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## Original Synthetic Article

# On The Origin of Salish, Wakashnan, and North Caucasian Languages

Vitaly Shevoroshkin

Vitaly Shevoroshkin was born in 1932 in Georgia (then a republic of the USSR).

In the years 1951-1974 he lived in Moscow USSR, where he has graduated from the Dept. of Philology of the Moscow University in 1956. When working as a researcher in the USSR Academy of Sciences (1966-1973), he defended two dissertations on linguistics (1964 and 1966). Since 1974, he lives in the USA where he is Professor of Linguistics at the University of Michigan in Ann Arbor.

He has published and edited 20 books and wrote over 500 papers on linguistics. He is mostly interested in the problems of distant genetic relationship between different language families.

*Department of Linguistics, University of Michigan , USA ;  
E. mail: vvs@umich.edu*

## ABSTRACT

The following paper represents a comparison between the most stable words in two language unities: 1) Salish-Wakashan (North America) and 2) Lezghian group of the North Caucasian family (North Caucasus). This comparison shows that any word/root from the list of basic words in Salish and/or Wakashan precisely matches the appropriate word/root of Lezghian as well as its proto-form in North Caucasian. Such close similarity clearly shows that the Salish-Wakashan languages of North America are related to the North Caucasian languages. We may add that the North Caucasian languages are older, and phonetically more complex, than Salish-Wakashan languages. This shows that Salish-Wakashan languages may have originated from the North Caucasian languages, which are a part of a larger unity: the Sino-Caucasian, or Dene-Caucasian phylum, or macro-family. Having this in mind, we can ask ourselves, when and where have the ancestors of the people, who now speak Salish and Wakashan languages, separated from North Caucasian

languages. In the paper below, we try to show that this may have happened approximately 5,000 years ago. After this split, the ancestors of the Salish and Wakashan languages started moving to the North-East and reached at the end the North American territory. Something similar has happened with another family that is a part of the Dene-Caucasian phylum: The Yeniseian languages of Siberia are closely related to the Athapascan languages of North America, which presupposes a split between the ancestors of the Yeniseian languages and those of the Athapascan languages at some point in Siberia, after which the ancestors of people, speaking Athapascan languages, migrated to North America.

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In a relatively recent work by Edward J. Vajda (I only have a copy of Vajda's preliminary paper, dated by Dec. 8, 2005), Yeniseian (= Yeniseic) languages have been successfully compared to Ath[apascan]-Eyak-Tlingit languages ("Na-Dene minus Haida" in Vajda's words). His general conclusion is: "Yeniseic and Na-Dene form a real, verifiable family. ... It appears possible to reconstruct the proto-language ancestral to Yeniseic and Na-Dene in considerable detail ...". So, the above American languages are, as it seems, much closer to Yeniseian as any other languages (either in America or in Eurasia).

On the other hand, Salish [Sa] and Wakashan [Wk] languages of America are much closer to North Caucasian [NC] languages (when judging by the proto-North-Caucasian reconstruction: see below) as any other languages (either in America or in Eurasia). Both North Caucasian and Yeniseian languages, along with Sino-Tibetan (and a few small languages of Eurasia), form a Sino-Caucasian [SC] phylum - or a Dene-Caucasian one, if we take in consideration languages as Athapascan-Eyak-Tlingit, Salish-Wakashan and a few others. But we have to reconsider the way the Sino-Caucasian / Dene-Caucasian languages have been classified. It seems incorrect to view Eurasian languages (NC,

Yeniseia, etc.) as some kind of a subgroup, and then add to them the related languages of America (Na-Dene, Salish, etc.). Rather we deal with a NC-Sa-Wak (+) subgroup; then with a Ath-Eyak-Tlingit-Yeniseian subgroup, etc. Naturally, such a division presupposes that the ancestors of people now speaking Yeniseian languages, in their migration to the North-East, stopped moving at some point and settled somewhere in the region of the Yenisei river, whereas the ancestors of people, speaking Ath-Eyak-Tlingit languages, continued to migrate until they reached the North American continent (where they split into smaller groups).

Accordingly, the ancestors of people, now speaking Sa-Wak languages, split at some point from the people who speak today NC languages and went to the North-East, reaching, at the end, the North-American continent, where they later split into smaller units (Salishan, Wakashan, and a few more). This may have happened some 5 thousand years ago, since there are features both in NC and in Sa-Wak languages which may indicate that both groups underwent a relatively late split of their common linguistic area (which happened over 5 millennia ago). Soon after this split, the ancestors of Salish and Wakashan people started moving to the north-east.

As many scholars assume, the ancestors of Amerind languages (= a large language phylum) came to North America some 12 millennia ago. The ancestors of Dene-Caucasian languages of America came, naturally, later: but when? Taking the above conclusions in consideration, we may suppose that, at least for some people, speaking these languages the arrival to America was relatively late.

Sino-Caucasian / Dene-Caucasian phylum is an old one; it may be older than Nostratic and Afro-Asiatic phyla. In Europe, we can identify several “isolated” languages that are, actually, Sino-Caucasian; we can also identify some rather broad areas of Sino-Caucasian substrate. All this indicates that Sino-Caucasian languages and peoples were wide-spread in Europe before Nostratic people came and, ultimately, covered almost all Europe. (On the other hand, the Sino-Caucasian people reached the American continent relatively late).

## Grouping of Salishan and North-Caucasian Languages

A relatively late regrouping of NC languages has resulted in the following (see also below):

**Group I:** Nakh, Tsez, Lezg, WC [in certain words, they preserve NC stops \*q'w, \*\_q'w, \*\_qw]

**Group II:** EC: AvA, Lak, Darg, Khin [in certain words, they have changed the above stops to \*k('), \*k'].

It seems possible to show (see tables below) that IS (Interior Sa) languages have preserved PS \*q', in words akin to those of NC languages of the Group I (< stops \*q'w, \*\_q'w), whereas CS (Coast Sa) languages (along with some Wk dialects) have changed PS (=Sa-Wk) \*q', in above words to \*k('), \*k', - in the same way the above NC (=EC) languages of the Group II have done.

The next sets may belong to those showing a split between the group-I languages (Lz/Nakh/Ts/WC + IS) which keep old uvular stops -q'<sup>(w)</sup> - (etc.), and the group-II languages which turn uvulars into k'<sup>(w)</sup> (etc.) (AvA/Drg/Khin/Lak + CS). (The situation in Wk languages is not very clear yet). The left column contains Sa and Wk data; the middle col. - roots in N(E)C daughter languages; the right col. - proto-NC/NEC roots. Numbers refer to pages in SED (left col.) /NCED (other col-s):

**Table 1.**

<p>TWO, TWINS I IS:MC tq'-aw's two; t'q',-m+aw's(-ññ) <i>together</i> (:PS *-was, *-alwas <i>pair+</i>)            II CS140 *k'ñyuya <i>twins</i> &lt;*k'ñ/iy            SWk:No[otka] k',a:y- <i>twins</i></p>	<p>I. Lz *qv,Đa two / Ts *qv,π-nV            WC *t q :,A &gt; Ub Ótqv,a            II. AvA *Óki- /Lk Óki / Khn Óku            Drg *Ók,i <i>two</i></p>	<p>I. NC 924 *tq'HwÉĐa <i>two</i>            EC 917 *q'H-Éam=VfLwV <i>one of (both) wives</i>            II. (EC *q'HwÉĐa; *q'Hw- &gt; *Ók, *Ók,*)</p>
<p>BIG, MANY I SWk *iÓxw <i>big</i> (NN 120) [Cf. Ts and WC]            II CS:Ld hik, <i>big</i> (a frequent deglottalization)</p>	<p>I. Nkh *qvÉani /Ts *=uqv b.,many / Lzg *naqv,V- m. / WC *q',V            II. Av *-HiÓku- &lt;AvA *hinÓka- b. &gt; Kar eÓka-m</p>	<p>NC 594 *HnĐaq'wÉV <i>big, old</i> (&gt; I. *HĐanq'wÉV) (&gt; II. *HĐank'wÉV)</p>
<p>SIT I (T[able] 74)            II CS:UC 55 k'wa s. (root) /Se 32 kwá-t <i>put down, set</i> / NWk:Kw k', a  <i>sit d.</i>, k', a-<sup>1</sup>a <i>be sitting</i></p>	<p>I Nkh *¼- Ts *-iqv,- <i>be</i> Lz *íqv,Đa- II AvA *=iÓk, <i>be, sit</i> / Lk *=i=Óka</p>	<p>I. EC 647 *=iq'wV <i>sit, be</i></p>

Note to two, twins: Cf. also a Kartvelian borrowing from WC languages: \*t'q'ub twins. Table 2 shows EC root for sour, raw which contains intervoc. \*k'; this latter is preserved as a velar in the Group-II languages (CS \*k; NWk x; EC:Drg \*Ók,) but changed to \*q(ʹ) in the Group-I languages (IS \*q' > (?q; EC \*q'w > Ts \*qʷ/\*q).

**Table 2.**

SOUR, RAW I IS 162 *c'aq s. + (Cb c'aʔq) [IS a :Lz ä :EC ä] II Ld 54 c'ik, raw ? NWk ciX,- [x, < *gʷ ?]	I Ts *c[π]q/qʷ s. [< *-q'w- < EC *-k'w-] II Lezghi ciÓki Archi Óceg <sup>w</sup> - < Lz *ÓcäÓk <sup>w</sup> ð- r., bitter / Drg *ÓciÓk <sup>w</sup> - sour	I (*-k'w- >) *- q'w- > ... II EC 356 *_c'äk'wV s., r.
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As it was mentioned above, the above division of NC languages in two groups is relatively recent; NCED contains the following passage about this regrouping:

"In the reflexes of the labialized uvular affricates in Avar-Andian [AvA], Lak, Dargwa and Khinalug we observe a very characteristic parallel development: the uvular affricates \*qʷw, \*\_qʷw, \*\_qw in non-initial positions shift to the velar series...

The development of uvular labialized \*\_qw, \*qʷw and \*\_qʷw into velars in medial postvocalic position has not at all afflicted Nakh, Tsezian, Lezgian and West-Caucasian languages. This development must be dated in a rather late period (after the break of the Avar-Andi-Tsezian unity); this is an important areal phonetic isogloss which obviously can provide us with information about the geographic location of separate families of the East-Caucasian languages in the period about the 2<sup>nd</sup>-3<sup>rd</sup> millenium B.C." [NCED 59-60; similar changes appeared in the NC root \*tq'HwÈÐa two > EC \*q'HwÈÐa, cf. NCED 924].

If the regrouping of NC languages into I. Nakh-Tsez-Lezg-WC vs II. AvA-Lak-Darg-Khin is indeed reflected by Sa languages (group I. IS vs group II. CoS) then this event may have occurred earlier than 4-5 mill. ago. This would match the time of the migration of the ancestors of the speakers of pre-Sa-Wk languages to N. America and splitting of the group into Sa and Wk languages (Salishianists seem to agree that Sa languages originated some 4 thousand years ago).

## The Most Stable Words in Salish, Wakashan and Lezghian

The following comparison and a Table of basic words (following Swadesh's 100-word list) contain Sa[lish] and Wk [=Wakashan] words/roots; reconstructed Lz [=proto-Lezghian] roots, and the appropriate protoforms, namely, EC [=proto-North East Caucasian] or NC [=proto-North Caucasian]. Some roots of other NC daughter languages (beside Lz) are listed as in the comparison as well.

Lezghian is one of six proto-languages which belong to the p.-North Caucasian (NC) family, along with two 'individual' languages – Lak and Khin[alug]. Many Lz roots show genetic identity to those in Sa and / or Wk l-ges.

[Note: T91 (etc.; col. I) indicates word order in the TABLE (below); PS 115, IS 197, CS 220

indicate pages in SED (col. II), but Li 48 or MC 7 refer to pp. in appropriate books; NC 845 or EC 1041 refer to pp. in NCED (col. IV)].

Here are some other important abbreviations: PS = proto-Sa; CS = Coast Sa; IS = Interior Sa; for most other abbreviations, see SED [Salish Etymological Dictionary by A.H.Kuipers, U. of Montana, 2002], p. VIII, and NCED [A North Caucasian Etymological Dictionary by S.Nikolayev & S.Starostin, Asterisk, Moscow, 1994], pp. 23-28.

If a page indication appears after other language abbreviations, they refer the appropriate books (MC = Dict. of the Moses Columbia Language by M. Dale Kinkade; Se = A Classified English-Sechelt Word-List by J.A.Timmers; Sp = Spokane Dict. by P. Flett; UC = Upper Chehalis Dict. by M. Dale Kinkade; BC = Stem List of the Bella Coola Language by H.F.Nater. Note also: NWk = North Wakashan Comparative Root List by N.J. Lincoln & J.C.Rath).

– Now note the following important phonetic symbols and shifts:

Óx=χ; C' = ÓC; Cʳ = CI // NC/EC geminated \*C> tense (\*)C: in daughter languages // NC/EC \*CH > pharyngealized (\*)CI [or (\*)CVI] in daughter languages // L, L̥ = voiced lateral fricative, affricate // \*l̥ = a reconstructed symbol: some lateral]. -- Sa voiceless lateral fricative l̥ matches N(E)C, Lz (etc.) λ // Sa/Wk c matches N(E)C, Lz (etc.) c'/č' (SaWk s may also match N(E)C č) // SaWk c' matches c'/č'/č', etc. \* \* \* .

Sound matches between Sa/Wk and Lz < N(E)C are obvious in many cases, cf. next (the meaning [col. 1] either covers all languages, or is indicated separately by SaWk (before /) and Lz/N(E)C (after /) -- Ex. 7 shows a root [ʔUq<sup>w</sup>]

*drink* in Sa & Lz, being very similar to EC (U = lab. vowel; underlined NC cons. is a geminate).

Ex. 6 includes Sa sibilant s which match NC s, ś, š etc.; we have a valid match Sa [nw-s] : Lz [n-wš] : NC [n-wš̌].

Ex. 1 shows Sa:Sq/Lz/EC [k<sup>w</sup>i] which, who (+ an isogloss: delabialized k < k<sup>w</sup> in Be/Avar-And./Dargwa).

Ex. 8 contains a totally precise match if we take into consideration two facts: Sa i regularly corresponds to Lz e, EC ě.

Ex. 8 Sa seldom preserves cons. clusters, so the match Sa ʰ [glott. later. affr.] : Lz fÓλw : EC ʰ'w is a norm.

Ex. 10 shows voiceless lateral fricatives (Sa <sup>1</sup> = Lz and NC/EC λ) in the word for 'woman' (note genetically related suffixes both in Sa and Lz).

**Table 3**

<b>1</b> <i>which, who</i>	Sq 274 k <sup>w</sup> i /Be ka:- <i>which</i>	Lz *k <sup>w</sup> i who /AvA Drg *kV-	EC 709 *kwi who, which
<b>2</b> <i>what, who</i>	NWk 89 *m <sup>ʼ</sup> á <i>what</i>	Lz mo-sa when / AvA ʔi-mV who	EC843 *mV <i>interrog. Stem</i> (Nakh *mV <i>id.</i> )
<b>3</b> <i>this, that</i>	MS ʔé <i>this</i> /SWk *ʔa- <i>that</i>	Lz *ʔi *ʔa <i>demonstr. pron.</i>	NC214 *ʔi <i>this</i> 218 *ʔǒ <i>that</i>
<b>4</b> <i>this, that</i>	Sq265 ti <i>this</i>	Lz *tV <i>demonstr. pron.</i>	EC 993 *tV <i>that</i>
<b>5</b> <i>thou</i>	MC 96 -wi Sq 48, 311 nəw	Lz *Éuo-n	NC1014 *ÉuĚo (Khñ wì)
<b>6</b> <i>two</i>	CS 220 *nwas	Lz *nuš-aj / *niwš-aj	NC 845 *năwši
<b>7</b> <i>water, to drink / to d.</i>	PS 91 *q <sup>w</sup> uí / *íuq <sup>w</sup>	Lz *íuq <sup>w</sup> a- (> q <sup>w</sup> a-, uq-)	EC 221 *íu/Ěo_qwV
<b>8</b> <i>sing</i>	Li 48 ʔifλ' <i>sing</i>	Lz *ʔefÓlwV	EC 413 *ʔ&A'wV s., <i>call</i> s., <i>say</i>
<b>9</b> <i>lump / knoll, mountain</i>	(Th mól <i>pile up!</i> ) NWk88 *m'ufλ- <i>lump, heaped up,</i> *m'u <sup>1</sup> - <i>ferment, rise</i>	Archi mul < Lz *muhIVl <i>mountain</i>	EC 834 *muÓalV <i>m.</i> (Ts *maIru <i>m., hillock, kn.</i> / Nakh *lām <i>m.</i> [inv.])
<b>10</b> <i>woman</i>	CS142 *s- <sup>1</sup> an-ayí <i>woman</i> (Sm S- <sup>1</sup>  enií)	Lz *λ:in:-ol <i>woman,</i> <i>female</i>	EC 762 *λπnÓV <i>woman,</i> <i>female</i>

Note to 6: Lz word means 2-year-old sheep; NC word means two (as in Nakh & HU) and 2-year-old animal.

In the following sets, the 1-st column includes main sound correspondences between Sa and/or Wk; Lz roots; N(E)C roots (occasionally also roots from other NC daughter languages beyond Lz).

The 2nd col. shows SaWk data.

The 3rd col. shows Lz (and, occasionally, other NC daughter languages).

The 4-th col. shows appropriate N(E)C roots. - - We'll start with labial and dental stops in SaWk, Lz, and N(E)C; then provide sets with c-type fricatives (and related s-fricatives); laterals (and sets where laterals alternate with X-type fricatives and K/G-type stops; r in Sa/Lz/NC (and sets where r alternates with laterals and fricatives); (labio)velar stops (and appropriate alternations);



(labio)uvular stops (and appropriate alter-nations); velar and labiovelar fricatives; uvular and labiouvular fricatives; back fricatives beyond uvulars; Í.

### Labial stops

#### 1 p p: b b̥

[p-l : p:all : b̥ā+h]	PS 73 *-pl-ucin <i>mouth, edge</i>	Lz *p:all <i>forehead, horn</i>	EC 285 *b̥ā+h̥ <i>edge, end</i>
[pəl : p:ɦ(:) : b̥ɦ] <i>penis</i>	PS 73 *-pəl-q p. (sf. *-aq)	Lz *p:ɦ(:) p. , p. <i>of a boy</i>	EC 307 *b̥ɦ/ɦV p. (Ts/Lz)
[xip : fλop: : fλH+b] <i>breeze, wind</i> [x<L; cf. LL]	MC 45 s-xíp <i>breeze, wind</i>	Lz *fλop:o-l w. / Lk x:iIw b.	EC 768 *fλH+Bv w., b.

#### 2 p p' p p

? [p'alíaní < *palhan_G : EC pan_G-lh] <i>bark+</i>	PS 79 *p'alan'y' <i>tree-bark</i> [*p'alíaní]	Lz *parqvu:l: <i>bark+</i>	EC 865 *pan_GVlhV (/Ó) b., leaf+ [ ?>*palhVn_G-]
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[qəp <sup>(s)</sup> : q̥lap : Ts *qəb : NC q'Hap] <i>cover / cap</i>	CS 148 *qəp' <i>cover, lid</i> / IS 180 *qəp <i>to cover</i> (Li q'əp')	Lz *q̥lapaj <i>big sheepskin hat / night cap</i> /Drg *q̥apa h., c.	NC 918 *q'HapE <i>hat, cap</i> (cf. Ts *q̥əbV-id.)
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Note to bark: C' [p'] < \*C--C (etc.) (IS:MC p'al' |an Th p'ély|en MS p'ñlñy|)

#### 3 p' p̥ p p'

[c'ip' : Ócip̥ : c'- p'] <i>squeeze/ blink, shut eyes / eyelash</i>	PS 31 *c'ip' <i>to squeeze (shut)</i> [frequently shut eyes]	Lz:Fit Ócip̥-Ócip̥ Khl Ócep̥-Ócep̥-aj Kryz çäp̥ <i>eyelash</i>	EC 365 (sub *c'ĪV) [*c'Ep'V] <i>eyelash</i>
[k <sup>w</sup> up : k-ḥ̥ : gw ə p'] (possibly assim. k-p<g-p')	PS 46 *k <sup>w</sup> up (seldom q <sup>w</sup> ) <i>push together, stuff</i>	Lz *k̥apal <i>group, heap, crowd, grove, sheep-flock</i>	NC 448 *gwə p'V <i>group, heap</i> [SC also unite] (=ST)

### Dental stops

#### 4 t tVw t: t<sup>w</sup> d dw

[ta : t:V : dV ] <i>not</i>	PS *taí CoS:UC tay-	Lz *t:V- <i>not</i>	EC 404 *dV <i>neg.</i>
[tawí? : t <sup>w</sup> iχ : dwirχ] <i>child, son</i> (-í?<*-iχ)	PS 106 *taw[i?] <i>child+</i> (Cb twí?-t Sq-taw?-)	Lz *t <sup>w</sup> :i(r)χ <i>son</i>	EC 407 *dwirχE <i>ch., s.</i>

## 5 t t t

[ti : tV : tV] <i>this / that</i>	Sq 265 <i>ti this</i>	Lz *tV <i>dem. pron.</i>	EC 993 *tV <i>that</i>
? [yat : ʔVt : -Vt] <i>give</i>	Se yat- <i>give</i> (<*it-?)	Lz *ʔVtV- <i>id.</i> / WC *tA-	NC 1034 *=VtV <i>bi/ʔ give</i>

## 6 t (&lt; t') t t'

[tu/ar : tur : t'hwə r] <i>stretch, string / string</i>	Cv s-ta-tár' <i>string, twine</i> Cr tar <i>stretch out</i> sub PS 103 *tu/əl <i>extend, stretch, fathom</i>	Lz *tur-im/n <i>string, rope, thread</i> /Nkh *t̥hēr-iḵ <i>s., cord</i>	EC 999 *t'hwə rV <i>string, cord</i> (Lz/Nkh)
? [k <sup>w</sup> it : kurt : kwīrt'] <i>break /sledge hammer etc.</i>	NWk282 *k <sup>w</sup> it- <i>break</i> / SWk *k <sup>w</sup> it[-]ḵ- <i>knock</i>	Lz *kurtaj (<*k-t) <i>hammer</i> /Ts *k <sup>w</sup> id <*k <sup>w</sup> iḵ <i>sledge h.</i>	NC712 *kwīrt' <i>h., axe</i> (WC *k:ət <sup>w</sup> V <i>axe, spear</i> )
[q'at : qaÓt (: AvA q'at <sup>w</sup> ) : q'ə t'w] <i>cut etc.</i>	NWk 371 *q'at- <i>cut with chisel</i> (? UC110 q'ətḵi- <i>hit</i> )	Lz *qaÓt <i>cut, chop</i> /AvA *q'at <sup>w</sup> V <i>cut, chop+</i>	EC 915 *q'ə t'wV <i>board, chopped piece+</i>

7 t' t<sup>w</sup> t'w t'H

?[t'al/ʔ : t <sup>w</sup> el (: Drg ʔal) : EC t'wēlʔ] (ʔ < lʔ)	PS 217 t'al [rather -ʔ] <i>put across, loom, raft</i>	Lz *t <sup>w</sup> ela <i>rod, pole</i> etc. / Drg *ʔal <i>stem, trunk, post</i>	EC 1006 *t'wēlʔe <i>stick, (cross)beam</i> [Nkh +bridge]
[t'-q <sup>w</sup> : tēql <sup>w</sup> : t'Heqw] <i>patch</i>	CO t'q <sup>w</sup> Kw t'əG <sup>w</sup> ə- <i>patch</i>	Lz *tēql <sup>w</sup> <i>speck, spot</i> /Drg *dek <sup>w</sup> V <i>patch</i> (Drg-Lz)	EC 399 [*dHeq'wV or] *t'HeqwV <i>spot, patch</i>
? [t'áq'aw : tēlql <sup>w</sup> : t'Hālg'w] <i>stand up /sole+</i>	UC 146 t'áq'awi- <i>move (stand up)</i> CVCVC < *CVCC	Lz *tēlql <sup>w</sup> <i>shin, ankle</i> / Ts *t̥p̥q <sup>w</sup> V <i>sole of foot</i>	EC 1000 *t'Hālg'w <i>part of leg</i>

## Laterals

[Sa and Wk ʔ denote a voiceless lateral fricative which is phonetically identical to Lz / NC λ

(NC \*ʔ is a yet unclear lateral used only in reconstruction)].

## 8111

[law-ʔ : Nkh -law : l̥wɛ] <i>man</i> (etc.)	IS69 *lawaʔ <i>man's</i> <i>f('s bro)</i> (:Cv l̥iw) Sh léw'e <i>uncle</i>	Lz *ʔ:ilV- (<NC *l̥iwɛ) <i>male, man,</i> <i>men</i>	NC749 *l̥wɛɛ <i>man,</i> <i>male</i>
<i>twist / twirl</i> (etc.) [SaWk c' : Lz lc : EC rc]	CS 139 c'ñl <i>twist,</i> <i>spin</i> / NWk 151 *c'l- <i>weave</i>	Lz *ʔilcal <i>turn</i> <i>around, twirl</i> (lc < *rc)	EC 649 (Nakh-Lz) *ɛ̃ircVI <i>twirl, turn</i> <i>around</i>
[m̥ɔal : EC mh̥ɛal] <i>warm</i> (var. with n) <i>warm</i>	IS:Cb mÓal' Cv m̥ɔal	Nakh *mÓal- (Lz *manV)	EC 807 *mh̥ɛalV (var.: EC *mh̥ɛanV)
[k'al : rkir : rkVI] <i>hear, listen</i> [k' < *rk]	PS 41 *k'al <i>listen+</i> ( <i>hear</i> in CeS, IS:Cr)	Lz *ɔi(r)ki(r)- h. [2ndary r] / Khin kl-i h.	EC 650 *ɔi(r)kVI l.

## 9111

[lam :lam : ʔam] <i>tongue / lick(ing)</i>	UC 59 lám- <i>tongue,</i> lám=stq [ <i>tongue+fire</i> ] <i>flames</i>	Lz *lam- <i>lick</i>	EC 754 *ʔamV <i>licking, to lick</i>
[k'al : k:wäl : gwV <sup>1</sup> ] <i>to hide /</i> <i>lose, steal</i>	Se 29 k <sup>w</sup> al- <i>to hide</i>	Lz *ʔik:wäl- <i>lose,</i> <i>hidden</i> /Ts *g <sup>w</sup> Vl- Av *golV <i>thief</i>	EC 630 *ɔigwV <sup>1</sup> <i>lose, get lost,</i> <i>steal</i>

101 (Wk<sup>1</sup>) 111

[c'ñl /c'a <sup>1</sup> : Ócal : c'ɛ̃ñ <sup>1</sup> ] <i>tree, branch</i>	PS28 *c'ñl <i>trees</i> sub PS 28 <i>stand; t. [CO c'l-c'al</i> <i>timber]</i> / swk *c'a <sup>1</sup> b.	Lz *Ócal b. (also <i>shoot</i> ) / WC *Ócñla <i>tree</i>	NC 362 *c'ɛ̃ñ <sup>1</sup> V <i>tree, b.</i>
[*c'ul <sup>1</sup> : Ó <sup>3</sup> cu/ol : H <sup>3</sup> c'ɛ̃ol] <i>black</i>	? IS 164 *c'uy <i>darkness,</i> <i>night</i> Be c'u <i>grey</i> (y < l) /NWk162 *c'ú <sup>1</sup> - <i>black</i>	Lz *Ó <sup>3</sup> cu/ol <i>see</i>	EC 556 *H <sup>3</sup> c'ɛ̃ol <sup>v</sup>

[məÓxet (inv. <*məteχ ?) : NC mHilʔaGw] <i>worm</i> etc.	Cv m'aɣ-mlaʔ w. Sm mə-məÓxet <i>caterpillar</i>	Lz *mulaqI <sup>w</sup> >Rut muluxI <i>worm</i> (also <i>snake</i> )	NC 817 *mHilʔaGwV w. (> *mHiG(w)aʔV ) EC 307 (Lz/Ts) *bɪl <sup>1</sup> V
[pəl : p:ɪl : bil] <i>penis</i>	PS 73 *s-pəl=q [see note]	Lz *p:ɪl(:)- / Ts:Tsezi bilu	

Note to *penis* (just above): For PS \*=q, cf. CS 212 \*=aq *sex. organ*

## 11 + 111?

[q,ə <sup>1</sup> : q <sup>w</sup> ul : q <sup>w</sup> ə <sup>1</sup> lʔ]	Ld 192 q,ə <sup>1</sup> áyʔ <i>log, stick</i>	Lz *q <sup>w</sup> ula <i>board, sm. plank</i>	NC 936 q <sup>w</sup> ə <sup>1</sup> lʔǎ <i>board</i>
ʔ[t <sup>w</sup> al/ʔ : t <sup>w</sup> el (: Drg ʔal) : EC t <sup>w</sup> ə <sup>1</sup> lʔ] (ʔ < lʔ)	PS 217 t <sup>w</sup> al [rather - ʔ] <i>put across, loom, raft</i>	Lz *t <sup>w</sup> ela <i>rod, pole</i> etc. / Drg *ʔal <i>stem, trunk, post</i>	EC 1006 *t <sup>w</sup> ə <sup>1</sup> lʔe <i>stick, (cross)beam</i> [Nkh +bridge]
[Óxál : χ:lol : χōlʔ] husband / male, h.	IS 197 *Óxálwiʔ h. / NWk 329 *Óx <sup>w</sup> 1- <i>uncle</i>	Lz *χ:lol h. / WC *χ <sup>w</sup> ə <i>male</i>	NC 1086 *χōlʔV <i>male</i>

## 12 + (ʔVC &lt; \*VIC) 11

[1-k <sup>w</sup> : (ʔ)alÓk <sup>w</sup> ] <i>scratch / scrape</i>	PS 57 *1ik <sup>w</sup> <i>hook up, spike+</i> MS 1ñk <sup>w</sup> <i>scratch</i>	Lz *ʔalÓk <sup>w</sup> Vn <i>dig, pick, scrape, put thru+</i>	EC419 *ə <sup>w</sup> lk <sup>w</sup> V[n] <i>pick, scrape+</i>
[1-k <sup>w</sup> : (lüÓkü <) ilÓk <sup>w</sup> ] <i>remember / recite</i> (etc.)	IS 171 *1ñk <sup>w</sup> <i>remember</i> (Sp in <i>muse, mull over, Cr remind oneself</i> )	Lezghi lüÓkūn- < Lz *ilÓk <sup>w</sup> an <i>speak, telling</i> <i>Khin liÓ ku</i> <i>learn, read, sing</i>	EC634 *ə <sup>w</sup> lk <sup>w</sup> Vn <i>recite, talk</i>
[1-q <sup>w</sup> : luq <sup>w</sup> : ilq <sup>w</sup> ] <i>pierce / stick into, sew</i>	Cx 1áq <sup>w</sup> - (root <i>pierce</i> in <i>earring</i> ) sub PS 57 *1ik <sup>w</sup>	Lz *ʔilq <sup>w</sup> Vn- <i>sew;</i> nomin. *luq <sup>w</sup> ina <i>knitting needle</i>	NC 637 *ə <sup>w</sup> lk <sup>w</sup> Vn (same as below)
[1-Óx <sup>w</sup> : ilq <sup>w</sup> ] <i>thread a needle / stick into, sew</i>	PS 61 *1ñÓx <sup>w</sup> <i>pass thru a hole+</i> (also <i>thread a needle</i> )	Lz *ʔilq <sup>w</sup> Vn- s., <i>embroider</i> *wilq <sup>w</sup> ina <i>knitting needle</i>	NC 637 *ə <sup>w</sup> lk <sup>w</sup> Vn <i>stick into</i> [>WC *q <sup>w</sup> : ə-], <i>sew</i>
[1-Óx <sup>w</sup> : -i¼ <sup>w</sup> : ilqw] <i>run (away)</i>	PS 61 *1ñÓx <sup>w</sup> <i>escape, run aw.</i> [diff. <i>pass thru a hole</i> ]	Lz *i¼ <sup>w</sup> (:) a <i>run (away)</i> / <i>AVΔ</i> *q/¼VI- <i>trot, run</i>	NC634 *ə <sup>w</sup> lk <sup>w</sup> ÉA <i>run</i>

Note two sets with PS \*1ñÓx<sup>w</sup> : Spirantization both in Sa Óx<sup>w</sup> and Lz χ<sup>w</sup> (<\*q<sup>w</sup>) in *run* vs spirantization in Sa only (Óx<sup>w</sup> <\*q<sup>w</sup>) in *thread* ...

13 † (/l) / Wk fλ fλ λ<sup>w</sup> fλ fλw

[maʔ/ʎ-: mārʎ-] handful	UC 84 (móʻ)-mʔ/-mal- take a handful / NWk 81 *máʎ- take by the hand	Lz *mä[rʎ] handful / Ts. *mi[rʎ]u /Nakh *morλ armful, to embrace	EC798 *mār[ʎ]ə handful, armful
[mʻifλ : (miλ<) marλ <sup>w</sup> : NC mārflaw] rain (T65)	SWk:No mʻifλ-, mʻiflaʻ raining	Archi moλ /miλi < Lz *marλ <sup>w</sup> rain	NC 795 *mārflawǻ (rain)cloud

## 14 † λ: ʎHw ʎw

[ʻəmʔ : λ:älm : ʎHwem]	Sq 327 †əmʔ (root) dew	Lz *λ:älmä- liquid	EC 768 *ʎHwemV liquid
[ʻanʔ : λ:aj : f_λwĒa_n] weave / wool	CS [ʻanʻ] weave (sub 142 *s-ʻan-ayʻ woman)	Lz *λ:aj wool / AvA *λunʻi hair+	EC 769 *f_λwĒa_nπ wool

## 15 fλʻ : l : lʻH fλʻ- l- lʻH-

[fλʻiÓx <sup>(w)</sup> : liqv <sup>w</sup> : IHĒĭ_qʻw] eagle [Sa also y-]	UC 77 fλʻiÓx in- eagle (CeS 218 *yñÓx <sup>w</sup> ñlaí)	Lz *liqv <sup>w</sup> eagle / Lak li-lu¼:i bird	NC 748 *lʻHĒĭ_qʻwĒA a bird (eagle, jackdaw)
[fλʻáí : laχl: : lHaχ] black bear / black	(Be39 fλʻa /) NWk 202 fλʻ alí black bear	Lz *la/o¼l:- black	EC 748 *lʻHla_¼V black

## 16 fλʻ Ófλ fλʻ ʎʻ

[fλʻécʻ : fÓλa¾Óc] grow (plant), leaf+	UC74 fλʻécʻ- g. (of a plant) (also in:) grass, plants, leaf	Lz *fÓλa¾Óca stalk, leaf /AvA *fÓλa¾ca leaf, some edible plant	EC 773 (AvA-Lz) *fλʻa¾c cǻ a k. of plant
[ʎʻl- : fλ:ol] (inv.) arm	NWk 195 fλʻlʻ-Óx- act with arm 185 ʎʻl ...palm of hand	Lz *fλ:ol sh.-blade, arm (inv.)	NC 588 *HluʎʻĒ arm
[w-fλʻ : woÓfλ] horn, antler (T41) (another var. shows -n-) [w-n : EC W- n] horn (T41)	[Be 64 wifλʻaÓx a.] NWk 301 *wflʻ aq have antlers (PS 115 *wa/inaíw h., a.) PS 115 *wa/inaíw horn, antler [ / Be 64 wifλʻaÓx a.]	Lz *woÓfλu-l head > Tsakh wuqvuł /Ts -ǫ- < *-Vn- in *bǫfÓλV hd, horn Lz *woÓfλu-l head	EC 1041 *wĒenfλʻV(-IĒV) beak, horn, head Ē EC 1041 *wĒenfλʻV(-IĒV) beak, horn, head see 2

**Alternations of laterals with velar/uvular fricatives and stops**

Alternations of fricatives and laterals, originating from (voiceless) laterals

**17 <sup>1</sup>/x λ: (Drg x:) λ**

1 [¹-n : λ:-n:] woman [suff.: Sa – ayʔ / Lz –ol] 2 [xn : x-n]	CS142 *s-¹an-ayÍ w. Sm S- ¹ eniÍ UC356-¹n' Be 43 xnas; Sq 397 -šn* [girl]	Lz *λ:in:(-ol) w., female Lz:Tsakh xuna-š:e id. / Drg *x:un(-ul) Woman	EC 762 *λπnÓV w., f. (not to weave)
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\*Use of the suff. -šn (<\*x-n : UC-¹n') has been misunderstood by Kuipers in *The Sq. L-ge* 397: "ḡimʔ-šn little girl. Cf. /ḡimʔ/ little boy. – The use of the suff. /-šn / (otherwise meaning 'foot, leg') in this word is unique".

**17a x<sup>w</sup> λ<sup>w</sup> (AvA x<sup>w</sup>) λ<sup>w</sup>**

[x in : λ <sup>w</sup> Vn : AvA x <sup>w</sup> an : NC λwEn] be aware /see	Be mnn x <sup>w</sup> in discover, become aware	Lz *ʔVrλ(:) <sup>w</sup> Vn to look / AvA *=ax <sup>w</sup> an- see, look	NC 1031 *=-VrλwEn see, look
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**18 Óx λ: λ-(WC:Abaz χ)**

[Óxíb <Óxím : λ:im:] (inv.) claw	Ls 265 Óxíb claw, scratch (b < *m)	Lz *λ:äm: /λ:im:- f.-nail / Lk mix c., n. (no inv.)	NC 814 *mḡāā f./t.-nail / WC məλə n., c. >Abaz mχə
[ḡaÓx : Lk *IVx: < *IVλ: : NC ʔlḡ-] night T60	Ls 143 ḡaÓx night, dark	Lz *ʔel:a evening, late / Lk x:u n. < *IVx:u < *IVλ:u	NC 216 *ʔlḡā n. (WC *λ:Vλ:V night)

**19 Óx<sup>w</sup> | (Lk lu) λ<sup>w</sup> ¹u λ<sup>w</sup>**

[c'ñÓx <sup>w</sup> : EC ¾cHĐa¹u] sand, gravel [c' < čH] (T70) but No c'i'ʔk/χ- soft earth	IS164 *c'ñÓx <sup>w</sup> Sh c'ʔwy- CS 139 *c'íÓx UC c'aÓxáʔ-	Lz *¾c:il earth+ / Lk š:al(lu) e., ground	EC 342 *¾cHĐa¹u e., ground, s.
[ʔaÓx <sup>w</sup> : ʔaλ <sup>w</sup> ] sweep	PS 21 *ʔi/aÓx <sup>w</sup> sweep	Lz *ʔaλ <sup>w</sup> V sweep	NC 201 *ʔāλwE whet, s.

Note MS x<sup>w</sup> ʔc' to skin / NWk 197 \*λ'is- skin vs AvA \*x<sup>w</sup> Vc:V skin (> Av. x<sup>w</sup> Vc:á) / EC 770 \*λ'wāj c'ā s., bark

Laterals and fricatives, originating from fricatives

## 20 †-x λ-rλ (Drg, Lk x-rx) x-rx

[†ix : λerλ : xērX] <i>slime</i>	Se 14 s-†iš (š<*x) <i>slime</i> Be †ix <i>slimy</i> sub PS 54 *lix	Lz *λerλ <i>snot</i> / Drg *xirX, Lak xurX <i>slime</i>	EC 1061 *xērXV <i>slime, spittle, snot</i>
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## 20a x λ: (Ts h) h

[x-c : λ:-mč̣ : h- m c'] <i>afraid</i> / (to) <i>fear</i> , <i>be afraid</i> +	Ld260 xóC <i>afraid</i> , <i>scare(d)</i> Note denaz. in Sa and Ts	Lz *λ:imč̣ <i>fright, be s-</i> <i>d</i> / Ts *hīč̣- <i>to fear, be</i> <i>afraid</i>	NC 504 *hVm c'V <i>fear</i> , <i>fright</i>
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Cases involving fricatives, stops, and laterals

## SaWk SaWk SaWk Lz N(E)C

21 q<sup>w</sup> G<sup>w</sup> q Óx( ) é ?<sup>w</sup> 1 (wk fλ) ʔ: λ<sup>w</sup> (λ q') λ(:)+ Łw λw λ'w λ'

PS *ci/aq <sup>w</sup> <i>bleed</i> T9	PS *ci é <sup>w</sup> Sq ciÓx <sup>w</sup> /ʔ (CO caÓx) <i>bleed</i> , <i>blood</i>	Ld cñ <sup>1</sup> - <i>bleed</i> ; in cmp. <i>breathe</i> / PS *cay	Lz *ÓčVʔ: V <i>alive</i> , <i>animated</i> [ʔ: >Ud q]	EC 376 * c'ÉafLwV <i>blood, life</i>
? NWk 90 m'áq <sup>w</sup> - <i>fog</i> ( <i>patches</i> ) Kw maG <sup>w</sup> - <i>drizzle</i>	He moXw <b>damp</b> m'óx <sup>w</sup> - d. <b>CHECK!!!</b>	SWk:No m'ifλ-, m'ifλa' <b>raining</b>	Arch moλ miλi <Lz *marλ <sup>w</sup> <i>rain</i> + / Nkh *marχo <i>cloud</i> / Drg *mark <sup>(w)</sup> a r., <i>dew</i>	NC795 *mārλwǎ (r.) <i>cloud</i>

NWk 371

\*xaq- *bone*NWk \*l'q- *liver*  
(Ha l'Gis) T48NWk \*xaX- *bone*

no later.

no later.

Rut laq' l. <Lz  
\*laÓλ-Lak

t:iliÓk

Lz \*jirʔ: b. /Khn inç

EC 586 \*Hläʔ:V *liver*

NC 528

\*freλ'wě b.

21a q k<sup>w</sup> Óx<sup>w</sup> (ʔ<sup>w</sup> <) lχ: rχ

CS222 *maqʔ <i>snow</i> IS 172 *mæk <sup>w</sup> SIS -a-(Ka -q' <sup>w</sup> -, Cr mik' <sup>w</sup> )	IS 175 *məÓx <sup>w</sup> s. Cr maÓx <sup>w</sup> <i>cover w. s.</i>	no later.	Tb maʔ <sup>w</sup> al < Lz *malχ:al s. ( <i>drift</i> )	EC 796 *marχalV s. (Lz-Lak only)
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## Sa and NC r 22 r r r

[c'ar- : Óčalr] wet	PS30 *c'Óal- MC c'ər- wet+	Lz *ÓčalrV- wet	EC 385 *č'HārV wet, fish
[c'il <*c'ir : c'w ār : EC č'Vr] (Vl indicates *Vr)	Sh c'il <*c'ir (/ *cər ?) stand sub PS 28 *c'əl	Lz *ʔəc'w ār- (>Tskh =zar-) stand (up) / Drg *ic:Vr- s.	EC 1025 *=Vmč'Vr] stand (up)
[c'ur- : -Óc:ur] stretch / strain	IS160 *c'Óu/Óal [*- r]	Lz *ÍπÓc:ur / AvA *Óc:ur	EC 213 *li_Ūur strain+
[c'ur- : Óčur] cold (T15)	PS 29 *c'Óu/Óal [*- r]	Lz *ruÓč <*Óčur hoar-frost	NC 393 *¾c'wErHV cold
[c'ar : NC - _c'Ēor] freeze	Cr c'ar feel cold (sub PS29)	Lz *laÓcVr- turn to ice	NC 419 *=ñ_c'Ēor- freeze
[k'ər : Ókir : k'ir] (-i- in IS:Th, Sh) cut / knife	PS 40 *k'Óəl (Cb k'ər-) cut [+ cut w. shears / saw]	Lz *Ókira fang, hatchet etc. / AvA *ÓkirV big k., hatchet	EC 725 *k'irV knife, axe (AvA-Lz)
[k'w r : WC k'w ər (roll)]	CO k'w r- round roll= [merwi? : *mirw-ñ < EC miñw-r ?] smelling grass	Lz *ʔakVr- / WC *k'w ərə Lz *miñur mint (etc.) / Drg *mura hay	NC 259 *=ak'ūr roll, rotate EC 821 *miñwVrV some odorous grass

## SaWk velar/uvular fricatives, originating from \*r

SaWk x<sup>w</sup> (SWk also Óx<sup>w</sup>) < \*r after CwV [C = voiceless non-uvular; cf. NC; see also #25]

### 23 x<sup>w</sup> (SWk also x<sup>w</sup>) r r

[k'ax <sup>w</sup> : k'w Vr : k'w ār] vessel etc.	PS 50 *k'ax <sup>w</sup> hollow out; container	Lz *k'w Vr- gutter, trough	EC 732 *k'w ārV an earthenware vessel
[k'ax <sup>w</sup> : kur : kHwə r]	NWk284 *k'ax <sup>w</sup> hole, hollow /Ni kuX <sup>w</sup> -ak hole (cf. Lz)	Lz *kur pit+ (= Drg)	EC 691 *kHwə rV hole, pit
[c'ax <sup>w</sup> : č'ar : c'wǎr]	Ha c'ax <sup>w</sup> - dribble [w-transf.]	Lz *jič <sup>w</sup> ar- melt, thaw	NC 627 *=İc'wǎr id.

SaWk x (SWk also Óx<sup>w</sup>) : NC \*-r- (after \*ĽV, \*ʔwV, \*j) and \*hr-



24 Óx (SWk also x<sup>w</sup>) r r hr

[ʔ <sup>w</sup> iÓÓx : iʔ <sup>w</sup> :Vr : Av Óʔir] (No ʔ <sup>w</sup> iÓÓx <sup>(w)</sup> :AvA *-urÓʔ:U-)	UC 68 ʔəx- burn SWk:No ʔ <sup>w</sup> iÓÓx <sup>(w)</sup>	Lz *ʔiʔ <sup>w</sup> :Vr- warm /AvA *Óʔir burn, be hot	EC 640 *=iʔVr be hot, bit-ter (NB Wk/AvA ʔ <sup>w</sup> < ʔ)
[ʔ <sup>w</sup> ÓÓx : ʔ <sup>w</sup> Vr : Drg her] see [delab.: Sa/AvA/Drg]	UC 9 ʔ <sup>w</sup> ÓÓx- see	Lz *ʔ <sup>w</sup> Vr- glance, peep, visit / AvA *harV s., look	EC 248 *ʔwerV look, sight (>Drg *her id.)
[c'aÓÓx : Obl. Óca-r <c'áj-r]	Cr c'aÓÓx fry /PS33 c'iÓÓx burn+	Lz *Ócaj / *Ócoj- rV fire	NC354 *c'ájʔ /*c'aj-rV f.
[Óxik <sup>w</sup> : rak <sup>w</sup> : hrégw] rake+ NB Wk Óx- <hr-	NWk 378 *Óxik <sup>w</sup> - sweep, brush off, rake (i < *ě)	Lz *rak <sup>w</sup> (a) (etc.) rake (Nakh *jeÓxÓk / Ts hiʔu)	NC 494 *hrégwē comb

Cf., for Wk x- < \*r-, NWk:Oo x̄m'a night : NC \*rVmʔ'ǎ id. (see also next). -- In this ex., as also in SWk

\*ʔ<sup>w</sup>iÓÓx<sup>(w)</sup> red hot (above), fricativization of \*r may have been caused by the voiceless lateral in SaWk root.  
SaWk Óx < \*r after \*q<sup>w</sup>V or \*q<sup>(?)</sup>wV- [cf. NC; see also #26]

25 Óx r / zero (< -r) r

[q'aÓx : qv̄Dar] mud / swamp, dirt	UC 110 q'aÓx ay'- mud (:q'aÓx a- smear)	Lz *qv̄Dar d., swamp, marsh	NC *q'ÉDarÈe earth, dirt
[q'əÓx : qvar : q'är] larynx / throat	NWk:Kw q'u- q'əÓxa(-wi) larynx	Lz *qvar-qv(ar) throat	NC909 *q'ä-q'ari /q'ära- q'i thr. (WC *qv̄ əra- qv̄ ə)
[q' <sup>w</sup> əÓx : Tsakh qv̄ar <Lz] split	UC 119 q' <sup>w</sup>  ñÓx- split / (?NWk *qÓx forked, s.) Kw q' <sup>w</sup>  aÓx- cut open)	Tsakh =qv̄ ar < Lz *ʔi(r)qv̄ ar tear, break	NC652 *=irq'wÉÉ(r) split, break (WC *q'í a pierce)
[q' <sup>w</sup> əÓÓx- :AvA q' ar] ask	IS:Sh q' <sup>w</sup> əÓÓx- ask	Lz *ʔerχ <sup>w</sup> a (<*-qv- ) a.	EC 604 *Herqwǎr ask

Note to the above: UC 14 ʔó·ÓÓx<sup>w</sup> aʃ beg for [ʃ < \*x, Óx; ÓÓx<sup>w</sup> after a stressed vowel] : Lz \*ʔerχ<sup>w</sup> a  
ask

SaWk Óx<sup>w</sup> < \*r- after \*q<sup>(?)</sup>wV- (or sim.) [cf. NC; see also #25]

26 Óx<sup>w</sup> r r rH

[q'Óx <sup>w</sup> : qar : q'hwōr] <i>dirt</i>	NWk 370 *q'Óx <sup>w</sup> - <i>dust, dirt</i>	Lz *qar <i>dirt+</i>	EC 916 *q'hwōrV <i>d., turf</i>
[q' aÓx <sup>w</sup> : EC q'warHV] <i>skinny, thin</i>	PS 97 *q' aÓx <sup>w</sup> <i>skinny</i>	Lz qvI: arV- <i>thin, emaciated, narrow</i>	EC933 *q'warHV <i>narrow</i> / *q'wa-q'warHV
[q' əÓÓx <sup>w</sup> : AvA q':ar: NC rqwVr] <i>butcher / chop</i>	Ld 196 q' əÓÓx <sup>w</sup> <i>butcher</i> (+ <i>clean the fish</i> )	Lz *rīrX: [a] (<*-qw-) <i>hit, hew, mow, tear off</i>	NC 580 *HīrqwVr <i>chop+</i> (AvA *q': ar-break off)

## Affricates and fricatives: c-type affricates and related s-type fricatives

## 27 c (NWk c' s) č c š c' c' c'

[cáy/cíy : čj : čĪ] <i>younger sister / sister</i> (with old suff. *-jV)	IS160 *ca-ca <i>y-r si.</i> (but Cb cáya? Cr ccíye?) / NWk165 *c'ay' <i>y-r br./si.</i>	Lz *čj <i>sister</i>	NC 670 *čĪ-jV <i>si.</i> (:*=čĪ <i>br./si.</i> )
[mayac, wiyec : wec, jamc] <i>meat, dear / bull, ox</i> (T53)	CS 146 *mayac <i>meat</i> [frequently deer] (Sq s-mic Ti wiyéc) / <i>ibid.</i> NWk:He miás <i>m., flesh</i>	Fit wic Ag bec <*wec, jac < *jawc < Lz *jamc <i>ox</i>	NC 680 *jə mcō <i>bull, ox</i>
[pac : EC bHać(w) ] <i>leaf</i>	? PS 72 *pac[-]kl <i>leaf</i>	Lz *p:alša <i>leaf+</i>	EC 297 *bHaćwe <i>bark, l.+</i>

## Voiced affricates in NC (cf. #33 below)

## 28 NWk s c c: c' 3 3 3w

[ʃis : lac: (Tb liz) : lōʒ]	NWk 208 *ʃis- <i>fair</i> ( <i>complexion</i> )	Lz *lac:V- <i>white</i> (Kryz läzi Tab lizi Rut liz-)	NC 751 *lōʒV <i>bright metal</i>
[saʔk <sup>w</sup> : ç:äm̄k : ʒänk̄w]	NWk 175 *saʔk <sup>w</sup> <i>to skin</i>	Lz *ç:äm̄k <i>goat skin</i> (etc.)	EC 1091 *ʒänk̄w̄ <i>skin</i>
[cul : ç: -l : ʒw-l] <i>shatter / shake+</i>	NWk 147 *cuʔ- [in reality, cul- (Kw only)] <i>shatter</i>	Lz *ʔeç: Vʃ <i>shake+</i> / Ts *=oc- knead/WC *ʒə- <i>throw</i>	NC 418 *=ēʒwĔl <i>wave, shake, stir</i>

## Glottalization in Sa: c' &lt;CH or RC

## 29 c' ʔ/c: čH

[c'(ñÓx <sup>w</sup> ) : ʔ/c:(il) : EC ʔ/cH(Đa <sup>1</sup> u)] <i>sand</i> (etc.)	IS 164 *c'ñÓx <sup>w</sup> <i>sand</i> , <i>gra-vel</i> CS 139 *c'íÓx <i>id.</i>	Lz *ʔ/c:il /*ʔ/c:ili- earth+ /Nkh *c(h)il <i>ashes, dust</i>	EC 342 *ʔ/cHĐa <sup>1</sup> u earth, ground, sand
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## 30 c' lc rš rč rc/č l' (type Rc)

[c'əl : -lcal : -rcul ]	CS 139 *c'əl <i>twist</i> , <i>spin</i>	Lz *ʔilcal <i>turn</i> <i>around</i>	EC 649 *=-īrcul <i>twist, t. a.</i>
[-Óac'- (/ -nc-) : EC -ārč-] <i>pus, matter</i>	PS 65 *mÓac'(-Óul) <i>p.,m.</i> [Óə < *ər] Be mnc'- [nc < *rč]	Lz *maIrš <i>pus</i> (> Tskh <i>maš</i> ) / AvA *mač( <sup>w</sup> )V	EC 816 *mHärčwV <i>pus, mucus</i>
[q'Óx-c' : qI <sup>w</sup> -rč : EC GHw-l'c (:Ts/Gin 1/4 <sup>(w)</sup> -š)] <i>stick+</i>	PS124 *Óxñc'-ay' <i>log, stick, wood</i> Be Óx/qc'a <i>id.</i> / ? NWk:He Óxc'a'í <i>canoe</i>	Lz *qI <sup>w</sup> arč <i>stake</i> , <i>wedge</i> / Ts *1/4 ~e <sup>3/4</sup> s:u <i>bar, (door)bolt</i> > Gin 1/4i <sup>3/4</sup> su	EC 459 *GHwĐal cV <i>stick, board, bolt</i>

## SaWk c' : NC c' č' and sim.

## 31 c' c' : Óc rč: mč' e' rʔ/c'

[c'ıl < *c'ir : c' : är : EC č'Vr] (Vl indicates *Vr)	Sh c'ıl < *c'ir (/*cər ?) <i>stand</i> sub PS 28 *c'əl	Lz *ʔəc' : är- (>Tskh =zar-) <i>stand (up)</i> / Drg *=-ic:Vr- s.	EC 1025 *=-Vmč'Vr] <i>stand</i> ( <i>up</i> )
[c'ip' : Ócip' : c'-p'] <i>squeeze/ blink, shut</i> <i>eyes / eyelash</i>	PS 31 *c'ip' <i>to</i> <i>squeeze (shut)</i> [frequently <i>shut eyes</i> ]	Lz:Fit Ócip'-Ócip' Khl Óceḫ-Óceḫ-aj Kryz čäp <i>eyelash</i>	EC 365 (sub *c'İV) [*c'Ep'V] <i>eyelash</i>
[ íc'a : arʔ/c:a : Ts iʔ/c- : EC Ēarʔ/c'-] ( <i>to</i> ) <i>skin</i> (T75)	PS 203 *=- íc'al <i>hide, clothes</i> IS:Li -ic'a <i>skin</i>	Lz * arʔ/c:a <i>take off</i> , <i>peel (skin)</i> / Ts *=-iʔ/c- <i>id.</i>	EC 265 *=-Ēarʔ/c'V <i>to skin</i>

31a c' Óč H<sup>3/4</sup>c' |<sub>-</sub>c'

[c'ú <sup>1</sup> : Ó <sup>3/4</sup> cul] black (T8)	(IS 164 *c'uy <i>darkness, night</i> ) Nwk 162 *c'ú <sup>1</sup> - b.	Lz *Ó <sup>3/4</sup> cu/oIV black	EC 556 *H <sup>3/4</sup> c'Éol <sup>v</sup> black
[c'uk <sup>w</sup> : ÓčäÓku : NC č'ākū] boy	Nwk161 *c'úk <sup>w</sup> /x <sup>w</sup> - <i>grand</i> -child (Ha c'ug <sup>w</sup> /x <sup>w</sup> boy)	Lz ÓčäÓku-j young goat / WC ÓčäÓk <sup>w</sup> ə y. boy+	NC 382 č'ākū / čāk'ū <i>young (animal), boy</i>
[c'-q : (¾Óc-qv<) ¾ÓcĐaq <sup>v</sup> : NC   <sub>-</sub> c'ÉĐaqw] scoop	Nwk 160 c'iq- <i>to scoop</i>	Tab ¾Ócaq <sup>v</sup> a < Lz *¾ÓcĐaq <sup>v</sup> spoon+ (Ók in Av Drg Lak)	NC 332 *  <sub>-</sub> c'ÉĐaqwÉa scoop

31b c'(ŋ) h-r<sup>3/4</sup>ç H-č'

[c'ŋan : h-čVn : NC H-č'Ān] <i>tight, press</i>	Cv c'ŋan IS (162 *c'əŋ) <i>tight</i> MS c'an (root) <i>press</i>	Lz *ʔ/hirčVn >Tsakh ho=čan- <i>press</i> , <i>squeeze</i>	NC 568 *Hič'Ān <i>press</i> , <i>squeeze</i> (>Drg *=aIčVn-)
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## Deglottalization in Sa

32 c ç<sup>w</sup> mč c'w m|c'

[cum : ç <sup>w</sup> em : c'fwěm]	CS 138 *cum <i>eyebrow</i>	Lz *ç <sup>w</sup> em <i>eyebrow</i>	EC 364 *c'fwěme id.
[x-c : λ:-mč : h-mč] <i>afraid / (to) fear, be</i> <i>afraid+</i>	Ld260 xəč <i>afraid, scare(d)</i>	Ld *λ:imč <i>fright, be s-d</i> / Ts *hič- <i>to fear, be afraid</i>	NC 504 *hVm c'V <i>fear, fright.</i>

Voiced affricates in NC (cf. #28 above)

33 c' (c'/z) ç Óč č: ʒ <sub>-</sub>¾Ω/ʒ

[c'ək <sup>w</sup> : č:iÓk : Av ¾ÓciÓk:] short	Nwk 160 *c'k <sup>w</sup> - <i>short</i>	Lz *č:i[Ók]V- id. / AvA *¾ÓciÓk: V- <i>small</i> , <i>short</i>	NC 1108 *É_¾Ωik'wÉA /*k'Éi¾ΩÉwÉA <i>short</i>
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\*Cf. PS [\*c'u/am] *suck* (Cb c'əm'-m) / Nwk (ibid.) \*ʒám'- (suck at the) breast Nwk 134 \*ʒm-x<sup>w</sup> - milky :

Lz \*ʔac:a- to milk &lt;NC 262 \*=āmΩÉU to milk/drink (inv.: AvA \*zin-HV cow &gt; Tlanub žū)

[m-c'/z : -mÓc : m- ʒ] <i>stinging insects</i>	Th məč'- <i>flies</i> , məz- <i>bees, wasps</i>	Lz *ÓcimÓc(:) <i>ant</i> (etc.)	NC 823 *miʒĀ / ʒimiʒĀ <i>a stinging insect</i>
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Sa c' : NC č'w č'w and sim.

34 c' ç<sup>w</sup> Óč<sup>w</sup> Óč H\_c'w č'w é'w

[c' Óu/Óam (Ócum<) ÓčĐam :EC H_c'wĚejm] <i>bone</i> (T10)	PS30 *c' Óu/Óam (Cb Ós-c' Óam'); diff.: *c' u/am <i>suck</i> *	Lezghi Ócum <Lz *Óč Đam shin- bone+	EC 555 *H_c'wĚejmñ leg bone
[k' Óac' ÓkuÓč kĕč'(w)]	PS 48 *k' Óac' <i>bend</i> , <i>twist</i>	Lz *ÓkuÓč <i>hook(ed), bent+</i>	EC 694 *kĕč'wĭ-h., <i>curved</i>
[yac' : ʔiÓč <sup>w</sup> : ičw]	UC 170 yac'á- <i>turn</i> ( <i>around and come</i> ) <i>back</i>	Lz *ʔiÓč <sup>w</sup> ä- <i>come</i> in / Ts *-iÓč- <i>get into</i> / Av -aÓč- <i>come</i>	NC 629 *=ič'wĚ <i>come, return</i>

\*Cf. a different root: PS [\*c' u/am] *suck* (Cb c'əm'-m) / NWk (ibid.) \*ʒám'- (s. at the) breast NWk134 \*ʒm-x<sup>w</sup> -

milky : Lz \*ʔac:a- to milk <NC 262 \*=āmΩĚŪ to milk/drink.

**Velars and labiovelars**

Velar stops

## 35 Wk k k k: k kw

[kus : kis : Ts kıs: ( <sup>w</sup> > kus) : kĭšw] <i>shave</i> / <i>cutting tool</i>	NWk 234 *kus- <i>shave, scrape w/knife</i> (/233 *kis- <i>graze</i> ; <i>strike a match</i> )	Lz *kis(a) <i>fork</i> / AvA *kVš:V <i>hay cutting</i> <i>device</i> / Ts *k[†]s: <sup>w</sup> <i>mow, shear, clip</i>	EC 693 *k[ĭ]šwV <i>scythe</i> <i>or a similar cutting tool</i> [verbs in Ts languages]
[ʔik : juk: : Ts †g : ĭkw] <i>good</i>	NWk 404 *ʔik- <i>good</i> , <i>nice, well, fine</i>	Rut jigi- <Lz *juk:†- / Ts *=†gV >Tsezi =igu <i>good</i>	EC 643 *=ĭkwV / =ĭkwVn <i>right, good</i>

## Glottalization in Sa (type C' &lt; \*CC) [cf. #39]

## 36 k' k (r)k Hk (r)k

[k'ə† : EC Hkə †] <i>mud/dirt</i>	PS41 *k'ə† [ə indicates *H]	Lz *lak (inv.) <i>dung</i>	EC 584 *Hkə †V -dirt
[k'al : EC -rkVl] <i>listen</i>	PS41 *k'al <i>listen</i> [also <i>hear</i> ]	Lz *=ʔi(r)k†(r) <i>h.</i> /Khñ kl-	EC 650 *=i(r)kVl <i>listen+</i>

Labiovelar stops

37 k<sup>w</sup> Ók k(:)<sup>w</sup> gw gw kw

[k <sup>w</sup>  ñp- : WC k <sup>w</sup>  ñp] <i>pile, heap, hill+</i>	Cx k <sup>w</sup>  ñp- <i>pile, hill</i> Se <i>pile up</i> sub PS 46 *k'/q <sup>w</sup> up <i>push together, stuff</i>	Lz *Ókapval <i>group, heap, grove+</i> / Nakh *gub <i>hill, barrow</i> / Ts *gup <sup>v</sup> <i>hill, h.</i>	NC 448 *gwĒñp'V <i>group, heap</i> (WC *k <sup>w</sup> : ñpñ g.)
[k <sup>w</sup> al : -k <sup>w</sup> :äl : -gwV <sup>1</sup> ]	Se 29 k <sup>w</sup> al- <i>to hide</i>	Lz *ʔik <sup>w</sup> :äl- <i>lose, hidden</i> / Ts *g <sup>w</sup> V1- Av *golV <i>thief</i>	EC 630 *=igwV <sup>1</sup> <i>lose, get lost, steal</i>
[k <sup>w</sup> i : k <sup>w</sup> i] (T96; T98 <i>who</i> )	Sq 274 k <sup>w</sup> i /Be ka:- <i>which</i>	Lz *k <sup>w</sup> i <i>who</i> /AvA *kV- <i>i.</i>	EC 709 *kwi <i>who, which</i>
[k <sup>w</sup> a'- : -k <sup>w</sup> : ä : -gwV] <i>visible / see, show</i> (T72b)	SWk *k <sup>w</sup> a'-Óxi <i>visible</i>	Lz *ʔak <sup>w</sup> : ä- <i>see, search, show</i> / Lak k <sup>w</sup> : a=k <sup>w</sup> : a- <i>see, meet</i>	EC 255 *=agwV <i>see</i> (/ Drg *g <sup>w</sup> - <i>look</i> )
[Óxik <sup>w</sup> : rak <sup>w</sup> : hrĕgw] <i>rake+</i> NB Wk x/X- <r	NWk 378 *Óxik <sup>w</sup> - <i>sweep, brush off, rake</i> /night	Lz *rak <sup>w</sup> ( a) (etc.) <i>rake</i>	NC 494 *hrĕgwĕ <i>comb</i> (Nakh *jeÓxÓk / Ts hiǝu)
[c <sup>w</sup> ik <sup>w</sup> : ÓcuÓk : NC c <sup>w</sup> ǵǵjVkw ] <i>spark</i>	IS:MS c <sup>w</sup> ?ík <sup>w</sup> <i>spark</i> (CO c <sup>w</sup> ix <sup>w</sup> )	Lz *ÓcuÓk <i>fire-brand, s.</i> / WC *ÓcVjəÓk <sup>w</sup> a / *ÓcVÓk <sup>w</sup> a	NC 373 *c <sup>w</sup> ǵǵjVkwō <i>brand, spark, brilliance</i>

> Abkh á-Ók <sup>w</sup> ic	(AvA *Óc <sup>w</sup> : aka b., s., <i>star</i> )
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38 k<sup>w</sup> Wk k<sup>w</sup> / ʔw / w<sup>w</sup> k<sup>w</sup> kw /gw gw

a [k <sup>w</sup> óʔs : NC gwǵǵ] <i>bitch, dog</i> b [Kw w'ác'/s : gwǵǵ]/ c [k <sup>w</sup> 's : WC k <sup>w</sup> :ǵǵ ] <i>wolf</i>	UC 53 k <sup>w</sup> óʔs b. / He ʔwas- Kw w'ác' à d. (Nater Be nnnnnnn) / NWk 287 *k <sup>w</sup> 's- <i>wolf</i>	Lz *k <sup>w</sup> :ač:a <i>bitch</i> / WC *k <sup>w</sup> :ǵǵ:ǵ/*k <sup>w</sup> :ǵǵǵ w.	NC 445 *kwǵǵĕ <i>bitch dog</i> b *gwǵǵĕ c (wolf in WC)
A different root: <i>mare</i>	UC 53 k <sup>w</sup> óʔs <i>mare</i>	WC *k <sup>w</sup> :ǵǵ:ǵ <i>mule, donkey</i>	NC 444 *gwǵǵĕ <i>mare, d.</i>

Glottalization in SaWk (type C' < \*RC) [cf. #36]

39 k<sup>w</sup> Rk<sup>w</sup> rk<sup>w</sup> mkU (?)

[q <sup>w</sup> ak <sup>w</sup> : q:ärk <sup>w</sup> : Gërkw]	NWk 325 *q <sup>w</sup> ak <sup>w</sup> - peel off	Lz *q:ärk <sup>w</sup> a nut- shell, bark	EC 455 *Gërkwe/a skin
[qak <sup>w</sup> : χak / χamk : qām <sup>w</sup> kV] (-V < *-U ?)	UC 104 qák <sup>w</sup> - (root) bit, front teeth (k <sup>w</sup> < *mkU?)	Lz *χa(m)k picket, stake / Ts *χɔg- molar tooth	EC 883 *qām <sup>w</sup> kV fang, m., stake (AvA *χa/onχa/o /*q)

Note to the above: EC \*qām<sup>w</sup>kV may be \*qām<sup>w</sup>kU.

Glottalized velars and labiovelars

## 40 k' Ók k'

[k'əm : Ókem] ( <i>grab a</i> ) <i>handful</i> [EC also <i>armful</i> ]	PS 41 *k'əm (Cr k'im) <i>grab a</i> <i>handful</i> +	Lz *Ókem <i>armful</i> +	EC 722 *k'emV a., h.
[k'əw : (r)Ókĕw ] <i>walk, go</i> (T92)	IS165 *kí/k'ñw-ñt w. (Ok k'aw gone)	Lz *ʔarÓkĕw <i>drive,</i> <i>go</i> / AvA *ÓkVb-	NC 267 * =Ēark'ĕw <i>go</i> +

41 k<sup>(w)</sup> Ók<sup>(w)</sup> k<sup>(w)</sup>

[k <sup>w</sup> ə/in : Ók <sup>w</sup> in] <i>small</i> <i>bones</i> (redupl.: IS, Lezghi)	MC 17 s- k <sup>w</sup>  ññ'- k <sup>w</sup> ññ' stick-game bones MS 9 k <sup>w</sup> n- k <sup>w</sup> k ñ id.	Lz *Ók <sup>w</sup> ini-j ankle, knuckle-bone+	NC 735 *k <sup>(w)</sup> inV small b., s. b. for playing dice
[k <sup>w</sup> í (inv. ?) : ÍÓk <sup>w</sup> and k <sup>w</sup> as : Ók <sup>w</sup> a-s] <i>burn</i> (T12)	IS:Sp k <sup>w</sup> í Sh k <sup>w</sup> í-es-t <i>scorched</i> (PS50 *k <sup>w</sup> as)	Archi Ók <sup>w</sup> a-s < Lz *ÍÓk <sup>w</sup> a- set fire, burn	EC 632 *k <sup>w</sup> vV burn (also set on fire)
[k <sup>(w)</sup> uk' : Ó(ÓkuÓÓk' <) Ók-Ók' / Ók'-Ók] ( <i>stand on</i> ) <i>edge</i>	NWk 251 (w) *k <sup>(w)</sup> ú-k <sup>w</sup> /g <sup>w</sup> - <i>stand on edge</i> <b>check</b>	Lzghi ÓkuÓÓk <sup>w</sup> a <Lz *ÓkĐa-Ók/ ÓkĐa- Ók <sup>w</sup> top, e., point	NC 733 *k <sup>(w)</sup> Ēe- k'Ēe edge, point, corner (redupl.)

42 k<sup>(?)w</sup> Ók(-?) k<sup>(-?)w</sup>

[k <sup>w</sup> iy' : Ókí? : k' fĒíw] <i>small</i> (T77a)	IS169 *k <sup>w</sup> ŷwəy /(?) q <sup>w</sup> <i>sm.</i> Cr k <sup>w</sup> iy' Ka k <sup>w</sup> oy'	Lz *Ókí? V- <i>small</i> / Nakh *ka-kVH-	EC 726 *k' fĒíwV <i>small</i> [diphthongization in Sa?]
[c <sup>w</sup> k : č:ik : žik <sup>w</sup> ]	NWk 160 *c <sup>w</sup> k - <i>short</i>	Lz *č:i[k]V/ AvA *č:ik <sup>w</sup> V	NC 1108 *žik <sup>w</sup> <i>short</i>

Note, for phonetics: IS 168 [\*k' <sup>w</sup> i/əl mountain] : NC 726 \*k'É†w<sup>1</sup>V mountain ridge (etc.)

Uvular stops in Sa and N(E)C (spirantization in Lz; cf. #48)

43 q χ q

[qak' <sup>w</sup> : χak / χamk : qāmKV] (EC -V < *-U ?)	UC 104 qák' <sup>w</sup> - (root) <i>bit</i> , <i>front teeth</i> (k' <sup>w</sup> < *mkU?)	Lz *χa(m)k <i>picket</i> , <i>stake</i> / Ts *χǝg- <i>molar tooth</i>	EC 883 *qāmKV <i>fang</i> , <i>m.</i> , <i>stake</i> (AvA *χa/onχa/o /*q)
[qam : Ts χ†m ] (both inv.) [qəmǝ? : Ts χ†mV- r] <i>breast</i>	PS 84 *s-qam <i>wo's</i> <i>b.</i> , <i>milk</i> Sg s-qəmǝ? (/Ts χ†mV-rV)	Lz *moχo-r ( <i>female</i> ) <i>b.</i> (no inv.), old suff. *-rV	NC 829 *mōnqī <b>breast, bosom</b> (WC *mVq:a)

Spirantization in SaWk / voiced uvulars in N(E)C

44 Óx †qv: q:l G G

[Óxəm : AvA qv:am < GēmH < NC HēmG] <i>bite</i>	PS 127 *Óxəm <i>bite</i> (inv. ?) (?/ NWk *Óxm-x <sup>w</sup> - <i>chew...</i>	Lz *?ǝqv:†- <i>bite</i> (no inv.) / AvA *qv:am- <i>b.</i> , <i>eat</i> (inv.)	NC 559 *HēmGǎ <i>bite</i> [> *q'ēmHǎ in AvA/SaWk ?]
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<*q' m-k <sup>w</sup> - <i>b. smth. brittle</i> )			
[†χ : Ts *r-χ : l-G ] (all inv. roots) <i>thigh</i>	Ld 149 =†χǎ? <b>thigh</b>	Lz *q:el <i>foot, leg</i> / Ts *r†χi- <i>la</i> <i>thigh, hip</i> /Nakh *βōlu-	EC 455 *Gēlu / *lēGu (sub *Gē†u) <i>thigh, leg</i>
[†al : -qv:ǎl : -Gǎ] <i>cut</i>	PS 134 *†i/al <b>cut</b> (as hair)	Lz *?iqv:ǎ(l) <i>clip, shear</i> etc.	NC 1019 *=VGǎ <i>cut, c., s.</i>

Note to PS \*Óxəm *bite*: Cf. NWk:Kw q'ǎx' <sup>w</sup> *b.*, q'ém-x <sup>w</sup> *b. brittle things*

44a Óx †qv: q:(I) wχ GHw/wGH wq

[Óxan : (Rán /βIun<) q:lun] <i>arm</i> <i>/arm, shoulder</i> (T37) / [niÓx : NC nHǎwGH]	PS211 *-á[-]Óxan <i>a.</i> ( <i>side</i> ) / NWk 121 *niÓx- [act w. h./a.=] <i>pull, pick</i> <i>up, carry</i>	Burk Rán Tab βIun < Lz *q:lun <b>shoulder</b> / Drg *naq:l <i>hand</i> , <b>arm</b>	NC 853 *GHwǎnǎ <b>arm, shoulder</b> / NC *nHǎwGHǎ
[laχ : lawχ : †ǎwq] <i>many</i>	Be s-laχ- <i>be many</i>	Lz *[a]wχ <i>much</i> , <i>m.</i> /Ts *laχ:i <i>much</i> / Drg *-aqal	NC754 *†ǎwqǎ / <b>*ǎwqǎ† many</b> , <i>enough</i>

Glottalization in Sa / spirantization in Lz (cf. #47 [2], #48 [2], and #49)



## 45 q' χ q

[q'ac' <*qac' : NC qǎrc'w] <i>embrace / shoulder, arm</i>	Sq nnn q'ac' <i>embrace</i>	Lz *χα(τ)ç <i>side of body /</i> Lk qaç <i>shoulder</i>	EC 885 *qǎrc'wǎ <i>shoulder,</i> <i>arm</i>
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Labio-uvular stops in Sa and NC

46 q<sup>w</sup> q(:) q(:) \_qw Gw

[q <sup>w</sup> - / Íuq <sup>w</sup> : q <sup>w</sup> - Íuq <sup>w</sup> ] <i>to drink</i> (T19)	PS 91 *q <sup>w</sup> uí / *Íuq <sup>w</sup> water, to drink	Lezghi q <sup>w</sup> a-, A g uq- < Lz *Íoq <sup>w</sup> a- d.	EC 221 *Íu/Èo_qwV d.
[q <sup>w</sup> ay : And q <sup>w</sup> oj : qwǎ]	PS94 *q <sup>w</sup> ay <i>blue+</i> ; <i>yellow</i>	Lz *qǎ-qV y./ A.*ʔvq <sup>w</sup> : o-ji-	NC 414 *ǎqwǎ <i>yellow</i>
[q <sup>w</sup> -l-ʔ : EC Gw-rʔ] <i>grass+</i>	Ld 192 (q <sup>w</sup> i-)q <sup>w</sup> aliʔ <i>grass</i>	Lz *q:ur <i>stalk,</i> <i>some g. etc.</i>	EC 472 *Gwǎrʔi <i>st.,leaf+</i>
[q <sup>w</sup> -m : q <sup>w</sup> : ǎn : Gwǎnm]	PS 45 *q <sup>w</sup> ǎm (/k <sup>w</sup> ) <i>heap+</i>	Lz *q <sup>w</sup> : ǎn- a <i>convex heap+</i>	EC 467 *Gwǎnmē <i>h., stack</i>

Note to the above: Cf. -m- (as in PS \*q<sup>w</sup> ǎm): Ts \*χeme (/ʙ:) *small stack* / Nakh \*ǎama *haystack*.

Delabialization in SaWk(Lz)

47 q (Wk q G) q: χ (Nkh q) qI q<sup>w</sup> qw qw Gw

[q-lÓx : q:-l-q : _qw-t-q'] egg(s) [EC also <i>grain</i> ] (note spirantiz. – Óx < -q'-)	CoS 148 *qñlÓx <i>fish</i> roe (=eggs)/ NWk 353 *qIÓx- <i>lay e. (bird)</i> *qIÓx-min e.	Lz *q:VIVq: <i>egg</i> > Rut ẽπIπẽ / Drg *q:ulqvi <i>roasted</i> <i>grain</i>	EC 906 *_qwVtVq'V <i>egg,</i> <i>grain</i>
[qan/Gn : χ(o)n : qwǎn] <i>female,</i> <i>woman, wife+</i>	PS 84 *qanaI fa.'s mo.+ / NWk 340 *Gna/m f. w. w.	Lz *χ on-p:V <i>wo./women</i> > Lezghi χnub /Nk *qin <i>wf.</i>	NC 900 *qwǎnV <i>wo.,</i> <i>f.</i> > Ts *ǎinV/ Khin χin
[qəl : qIal : : Gwǎth] <i>hurt, angry,</i> <i>offence</i>	[Th qI-il] BC qilix UC qəlǎÓx a. (type CVCVC)	Lz *qIal: o., <i>anger</i> / AvA *ǎ <sup>w</sup> VIV <i>gossip,</i> <i>abuse</i>	EC 465 *Gwǎtho <i>gossip, rumor,</i> <i>offence, anger</i>
[c'iq : Ó¼cǎq <sup>w</sup> : č'ǎqw]	NWk 160 *c'iq- <i>scoop</i> <i>out</i>	Lz *Ó¼cǎq <sup>w</sup> <i>wd. jar,</i> <i>spoon</i>	NC332 č'ǎqwǎ <i>scoop,</i> <i>sp.</i>

Partial spirantization in SaWk

48 q<sup>w</sup> / Óx<sup>w</sup> q:l<sup>w</sup> χ qu Gw qw

[q <sup>w</sup> / Óx <sup>w</sup> (a)n :	UC113 q <sup>w</sup> an u- <i>fear,</i>	Ar =qI <sup>w</sup> in <Lz	EC 553
q:l <sup>w</sup> Vn : EC	<i>afraid / NWk Óx<sup>w</sup> n-</i>	*íĐaq:l <sup>w</sup> Vn- <i>t., sh.,</i>	*=HĐaGwan-
Gwan] (be)	<i>shake, tremble be</i>	<i>be a. / AvA *ëiëVn be</i>	tremble, be afraid
afraid	<i>nervous (SED 54)</i>	<i>nervous, shake</i>	
[Wk Óxq <sup>w</sup> a : WC	NWk 380 *Óxq <sup>w</sup> a-	Lz *¼em¼(a) <i>big</i>	NC 1070 *¼emqw̄
χaq: /	/*ÓxÓx <sup>w</sup> a- <i>gather</i>	<i>stone WC *χaq: ɔ &gt;A.</i>	/*¼wemqw̄ <i>stone</i>
wk ÓxÓx <sup>w</sup> a :	<i>stones</i>	<i>χahw s.</i>	
Abkh χahw]			
[x̣ <sup>w</sup> əlʔ : qu:l :	PS *x̣ <sup>w</sup> əl <i>dig out (etc.)</i>	Lz *qu:l <i>hole, hearth</i>	NC468 *Gwə lʔi
Gwə lʔ] <i>make a</i>	sub PS 120 *x̣ <sup>w</sup> əl	(etc.) / WC *B <sup>w</sup> V <i>hole</i>	<i>hole, bur-row (AvA</i>
<i>hollow / hole (etc.)</i>	[*x̣ <sup>w</sup> ər]		*q̣: irV <i>dug-out+</i> )

48a q / Óx (delab.) qI<sup>w</sup> (Ts ¼<sup>w</sup>) GHw

[q / Óx-c' : qI <sup>w</sup> -rč : EC	PS124 *Óxñc'-ay' <i>log, stick, wood Be</i>	Lz *qI <sup>w</sup> arč <i>stake, wedge</i>	EC 459
GHw-lc' (:Ts/Gin	Óx/qc'a <i>id. /</i>	/ Ts *¼ <sup>w</sup> ~e¼s:u	*GHwĐal cV s.,
¼ <sup>(w)</sup> -š]] <i>stick+ [note c'</i>	? NWk:He Óxc' a'í	<i>bar, (door)bolt &gt;</i>	<i>board, bolt</i>
< *RC]	<i>canoe</i>	Gin ¼ ¼su	

Glottalization in Sa / spirantization in Lz (cf. #44 above)

49 q' χ(:) (Ts q̣) χ q--w qw q(w)

[q' ic' : Ts q̣+c :	UC 120 q' íc'-	Lz *χan Óc(a) <i>dirt</i>	NC 884 *qānc'wV
qānc'w]	<i>dirty</i>	/Ts q̣+c	<i>dirt</i>
[ləq' : -lχ:- : lǒq]	MC 18 lǒq' - <i>break,</i>	Lz *?alχ:Vn-	EC 587 *HlǒqVn-
<i>break</i>	<i>smash</i>	<i>scatter+ ??</i>	<i>destr.,b.</i>
[q' əÓÓx <sup>w</sup> : AvA	Ld 196 q' əÓÓx <sup>w</sup>	Lz *?irχ: [a] (<*-	NC 580 *HĩrqwVr
q: ar: NC rqwVr]	<i>butcher (+ clean</i>	qw-) <i>hit, hew,</i>	<i>chop+ (AvA *q' ar-</i>
<i>butcher / chop</i>	<i>the fish)</i>	<i>mow, tear off</i>	<i>break off)</i>
? [q' əÓÓx- AvA	IS:Sh q' əÓÓx-	Lz *?erχ <sup>w</sup> a (<*-	EC 604 *Herqwǎr
q ar] <i>ask</i>	<i>ask</i>	qw-) <i>a.</i>	<i>ask</i>

Glottalized uvular stops in Sa and Lz (uvulars or labio-uvulars in EC)

## 50 q' q̇ q: q̇I: q'hw q'(w)

[q'Óx <sup>w</sup> : qar : q'hwör]	NWk 370 *q'Óx <sup>w</sup> - <i>dust, dirt</i>	Lz *q'ar <i>dirt+</i>	EC 916 *q'hwör/V <i>d., turf</i>
[q'(a)t : qaÓt : AvA q̇:at <sup>w</sup> : q'ə t'w] <i>cut</i>	Sp 74 q't <i>scar</i> NWk 371 *q'at- <i>cut</i> w/chisel 328 q' <sup>w</sup> t- <i>scar</i> (:EC – t'w-)	Lz *qaÓt <i>cut, chop</i> /AvA *q̇:at <sup>w</sup> V <i>cut,</i> <i>chop+</i>	EC 915 *q'ə t'wV <i>board, chopped</i> <i>piece+</i>
[q'iÓx : Lk q̇i- : Lz q:i] <i>day</i>	UC 112 q'iÓx- <i>d.</i> +Cw <i>today</i>	Lz *q:i <i>today</i> Lk q̇i- <i>ni d.</i>	EC 622 *Hwīq'V <i>day</i>
[ʔaq' : ʔarq̇l : : Harq' ] <i>become</i> <i>visible/ see, find</i>	NWk 411 *ʔaq' (/h'- ) <i>show up, become</i> <i>visible</i>	Lz *ʔarq̇l:ä- <i>see,</i> <i>watch, look, be</i> <i>found</i>	EC 547 *Harq'V(n) <i>see, find</i> (> Ts *=-īq- <i>find</i> )
[q'us : qv̇us] ( <i>to</i> ) <i>paddle</i>	NWk 368 *q'us- <i>to</i> <i>paddle</i>	Lz *qv̇usV[-j] <i>shovel, p.</i>	EC941 *q'wiswa <i>wood. sh.</i>

## Delabialization in SaWk

51 q' q̇<sup>w</sup> (> Ag qv̇) q'w

[q'a <sup>w</sup> : qv̇ V I : [q' ä <sup>w</sup> ] <i>strap</i> / <i>rope</i> etc.	CS 149 *q'a <sup>w</sup> <i>carrying strap</i> (Se <i>headband of c. s.</i> )	Lz *qv̇ VIV <i>harness</i>	EC 930 *q'wã <sup>w</sup> V <i>rope,</i> <i>saddle-girth</i>
[q'ñn : (qv̇an<) qv̇- n] <i>sew, needle</i> (SaWk delab. as Ag; AvA)	Se q'ñn-ay <i>needle</i> Li s-q'ñn <i>id.</i> / NWk 362 q'n- <i>sew, stich</i>	Ag -uqv̇an- <i>s.</i> / Lezghi aqv̇ <sup>w</sup> <i>an knitting needle</i> < Lz *ʔi(l)qv̇ <sup>w</sup> Vn- <i>sew+</i>	NC637 *=il_q'wVn <i>stick into, sew</i> (AvA *qv̇ <sup>(w)</sup> in- [etc.] <i>sew</i> )

## Glottalized labio-uvular stops

## 52 q'w Wk q'w qv' qv(:)vl' q'(H)w q'w

[q' um : qv em : EC hq'wÊem] <i>head</i> (T38)	PS 97 *q' um I h., skull *q' um II <i>top+, horn /</i> NWk 327 *q' m- <i>stick out+</i>	Lz *qv em back of head, summit, top+ / Ts *qvm head	EC 494 *hq'wÊemv̄ horn, head
[q' um : qvam : NC hq'wām] <i>hair (on</i> <i>h-d)</i> (T36)	PS 97 *q'wum l hair	Lz *qvam plait, mane+	NC 931 *_q'(w)ÊamíĒñ hair
[q' at : qvunt : q'Hwāt] <i>joint / knee, elbow</i>	Th q' at – Óx,əm' <i>joint</i> (2nd stem < q' əm lump ??)	Lz *qvunt <i>elbow</i>	EC 925 *q'HwentV <i>knee, elbow</i>
? [q',əc : qvuc : q'wic]	Kw q',əcī <i>leather</i>	Lz *qvucur <i>leather</i> sack	EC941 *q'wicVrV l. <i>bag+</i>
[q',ic' : qvl,aÓ¼c : EC q'Hw¾em¾c'] <i>twist / bend</i>	IS:MC 36 q',ic' - <i>wring,</i> <i>twist</i>	Lz *qvl,a(m)Ó¼cV- to bend+	EC 925 *q'Hw¾em¾c'V <i>hook, curved</i>
[q' əʒ : qv,erč : q'wērč']	NWk q' əʒ- <i>peg</i>	qv,erč <i>stick</i>	EC 935 *q'wērč'Ā <i>stick</i>
[miq' : Ag maq:I < Lz mirqv:l,] ( <i>make</i> ) <i>muddy/dirty</i>	UC 84 miq',i- <i>roil, m. m.</i> /NWk 77 *miq,- <i>m./d.</i> (w-r)	Lz *mirqv:l, <i>rust, soot</i> > Ag maq:I' , Kryz meq	EC818 *mHīrq'wV <i>dirt, r. (delab. in Nakh</i> <i>*mfi/āqV)</i>
? [tʰaq' <*q' at /q' aʎ: NC q' -t] to <i>bend</i>	Th tʰaq' (root) <i>bend</i> <i>over / SWk:M q' aʎ-</i> <i>to bend</i>	Lz *ʒilq' V-l- to <i>bend</i> / AvA *q̄u:l / WC *q' V <i>id.</i>	NC 637 *=il_q'wV(†) <i>id.</i>

Deglottalization in SaWk

53 q<sup>w</sup> q̇(:l), q̇u q<sup>w</sup> q<sup>w</sup> (WC G<sup>w</sup> ə)

[q,əç : qv, VÓç] <i>tail</i>	Li q,əç <i>tail</i>	Lz *qv, VÓç <i>goat's tail</i>	NC 934 *q <sup>w</sup> w̄Ac <sup>ʔ</sup> Ā <i>tail</i>
[q,əʔ : qvul : q <sup>w</sup> w̄əʔ?]	Ld 192 q,əʔáyʔ <i>log, stick</i>	Lz *qvula <i>board, sm. plank</i>	NC938 *q <sup>w</sup> w̄əʔā b. WC *G <sup>w</sup> ə
[q,u <sup>1</sup> : -q <sup>w</sup> V <sup>1</sup> ] <i>bent/d</i>	NWk 324 q,u <sup>1</sup> - <i>bent</i>	Lz *ʔiqv, V <sup>1</sup> - <i>to bend</i>	NC637 *=ilq <sup>w</sup> V <sup>1</sup> Av *qv:ul-
[niq, : nəq <sup>w</sup> ] <i>dirt(y)</i>	NWk 121 *niq,- <i>dirty+</i>	Lz *näqv, <i>earth+</i>	EC 848 *nəq <sup>w</sup> w̄t̄ e., <i>dirt</i>
[miq, : mirq:l v, > maq:l,]	NWk 77 *miq,- <i>dirty+</i>	Lz *mirqv:l, <i>rust&gt;</i> maq:l <sup>w</sup>	EC818 *mHīrq <sup>w</sup> V <i>dirt, r.</i>

## Fricatives

(Labio)velar fricatives in SaWk and EC / Voiceless laterals in Lz

54 x-w x<sup>w</sup> λ<sup>w</sup> (Av x<sup>w</sup>) λ: (=Ts) x(w) xw

[x(ə)w : : λ <sup>w</sup> : EC - xw- > Av x <sup>w</sup> -] <i>trail / walk(ing)</i>	? PS 118 *xəwal <i>trail</i> Li x <sup>w</sup> wāt, Th suff. =xwey(ʔ)	Lz *ʔil <sup>w</sup> e <i>walk, go (aw.), come / Av x<sup>w</sup> á- w., return</i>	EC 864 *x̄xwV <i>go, walk, flow</i>
[ʔ/yux <sup>w</sup> : ʔil: : Hīmxw] <i>know, learn, teach</i>	PS133 yux <sup>w</sup> <i>used to, know</i> UC 16 ʔux <sup>w</sup> ána- <i>teach</i>	Lz *ʔil:a <i>learn / Lk -ax:i- (suff.: Lk -n(u) / AvA -Vn-)</i>	EC 574 *HīmxwV L, <i>teach</i>
[x n : λ:än: : x̄änfi > Khñ XU / x̄in] <i>water</i>	(Be x <sup>w</sup> n-al <i>spring of water</i> ) NWk 294 *x <sup>w</sup> n-is <i>cold s.</i>	Lz *λ:än: w. /Ts *λ:ĩ-/ Drg *xin / Khin XU, x̄in	EC 1060 *x̄änfi <i>water / HU:Hu *xijə w., river</i>

## Uvular fricatives in Sa / Glottalized voiceless laterals in Lz

## 54a Óx λ: h

[x-c : λ:-mč̣ : h-mč̣] <i>afraid / (to) fear, be afraid+</i>	Ld260 x̄əç <i>afraid, scare(d)</i>	Lz *λ:imč̣ <i>fright, be s-d / Ts</i> *hĩč̣- <i>to fear, be afraid</i>	NC 504 *hVm c <sup>ʔ</sup> V <i>Fear, fright.</i>
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## Uvular and other back fricatives, and ?

## 55 Óx χ: χ

[Óx-m : χ:-m:] (inv.) (grab an) armful / handful	CS:UC 84 Óxími- grab an armful / handful+	Lz *χ:am: armful / handful	EC 819 *mHōχt handful [see also #55a]
[caÓx : č(:)ax:l : čHax]	SWk caÓx- leaking	Lz *č(:)ax:l- wash, flow	EC 341 *čHaxV be wet, f.

## 55a ? (&lt; Óx) χ χ

[tawí? : t: <sup>w</sup> iχ] child, son (note -í? : Lz - iχ)	PS106 *taw[i?] child+ (Cb twí?-t Sq -taw?-)	Lz *t: <sup>w</sup> i(r)χ son	EC 407 *dwirχE ch., s.
[m':? : *m:-χ: : EC mH-χ] (take a) handful	UC 84 mó'ʔi- (take a) handful (:mó'-m't, - mal)	[?Lz *m:ax: < *χ:am: armful, handful]	EC 819 *mHōχt handful [same root: #55]

## 56 ʃ zero f h H

[p'ʃac' : pi(l)c: : pñilc'w] dung / mud etc.	Sp 64 loose bowels/ /Nkh *phač: horse's dung	Lz *pic: / *pilc: swamp, marsh	NC 878 *pñilc'wə dirt, mud
[məç' (ʃ-t) : malrš (AvA mač <sup>w</sup> ) : mHärčw] pus	Cv mc'ʃat-t (see PS 65 *məç'(-ul) pus, matter)	Lz *malrš pus / AvA *mač <sup>w</sup> )V snot	EC 816 *mHärčwV pus, mucus, snot
[mʃal : Nk mñal : mhäl]	Cv mʃal Cr mal' heat, warm	Lz *manV w. / Nkh *mñal- w.	EC 807 *mhäl/nV w.

Note loss of \*ʃ in Sa: Cv c'an tight (IS162 \*c'ən; MS c'an press) : Lz \*ʔ/ħirčVn p., squeeze : Drg \*=aIčVn- : NC568  
\*Hič' Ān id.

## 57 h ħ/ʔ-ñ

[həç' : ħirč: <sup>w</sup> : firēʒw] tail (c' < *rC) (T84)	NWk *hc/s- tail but cf. Kw həç'əx He Oo hc'əx	Lz *ħirč: <sup>w</sup> (/*ʔ-) tail	EC 529 *firēʒwə long hair, tail
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Labio-uvular and other back fricatives, and ?

58 Óx<sup>w</sup> Óx/ɣ (< \*χw) χ(l/:) χ(:l) wχ χ(Ó)w χw wχ

[Óx <sup>w</sup> um / Óxim' : χl+mχl : AvA χ: imVχ (> Chd χumuχ) : EC χÓw+mχ] buttocks+ / cheek, buttock	CS 155 *Óx <sup>w</sup> um protruding [body] part (Ch s-Óx <sup>w</sup> úm-nč b-s) / NWk 378 *Óxim'- creep sitting [m' < *m- χ?]	Lz *χl+(m)χl- buttock / AvA *χ: [i]m(V)χV muzzle+ > Chd χumuχ / Drg *χl <sup>w</sup> aχl b. > Chir χluχl	EC 1072 *χÓw+mχV cheek, buttock
[yəɣ / ʔiɣ : *ʔeχ:l <sup>w</sup> : Nkh ʔah : EC Hēmχw] to grind	PS 133 *yəɣ / *ʔiɣ grind+ also frequently ʔiχ to g.+	Lz *r-eχ:l <sup>w</sup> a<*r- HēmχwV g.+ / Nkh *ʔah / Ts *ʔab: <sup>w</sup> ə-	NC 559 *HēmχwV to grind
[ʔiÓx <sup>w</sup> : ʔeχ <sup>w</sup> : Hěχw ]	PS21 *ʔi/aÓx <sup>w</sup> throw (away)	Lz *ʔeχ <sup>w</sup> a pour, scatter	EC 563 *HěχwV id.
[ʔuÓx <sup>w</sup> : ʔiÓx: : Ts uχ: <sup>w</sup> ] go / go, come	Ld 22 ʔuÓx <sup>w</sup> go (/? Be ʔiÓxa foot, leg)	Lz *ʔiχ(:)e enter, come, go / Ts *=uχ: <sup>w</sup> - come	EC 666 *=iχwV (/q') go, come, enter
[maÓx <sup>w</sup> : mVwχ : mōwχ] fir / wool, thread, string	? NWk 83 *maÓx <sup>w</sup> - douglas fir (> maw'- a-)	Lz *mVwχV-r string, rope	EC 832 *mōwχē wool, (woollen) thread

59 Óx<sup>w</sup> / ɣ<sup>w</sup> / ɛ<sup>w</sup> Óx ʔ--[w] h ʔl Ó--w Ów

[Óx <sup>w</sup> -c/3 : NC h- ʒw] sharp [Wk ʒuÓx <sup>w</sup> : *ʒüfhw]	Ld 270 Óx <sup>w</sup> əc/3 sharp / NWk (inv. ?) *ʒuÓx <sup>w</sup> - id.	Lz *ʔeč: <sup>w</sup> a- to sharpen, whet(stone)	NC 531 *ñüʒwā sharp, to sharpen
[Óxñl-Óxal : ħal: : ÓwĒaÓl]	UC161 ÓxñlÓxal[- ]s- arrow	Lz *ħal: a. / Ts *hel/r	EC 533 *ÓwĒaÓl/IV a.
[m-ɣ <sup>w</sup> / Óx <sup>w</sup> : meħ : -mēÓw] wet+, flow	Sp 53 moʔ (moɣ <sup>w</sup> ) flow, be a river / NWk79 *mÓx <sup>w</sup> - wet, damp	Lz *meħ whey, w.+ / Drg *m/neh wh. / Lak muha- li stream, rapid brook	EC 538 *ÓwmēÓwā moisture, lake, pool [but cf. stream in Lak]
[míɛ <sup>w</sup> : maʔl : māfhw] fat, grease	Th míɛ <sup>w</sup> əy grease	Lz *maʔl f. (n.) /*maʔli-	EC 794 *mā/ðfhw fat, grease (> Khin mi fat)

60 ʕ<sup>w</sup> (>w) ʕ<sup>w</sup> ʕ ħw ʕw

[ʕ <sup>w</sup> /wəÓx <sup>w</sup> : EC ħwimÓ/ʕ-] lace up / lace (EC -U ?)	IS 202 *ʕ <sup>w</sup> /wəÓx <sup>w</sup> lace up	*ʕ <sup>w</sup> im: lace (etc.)	EC 506 (Lz / Lak only) *ħwimÓ/ʕV string, lace
[ləʕ <sup>w</sup> : EC ʔeʕ/ʕw] come off (as skin) / skin	PS 53 *ləʕ <sup>w</sup> come off (as skin/bark), also in bark	Lz *ləʕ skin	EC 755 ʔeʕ/ʕwni skin (of animal)

## Table of Basic Words

The following table (left: SaWk; right: Lz <N(E)C) is a part of a comparison, tailored to the 'basic 100-word list'

3 BARK PS 79 *p'alan'y' tree-bark [*p'alíani] (IS:MC p'al an Th p'elý en MS p'ñĩnyí-)	Lz *parq <sup>v</sup> :ul: bark+ < EC 865 *pan_GVihV (/Ó) bark (also leaf+) [ ? PS <*palhVn_G-
5 BIG, MANY I SWk *ʔiÓx <sup>w</sup> - big (NN120) II CS:Ld 109 hik <sup>w</sup> big+ (deglott.) [ ? <*hi(n)k <sup>( )</sup> w-]	I Lz *naqv <sup>w</sup> V- m. < NC594 *HnĐaq'wĒV b., old II Av *-HiÓku- < AvA *hinÓka- b. > Tind hiÓka- b.
7 BITE (v.) PS 127 *Óxñm [PS Óx matches NWk Óx/q'] / ? NWk361 *q'm-k <sup>w</sup> - b. smth. hard/brittle 374 Óxm-x <sup>w</sup> - chew... (Kw 45 q'əx' b., q'ém-x <sup>w</sup> - b. brittle things)	Lz *íeq <sup>v</sup> .π- b. <NC 559 *HĒem_GĒA b. / [*_GĒemHĒA] (>AvA *qv:am/n- b., eat / Khin qvπn e.)
8 BLACK NWk 162 *c'ú <sup>1</sup> - black (:Kw 68 c'ú-c'əʔ-)	Lz *Ó <sup>3</sup> / <sub>4</sub> cu/oIV < EC 556 *H <sup>3</sup> / <sub>4</sub> c'Ēolṽ black
9 BLOOD+ PS26 *cay b. *ciç <sup>w</sup> , *ci/aq <sup>w</sup> bleed (IS:Sp)	Lz *Ó <sup>3</sup> / <sub>4</sub> cV <sup>w</sup> A: V alive, lively, animated [Udi q < *ʕ: ]



10 caÓx <sup>w</sup> <i>blood</i> Sh cəɣ <sup>w</sup> - CS:Sq ciÍ-, ciÓx <sup>w</sup> - Ld c <sup>1</sup> -bleed, cñ <sup>1</sup> - breathe in compnds, co caÓx blood-colored)	< EC 376 * c'ĒafLwV blood, life [cf. 41]
10 BONE PS 30 *c'Óu/Óam (Cb Ós-c'Óam') [different: *c'u/am suck (Cb c'əm'-); see note]	Lezghi Ócum < Lz *Óc <sup>w</sup> Đam shin-bone+ < EC 555 *H_c'wĒejmñ leg bone
? 12 BURN [PS *k' íí b. (Sp k'íí scorched+)] Sh k' í-es-t s-d Cl k' íí-us hot sub PS 50 *k' as hot+ (burn in Cw, Ms, Ch; Cw k' <sup>w</sup> εɣ-l-əs warm [see Sq 345])	Lz *ííÓk <sup>w</sup> a- set fire, burn (Archi Ók <sup>w</sup> a-s) < EC 632 *=ĒikwV burn (also set on fire)
15 COLD IS:Sp c'er- cold Cr c'ar <i>feel cold</i> ...; PS 29 *c'Óu/Óal [*c'u/ar] c.; ? UC 32 c'íÓx-	[Lz *Ó <sup>3</sup> / <sub>4</sub> cur]<NC393 * <sup>3</sup> / <sub>4</sub> c'wErHV c. [419 *=əc'ōr freeze] / Lz *ruÓ <sup>3</sup> / <sub>4</sub> c hoar-frost < NC *rHE <sup>3</sup> / <sub>4</sub> c'wV cold (inv.)
15a COLD SWk *m'a'ł- or *m'ał'- (No) [cf. NN 121]	Lz *meÓfλ <EC808 *mħēl'ə c. (>Nakh *m(ħ)il- <i>get c.</i> )
18 DOG+ CoS:UC k'óʔs bitch [:Be 64 wac' d. (<Wk?)] / NWk 315 *w'ás- <i>dog</i> (Nater: Kw w'ác'ə He ʔwas- <i>d.</i> )	Lz *k:wáč:a bitch <NC 445 *gwǎǰē bitch, dog ( > Lak k:ač:i dog / WC *k:wəč:ə, *k:wəǰə wolf)
19 WATER, TO DRINK PS 91 *q uí / *íuq <sup>w</sup> (+)	Lezghi q a- Ag uq-<Lz *íuq <sup>w</sup> a-<EC221 *íu/Ēo_qwV d.
21 EAR PS 206 *= ani/aí ear (side)	Lz *ʔlam: <EC 239 *ǰwanǰV ear (>AvA *ǰan-)
? 23 EAT PS 16 *íi'(t)n eat (IS:Cr -iln food) (Be root ʔa <sup>1</sup> -)	Rut =ile- <Lz *íi-íwĐal- eat <EC 625 *i-wVl e., feed on+ (> Ts *hell- > Gin hil- / *heln- bite)
? 24 EGG CoS 148 *qñlÓx fish roe (=eggs) / NWk 353 *qlÓx- lay eggs (about a bird) *qlÓx-min e.	Lz *q:VlVq: egg (Rut ěπlπē) <EC 906 *_qwV'Vq'V egg, grain (> Drg *q:ulqvi roasted g. )
25 EYE Be 57 ʔa <sup>1</sup> - <i>look at</i> ; -u <sup>1</sup> e-s Sq 268-9 -áyʔ <i>id.</i> UC 362 =ál=us <i>eye</i> / IS: Sp 7 ʔul meet Li 27 háł'a <i>be visible</i> PS 116 *way <i>id.</i> Ld wñl í Se wil í <i>peep</i>	Rut ul, Lezghi wil <Lz *íwil<NC 250 *wĒil'í eye (>Ts *ǰre / Drg *ǰuli)

25a EYE, LOOK CS:Se 30 c'íl- l. for; 14 ca-cúm- eyebrow (*eye +*hair as Lz) co:- tear <*eye-water	Lz *Ócil- < EC *c'ÉilV eye (not eyebrow); also *c'alV a) c'V-; b) c'VL-
26 FAT, GREASE IS:Th míž <sup>w</sup> əy	Lz maʔl* f. (n.; obl. *maʔli- >Tskh maji-) < EC 794 *mä/ðñwV f., grease (> Khin mi fat)
29 FISH PS 24 *ci'[-]n fish, food	Lz *Ó <sup>3</sup> ceÓA( : ) <EC 333 *_ ceA'V /*f_λ'e cV f.+ (Ts *fλ <sup>3</sup> ce)
9a FISH PS 35 *hññw/y hump-back salmon out eS:Ms həwn? Cw ha:Ín Ck h ñw:lñy-e; IS:Li hani?)	Lz *χ :an: fish < EC 1078 *_¼wan_V fish (> Lak əawa)
3 GIVE CeS:Se yat- <*Í/yat? [cf. PS 132 *ʔiq' /*yəq']	Lz *ÍVtV- < NC 1034 *=VtÉV give [Sa ʔ/y < *ʔ]
34 GOOD IS 198 *Óxñs(-t) (Sp Óxes, Óxis)	Tab užu<Lz *Íi <sup>3</sup> 4c:V<EC 248 *_a <sup>3</sup> 4QV g. (Ts *_o <sup>3</sup> 4ze)
34a GOOD NWk 404 *ʔik- good, nice, well, fine	Rut jigi- <Lz *juk:í- <EC643 *=ĩkwV / =ĩkwVn right, good (> Ts *=igV >Tsezi =igu good)
36 HAIR (ON THE HEAD) PS 97 *q'wum l [+38]	Lz plait, mane+ <NC 931 *_q'(w)ÉamíÈñ h.
? 37 HAND, ARM+ a) PS211 *-á[-]Óxan a. (side) / b) NWk 121 *niÓx- [act with h., a.:] pull, pick up, carry	a) Burk Rán Tab ʔIun <Lz *q:lun shoulder <NC853 *GHwñā a., sh. b) *nHěwGHĀ (> Drg *naq:l h., a.)
38 HEAD PS 97 *q' <sup>w</sup> um l h., skull *q' <sup>w</sup> um ll top+ (horn in Cv) / NWk 327 *q' <sup>w</sup> m- stick out, be taller	Lz *q' <sup>w</sup> em back of head, summit, top+ < EC 494 *hq'wÉemÈV horn, head (>Ts *q'wom head)
39 HEAR, LISTEN PS 41 *k'al l.+ (hear in CeS, IS:Cr)	Lz *=ʔi(r)ki(r)- h. <EC 650 *=i(r)kVI l. (>Khin kl-i h.)
41 HORN PS 115 *wa/inaíw h., antler (:Be 64 wifλ'aÓx a. / Kw wufλ'aÓx a.) NWk 301 *wfλ'- aq have antlers	Lz *woÓflu-l head (>Tsakh wuqʋul) < EC 1041 *wÉenfλ'V(-IÈV) beak, horn, head

42 I PS *-c(a)- / -s (or sim.) / SWk *-s id.	Lz *zo-n <NC 1084 *zĒo I (> Nakh *sĒo /WC *sA)
47 LIE IS *Óxñr lay evenly CeS:Se ÍaÓx(-ic) lie down	Tb aχ- Bd =¼ar-<Lz *Ía¼Đar sleep <NC 273 *a¼Vr l.+
48 LIVER NWk220 *lq'- in Ha l'G-is [not to *lq'- be]	Rut laq' l. <Lz *ÍaÓx-<EC586 *Hlää'V [q' < *ġ']
? 51 MAN IS 169 *law-aʔ man's fa. ('s bro.) Sh léw'e <i>uncle</i> Cv lʔiw man's fa. ; Ti ləʔəh fa. of male	Lz *ġ:ilV- male, man <NC 749 *liwĒĒ male, man (>Nakh -law <i>suff. of profess.</i> ; Chech. -lo <i>id.</i> )
? 51a MAN+ PS 67 *s-mʔal fa.'s bro. (IS:Sp s-meʔt)	Lz *morġ:il man, male <EC 830 *mōrĒV male [ʔ<r]
? 53 MEAT CS 146 *mayac [also frequently deer] (Sq s-mic m. Ti wiyéc <i>belly</i> ) / <i>ibid.</i> NWk:He miás m., <i>flesh</i>	Fit wic Ag bec <*wec, jac <sup>w</sup> < *jawc < Lz *jamc <i>ox</i> < NC 680 *jə mcō bull, ox
60 NIGHT CS:Ld 143 ÍaÓx <i>night, dark(ness)</i>	Lz *ʔeλ:a <i>evening, late</i> < NC 216 *ʔĒā n.> Lk x:u (< *IVx:u < *IVuλ:u) n. / WC *ġ:Vλ:V n.
62 NOT PS *taí, CoS:UC tay-	Lz *t:V- not <EC 404 *dV neg.
65 RAIN SWk:No m'ifλ-, m'ifλa: raining	Archi moλ / mīli <Lz *marλ, rain <NC 795 *mārfλwĀ (r.)cloud
69 ROUND+ PS [*y/h/Íñr (/i)] (IS:MC y ñr- r., spherical, Sp y ñr., circle / CoS:Be Íil go/pass by, go around; yal-¼/q' roll /Sq h ñl- id.) cf. PS 130 *yÓñl, *yul, *hñyl roll, round+ [y/ʔ- : Lz ʔ-]	Lz *Íirē,Đa (/q:,) turn around, roll, be round (Rut ruĒ,a-s) < EC 650 *=irēwV roll, turn around (> AvA **=iē, /Ē,ir- to fly, glide, roll / Drg *Íiē(,) spin/turn around)
70 SAND IS 164 *c'ñÓx <sup>w</sup> s., gravel (but Sh c'ŋ <sup>w</sup> y-) MC 7 c'ə/ÍÓx <sup>w</sup> s. / CS 139 *c'íÓx s., g. (UC c'aÓxáʔs)	Lz *¾c:il earth+ < EC 342 *¾cHĐa' u e., ground, sand (> Lak š:allu, š:al e., ground)
? 71 SAY PS 23 *ʔaŋ <sup>w</sup> , *ʔaw call [ŋ <sup>w</sup> : Lz ʔl <sup>w</sup> ?] IS:Ka ʔáu <i>name</i> MS 60 ʔaw say [ʔaw < *ʔw]	Lz *ʔiʔl <sup>w</sup> i- s. < EC 625 *=iʔwV say (>AvA *ʔVb- s. > Avar ábi- [b<*w])
72 SEE CoS:UC ÍñÓx, Ía-ÍÓx-n / ? NWk 411 *ʔaq- Ha h'laq'- [Íh'laq'] <i>show up, become visible</i>	Lz *Íarqvl:Đa s., <i>watch, look</i> <EC547 *HĒar_q'V(n) see (> Ts *=řq-/Drg *=ahl-)

<p>72a SEE, LOOK (FOR) PS 62 *fλ'ńí go after, l. f. IS:MS -fλ'áí-us-tn eye-sight / UC 76 fλ'i evidently Ld 150 fλ'áí bec. aware of, notice (s-fλ'áí nobility+)</p>	<p>Lz *l-ifλ:[a] to look &lt; EC 209 *lí_fLV to look (&gt;AvA *Ófλ:V(n)- id. / Nakh *(t)-all-explore(r), check, hunt(er))</p>
<p>? 72b SEE, (BE) AWAKE IS:MC k<sup>w</sup>áx<sup>w</sup>- a., wake up / SWk *k<sup>w</sup>a:Óxi be in view, visible [?&lt;*g<sup>w</sup>a-g<sup>w</sup>a-]</p>	<p>Lz *ʔak:<sup>w</sup>ä- see... &lt;EC 255 *=agwV s. (&gt;Drg *g<sup>w</sup>- to look / Lak k:<sup>w</sup>a=k:<sup>w</sup>a- s.)</p>
<p>74 SIT CoS:UC 55 k<sup>w</sup>aʔ s. (root) CeS:Se 32 k<sup>w</sup>á-t put down, set / NWk 291 *k<sup>w</sup>á- sit; SWk *k<sup>w</sup>a- seated [NN]</p>	<p>I Lz *ʔiqv<sup>w</sup>ä- sit, set &lt; EC 647 *=iq<sup>w</sup>vV sit, be (&gt; II AvA *-iÓk<sup>w</sup> - be, sit / Lak =iÓka- id.) I / II</p>
<p>75 (TO) SKIN PS 203 *= íc'áí hide IS:Li – ic'a skin CS:Be -ic' skin, bark+; take off clothes</p>	<p>Lz *Íar<sup>3</sup>/c:a take off, peel (skin) &lt;EC 265 *=Èar<sup>3</sup>/c'V to skin (&gt;Ts *=i<sup>3</sup>/c- peel, take off skin)</p>
<p>? 75 SKIN+ CeS 53 *s-lóway' (inner) cedar bark (:Sq lówayʔ); cf. IS:Th s-lówe-c' treebark [sub PS53 *ləw/ɫ<sup>w</sup>]</p>	<p>Lz *leʔ skin (obl. *leʔi- Ag leʔu-) &lt;EC755 *Íěʔwni skin (of an animal) (&gt; AvA *IVbV sole, Av láb-ci id.)</p>
<p>77 SMALL MC41 t'aɣ<sup>w</sup> - little [not to MC 41 tw'í-t boy]</p>	<p>Lz *Óti- s.; l. finger &lt;NC1001 *t'iHV s., l. (&gt; WC *Óta)</p>
<p>77a SMALL IS169 [ʔ] k<sup>w</sup>ɣ<sup>w</sup>əy (/q<sup>w</sup>) Cr k<sup>w</sup> iy' Sp k<sup>w</sup> y'</p>	<p>Lz *Ókɪ? V- &lt;EC 726 *k'fÉíwV s. (&gt; Nakh *ka-ɣVH-)</p>
<p>81 STONE CoS221 *k'əfλ'aʔ s., rock / NWk243 *k'ɫ/- s.</p>	<p>Lz [b] *ÓkVl- (Ag Ókele-)/[a] *ÓfλVl- s. &lt;EC 773 [a] *fλ'älü s. (rock in AvA *ÓfλalV)</p>
<p>81a STONE NWk 380 *Óxq<sup>w</sup> - /*ÓxÓx<sup>w</sup> - gather stones [precise match: Óxq<sup>w</sup> - / WC ɣaq:<sup>w</sup> -; ÓxÓx<sup>w</sup> - / Abkh ɣahw]</p>	<p>Lz *1/4 em<sup>w</sup>1/4(a) big stone &lt; NC 1070 *1/4emqw̄ / *1/4wemqw̄ s. (&gt; WC *ɣaq:<sup>w</sup> ə &gt; Abkhaz ɣahw stone)</p>
<p>84 TAIL NWk 385 *hc/s- (He Oo hc'Óx-, Kw [hñc'ñÓx-])</p>	<p>Lz *πr<sup>3</sup>/c: t.+ &lt; EC 529 *Ór<sup>3</sup>ε_ Qw<sup>3</sup>/ñ t. (+long hair)</p>

85 THAT 86 THIS IS:MS ?é this / swk *ʔa- that	Lz *ʔi demonstr. pron. < NC 214 *ʔi this Lz *ʔa demonstr. pron. < NC 218 *ʔö that
85a THAT 86a THIS Sq 265 ti this	Lz *tV dem. pron. < EC 993 *Tv that
87 THOU IS:MC -wi; CS:Sq 48, 311 nəw (etc.)	Lz *Éuo-n < NC 1014 *ÉuÈo (> Nakh *waj / Khin wî)
90 TREE, BRANCH CO c'l-c'al timber (cf. sub PS 28 *c'ñil stand; trees) / swk *c'a¹ branch	Lz *Ócal branch, shoot < NC 362 *c'Éñ¹V tree, branch (>WC *Ócñla tree)
? 91 TWO CoS 220 *nwas (Be t-nus); Li ʔá-n'was	Lz *nušaj/*niwšaj 2-y.-old sheep < NC 845 *năwši two
92 WALK, GO IS165 *kí/k'ñw-ñt w. (Ok k'aw gone)	Lz *ʔarÓkĒw < NC 267 *=Ēark'Ēw go+ (> AvA *ÓkVb-)
93 WARM a) IS:Cb mÓal' Cv mġal / maʔl Cx máʔl' (PhM 230) / b) ? NWk:He mánis bask in the sun	a) EC 807 *mhĒalV warm (>Nakh *mÓal- w.+) b) Tab mani < Lz *manV warm < EC 807 *mhĒanV
95 WE PS *-¹V (or sim.) (CeS:Ld -a¹i, etc.)	Lz *Lä-n < EC 786 *Lā we (incl.) (> AvA *ʔiλ:i)
96a WHAT NWk 89 *m'á [ʔəmá]; 98a WHO	Lz *mo-sa when < EC843 *mV interrog. >AvA *ʔi-mV who
99 WOMAN a) CoS 142 *s-¹an-ayí (Sm s-¹ enií) UC356 -¹n' b) Be 43 xna-s w. CeS:Sq 397 -šñ (š<*x) girl	a) Lz *λ:in:(-ol) w., f. < EC 762 *λnÓV w., f. > b) Lz:Tsakh xuna-š:e id. (/EC:Drg *x:un(-ul) w.)
? 99a WOMAN, FEMALE PS 84 *qanaí fa.'s mo.+ / NWk 340 *Gn- f. Kw [Gən- ñm] f., woman, wife, d-r+	Lezghi χnub < Lz *¼on-p:V woman, women < NC 900 *qwĒðanV woman (>Nakh *qin wife)
100 YELLOW PS 94 *q <sup>w</sup> ay blue, green+; also yellow	Lz *qä-qV- y. /And *ʔVq: o-ji- < NC 414 *=-ëqwĀ yellow

Note to #100: blue < yellow.

The above table will certainly be modified: some sets will be dropped, but more sets will be added. But it is already clear, that there more than 50 sets which genetically link Sa-Wk and Lz (all < EC/NC) sets.

We may also easily expand our SaWk—N(E)C comparison by including into it many data from EC/NC languages, other than Lz.

As for the problem of borrowings from Sa into Wk and vice versa, there are not many such borrowings in the basic list of 100 words/roots. In any case, both Sa and Wk are clearly related to Lz and other NC languages very closely.

## **Basic Literature**

A. Kuipers's Salish Etymological Dictionary [=SED], Missoula, MT, 2002

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