rule states that the stem is always stressed, and that every other (odd, counting first the stem) prefix receives stress. This results in a iambic stress pattern (accompanied by tonal downdrift).

12. Cook's counter-examples involve: (a) compounds, (b) particles, (c) loan words, and (d) inherently stressed prefixes.

13. Jeff Leer makes a similar remark in his Report on the Recommended Tahltan Orthography (manuscript, 1985). It is interesting that in Chiricahua Apache, too, low-toned long vowels are characterized by more duration than are high-toned long vowels.

14. For voicing of stem-final and -initial consonants see section (2.3).

15. Note, first of all, the short vowel in the possessed form 'ešše' (cf. (2.2.1)): bound -tu' = free tū WATER). Secondly, the possessive marker -' occurs (instead of -e) after stem-final V in nouns referring to objects usually not shared with others, such as items of clothing, body parts, and the like.

16. The alternation š- ~ l- is irregular (recorded only in š'i'). However, š- is here secondary; in most (if not all) other Dene languages, the word for DOG begins in a voiceless lateral fricative. Compare also Tahltan 'u-šā'n IT IS MUCH and šā'n/ VERY.

17. In 'ešše''e, two shifts have taken place: (a) ...sy... > ...šy..., (b) ...šy... > ...šž...; cf. footnote 10. Note further, that not all informants accept 'ešše''e. In their idiolects, only the first shift is allowed: 'ešye''e.

18. See section (4.1). Note, that final consonant alternation also applies to verb stems - see my Conditioned Allomorphy in Tahltan Verb Stems (in preparation).

19. The regular Tahltan reflex of proto-Dene x/g# (əx#) is x# (ox#): š'ox < š'əx, -cex < -čəx. For the origin of j# see section (4.1).

20. -i has a nominalizing function: -zog/-zoy meaning SOMETHING FROSTY, -ceg/-cey SOMEBODY WEeping.

21. We would have expected *šāh and *eššā'he (from proto-Dene sāx), but even in careful speech, there never is h. It is possible that in 'eššā'e an originally present h has been elided (cf. debē' = debē'he MOUNTAIN SHEEP), and that šā is a secondary formation; cf. section (2.3.2).

22. A nightline is a fishline set in the late afternoon, and checked early the next day. Note further, that stem-final š is immune to voicing (except in -čiš/-čūš, see (2.3.1)); this is correlated with the extreme rarity of ž between vowels.

23. Some words containing an intervocalic voiceless fricative are: 'iše'ni BELONGINGS, hos'io'se LING COD, ket'isā' AWL, gešū' PORK, mē'xu I WONDER WHO, daxu'ni WE, q'axā'dī DOOR, 'e'e'le BEAVER DAM, 'ešā'gexIt HOUSE MADE OF SPLIT LOGS, 'e'šit'ēš WE ARE COOKING. Of these, gešū' is a loan (< Chinook Jargon < French), and so is q'axā'dī (from Tlingit); mē'xu contains the enclitic -xu UNSPECIFIED, I WONDER WH-; 'e'šit'ēš contains -šid- WE (enclitics and pronominal prefixes are not sensitive to voicing processes).

24. I have selected a small number of Dene languages that are characterized by the presence of distinctive tone and/or nasality.

25. The orthography of other Dene is the same as the one employed for Tahltan in this paper. However, due to the limited number of symbols available on my daisywheels, I spell shwa as š, the epsilon has been replaced by E, raised n indicates nasality, and ž stands for æ.

26. I suspect that Cl c'ai' is actually a misrecording.

27. From here on, tone is not indicated when left unmarked in the sources. Furthermore, note the occasional differences between H (Hardwick) and S (Story) as regards the reconstruction of proto-Dene forms.

28. For Tahltan d < proto-Dene n see Hardwick, pages 19-20.

29. The verbal augment -h- corresponds to -l- in other Dene. For a thorough treatment of the Dene verbal augments, read Krauss' "On the Classification in the Athapaskan, Eyak, and Tlingit Verb", IJAL Vol. 35, No. 4, Memoir 24, 1969.

30. Such areal phenomena are not unusual. Consider, for example, the retention of uvulars in Ingalik, Tanaina, and other Dene spoken near the Inuit linguistic continuum.

31. See Gillian Story's Babine and Carrier Phonology.

32. The debate on a possible genetic link between Tlingit and Eyak-Dene continues. One proponent of such a connection is Jeff Leer, who infers common origin from structural resemblances (viz. the "classifiers" discussed in Krauss' article mentioned in footnote 29). Heinz-Jürgen Pinnow's view on this matter seems, however, at least somewhat debatable. In the first place, he adduces lexical (rather than typological) similarities in his attempts to prove a genetic relationship (his reconstructions often being unwarranted). Secondly, he also includes Haida in his comparisons; this approach (based on the Na-Dene concept) is currently in serious dispute.

33. If Thorman describes a dialect immediately ancestral to contemporary Tahltan, some sound shifts appear to be of recent origin. Loans from Tlingit confirm this: (f/c) speakers have interdental s in Tlingit words originally containing s, s', c, c', etc. Tlingit influence has been quite penetrating, although frequent contact has now ceased (formerly, the Tahltans traded, waged war, and intermarried with the Tlingits), but there are still individuals at Iskut and Telegraph Creek who have some knowledge of the Tlingit language.

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