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Salishan and North-Caucasian

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Abstract - Sa[lishan] languages are represented in this paper in the following way (data used in this paper are taken from the appropriate dictionaries or published word lists): Tsamosan [Ts]: Upper Chehalis [UP]. Interior Salish [IS]: Thompson River Salish [Th], Shuswap [Sh], Colville-Okanagan [CO], Moses- Columbian [MC], Spokane [Sp], Montana Salish [MS]. Central Salish [CS]: Lushootseed [Ls] (=Puget), Sechelt [Se], Squamish [Sq].

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I. Introduction

Sa[lishan] languages are represented in this paper in the following way (data used in this paper are taken from the appropriate dictionaries or published word lists):
Tsamosan [Ts]: Upper Chehalis [UP].

Interior Salish [IS]: Thompson River Salish [Th], Shuswap [Sh], Colville-Okanagan [CO], Moses-Columbian [MC], Spokane [Sp], Montana Salish [MS].

Central Salish [CS]: Lushootseed [Ls] (=Puget), Sechelt [Se], Squamish [Sq].

Bella Coola (Nuxalk) [BC]/[Nu].

I am also using occasionally North Wakashan [NWk] language data as provided by N.Lincoln and J.C.Rath in their *North Wakashan Comparative Root List* (Ottawa 1980); abbreviations: Haisla = Ha; Heiltsuk = He; Kwakiutl (=Kwakwala) = Kw; Oowekyala = Oo. - Note also: Wakashan = Wk; M = Makah; Nitinat = Ni; Nootka = No.

North Caucasian [NC] languages are cited after *A North Caucasian Etymological Dictionary* by S.Nikolaev and S.Starostin (Asterisk Publishers, Moscow 1994) [NCED], and occasionally also after S.St[arostin]'s papers *Nostratic and Sino-Cacasian* (in *Explorations in Language Macrofamilies*, Bochum 1989: 42-66) [St. '89] and *On the Hypothesis of a Genetic Connection between the Sino-Tibetan Languages and the Yeniseian and North-Caucasian Languages* (in *Dene-Sino-Caucasian Languages*, ibid. 1991: 12-40) [St. '91]. - Note relevant abbreviations: North-East Caucasian = NEC = EC; N.-West Caucasian = NWC = WC; Sino-Caucasian = SC; Yeniseian = Yen; Sino-Tibetan = ST; Nostratic = N.

Abbreviations of NC daughter languages' designations follow the pattern adopted in NCED; besides, I am provoding abbreviations of designations of some especially important NEC and NWC daughter languages in the text of this paper.

Sa languages show a remarkable uniformity of their sound systems*, making shallow the existing PSa reconstruction and "elevating" archaic languages (which have preserved retracted sounds, and didn't palatalize *k k′ x*) practically to the level of PSa.

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*Sa stops *p t c k* k^{w} *q* q^{w} have glottalized counterparts; this is also valid for *m n r l y w*. - Stops *k* k^{w} *q* q^{w} have also appropriate fricative counterparts *x* x^{w} *x̣* $x̣^{w}$; voiced: *ɣ* (velar?), *ʕ* $ʕ^{w}$ (either voiced uvulars or pharyngeals). - There are also *ɬ λ′ h ʔ*. - On some occasions, Sa voiced consonants *z z′ ɣ ʕ* $ʕ^{w}$ seem to match NC voiced consonants (see rxx. below).

**PSa had at least three vowels as well as their retracted counterparts: *a ạ i į u ụ* [These vowels participate in an old ablaut *a/i*; *a/u*; etc.; cf. ablaut in the NC languages; Sa *i* is concidered the stablest vowel]. Historically, retraction indicates a back articulation in the original root. Several consonants have retracted counterparts: *s c l l′* vs *ṣ ç ļ ļ′*. Always retracted are *r r′* and *z z′*. Most Sa languages show no retraction; most languages lack consonants *r r′ z z′*.

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a) Ways To Compare Sa (And Wk) Languages with Nc Languages

Both Sa and Wk languages show many very strong genetic ties with NC languages (a relationship which seems much more intimate than that between NC on the one hand, and both Yen and ST on the other)*.

It is totally inappropriate to deny mutual genetic relationship between Sa and Wk just because there exist many borrowings from Wk to Sa, and vice versa. There are many identical, or semi-identical, Wk-Sa word pairs which belong to the the most stable lexicon (1st and 2nd pron.; some body parts definitions, etc.); these root correspondences can not be considered as borrowings, simply because such words do not become subject of borrowings. Such correspondences indicate deep genetic relationship.

This paper deals primarily with Sa - NC cognates; some Sa - Wk, Wk - NC, and Sa - Wk - NC cognate sets are also present.

Sa (and Wk) sounds either match NC sounds directly, or in a way which shows that Sa sounds are "reduced" representations of NC sound combinations (a given Sa sound may represent several sounds of a much larger sound system; original sounds may disappear; original clusters can be reduced to simple consonants, or eliminated in the followin way: **CC > CVC*, or **CC > C...C*). Relatively frequent metatheses of Sa roots, as compared with NC roots, are similar to frequent metatheses of NC roots (this may be reflected in reconstruction of 2 variants of a given root, or a given NC root may be metathesized in appropriate daughter languages).

There is no sufficient reconstruction of PSa; the existing reconstructions of NWk roots are on many occasions seem to be incorrect. On the other hand, both Sa and Wk languages have clearly preserved many features of the underlying sound system: cf. preservation of *q q' q^{W} q'^{W}*; *x χ x^{W} χ^{W}*; *l l' ɬ λ* [Wk only] *ƛ* [Wk only] *ƛ'* (etc.). There are no significant differences between genetically related roots in various Sa (or, for that matter, Wk) languages.

Scholars agree that there were inherited voiced consonants in Sa; they seem to be best preserved IS:Th: *z ʒ ɣ ʕ ʕ^{W}* (cf. also Wk). The following exx. 1-4 seem to show that Sa voiced consonants may match NC voiced counterparts in genetically related roots/words:

(1) STINGING INSECT: IS:Th *məz·/məze* 'flies'; *məc'·/məc'e* 'bees, hornets, wasps' // NC **miʒƛ* stinging insect. [Alternations of the type *c/z* are typical also for Wk].

(2) LYNX (etc.): PSa **mVɣaw?* (Kuipers: **(s-)mɣaw(?)* 'feline, coyotte') > IS:Th *məɣew'*, Sh *s-mɣew?* // NEC **mHarGVwV* 'tom-cat' (> Lezg. **marq:/aw* > Ag. **maʁ/aw* / Tsez. **maʁ:ur*, also with **-χ-*). [Cf. NWk:He *mauχwa* 'bob-cat'].

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*When comparing languages on a broader scale, - i.e., not just Sa (or Sa-Wk) vs NC, but Sa, Wk, Ath[apascan] (etc.) vs SC (or Yen, or ST, for that matter) vs N (or Kartvelian, for that matter), - one can use SC data even in cases where there are no NC cognates, - for instance (N.Kruglyj-Enke, Moscow 2000 Conference on deep reconstruction):

FIRE, BURN: Sa **p'iχ(W)* 'fire, burn' // SC **piHwV* 'heat' (**p < *p'*) // N **p'a/iyxwV* 'fire'.

In the present paper, such broad comparisons appear very seldom.

(3) WORM: IS:CO *m'aʕ-mlaʔ* (metathesis + partial redupl.?) // NC **mHilaGwV.*

(4) GREASE: IS:Th *miʕ'W-* (root) // NEC **măɦwV*; etc..

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The above exx. show that a relatively close genetic relationship between Sa and NC may be seen rather clearly even if we take only one Sa language and compare it to NC. [Naturally, when we deal with several Sa languages (which have preserved a given root) the comparison will look more solid].

In ex. 5, a PSa root is represented by several Sa languages; the NEC match is exact. - Ex. 6 shows only one Sa language which is archaic (actually, more it is more archaic in this case than even NEC which has lost initial **t-* (NEC); this **t-* is still present in NWC). - Both exx.. 6 and 7 show semi-identical matches between MC (an archaic Sa language) and NWC. - Ex. 8 provides a precise match between Sa (UC), Wk (Kw), and NEC languages:

(5) DRINK: UC *$q^{w}o\cdot ?$* (from PSa; cf. Th *?u-$q^{w}e?$*, Ls *$q^{w}u?$*, etc.) // NEC **?u-qwV.*

(6) TWO: IS:MC *tq'aw'-s* (cf. *t'q'^{w}maw'-s-ən* 'together') // NC **tq'Hwā* > NWC **tq/':^{w}A* (> Ubykh *ṭq^{w}a*). [Sa may show a typical vowel insertion: *CVC* for *CC*].

(7) TREE: IS:MC *c'əl* // NWC **çəla* < NC **ç'ă/ŏłV.*

(8) DIRT: Ts:UC *ciq^{w}-i-* // NWk *cq^{w}-*, *zq^{w}-*; *c'q^{w}-* 'dirty'; cf. Kw *ʒeq^{w}á* 'dirt' // NC **ç̆Hĕq'wĂ.*

In Sa - NC comparison, some existing reconstructions (mostly proposed by A.Kuipers; cf. *Lingua* v. 57, 1982: 93-100) can be used, - but we may note that important phonetic elements (which still appear in some remnants of underlying consonants or cons. clusters) may be absent in these reconstructions. Unfortunately, the amount of the existing reconstructions is very low; on occasions, these reconstructions are not satisfactory from the point of view of comparative and diachronic semantics (there is a very strong tendency among linguists working on Sa and, especially, Wk languages to genetically unite different, though phonetically similar, roots, however improbable such a tie-in may be from the point of view of histor. linguistics and semantics).

Nevertheless, many existing PSa reconstructions are quite acceptable; it is not by chance that these reconstructions often match NC roots in a very precise manner:

(9) NECK, THROAT, GOITRE: PSa **qənu/ax^{w}* 'throat, gullet' (Kuipers) // NEC **q'^{w}i/ēnwV* 'goitre, Adam's apple'. [Cf. NWk:He *q'^{w}ú-q'^{w}ùni* 'neck'. - Wk may reflect a process of simplification: **q'^{w} > q'/q^{w} > q*; cf. Sa *q* in all languages; some NEC languages show *q'*].

(10) HAIR (on the head; meaning 'head' is <u>not</u> original): PSa **q'^{w}um* as in: IS:MC *q'^{w}um-qən* 'head' (='hair + head'; cf. Th lex. suff. *=qin* 'head') : MS *q'^{w}om-qən* / CS:Sq *s-q'^{w}um-ay* 'hair', etc. // NC **q̱'(w)ăm?ə̄* 'plait, mane; hair'. [NB sound correspondences: Sa **q'^{w}* : NC **q̱'w*; umlaut: Sa **u* : NC **a*]

(11) DEER, etc.: MC *x̱^{w}əl(ʕ)* 'buck' : Sp *x̱^{w}ɬ* id. / CS:Ls *x̱^{w}el* 'deer': Sq *x̱^{w}i?* // NEC **Gwăłā* 'doe, hornless goat'. (On spirantization Sa *x̱^{w}* < **Gw* see below). - Possibly related to Sa **x̱^{w}ɬ̵'* 'mountain goat' (Kuipers), as in Se *s-x̱^{w}ɬ̵'-ay.*

(12) COLD: PSa **cu/ạl* // NC **č'wErHV.* [Pre-Sa **rH* is indicated by vowel retraction].

(13) WASH: PSa **c'aʕ^{w}* // NC lex. suff. **=Hăç̆wĂ.* [Metath. in pre-Sa?].

(14) GROW(TH): PSa **ƛ'ax̱^{w}*, as both in IS:Th and CS:Ls, not just **ƛ'ax̱* (Kuipers); this latter is a root variant with a lost [w]) 'grow(th), old'. - PSa root var. **ƛ'ax̱* appears in IS:CO *ƛ'x̱*, MC *ƛ'əx̱* / CS:Se *ƛ'ax̱-ax̱* *'grown up' > 'old person' // NEC **ƛ̵'ōrχwV* 'sprout'. [Sa **a* (<**a*, **o*) in both main branches: IS:CO, CS:Ls (*o* is secondary in Sa languages); note *x̱^{w}* : **rχw*].

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(15) HARD: IS:Th *ƛ'əʕʷ* vs CS:Sq *ƛ'əχʷ* / Ts:UC *ƛ'əχʷ* / BC *ƛ'aχʷ* // NC **ɬwěrV*. Note typical transfer of **w* from *L*-type sound to *ʕχ* in pre-Sa: [w] shifts to the right, to a more "comfortable" position, after **r* turns [ʕχ].

(16) BOY: PSa **t(a)wiH* [not **taw* '(small and) growing up'; Sa has two similar roots: one for 'boy', another for 'small, little'; see below] // NEC **dwirχE* 'child, son'.

Both IS:MC and CO show the root *tw'i-* 'boy, child', cf. also CS:Ls *tawixʷ* 'child'. - A different root (with the meaning 'little') is present in MC *t'aʕʷ*, CO *t?iw-*. - Accordingly, Kalispel shows *ɬ-təəw'i-t* 'youth, young boy' vs *tew* 'little'.

For the meaning 'small, little', cf. NC **t'iHV* (which may be **t'iHU*). - Contamination of both roots ('boy' and 'little') seems possible in some Sa languages.

There is a tendency to lump together two PSa roots: **k'Vm(')* '(take a) handful', as in Sh *k'm-* (:NEC **k'ēmV* 'amful, handful') and a phonetically similar root **k'Vm?* which means 'bite'.

There is a tendency to lump together two unrelated PSa roots: **ɬaw* 'leave (behind)' and **ɬup'* (as in Se; cf. N parallels) 'peel off'.

A reconstruction **p'alan(?)* 'treebark' (Kuipers) doesn't reflect a rather archaic structure *CVCCV(n)* of this root as represented by CS:Se *p'el'an*, IS:Th *p'a?yan* (*y* < *l*, etc; we may reconstruct PSa **p'aHlan / *p'alHan* 'bark', or the like).

As mentioned above, Sa - NC comparisons seem valuable, even if we deal not with PSa reconstruction but with certain forms which appear in "individual" Sa languages. When comparing pronouns of the 1st and 2nd p. (stablest elements in any language) we may cite either Sa proto-forms or existing Sa forms: there is practically no difference:

(17) PERSONAL PRONOUNS: 1st sg. *-n* (:NEC **nɬ*); *-ca/-s* (:NC **zō*);

2nd sg. *-xʷ* (:NEC **ʁwV̄*); *-w* (:NC **u̯ō*);

1st p. pl. *-ɬ* 'we' (:NEC **Lā̄*).

[Note that NC **ź wě* 'you (pl.)' has an exact parallel in Wk **-zu* (related to 2nd sg.). - Note also Ath 2nd pl. (subj.) *-*χʷ-* which is comparable with Sa *-xʷ* : NEC **ʁwV̄*, 2nd sg.].

The above mentioned Sa root with the meaning 'two' exists only in one language (MC); still, its comparison with NC reveals some archaic relationship between Sa and NC:

(18) TWO: IS:MC *tq'aw'-s* 'two' (cf. *t'q'ʷmaw'-s-ən* 'together') // NWC **tq|':ʷA* (> Ubykh *ṭq*ʷ*a*) (:Kartv[elian] **t'q'ub* 'twins', a borrowing?) vs NEC **q'Hwā̄* 'two'. This latter also appears in **q'HămVɬwV* 'one of several wives' (Starostin). We may compare Sa:MC root *t'q'ʷmaw'-* (in 'together', above) with NC **tq'Hwă-mVɬwV*, on which the above NEC **q'HămVɬwV* is based. - Cf. Tsez *q̇|uƛu* 'pitchfork' with the uvular (not velar) initial, possibly influenced by *q̇|a-no* 'two' (Starostin) (:Sa in Ts:UC *q'ʷəχ* 'fork; split, divide'; *q'ʷəyəƛ'* 'cut in two' ?); see NWk *q'- ƛh-* in ex. 19.

We may consider Sa numerals 'two' (above) and 'three' (next) as genuine proto-language inheritance since both these numerals have parallels in NC. (Some synonymous numerals in Sa may have been borrowings from Penutian which belonged, along with Sa, to an old North American Sprachbund).

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(19) THREE: CS:Ls: *ɬix*^{W} // NC **ƛHĕ* (:NWk: Ha *q'-ƛh-* 'six', *'two triads' (?), see ex. 18). - Sa frequently reshapes underlying roots as *CVC*.

[For root structure *CVC* in Sa vs a different, older structure in NC, cf. also: a) HEAR: CS:Ls *luh* // NC **=eƛu* > NWC **λ*^{W}*ə-*; b) CS:Ls *ʒix*^{W} 'first // NEC **çwi* 'in front, before'; c) CS:Ls *x̱*^{W}*u-l* 'near' // NC *x̱wE* 'together, close to'; d) IS:MS *x*^{W}*uy* 'go' // NEC lex. suff. **=iχwV* 'go'; e) IS:Sp *k'*^{W}*i?* 'burnt' (etc.) // NEC lex. suff. **=ĭk'wV* 'burn, set on fire', - etc.].

It may be rational to compile lists of comparisons between representatives of various Sa language groups (such as Ts, IS, CS) and NC. At some point, we may add Wk cognates to our sets.

We deal with stable roots, many of which don't become subject of borrowing; besides, any plausible Sa-NC or Wk-NC cognate set is of interest to us. This short comparison may confirm our thesis that Sa languages are very stable from the standpoint of historical phonetics and that Sa (and Wk) languages easily reveal deep genetic ties with NC languages.

Note that we deal almost exclusively with words/roots which have the same meaning both in Sa (also in Wk) and in NC. [NC data are from the above mentioned NCED (with a few corrections from Starostin's materials as presented at the Moscow 2000 Conference on deep reconstruction)].

ANGER/ANGRY, ANT, ARROW, BEND, BLACK, BLOOD/BLEED, BLUE, BONE, BOY, BRANCH, BREAK, BURN, BUTTOCKS, CHILD, CHIP, CLOSE (adverb), COLD, CRAWL, CROWD, DARK, DEW, DIRT, DOG, DRINK, EAGLE, EAR, EYE, EYEBROW, FAT, FLASH (verb), FLOW, FRESH, FOREHEAD, GREASE, GROW, HAD, HAIR (on the head), HAND, HANDFUL, HARD, HIDE (noun), HORN, I, JOINT, LEG, LEAF, LITTLE, MILK, MALE, MAKE, MOUNTAIN GOAT, MOUTH, OPEN (verb), OLD, POINT (verb), PULL OUT, QUICK, RETURN, RIPE, ROCK, RUB, SCATTER, SCOOP, SCRATCH, SEARCH, SEW, SHARP, SHARPEN, SHORT, SHOULDER, SKIN, SLIP, SNOW, SPEAK, STICK (noun), STINGING INSECT, SWALLOW (verb), THOU, THREE, THROW, TIE, TREE, TURN AROUND, TWO, WASH, WAR, WARM, WE, WEAVE, WHITE, WOMAN, YOU (pl.).

b) A Short Preliminary Lists of Sa - Nc Cognate Sets

The following comparison covers three groups of languages: 1) Ts:UC; 2) IS:MC / MS / Th; 3) CS:Ls / Se. The order of the first (and the second) consonants in Sa roots (capital cons. = Cons. class, for instance, *Q = q q' q*^{W} *q'*^{W}; *X = x x̱ x*^{W} *x̱*^{W} *ɣ ʕ ʕ*^{W}; *S = s z*; *L = ƛ' ɬ l l'*, etc.) is as follows: *K Q X ? // C S T n // r L y // P m w*.

1 A FEW COMPARISONS BETWEEN Sa:Ts (REPRESENTED BY UC) AND NC LANGUAGES

[Ts:UC vs NC] (1) BURN: UC *k(*^{W}*)əw-* // NEC lexical suff. **=ōgwV.* [Sa *k*^{W} < **k*^{W} or **g*^{W}].

(2) BE AFRAID: UC *q*^{W}*anu-* // NEC lex. suff. **=Hä-GwVn.* [Sa *q*^{W} < **q*^{W} or **G*^{W}].

(3) DRINK: UC *q*^{W}*o·?* (from PSa; cf. Th *?u-q*^{W}*e?*, Ls *q*^{W}*u?*, etc.) // NEC **?u-ɋwV.*

(4) BARK: UC *q'*^{W}*iɬ-* 'cedar bark' // NEC **q'wăɬV* 'bark'.

(5) (?) ARROW: UC *x̱əlx̱a?s* (< **x̱əl?a-* ?) // NEC **fiwăfilV* (also *-ɬ-*) (> Tsez. **hel*).

(6) SPEAK: UC *x̱əw-əq'-* // NC **=ĭχwA* (lex. sf.). [Note Sa *x̱ew-* : NC **-χw-*; cf. ex.1 above].

(7) DIRT: UC *ciq*^{W}*-i-* // NC **ç̆'Hĕq'wĂ.*

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(8) SUCKLE (etc.): UC *c'am-i-* 's.' (<PSa **c'ạm'*) // NEC **=ĕč'Vm-* 'gnaw, chew' (AvA **čam-*)

(9) DEW: UC *səx*^{w} 'wet, dew' (from PSa **sVx*^{w}) // NC **šaχwV.*

(10) HORSE, DONKEY: UC *tiqiw'-* 'h.' (from PSa) // NEC (Lak.-Darg.-Lezg.) **dHogwā* 'd.'. [This word seems to originate from NC **t'HōgwV* 'hoofed animal'; cf. related NC **t'ūgV̄* '(young) male goat' (also 'young animal' in NWC].

(11) LEAF, PLANT: UC *ƛ'əc'-* 'grow' (of plants) [*ə* <**a* ?] // NEC **ƛ'ać/ča* (/*-ĕ*) 'leaf' ('plant' in some lang.) (Cf. NEC:Lezg. **ƛ̣ač̣a* 'stem, stalk, leaf, grain').

(12) LOOK (FOR): UC *ƛ'i* 'evidently' (:MC *ƛ'a?* and Sp *ƛ'e?* 'look for') // NEC *?iɬ̲V* 'look'.

(13) (?) DEER (etc.): UC *ƛ'alaš* 'deer' // NEC **ƛ̲'äñɬə* 'lamb'. [This latter doesn't match N **t'älV* 'young (of animals)' (St. '89, no. 197); for N, cf. Sa:CS:Ls *(s-)t'i-t'ələ?* 'young (fawn, calf, colt)'].

(14) WOMAN: UC *łanay'*, lex. suff. *=łn(?)* [:CS:Ls *ładey?* (*d*<*n*)] // NEC (Darg.-Lezg.) **λɨnɬ̃V.*

(15) STEAM: UC *pəx*^{w} (:Th *pəx*^{w} spray with mouth') // NC **pHā̃χV.* [NC *-V = -U* ?].

(16) HANDFUL: UC *mo·?i-* '(take a) handful' (cf. *mo·-mɬ* 'take a handful'; *-mɬ* to NEC **mă̆r[ƛ]o* 'handful') // NEC (Tsez.-Lezg.) **mHŏχɨ-* > Tsez. **mɔχV*

(17) PAY: UC *muxʷi* // NC **mV̄xwV̄* 'price, pay' (> AvA **mixʷV* 'pay').

2. A FEW COMPARISONS BETEWEEN Sa:IS AND NC LANGUAGES

[IS:MC vs NC] (1) HAND: (?) MC *kalx* // NEC **kwīʔi.*

(2) BONE(S): MC *k'ʷən'* 'bones for stick game' (root) // NC **k'(w)inV* 'small bone'.

(3) HORN: MC *qəx-min* (root + instrum. suff.) // NC **qwīrhV.* [Late delab. in Sa; cf. NEC:Lak *qi* 'horn'].

(4) CRAWL: MC *q'əw'-t* // NC **HV-q(w)V.* [Note Sa *CVw-* vs NC *-Cw-*].

(5) MALE: MC *s-χal-wi?* 'husband' // NC **χōlʔi* 'male' (human/animal).

(6) BONE: MC *c'ạm'* (root; from PSa) // NEC **Hc̣'wējmə* 'leg bone'. [:Eyak-Ath **c'émʔ*]

(7) TREE: MC *c'əl* (root) // NWC **çəla* 'tree' < NC **c̣'ə/ŏɬV* 'branch, tree'. **STAND - inoe**

(8) STAND UP: MC *c'əlix* (not related to ex. 7) // NEC **=Vm-ć̣'Vr.*

(9) DARK: MC *c'el'* 'shadow, dark', *c'al'* 'shady' // NEC **Hč'ōlV̄* 'black' (Lezg. **c'olV* 'black; dark berry' = raspberry, etc.).

(10) TWO: IS:MC *tq'aw'-s* (cf. *t'q'ʷmaw'-s-ən* 'together') // NC **tq'Hwā̃* > NWC **tq|':ʷA* (> Ubykh *ṭq̇ʷa*).

(11) (?) ROT, PUS: MC *naʔq'* 'rotten meat' // NEC **nĕwq'ŭ* 'pus' (> Lezg. **näwq:*) [:ST **n0k/ŋ*].

(12) BREAK (etc.): MC *ləq'ʷ-* 'break, smash' // NEC **HlŏqV̄n-* 'destroy, break, scatter'. [Note Sa *-q'ʷ* vs NC **-qV*, possibly **-qU* ?].

(13) (?) (TELL) A STORY: MC *may'x* (root) 'tell a story' // NEC **mħ/ʕārχwā* 'tale'.

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[IS:MS vs NC] (14) PLENTY: MS *q^{w}o/ey* 'rich, plenty' // NC **q'(w)ă/ějē* 'things, possessions'.

(15) GO: MS *x^{w}u, x^{w}uy* // NEC lex. suff. **=ǐχwV.*

(16) SPARK: MS *c?ik^{w}* (:*cik^{w}* 'shine') // NWC **çV(jə)ḳwa* < NC **ç'wǐ̆Vkwŏ* 'brand, spark'.

(17) SHEEP, LAMB: MS *łox^{w}* 'sh.' (:Sp *łu?*) NC **ɬīlχU.*

[IS:Th vs NC] (18) DRINK: IS:Th *?u-q^{w}e?* (:Ts:UC *q^{w}o?*) // NEC **?uqwV* or **?ōqwV.*

(19) JOINT: Th *q'^{w}ət-x^{w}əm'* (2nd stem: 'lump') // NC **q'Hwəntv* 'knee, elbow'.

(20) (?) ELK, GOAT (etc.): Th *təx^{w}aq'^{w}-* (root) in *təx^{w}aq'^{w}-i?pe* 'doe' // NC **dVrq'wV* 'he-goat'.

(21) BEND: Th *łaq'^{w}-əw-t* 'bend over' // NC **=ilq'wV(ɬ).*

(22) ROCK: Th *ƛ'ix^{w}-* // NEC **ƛ'wehrŭ* (or *-lŭ*). [*w*-transfer in pre-Sa?]

(23) GATHER; HANDFUL: Th *muq, moq^{w}-* 'gather' // NEC **mŏq'V̌* 'handful' (also 'handle, hilt'') (> Tsez. **moq*).

(24) SWALLOW, THROAT (etc.): Th *məq'* 'satiate', *məq^{w}* 'hold in mouth' (:Ls *bəq'* 'put/hold in mouth, swallow'; *b* < *m*) // NEC **mVq'VɬV* 'throat, larynx' (> Tsez. **muq'* 'throat').

(25) WHITTLE, etc.: Th *məx* 'wh.; sliver' // NEC **m[ã]nχwV* 'sickle' > Lak *mirx* (etc.). [NC also shows meanings 'plough', 'reap' in different languages].

(26) SNOW: Th *məx^{w}* (:Sp *mx^{w}-* 'to snow') // NEC **marχalV* > Lezg.:Tab. *maʁ^{w}al.*

(27) GREASE: Th *mi$^{\varsigma}$'^{w}-* (root) // NEC **măfiwV.* [Voiced cons. both in Sa and NC].

(28) LYNX, CAT: Th *məɣew'* 'l.' // NEC **mHarGVwV* 'tom-cat'. [As above].

(29) STINGING INSECT(S): Th *məz·/mẹze* 'flies'; *məc'·/mẹc'e* 'bees, hornets, wasps' // NC **miʒĀ* stinging insect.

(30) MOUNTAIN, HILL, PILE: Th *mol* 'pile up (dirt or snow)' // NEC **muHalV* 'mountain' > Lezg.: Arch. *mul*, etc. (In Tsez. also 'hillock, knoll').

3. A few comparisons between Sa:CS and NC languages

[CS:Ls vs NC] (1) BURN: Ls *k'^{w}a-s* 'burned' (cf. IS:Sp. *k'^{w}i?* 'burnt') // NEC **=ĭk'wV.*

(2) (?) GREEN (etc.): Ls *q^{w}ac* 'yellow, (light) green, pale' // NEC **GoʒV* 'green color, dirt'.

(3) THOU: Ls *-ax^{w}* // NEC **ʁwV̄.*

(4) SCATTER: Ls *x^{w}əš* (*š* from *x*) // NEC **=Hěχwv.*

(5) SHARP: Ls *x^{w}əc* // NC **ɦüžwĀ* > Tsez. **?ãč-.* [*w*-transfer (from *C* to *X*) in Sa?].

(6) (?) EAT: Ls *x^{w}uƛ'* [:NWk *ƛ'x^{w}-*, metath.?] // NEC **=ɁwVl* (metath. in Lezg.:Archi *lah-* < **li?^{w}ä-*).

(7) BLOOD: Ls *cəɬ* // NEC **ć'ãŁwV.* [There is no PSa **cay* 'blood' (*y* < **ɬ*); for Sh *ci$^{\varsigma}$^{w}*, Th *c?i$^{\varsigma}$^{w}*, 'bleed' (Sq root *ci?/x^{w}*), cf. Nakh. *çēgi*, Lezg.Tab. *čiwi* (same NEC root)]

(8) CHILD: Ls *tawix^{w}-* (root) // NEC **dwirχE.* [Note Sa *CVC-* vs NC *CC-*].

(9) ACROSS: Ls *t'aɬ* '(put) crossways, across', *t'aɬ=us-ən* 'beam' // NEC **t'wēl?e* '(cross)beam'.

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(10) WE: Ls *-ałi* // NEC **Lā̆.*

(11) MUCUS, SALIVA: Ls *łəbc'* 'm.' (*b* < *m*) // NEC (AvA-Tsez.) **ƛ̆ămVč'V* (*/x-*) 'saliva, pus'.

(12) (YOUNG) HORNED ANIMAL: Ls *s-wiʔ-qaʔ* 'buck deer' (root **wiʔ*) // NEC **wɬ̆ĥwV* 'sheep, lamb, young (horned) animal'.

[CS:Se vs NC] (13) HIDE, STEAL: Se *kʷal-* 'h.' // NEC **=igwVɬ* 's.'. [Sa *kʷ* < **kʷ* or **gʷ*].

(14) BEND, CURVE: Se *k'ʷuc'-* 'bend' (v.) // NEC **kɬ̆č'wɬ̆-* (also **č'ɬ̄̆kwV*) 'curved'.

(15) (?) LUMP (body): Se *qʷemxʷ* 'lump of ankle' // NC **q'ămq'(w)ă* 'knee, leg-bone'.

(16) GOAT: Se *χʷiƛ'ay* 'mountain goat' // **Gwăłā* 'doe, hornless goat' (> AvA *ʁʷalV* > Tlan. *ʁʷeli* / Tsez. **ʁ:ʷel* > Gin. *ʁʷil*, etc.). [NB: Altern.: NC **ʔɬ̄χU.* (Metath. **χʷilʔ-* in pre-Sa?)].

(17) (?) DRIP, DRIZZLE: Se *c'iqʼʷ-* 'drip' // NEC **čŏwqɬ̆-* 'drizzle'.

(18) WASH: Se *c'əχʷ* // NC **=Hăc̱wĂ.* [Metath. and **w*-transfer in pre-Sa?].

(19) LOOK, EYE: Se *c'il-* 'look for' // NEC **c'ilV* 'eye' [sic! Not 'eyelash, eyebrow'].

(20) GIVE: Se *yat-* (from **=it-* ?) // NC **=VtV̆.*

c) Selected Wk - Nc Cognate Sets

Phonetically, Wk languages are more archaic than Sa [a higher amouny of laterals (close to that of NC); a higher amount of inherited voiced consonants, etc.]. - We may use the following data.

(1) WIDE: Wk:No, Ni *ʔaq-*, NWk:He *[ʔʌqá]* // NC **ĥărq'Ĕ.* [*-q-* < *RC*, as in Sa].

(2) HOLE: Wk:Ni *kuχʷ-ak* // NEC **kHwārV.* [Wk *χ* < **r*, as in Sa?].

(3) KNIFE, SCRAPE: NWk *kus-* 'scrape off with a knife, shave' // NEC **k̲[ĭ]śwV* (cutting tool). [Transfer of **w* in pre-Wk ?].

(4) SEE; VISIBLE: Wk:No *kʷa·hi*, M. (=Ma?) *kʷa·χi* 'v.' // NEC lex. suff. **=agwV* 'see'.

(5) DUST, DIRT: NWk: *q'χʷ* 'dust, powder' // NEC **q'ħ/ʕwŏrV* 'dirt, turf'.

(6) NECK, THROAT, GOITRE: NWk:He *q'ʷú-qʷùni* 'neck' // NEC **q'winV* 'goitre, Adam's apple'.

(7) BUTTOCK(S): NWk:Kw *χím'a* // NEC **χĥwɬ̆mχV* (also 'cheek') > Lezg. **χ/i(m)χ/-* 'buttock'.

(8) DIRT: NWk *cqʷ-*, *zqʷ-*; *c'qʷ-* 'dirty'; cf. Kw *ʒeqʷá* 'dirt' [:Sa:UC *ciqʷ-i-* 'dirt'?] // NC **č̲'Hĥq'wĂ* (*/-G-*).

(9) SLIP: NWk *caʔx-* (as in Kw *ceʔxá* 'slippery') // NEC **čirχwV.* [Delab. in pre-Wk?].

(10) (?) FLOW: NWk:Kw *caχis* 'flowing down' // NEC **čHaχV.*

(11) FLOW, POUR; WASH: NWk *cxʷ-* (as in Kw *cxʷla* 'overflowing') may, or may not, relate to NWk *c'uχʷ-* > Kw *c'uχʷa* 'wash' [cf. in Sa: UC *c'əχʷ-* and MC *c'aw'* 'wash' vs MC *c'əχʷ* 'pour out'] // NC lex. suff. **=Hä-c̱wV* 'pour, wash'.

(12) FAT: NWK *cnχʷ-* // NEC **c'ēnχ̲wV*

(13) SHAKE: NWk:Kw *culiχa* 'shatter' // NC **=ēʒwĔl.*

(14) SHORT: NWk *c'kʷ-*, Kw [*c'ek'ʷá*] // NC *ʒĭk'wV̆.*

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(15) SCOOP: NWk *c'iq-* // NEC **ç̆ăq'wă.* [Cf. next, for Wk *q* (etc.) vs NC *q'w*].

(16) NARROW, TIGHT: NWk *c'iq'-*, *c'iq'^{W}-* (also with *q*, *q^{W}*) // NEC **č'iq'wV* 'tight plait'.

(17) (?) POLE, STICK: NWk *c'waχ-*, Kw *c'ux^{W}-* 'insert (pole)', *c'x^{W}-* 'stab'; *zux^{W}-* 'log, pole' // NEC **ç̆'wēχV* 'stick'.

(18) ARROW: No *c'iḥat*, Ma *c'iχat* (Wk root **c'iχ-* ?) // NC **c'ănHV*

(19) FRESH: NWk:Oo *c'uta* (<**c'w-* ?) // NC **=Vč'wV* 'good, fresh, new' > NWC **ç̆^{W}a.*

(20) BLACK: NWk *c'uɬ-* [:Sa:BC *c'u-* 'grey' ?] // NEC **Hč'ōlV.*

(21) (TO) POINT: NWk *c'm-* 'idex finger; to p.' [:*c'm-t* 'stand on tiptoes'] // NEC **ç̆'ūmV* 'tip, p.'

(22) PLANT: NWk *zm-* (Kw *zmi?*, etc.) // NEC **č'ə̄mɬV.*

(23) SHARPEN: NWk **zuχ^{W}-* // NC **ɦüǯwĀ.* [Metath. and *w*-shift in pre-Wk?].

(24) MILK: NWk: Kw, Oo *zam'-a* '(suck at the) breast'; **zm-x^{W}-* 'milky' (in Oo) // NC **=āmʒŬ* 'to milk, to drink'. [Wk underlying root **zm-* from metathesized **zVmV* ?].

(25) CROOKED, CURVED: NWk:Oo *si?k-la* 'crook-ed' // NEC **č'ŭ̆kwV* 'be hooked, curved; cook'

(26) (?) MOUTH: NWk *sm-s-*; Oo *sm-yat* 'have mouth' // NEC **ǯwĕmV.* [For phonetics, cf. Wk *-s/zu* 'you' (pl.) : NC *žwĕ* id.; Sa *-s/ca* 'I' : NC *zō* id. ?].

(27) CUT: NWk *t'ew-* (in Kw verb *t'ewi̯k^{W}*) // NC **=āt'wV.* [Wk *CVC* vs NC *CC*].

(28) I: Kw *-en*; cf. *nus*, He *nĭs* 'be mine' [cf. Sa] // NC **nɬ.*

(29) DIRT: NWk *niq^{W}-* (Kw, Oo *niq^{W}a* 'dirty') // NEC **nĕq'wɬ.*

(30) THROW: NWk:Kw *nep'-ĭd* // NEC **l(H)ap'V* / Urartu *nāp'-* (as in *nāp'-aχ-* 'overthrow'). [Wk *n* < **l(H)* ?].

(31) SHOULDER: NWk *n'ik^{W}-* 'carry on the sh.' [:NWk *niχ-* 'act with hand'?] // NC **nHɬwG̲Ā* 'arm, shoulder'.

(32) (?) BERRY: NWk *n'ux^{W}-* (Kw *n'ux^{W}a* 'small blueberry') // NEC **niwG̲V.*

(33) SWALLOW (verb): NWk *n'q^{W}-* (Kw *n'q^{W}a*) // NEC **=HV-q'wVn.* [Metath. in Wk?].

(34) (?)MOUNTAIN GOAT: NWk *n'aχ-* (He *n'aχa*) // NEC **ɦ/ʕānχV.* [NB Wk *CVC* : NC *-CC-*].

(35) FLASH: NWk:Ha *l'pa* 'flash a light' // NEC **l/ɬapV* 'glitter, flash'.

(36) BRIGHT: NWk:Kw *ɬis-a* 'fair (complexion)' // NC **lōʒ̄V* 'bright metal > Lezg. **lac:V-* 'white', etc. (Lezg. languages shift the original meaning 'bright metal' to 'bright, white').

(37) (?) KIN: NWk:Kw *λul'i?* 'nephew, cousin' (etc.) // NC *Hĭ-ƛ̓'ĭwV-ɬV* (> NWC **ƛ':^{W}əlA* 'seed, kin, clan, people').

(38) HARD: NWk: He *ƛ'áχ-* and Kw (etc.) *ƛ'aχ-* 'stiff, regid' [:Sa:UC *ƛ'əʕ^{W}* / MC *yəʕ'^{W}* hard'] // NEC **ƛ̓wĕrV* 'hard'. [**w*-loss in Wk; **w*-transfer in pre-Sa?].

(39) (?) SKIN: NWk *ƛ'is-* // NEC **ƛ̓wājc'ā* 'skin, bark'.

(40) (ACT WITH) HAND: NWk:Kw *ƛ'ol-* 'feel, grope with hand': NEC **ƛ'ōrə̄* 'hand'.

(41) DOG: NWk:Kw *w'ac'* // NC **gwăžē* > Darg. **k:^{W}ač:a* (etc.).

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d) Direct Comparison Between Sa and Nc Daughter Languages

Since Sa proto-language is not yet sufficiently reconstructed, and since the existing reconstructions are fully, or almost fully, identical to roots in "individual" Sa languages (see above), we may *compare roots of "individual" Sa languages directly to NC daughter languages* (first of all, to reconstructed languages - ancestors of NC language groups). Predictably, roots/words of "individual" Sa languages are, on many occasions, identical or almost identical to roots/words in NC daughter languages.

If we consider the following three cognate sets we may see that the closest link between Sa and NC languages is neither Sa-to-NC nor Sa-to-NEC but that between Sa and a certain NC daughter language, such as Nakh.:

(1) EYE: Ts:UC *co·-* (as in *co·q^{w}a* 'tear' = *'eye+water'; cf. CS:Sq *q^{w}u*) / CS:Se *ca-* // Nakh. **ça-* (< NEC **c'alV* > Darg. **-çali*, with preservation of the NEC **-l-*).

(2) DOWN: Ts:UC *lix^{w}i-* 'walk downward' // Nakh. **laχu-n* (cf. Chechen *loχa* 'low', *laχa* 'down, below'; *laχ-alar* 'descend, come down', etc.) < NEC (Nakh.-Lak.) **l/ɬV̆χV* 'low'. [Note Sa *-x^{w}-* : Nakh. **-χu-*].

(3) GATHER, HANDFUL: IS:Th *muq*, *moq^{w}* 'gather' // Nakh. **muq̇* (< NC **mŏq'V̆* 'handful, handle') / Tsez. **moqV*.

Now we may look through four short lists of cognate sets, namely, Sa vs AvA; Sa vs Tsez.; Sa vs Lezg.; Sa vs NWC. - Occasionally, Wk - NC cognate sets are listed as well.

1. A FEW COMPARISONS BETWEEN Sa AND AVAR-ANDIAN LANGUAGES

The following list includes some comparisons between Sa languages and NEC daugter languages. On occasions, Wk-to-NC cognate sets also appear in the list.

(1) EYES, LOOK: / Ts:UC lex. suffixes *=us-i-* 'face, eye', *-al-us* 'eye' (:CS:Sq *=us* 'eyes' in *c'ip'=us* 'shut the eyes') // AvA **-us-* 'to search' (> *-us-* in modern AvA l-ges) < NEC **=HimsV* 'to look'. - The above comparison may be summarized as follows:

[=1] Sq *=us* 'eyes', UC *=us(-i)-*	And. *-us-* < AvA **-us-* 'search'	< NEC **=HimsV* 'to look'

(2) TO SCRATCH: IS:Th and MC *qəs* // AvA **qas:-* < NEC **qālsV*.

(3) WHITE, BLUE: Ts:UC *q^{w}a/uχ^{w}-* 'wh.', *q'^{w}iχ* 'b.' // And. *q:^{w}oj* 'b.' (<PAnd. **ʔV-q:^{w}o-ji-* < AvA **q:oʔi-* 'wh., b.' < NEC **=ĕqwĂ* 'yellow').

(4) COLLAR-BONE: IS:Sp *-q'wl-* (root) // AvA **q^{w}ilu* (< NC **qHwŏɬwV* 'neck, collar'). [Note Sa *q'(*^{w}*)* vs NC **qH(w)*].

(5) LUMP, BUTTOCK(S): Ts:UC *χ^{w}um-* 'lump' (in compounds, meaning 'elbow', buttocks'; cf. also IS:Th *q'^{w}ət-χ^{w}əm'* 'joint' vs NEC **q'HwəntV* 'knee/elbow') // Wk:Kw *χĭm'a* [note delab. *χ*] // AvA **χ:^{w}[i]m(V)χV* (:Lezg.**χ/ɨ(m)χ/-*) <NEC **χĥwĭmχV* 'buttock, cheek'. [NB **-mχ-* > *-*-mVχ-*].

(6) FAT: NWk *cnχ^{w}-* (in Kw *cnχ^{w}iʔ*, etc.) // NEC (AvA-Darg.) **c'ēnχwV*.

(7) SUCKLE, CHEW: (?) Ts:UC *c'am-i-* 's.' (<PSa **c'ạm'*) // AvA **çam-* < NEC **=ĕč'Vm-* 'gnaw, chew'.

(8) POUR, WASH: IS:MC *c'əx^{w}* 'pour', *c'aw'* 'wash' : Sp *caw* (*:caʕ^{w}*), *c'ew'* 'wash' // AvA **č:Vb-* (*b* < **w*) < NC **=Hä-ḉwĂ*.

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(9) GROW(TH): IS:Th, CS:Ls *ƛ'aχ*^{w} // AvA **ƛiχ:*^{w}*i* < NEC **ƛ'ōrχwV*. [NB absense of pre-consonantal **r* both in Th, Ls, - and in AvA; note also preservation of labial elements in these languages].

(10) LOOK FOR: IS:Sp *ƛ'e?* / Ts:UC *ƛ'a?* (etc.) (from PSa) // AvA *ƛ:V-* < NEC **?iɬV* 'to look'. [Metath. in pre-Sa?].

(11) MUCUS, SALIVA: CS:Ls *łəbc'* 'm.' (*b* < *m*) // AvA **ƛ/ʌaç:V* and **ƛ/ʌamçV* < NEC (AvA-Tsez.) **ƛămVč'V* (*/x-*) 'saliva, pus'.

(12) PAY: Ts:UC *mux*^{w}*i-* // AvA **mix*^{w}*V* 'pay' (> Av. *mux*) < NC **mV̄xwV̄* 'price, pay'.

2 A FEW COMPARISONS BETWEEN Sa AND TSEZAN LANGUAGES

(1) SMOKE: Ts:UC *q*^{w}*o·?* and *q'*^{w}*uχ*^{w}*-*; CS:Ls *q*^{w}*əš* (*š* < *x*) // Tsez. **q*^{w}*ɬ, *qo* < NC **kwɬ̆ħV*. [Sa *q*^{w} matches Tsez. **q*^{w}].

(2) JOINT: Ts:UC *χ*^{w}*ut'* 'bent up' / IS:Th *q'*^{w}*ət-χ*^{w}*əm'* // Tsez. **qɔtV* and **qɔntV* < NEC **q'HwəntV* 'knee/elbow'. [Note Sa *-t' :* Tsez. *-t-* and *-nt-* < NC **-nt-*].

(3) STICK (noun): Ts:UC *χəc'* 'stick' / IS:Th *χəc* and *χic* 'wooden' // Tsez.:Gin. *χišu* < NEC **GHwālć V* 'stick, board'.

(4) ARROW: Ts:UC *χəlχaʔ-s* (< **χəlʔa-* ?) // NEC **ɬwăɬlV* (also *-ɬ-*) > Tsez. **hel* / Lezg. **ħäl(:)* (etc.). [Sa shows *χ* vs **ɬw* (similar: NEC languages Tsez. and Lezg.). - Sa also seems to show *l ... ʔ* (from **ʔ ... l* ?) vs cluster **ɬl* in NEC].

(5) SHARP: CS:Ls *χ*^{w}*əc* // Tsez. **ʔāč-* < NC **ɬüžwĀ*. [*w*-transfer (from *C* to *X*) in pre-Sa?].

(6) GROW(TH): IS:MC *ƛ'əχ-*, CO *ƛ'χ* / CS:Se *ƛ'aχ-* (etc.) // Tsez. **ƛeχ(:)* < NEC **ƛ'ōrχwV*. [NB preservation of [χ] but loss of [w] both in CO, Se, - and in Tsez.].

(7) GATHER, HANDFUL: IS:Th *muq*, *moq*^{w}*w-* 'g.' // Tsez. **moqV* (:Nakh. **muq̇*) < NC **mŏq'V̄* 'h.' (also 'handle').

(8) SWALLOW, THROAT (etc.): IS:Th *məq'* 'satiate', *məq*^{w} 'hold in mouth' (:Ls *bəq'* 'put/hold in mouth, swallow'; *b* < *m*); from PSa // Tsez. **muq̇* 'throat' < NEC **mVq'VɬV* 'throat, larynx'.

(9) HANDFUL: UC *mo·ʔi-* // Tsez. **mɔχV* < NEC (Tsez.-Lezg.) **mHŏχɬ-*

(10) HANDFUL: UC *mo·ɬ* // NEC **mă[ƛ]ə/o* 'handful, armful' (> Tsez.:Gin. *meƛu* 'handful', etc.).

3 A FEW COMPARISONS BETWEEN Sa AND LEZGIAN LANGUAGES

(1) ANGER: Ts:UC *qəłəχ-* 'angry' // Lezg. **q/al(:)* > Lezgi *qel* (:Nakh. **qēl*) < NEC **Gwāɬho* 'gossip, offence, anger' (etc.). [Sa seems to show simplified *q* vs NEC **Gw* (similar: Nakh.; Lezgi). - Besides, Sa shows a frequent restructuring of the *CVCCV*-type root into *CVCVC*].

(2) DAY: Ts:UC *q'iχ-* // NEC **Hwt̄q'V* > Lezg. **q:i* 'today' < **Hwq'ī* . [Metath. in pre-Sa?]:

[=2] UC *q'iχ-* 'day'	Lezg. **q:i* 'today' < **Hwq'ī*	< NEC **Hwt̄q'V* 'day'

(3) DRINK: Ts:UC *q*^{w}*o?* / IS:Th *ʔu-q*^{w}*e?* / CS:Se *q*^{w}*u-* // Lezgi *q*^{w}*a-* < Lezg. **ʔoq*^{w}*a* 'suck, drink' < NEC **ʔuqwV* or **ʔōqwV* 'drink'; actually a Lezg.-Tsez. isogloss (cf. also NEC lex. suff. **=VqV* 'suck').

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(4) (?) LOOK: Ts:UC *ʔəx̣-* 'see' // Lezg. **ʔʷVr* (> Arch. *hara-*, in compounds; cf AvA **ħa/orV*) / Darg. **ħer* < NC **ʔwerV*, noun and verb (an archaic root).

(5) DARK: IS:MC *c'el'* 'shadow, dark' / CS:Ls *c'al* 'shadow' // Lezg. **c'olV* 'black; dark berry' (= raspberry, etc.) < NEC **Hč'ōlV̄* 'black'.

(6) EYE: CS:Se *c'il-* 'look for' // Lezg. **çil-* in **çil-çim* [sic!] 'eyelash' > Tab[asaran] *çil-çim* / Tsez. **çɨ(l)-ç(im)-* id. (to NEC **c'ilV* 'eye'). - Se (Sa) and Lezg. (NEC) show an archaic feature: preservation of the 2nd root cons. **l.*

(7) BLINK THE EYES / EYELASH: BC *c'im-uɬ* 'blink the eyes' [:UC *c'im-alis-* 'open and shut the eyes; squint'] // Lezg. **çil-çim* > Tab. *çil-çim* 'eye-lash' (:Drav. **cimV* 'blink, wink; eyelash'). - See above.

(8) (?) ROT(TEN), PUS: IS:MC *naʔq'* 'rotten meat' // Lezg. **näwq* > Lezgi *naʁ*^{W} (:Tsakh. *naʁ*) < NEC **ně̆wq'ŭ* 'pus'.

(9) LEAF, PLANT: Ts:UC *ƛ'əc'-* 'grow' (plants) [*ə* <**a* ?] // Lezg. **ƛ̣aça* 'stem, stalk, leaf, grain' < NEC **ƛ'ać/ča* (/*-ĕ*) 'leaf' ('plant' in some lang.) [Lezg. glottalization pattern equals Sa].

(10) WOMAN: Ts:UC *łanay'*, lex. suff. *=łn(ʔ)* / Cs:Ls *ładəyʔ* (*d* < *n*) // Lezg. **λ:ɨn:(ol)* < NEC (Darg.-Lezg.) **λɨnɦV.*

[Sa:UC word seems to match Lezg. root precisely: UC *-ay-* matches Lezg. **-ol*, etc.].

(11) SNOW: IS:Th and MC *məx̣*^{W}- : Sp *mx̣(ú)* 'to snow' // Lezg.:Tab. *maʁ*^{W}*al* < NEC **marx̣al/ɬV.*
(12) MOUNTAIN, HILL, PILE: IS:Th *mol* 'pile up (dirt or snow)' // Lezg.:Arch. *mul* < Lezg. **muh/ʔVl* or **muʔ/ʔVl* < NEC **muHalV* 'mountain', etc. (In Tsez. also 'hillock, knoll').

(13) EYE: CS:Se *wil/'-* 'peep, peer', BC *-uɬ* // Lezg. **ʔʷil* > Lezgi *wil*, Tab. *ul* / Darg. **ħuli.*

4 A FEW COMPARISONS BETWEEN Sa AND NWC LANGUAGES

(1) STICK (etc.): CS:Ls *q*^{W}*(ə)ɬayʔ* 'stick, log' // NC **q'wəlʔă* 'board' > Lezg. **qula* 'board, shelf, lid, small plank' / NWC **G*^{W}*ə* 'board, post, pole, stake'. [Non-glott. Sa *q*^{W} matches NWC **G*^{W}].

(2) SPARK: IS:MS *cʔikʷ* (:*cikʷ* 'shine'; cf. Th, Sp *c'ek'*^{W} 'shine, shiny') // NWC **çVk̓*^{W}*a* / **çVjək̓*^{W}*a* < NC **c̲'wɬ̆Vkwŏ* 'brand, spark, brilliance':

[=2] Sp *c'ek'*^{W} 'shiny'	Tsez. **çək̓ə* 'fire-brand'	WC **çVk̓*^{W}*a* 'spark, fb'	< NC **c̲'wɬ̆Vkwŏ*

(3) FRESH: NWk:Oo *c'uta* (<**c'w-* ?) // NWC **č*^{W}*a* < NC **=Vč'wV* 'good, fresh, new'.

(4) TWO: IS:MC *tq'aw'-s* (also *t'q'*^{W}- in this root) // NWC **tq/'*:^{W}*A* > Ubykh *t'q'*^{W}*a.*

(5) DO, MAKE: Ts:UC *wi* // NWC **wə* < NC **=ăhwV(r)* [ablaut **a/i*] (> NEC:Tsez. **=Vw-*).

e) Genetically Related Compounds In Salishan and North-Caucasian Languages

We may identify CS:Se *ca-cum(-an)* 'eyebrow' with Nakh. **ça-çʔVm* 'eyebrow'; this compound apparently consists of a word for 'eye' + word for 'hair' (:ST **chaĩ̄*): this latter component appears as **-c'ɦwĕme* in NEC (in 2 compounds, both for 'eyebrow' <'eye+hair'):

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(1) EYEBROW: CSSe *ca-cum-an* / Ts:UC *cum-ay'is* (*'hair' + 'eye') // (NEC **c'alV-c'ĥwĕme* [rather than **c'ilV-c'ĥwĕme*] >) Nakh. **ça-ç? Vm* 'eyebrow'; cf. next ex. where the component 'eye' is different.

(2) EYEBROW: BC *-uł* 'eye' + Se, UC *cum* in 'eyebrow' (ex. 1) // (NEC **ʔwiɬʔi-*c'ĥwĕme* >) Lezg. **ʔwil(i)-ç^{w}em* > Tab. *ul-č^{v}i/am* (eye+*hair). Cf. 'eye': (Lezg.>) Lezgi *wil*; (Darg.>) Ak. *ħuli.*

The NEC component **c'alV* and/or **c'ilV* means only 'eye': gloss "**c'ilV* 'eyelash'" in NCED seems incorrect: when this root appears in compounds with the meaning 'eyelash' *then the 2nd component is genetically different from the above* **-c'ĥwĕme* (> Nakh. **-ç? Vm*, Lezg. **-ç^{w}em* etc.)

Accordingly, *in a synonymous compound* **ʔwiɬʔi-*c'ĥwĕme* *the 1st component means only 'eye', not 'eyelash'*. The 2nd component (*-*c'ĥwĕme*) *is used only in words for 'eyebrow', not in words for 'eyelash' (or 'eyelid')* [cf. Sa:UC *cum=ay'is* 'eyebrow' (*'hair' + 'eyes'): not to *c'im-* 'blink'].

As we have seen, NEC compound **ʔwiɬʔi-*c'ĥwĕme* 'eyebrow' > Lezg. **ʔ^{w}il(i)-ç^{w}em* 'eyebrow' is the underlying form for Tab. *ul-č^{v}i/am* id.; labial element [w] in the 2nd component indicates that it originates from NEC **-c'ĥwĕme.* - In Sa, *wil-/wi'-* (CS:Se) means 'peep, peer', and a related form *-uł* means 'eye(s)' (acc. obj. in BC *c'im-uł*); Sa *cum* is used only in words for 'eyebrow'.

*It is incorrect to reconstruct the NEC word for 'eyelash', using the 2nd component derived from NEC *c'ĥwĕme*: this latter always means 'eyebrow', never 'eyelash': so, there is no "**çil-ç$^{(w)}$em* 'eyelash'" in Lezg.:Tab. *çil-çim* 'eyelash'. This root *-çim* (Lezg. **-çim* > Tab. *-çim*) *is etymologically different* from *-č^{v}i/am* (< Lezg. **-ç^{w}em*) in the word for 'eyebrow': *ul-č^{v}i/am* above.

[In Sa, *c'im-* means 'blink; contract; open and shut' (+ obj. 'eyes' in BC (*-uł*) and UC (*-alis-*)). In NC we have Lezg. **-çim* in Tab *çil-çim* 'eye-lash', and Darg. **çimi-çali-* 'eye-lash' (in Ak.). - In Drav. **cim-* means 'wink, blink, twinkle; eyelash, eyelid'. - In Kartv. **c'am-* means 'instant' [typologically matching Russ. *mig* vs. *migat'*, a verb]; **c'am-c'am* 'eyelash(es)'. Old ablaut **i/a* in N **c'imV/*c'amV* [Dolg.: **ć'-*] 'blink the eyes; eyelid' reminds us on **i/a* in NEC **c'ilV/*c'alV* 'eye'.

We may add that NC shows only nominal meanings for the above words ('eye', 'eyelash' etc.); Sa shows only nominal meanings for *ca-*, *-uł* 'eye(s)' but only verbal for Se *c'il-* ('look for'), *wil/'-* ('peep, peer'). - Drav. (**cim-*) is used both as verbal and nominal stem. - Kartv. **c'am-* means both 'instant' (verbal origin very likely) and 'eyelash' (**c'am-c'am-*; verbal origin likely)].

It is incorrect to assert that words for 'eyelash' in many Lezg. languages "are completely distorted": they rather belong to different roots: Tab. Khiv. *miç-miç* may originate from the above **c'im-*; Khl. *čep-čep-aj* 'eye-lash' (from *'cover-cover for/of eye'?), Kryz *çäp* id., Fit. *çip-çip* id. may match IS:MC *cəp- ~ -ay'* 'eyelash(es), eyelid'; Ls *c'ip-l-il* 'shut the eyes', CS:Sq *c'ip'-us* id., etc. (Note NEC:Khl. *-aj* vs IS:MC *-ay'*, probably, *'eye, face').

Note also that words of the type Tsez. 'eyebrow', 'eyelash' **çiç* > Tsez. and Gin. *çe-ç* (as stated in NCED) seem to contain (**çil-* > **çi-* >) *çe-* *'eye' + the 1st sound of the 2nd component (apparently, < **-Vm-* when judging on the oblique base Cez. *çe-çmo-*). We may add that the 2nd component may be *'hair' in words for 'eyebrow', but in words for 'eyelash' the root may be different (possibly **çim(V)-* used in words for 'eyelash'; a homonym).

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We have, both in Sa and in NEC:

(a) Ts:UC *cō-* 'eye' / CS:Se *ca-* // NEC **c'alV* > Nakh. **ça-* / Darg. *-*ǯali* 'eye'

(b) CS:Se *c'il-* 'look for' // (NEC **c'ilV* 'eye' >) Lezg. **çil-* 'eye' / Tsez. **ç̣i-* 'eye'

(c) CS:Se *wil-* 'peer' / BC *-uɬ* 'eye' // (NEC **ʔwiɬʔi-* >) Lezg. **ʔʷil(i)-* 'eye' > Tb *ul-* 'eye', etc.

(d): [*'hair' in 'eyebrow'] Ts:UC *cum-* / CS:Se *ca-cum-*, Ls *cub-əd* // Lezg. **-ç̣ʷem* in Tab. *ul-čᵛi/am*

(e) BC *c'im-uɬ* 'blink the eyes' // (Lezg. >) Tab. *çil-çim* 'eyelash' : Darg. **çimi-ǯali* id.

f) Some other Roots and Compounds, Designating Body Parts

There are many forms in both in Sa and NC, describing body and its functions. (Sa compounds of the type 'elbow-joint' relate to words, meaning 'twist, bend' (etc.), or 'lump' [note Sa variants with *q'ʷ/x̣ʷ*]):

(1) FINGER: IS:MC *=aks-t* // NC **k'ă̈s̈i/a* (very archaic)

(2) SMALL BONE: IS:MC *s-k'ʷən'-k'ʷən'* 'bones (for stick-game)' // NC **k'(w)inV* 'small bone' (also about small bones for playing dice).

(3) ARM, EMBRACE (etc.): CS:Sq *q'ac'* [*c'* < **rC'* ?] // Lak. and Khosr. *qaǯ* 'shoulder' < NEC **qărć'wV* 'shoulder, arm'.

(4) HORN: (I) IS:Th *q'ʷay'* < **q'ʷa/ir'* (?) [*y* may originate from **l*, **r*] / (II): IS:MC *qəx̣-*, *qx̣-* (+ stressed "instrum." suff. *-min*), Sp and MS *qx̣-* (also with suff.) // NC **qwĭ̈ħV* [// N **kErV* (NB Sa stem II); St. '89 # 86].

(5) BREAST: Wk **xu:ɬ* (or sim.) : No *ḫu·(ƛ)* // NC **Gwălʱē* 'udder, breast' (> AvA *ʁʷarHV* > Kar. *ʁori*, etc.).

(6) HAIR (on the head): IS:Th *q'ʷum* 'head', MC *q'ʷum-qən* 'head' (*'hair' + 'head'; cf. Samish *qən* 'head', loc.) : MS *q'ʷom-qən* / CS:Sq *s-q'ʷum-ay* 'head hair' // NC **q̣'(w)ăm?ə* 'plait, mane; hair'. Cf. compounds: Sa:MC *q'ʷum-qən* 'head' < *'hair on the head' vs NEC **q̣'(w)ăm-čV* 'hair on the temples'.

(7) JOINT: IS:Th *q'ʷət-x̣ʷəm'* (*'elbow/knee [=joint]' + *'lump'?) / Ts:UC *x̣ʷut'* 'bent up' // Tsez. **qɔ(n)tV* < NEC **q'HwəntV* 'knee/elbow'. [Note Sa *-t'* : Tsez. *-t-* / *-nt-* : NC **-nt-*]. - See next.

(8) (?) *LUMP: Ts:UC *s-x̣ʷum=ač'a* 'elbow' (*'lump + arm'?), *s-x̣ʷum=nač* 'buttocks, hips' ("*lump + leg'?) // Wk:Kw *x̣ĭ̈m'a* 'buttocks' // NEC **χʃwɨ̆mχV* 'cheek, buttock'.

(9) COLLAR-BONE: IS:Sp *(s-č'im-)aɬ-q'ʷl-t* (root *q'ʷl-*) // NEC **qHwŏɬwV* 'neck, collar' (> AvA **qʷilu*).

(10) (?) HEAD: NWk:Kw *xum-s* // NEC *hq'wĕmV̄* 'horn, head'.

(11) BODY: IS:CO *=ic'a?* // NEC **čōrχV*

(12) FAT: NWk:Kw *cnx̣ʷ-i?*, noun > Kw *cénx̣ʷa?i* (noun) // NEC (And.-Darg.) **c'ēnx̣wV* (also **c'ēnλV*), adj.

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(13) HEAD: CS:Se *c'əq'* (root; from **c'iq'-* ?) // NWC **sq/'a* / Yen **ciGV* (**c* < **c'*) [Cf. NWk:Kw *səq'a* 'above'; cf. also Ath *-ci?*, etc.].

(14) MOUTH: NWk:Kw *sem-s* // NEC **ǯwěmV*].

(15) ARM, SHOULDER: CS:Ls *dəx̣* 'arm' (*d* < *n*) : Sq *niχ̣* id. // NWk *n'ikʷ-* in He *n'ĭkʷ-lá* 'carry on the shoulder' // NC **nHĭwǤĀ*.

(16) FOREHEAD: Ts:UC *ƛ'oxʷ-s* // NEC (AvA and Tsez.) **ƛ'arq'wě* > AvA **ɬ̣aq̇ʷara* (> Av. *ṭaɣúr*) / Tsez. **ɬ̣ɔqɔ* forehead, cap'. [Sa *-xʷ-* may match Av. *-ɣu-*; Sa **ƛ'* < **ƛ'*; Sa *o* < **a*].

[=116] UC *ƛ'oxʷ-* 'fhd'	Av. *ṭaɣúr* < **ƛaq̇ʷara*	Tsez. **ɬ̣ɔqɔ* 'forehead'	< NEC **ƛ'arq'wě* id.

(17) HIDE: IS:Th *ɬexʷ* 'patch' : CO *ɬxʷ* 'dress' : Sp *-ɘɬxʷ* : MS *-ɬxʷ* 'skin, clothes' // NEC *ɬěʔɬʔwnɬ-* 'skin (of an animal)'.

(18) EAR: IS:MS *leš-n'* 'hear' (<**lex*): Ka *leš-ən* 'hear' / CS:Ls *luh* 'hear' // NC **ɬěHe/i* or **ɬěHe*.

(19) FAT, GREASE: IS:Th *miʕ'ʷ-* 'grease' // NEC **măɦwV*.

(20) HEAD, FACE: Ts:UC *matin* 'head' // NEC **mət'e/i* 'face' [// N **mEt(')a* 'head, top'].

(21) HORN: Ts:UC *winaw'* (*i* may originate from **i/e/ĕ/ē*); cf. CS:Se *wenaʔəw* // NWk:Kw *weƛ'aχ̣* 'horn, antler' // NEC **wěnƛ'V* 'beak, horn; head'. [**-nƛ'-* > Wk *-ƛ'-* : Sa *-n(V)ʔ-* ?].

g) Shift of [W] In Pre-Salish When Compared with Nc

Sa often shows labials *qʷ, q'ʷ, χ̣ʷ, ʔʷ* where NC has no [w]. Appropriate NC words contain **Cw, *Lw*. A pre-Sa methathesis may have "simplified" the prononciation: it was easier to use [w] as a part of *qʷ, q'ʷ, χ̣ʷ, ʔʷ* than as a part of **Cʷ, *Lʷ*, so [w] shifted from [C, L] to [q, χ̣].

(1) BEND, CURVE: CS:Se *k'ʷuc'-* 'bend' (v.) // NEC **kɬ̆č'wɬ-* (also **č'ɬ̆kwV*) 'curved'.

(2) SHARP: CS:Ls *χ̣ʷəc* // NC **ɦüžwĀ* > Tsez. **ʔāč-*; Lezg. **ʔeč:ʷa-*.

(3) FLOW, POUR, WASH: IS:MC *c'aw'* 'wash' : Sp *c'ew'*, *caw* 'wash' / Ts:UC and CS:Se *c'əχ̣ʷ-* 'wash' // NWk *cxʷ-* in Kw *cxʷla* 'overflowing' etc. // NC lex. suff. **=Häc̣wV* 'pour, wash' (> **c̲wäHA* ?). [Note that **w* shifts from **C'* to *χ̣* in Sa, and to *x* in Wk].

(4) (?) POLE, STICK: NWk *c'waχ̣-*, Kw *c'uxʷ-* 'insert (pole)', *c'xʷ-* 'stab' (cf. NWk *zuxʷ-* 'log, pole') // NEC **c̲'wēχV* 'stick, chip, piece of wood, beam''.

(5) SHOULDER: NWk *n'ikʷ-* 'carry on the sh.' // NC **nHĭwǤĀ*.

(6) BERRY: NWk *n'uxʷ-* (Kw *n'uxʷa* 'small blueberry') // NEC **niwǤV*.

(7) ROCK: IS:Th *ƛ'iχ̣ʷ* 'rock, gravel' // NEC *ƛ̲'wěhrŭ* (*/-l-*) 'rock, cliff' [*w*-shift; Sa *-χ̣ʷ* : **-(h)rŭ*].

(8) HARD: Ts:UC *ƛ'əʕʷ* (:*χ̣aƛ'e·-* id.) / IS:MC *yəʕʷ* (note shift of glottalization *ƛ'* to *ʕ'*; note *ƛ'* : *y*; *yəʕʷ*, *y* < **L*) / Ts:UC *ƛ'əχ̣ʷ* / CS:Sq *ƛ'əχ̣ʷ* / BC *ƛ'aχ̣ʷ* // NC. **L̲wěrV*. [**w* shifts from left to right, after **r* turns *χ̣*]; MC *ʕ* may originate from **r*, and *y* from **L*].

*h) Sporadic Spirantization of The Underlying Uvulars *Gw, *Ghw, *Q'w, *Q'hw In Salish*

Spirantization of uvulars, especially labiouvulaes, is rather wide spread both in NC and Sa, but this process is much more frequent when the voiced uvular **Gw* is involved:

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(1) IS:Th *q'ʷət-χ̣ʷəm'* 'joint' vs Ts:UC *χ̣ʷut'* 'bent up' // Tsez. **qɔ(n)tV* < NEC **q'HwəntV* 'knee/elbow'. [Note unstable pre-cons. nasal in NEC languages vs possible loss of **n* in pre-Sa].

(2) IS:MC *q'ʷic'-* 'twist' vs. IS:Sh, CS:Sq *χ̣ʷəc'-χ̣ʷəc'* 'joints' : CS:Se *χ̣ʷəc'-q'ʷ-uya* 'wrist' / Ts:UC *χ̣ʷuc'* 'bent up' // NEC:AvA-Lezg. **q'HwĕmčV* 'hook, curved' with unstable **-m-* in Lezg. *q̇ʷa(m)čV* 'bend, elbow, tip, point'. [NEC **q'-* doesn't undergo spirantization; cf. also next ex.].

(3) STICK: IS:Th *χ̣əc*, *χ̣ic* 'wooden' / CS:Ls *s-χ̣ac* // Tsez *ħiš* < TsKh **χ1ešu*, **χ1öšu* < NEC **GHwälćV* 'stick, board; bolt'. [Spirantization and delabialization both in Sa and Tsez.].

(4) DEER: IS:MC *χ̣ʷəl(')-* 'buck' / CS:Ls *χ̣ʷel* 'deer' // Gin. *ʁʷil* 'doe' < Tsez. **ʁ:ʷel* id. < NEC **Gwäƛĺā* 'doe, hornless goat' (> AvA **ʁʷalV* 'hornless goat/ram'). [Spirantization both in Sa and in NC daughter languages (Nakh., AvA, Tsez.)].

(5) (?) ASK: Ts:UC *ʔo·χ̣ʷaš* (*š* < *x*) // NEC (AvA-Lezg.) **HreqwĂ(r)* > Lezg. **ʔerχʷa.*

(6) EAGLE: Ts:UC *ƛ'ix̣in* / CS:Ls *yəχ̣ʷ(-)əlaʔ* [NB *y* < *ƛ'*] // Lezgi *leq̇*, Ag. *liq̇* < Lezg. **liq̇ʷ* < NC **lHĭg̃'wĂ* 'eagle', etc. > NWC **la(r)qʷa* (> Abaz. *laħʷa*, Ub. *daχʷá*). [Note delabialization in Ts:UC vs NEC:Lezgi-Ag., and spirantization *χ̣ʷ* in CS:Ls vs *ħʷ* in Abaz. (and Abkh.), and *χʷ* in Ubykh]:

UC *ƛ'ix̣-*,Ls *yəχ̣ʷ*	Lzg. *leq̇* < **liq̇ʷ*	A *laħʷa* U *daχʷá*	< WC **la(r)qʷa*	< NC **lHĭg̃'wĂ*

(7) SEW: IS:MC *łəχ̣ʷ-* : MS *ɬχ̣ʷ* // NC **=ilg̃'wVn* 'stick into, sew'.

We may compare a case (ex. 8) where Sa *-w-* matches NC **-Gw-*, indicating a shift **Gw* > **ɣw* > *w* (cf shifts of the type *xʷ* > *w* in Sa languages):

(8) IS:Th *maw-e* 'gossip' (< Sa **maɣw-* ?) // NC **maGwV* 'word, sound, song'. - Cf. Sa *ɣ* < **(r)G*, ex. 9. - Altern.: Th *mawe* : NEC **mħārχwā* 'tale' > Lezg. **maxʷ*, etc.

(9) IS:Th *məɣew'* 'lynx' // NEC **mHarGVwV* 'tom-cat' (> Lezg. **marq:aw* > Ag. *marRu*). - Cf. NWk:He *mauχ̣wa* 'bob-cat'.

*i) Reduction of Underlying Clusters In Salish: -Vc < *-Vrc- (*R = N/M, L, R)*

On many occasions, Sa shows reduction of prehistoric intervocalic clusters to single consonants; the cluster itself may be a reduced form of an underlying sequence *-CVC-*:

(1) [*t* < **nt*] IS:Th *q'ʷət-χ̣ʷəm'* 'joint' (cf. Ts:UC *χ̣ʷut'-* 'bent up') // NC **q'HwəntV* 'knee/elbow'.

(2) [*k* < **nk*] GOOD: NWk:Kw *ʔik* // NEC **ĭnk̲wV* 'right, good'.

(3) [*c'* < **mć*] MOUNTAIN GOAT: NWk:Ha *c'aG* (< **Gac'* ?) // NEC (AvA-Darg.) **Gamćā* > Darg. **q:ača* (with *č:* in some dialects).

(4) [*c* < **Nc* < **mVc*] ANT: BC *qac-qiɬ* // NEC:Nakh. **qēç/ʒ-* / AvA **ʁamça* < NC **q/GāmVc'V* (also 'grasshopper'). [Cf., in North America: Tsimshian *s-ḡans-ḡoʒinx̄t* 'ant'. - Note also N **K'[u]č'V* 'ant']

(5) [*l* < **mƛ*] MOUNTAIN GOAT: NWk:Kw *p'lχ̣* (root) // NEC **bHēmƛ̣i.*

(6) [*c'* < **rć*] ARM, EMBRACE (etc.): CS:Sq *q'ac'* // NC **qărć'wV* 'shoulder, arm'

(7) [*c* < **lć*] STICK: IS:Th *χ̣əc*, *χ̣ic* 'wooden' / CS:Ls *s-χ̣ac* // NC **GHwälćV* 'stick, board'

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(8) [*s* < **ls*] TO SCRATCH: IS:Th and MC *qəs-* // NC **qālsV* (> AvA. **qas:-*, Darg. **qars:-*)

(9) [*ɬ/r* < **rH*] COLD: IS:MC *c'əɬ-* : Sp *c'er* // NC **č'wErHV.*

(10) [q^{w} <**rq'w*] DIRT: NWk:He *miq^{w}a* 'dirty, muddy' / NC *mHĩrq'wV* 'dirt, rust' (Lezg.:Kryz *meq*).

j) A Few More Examples of Simplification of The Underlying Roots In Salishan

Table I shows 9 cases of simplification of original clusters in Sa: Underlying **c'w-/*c'ɬw-/*Hc'w-* becomes *c'-* (and *-c-* in a compound) in Sa; **ɬwm-* becomes Sa *-m-*; **q'Hw-* becomes Sa *q'^{w}-*, etc.

TABLE I

a EC **Hc̲' wēj mə* leg-bone PSa *(s-) c' u̯a m'* bone	b EC **-c'ɬ wē me* eyebrow CS:Se *-c u m-* eyebrow	c NC **c' ā̃ nHV* arrow No *c' i· ḥ-* arrow
d EC **c' wɨ̄ ɬɬV* stick, branch IS:MC *c' ə l*, MS *c' i l* tree	e EC **ɬwm ă ɬwā* moist,pool IS:Sp *m o ʕ^{w}* flow	f EC **q'Hw ĕ mčV* curved IS:MC *q'^{w} i c'-* twist
g EC **q'ɬwĕɬV̄* cow, mare IS:MS *q'^{w}ey-q'^{w}ay* bison, buff.	h EC **x̲HwemV* liquid (adj.) CS:Sq *ɬəmʔx^{w}* rain, *ləmʔ* dew	i EC **mh ă lV* warm (*/-n-*) IS:CO *mʕ a l* (:*maʕl*) warm

[To ex. a: Cf. Eyak-Ath **c'emʔ* 'bone' [] b: EC root is preceded in this compound by **c'ilV-* 'eye' (:CS:Se *c'il-* 'look for') [] c: Altern.: NEC **ć'ăʕV* 'reed, cane; arrow' [] d: Cf. Wk:No *c'aɬ-aq* 'branching out' [] g: Cf. Th *q^{w}is-p* [devoicing] [] h: N **LaHm/u/* 'marsh, silt, wet' (St. '89#106) [] i: Cf. NEC:Ts. *mɔʁ:V*]

Cf. some other examples of simplification of the underlying roots in Sa (end of the underlying roots seems to be lost):

(1) EAR, HEAR: IS:MS *leš-n'* 'hear' (<**lex*): Kalispel *leš-ən* 'hear' / CS:Ls *luh* 'hear' (cf. Ts:UC *s-lix-n* 'ear-lobe') // NC **ɬlĕHe/i* (**ɬ* because of Hurr. *lēlə* 'ear') or **ɬlĕHe* (if Hurr. *-lə* is a suff.).

(2) HIDE (Sa has both a regular word and a lex. suffix): IS:Th *ɬex^{w}* 'patch' : CO *ɬx^{w}* 'dress' : Sp *=eɬx^{w}* : MS *=ɬx^{w}* 'skin, clothes' // Lezg. **leʔ*

'skin' < NEC *ɬĕʔʔwnɨ* 'skin of animal'.

(3) SWALLOW, THROAT (etc.): IS:Th *məq'* 'satiate', *məq^{w}* 'hold in mouth' (:CS:Ls *bəq'* 'put/hold in mouth, swallow'; *b* < *m*) // NC **mVq'VɬV* 'throat, larynx'

k) Some Salishan CVCVC-Type Roots and Their Nc Cognates

In many cases, Sa roots of the type *CVCVC* seem to have developed the part *-CVC* from underlying clusters *-CC-*. Some roots show late suffix-like additions.

Ex. 1 seems to show *-CVC* from *-CC-*, as well as a reduction **Gw* > *q*, possibly, in an unstressed position. - Sequence *-χ^{w}aq'^{w}* (secondary labialization in *χ*ʔ) in ex. 3 seems to match NC **-rq'w-*. - Sequence *-qiw* in ex. 4 may relate to NC **-gw-*; cf. *-saw-* vs **-św-*; in ex. 5 (note here also *y* vs **r*). - For the process *-CVC* < *-CC-* in pre-Sa, cf. AvA:Lak. *çiniq* < NEC **c'ãnq'V* 'lynx, panther' (etc.).

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(1) ANGER (etc.): Ts:UC *qəɬ(ə)χ-* // NEC **Gwāɬħo/ə* 'gossip, offence, anger' (UC *χ* : NEC **ħ*).

(2) (?) WAR: CS:Ls *χiliχ* // NEC **Ɬ̆ɛ̆ɬV.* [Sa may show *χ* vs NC *L*-type cons.; same in NC].

(3) (?) ELK, GOAT (etc.): IS:Th *təχ^{W}aq'^{W}-* (first stem in 'doe') // NEC **dVrq'wV* 'he-goat'.

(4) HORSE, DONKEY: Ts:UC *tiqiw* 'h.' / CS:Sq *s-taqiw* 'h.' // NEC **dhogwā* 'd.' < (?) NC **t'HōgwV* 'hoofed animal' (covering also NC **t'ūgV̄* 'he-goat').

(5) TREE: Cs:Ls *yesawi* 'alder' // NC **räśwē* 'tree, wood'.

In exx. 2 and 6, auslauting consonants may represent a relatively late addition. - Sa word in ex. 2 (*χiliχ*) seems to show structural and phonetic symmetry, typical for Yokuts (Penutian).

(6) EAGLE: / Ts:UC **ƛ'iχin* (?) (:CS:Ls *yəχ^{W}əlaʔ*) // NC **lHi̱g̱'wĂ* (also with **ɬH-*, **-g̱-*) > Lezg. **liq'^{W}* > Lezgi *leq'* / Darg. **ʔiχ/-liq'an*, loss of labialization, as in Ts:UC?.

(7) LAND, EARTH: CS:Ls *ɬalil* 'to go ashore, to land' // NC **lhěmŁ̱wɬ̆* 'earth'. [The underlying cluster **-mŁ̱w-* is probably simplified to *-l-* in Sa; *CVCVC*-status is acquired by adding *-(V)l*].

Ex. 8 shows *CVCVC* becoming a *CVCC*-root, but it still behaves as a two-vowel root, namely, *CVC[V]C*, - otherwise it would lose the nasal (**-VmC- > -VC-*). - Ex. 9 is usually interpreted as root-type *CCVC*; it is still prnounced as *CVCVC.*

(8) CS:Ls *ɬəbc'-* 'mucus' (*b < m*) // NEC **ƛ̆amVč'V* (*/x-*) 'saliva, pus' > AvA **ƛa(m)ç:V* 'saliva'

(9) IS:Th *məɣew'* 'lynx' // NC **mHarGVwV* 'tom-cat' [Cf. Wk:He *mauχwa* 'bob-cat'].

l) Salishan Roots Which Match N(E)C Lexical Suffixes

N(E)C lexical suffixes frequently match both Sa roots and Sa lex. suffixes. NC lexical suffuxes show genetic links to Sa much more frequently than "regular" N(E)C roots do. N(E)C lex. suffixes may correspond either to lex. suffixes or to regular roots in N(E)C daughter languages.

We may deal with pre-Sa metathesis in exx. 1-4.

(1) [Type *C^{W}Vy* in Sa vs *=iCwV* in NEC] GO: IS:MS *x^{W}u*, *x^{W}uy* // NEC lex. suff. **=iχ̆wV*

(2) [Type *C^{W}Vw* in Sa vs *=VCwV* (*-V = -U* ?)] BURN: Ts:UC *kəw*, *k^{W}əw* // NEC:East Dag. **=ōgwV* (> Lezg. **ʔok:^{W}ɬ-* / Khin. *=ek:- / k:-*).

(3) [Type *C^{W}VC(V)* in Sa vs *=iCCwV* in NC (> *=iCVC* ?)] RIPE(N): Ts:UC *q'^{W}əli* 'ripe' (<**ilq'^{W}ə*, with *l* from **r* ?) // NC **=ĭrq'wĂ* 'ripen' > NEC:AvA **=ïq(-Vl)-* 'ripe(n)'. [Cf. frequent *l < *r* in Sa; pre-Sa **q'wirV* ?]

(4) [Type *CVw' / CVH^{W}* in Sa vs *(? CwVHV <) =HVCwV* in NC (> *CVw*)] POUR, WASH: IS:MC *c'aw'* : Sp *c'ew'* 'wash' / CS:Se *c'əχ^{W}* / Ts:UC *c'əχ^{W}* [from underlying **c̱'wäHA*?] // NC **=Häc̱wĂ* 'pour, wash', or **=Häc̱Ăw* > AvA **č:Vb-*. [**w* shifts from *c'-* to *χ-*. - Note that both Sa and AvA *CVC* matches NC root type *=HVCVw* (rather than *=HVCwV*)].

(5) [Type *CVC^{W}* in Sa vs *=iCCwV* in NC] DIE, KILL: IS:Th *ƛ'əx^{W}* 'cripple' : MC *ƛ'əx^{W}-* 'die, kill' / (?) CS:Ls *ɬəχ^{W}-* 'hunt' (also IS:MS *ɬx^{W}-*) // NEC **=ilχ̆wV-* (*/-qw-*) 'die' vs **=ilχwV-* 'kill'. [Note sound symbolism in NEC].

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[=5] Sa:MC *ƛ'əx^{W}-* 'die, kill' / ? Ls *ɬəχ^{W}-* 'hunt'	NEC **=ilχwV-* (*/-qw-*) 'die'; **=ilχwV-* 'kill'

(6) [Type =VCwV in NEC] WHITE, BLUE: Ts:UC *q^{W}a/uχ^{W}-* 'wh.', *q'^{W}iχ-* 'b.' // NEC **=ĕqwĂ* 'yellow' > AvA **q:o?i-* 'wh., b.' >Av. *q:áɦa-b* 'wh.', Chad. *qáɦa-b* 'wh.', And. *q:^{W}oj* 'b.' (PAnd. **?V-q:^{W}o-ji-*).

(7) [Type *C^{W}VC(u)* in Sa vs *=HV-CwVC* in NEC] FEAR: Ts:UC *q^{W}anu-* // NEC (AvA and Lezg.) **=Hä-GwVn* 'tremble, be afraid' > AvA **=iʁVn- / *ʁiʁVn-* > Cham. *ʁiʁin-*, Tind. *ʁiʁan-* / Lezg. *?äq:/^{W}Vn-* > Arch. *e=q/^{W}in-.*

(8) [Type *CVC^{W}* in Sa vs *=iCCwVC* in NC; altern.: Sa *CVC^{W}* is a metath. of *CwVC*] SEW: IS:MC *ləχ^{W}-* : MS *ɬχ^{W}* // NC **=ilq'wVn.* - Pre-Sa may represent a metath. of the old **q'wil-.*

(9) [Type *wVC* in Sa vs *=VwCwV* in NEC] TO OPEN: Ts:UC *waɬ-a-* // NEC **=ĕwλ(w)V* > Lezg. **?äwλɨ-* 'unlock'. - (Cf. Ts:UC *waχ-* 'open (eyes)' // NEC **=ĕwλ(w)V* > Darg. **?awx:-* > *?abx:-* 'to open').

(10) [Type *CVC^{W}* in Sa vs *=iCCwV(C)* in NC] BEND: IS:Th *ɬaq'^{W}əw-t* 'bend over' // NC **=ilq'wV(ɬ).*

(11) [Type *CV* in Sa vs *=VCwV(C)* in NC] DO, MAKE: Ts:UC *wi* // NC **=ăhwV(r)* [ablaut **a/ɨ*] > NEC:Tsez. **=Vw-* / NWC **wə.*

[=11]UC *wi-* do, make	Tsez. **=Vw* id.	WC **wə* id. <	NC **=ăhwV(r)* id.

(12) [Type *CVC(V)* in Sa vs *=VCVC* in NEC (> *CVC*)] SUCKLE, CHEW: Ts:UC *c'am-i-* 'suckle' // NEC **=ĕçVm-* 'gnaw, chew' >AvA **çVm-* 'chew' / Darg. **ça/m-.*

(13) [Type *CV* in Sa vs *=VCCV* in NC (> *VCVC*)] SPEAK, TELL, TALK: Ts:UC *cu-t*, *cu-n* (<PSa) // NC **=[ĭ]mcŪ* > AvA **=ocVn-* / WC **c:^{W}a*

[=13] UC *cu(-n)* <PSa	AvA **=ocVn-* 'talk'	WC **c:^{W}a* 'talk'	< NC **=[ĭ]mcŪ* 'talk'

(14) EYE, LOOK: Ts:UC *=us-i-* 'face, eye', *-al-us* 'eye' // NEC **=HimsV* 'to look' (> AvA **-us-* > *-us-* 'to search' in modern AvA l-ges) [cf. NEC **c'il-* 'eye' : Sa **c'il-*]

[=14] Sq *=us* 'eyes',UC *=us(-i)-*	*-us-* < AvA **-us-* 'to search'	< EC **=HimsV* 'to look'

(15) [Type *yVC* in Sa vs *=iCCwV* in NC] (TURN) AROUND: IS:Sp *yir* (and a borrowed *yal* ?) / Ts:UC *yəl* (*l* < **r*) 'around' // NEC **=irʁwV* 'roll, turn around'.

(16) [Type *yVC* in Sa vs *=iCVC* in NC] SPIN, WEAVE: CS:Ls *yiq'-* 'weave, knit, spin' / Ts:UC *yəq^{W}-* 'twist, spin' // NC **=iqăr* 'weave' (verb preserved only in WC and E.Daghestan languages) > NEC **wiqVrHV* > **qwVrHV* '(smthg) woven' > Darg. **q^{W}a/r* > Chir. *qu/r* 'horse-cloth' (etc.).

(17) [Type *yVC* in Sa vs *=iCwV* in NC] RETURN: Ts:UC *yac'-* 'turn back, turn around and come back' // NC **=içwĔ* 'come, return'.

(18) [Type *?iC(C)* in Sa vs *=iCwVC* in NEC] EAT: Ts:UC *?iɬn* // NEC **=iʔwVl* 'feed on, eat' (> Tsez. **he/n- / *he/l-*).

(19) [Type *?VC^{W}* in Sa vs *=iCwV* in NEC (> *=VCwV*)] GO: CS:Ls *?uχ^{W}* // NEC **=iχwV / *=iqwV* 'go, come, enter' (> Tsez. **=uχ:^{W}*).

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(20) [Type *ʔVC* in Sa vs *HVCCV(C)* in NEC (> *=VC*)] SEE: Ts:UC *ʔəx̣, ʔa-ʔx̣n* // NEC **=Hārq̣'V(n)* 'see, find' (> Tsez. **=ɦq-* / Darg. **=ah/-*).

(21) [Type CVC^{W} (with redupl.?) vs *=VCV* in NEC (> *CVCV* with redupl.)] QUICK: Ts:UC $x̣ax^{W}$ 'quick, hurry' // NEC **=ăχV* 'quick, swift' (>AvA **χ:iχ:V-* > Cham. *χ:iχ:u* id., Cham. Gig. *χ:eχ:a* 'quickly'; similar in other AvA languages). [Sa almost equals AvA].

[=21] UC $x̣ax^{W}$ 'quick'	Cham. *χ:iχ:u* 'quickly'	< AvA **χ:iχ:V-* <	EC **=ăχV* 'quick'

*m) Nc Words With *R and Their Cognates In Sa Languages*

One of a few significant changes from PSa to individual Sa languages is the evolution of the underlying **r* and its variants. Even in conservative Sa languages, the reflexes differ, being realized as *r, l, ɬ, ƛ', y,* (in many cases:) *x, ʕ, ʔ,* ; consonants *x̣ x, ʕ, ʔ* may be labialized ([w] represents a neighboring labial vowel or an undelying labial consonant).

(1) DIRT: Ts:UC *q'ax̣-* 'mud, smear, paint' // NC **q'ărē* (**r* > *x̣* in Sa?).

(2) BANK: MC *xər'-xər'-t* 'steep bank' (root metath.?) // NEC **rēGV.*

(3) DAY: Ls *ləx̣* // NC **rĭhV.* [Sa *l* may originate from **r*].

(4) HARD: PSa **ƛ'aʕ^{W}/x̣^{W}-* > Ts:UC / CS:Sq *ƛ'əx̣^{W}* / BC (Nu) *ƛ'ax̣^{W}ƛ'əx̣^{W}* vs IS:MC *yəʕ$^{'W}$* // NC **ꞭwěrV* ([w] shifts to the right, to a more "comfortable position", after **r* turns [x̣]; there is also a shift of glottalization from *L' - H* to *Y - H'*).

(5) WOOD: CS:Ls *yesawi* 'alder' // NC **răśwē* 'tree, wood' (Sa *y-* < **r*; **-Sw-* becomes *-saw-*).
[(6) BREAK: IS:Th *maʕ'* : CO *mʕ$^{(W)}$* : MC *maʕ$^{'W}$* : Sp *maw'* // SC:ST **muar* 'bite' vs N **murV*, St. '89 #127 (shift of the type **mwar* > **marw* in pre-Sa?)].

[(7) (BE) VERY SICK, DIE: IS:Sp *mix̣^{W}* : MS *mix^{W}* / CS:Ls *mix̣^{W}* (< [mIx̣/rU]?) // N **märV*]

There are many other Sa roots which can be linked to Kartv.; some of them may indicate old SC borrowings to Kartv., but most forms seem to reflect genetically related, inherited roots.

The following exx. cover the shift from an underlying cluster of the type **X(w)r* to Sa (labio)uvular sounds, velar sounds (including *ɣ*), *ʔ* (> '); relatively seldom to *r - ɬ - y.* (This is similar to the development of **r* in Sa)

[(8) OLD: IS **kix* 'close elder fem. relative' // SC:ST **Kri* // N **kirHA* (St. '89 #50)].

(9) HORN: (I) IS:Th *q^{W}ay'* (*y* may originate from sonorants of the type *y, l, ɬ, λ', r, -'* in *-y'* may indicate an underlying **H*) / (II): IS:MC *qəx̣-, qx̣-* (+ stressed "instrum." suff. *-min*; loss of [w] in an unstressed root in a compound *C(V)C-CVC*) : Sp and MS *qx̣-* (with suff.) // NC **qwĭrhV* (Sa stem I **q^{W}a/ir'* seems to match NC) // N **kErV* (NB Sa stem II); St. '89 # 86.

(10) COLD: IS:MC *c'əɬ* 'cool off' : Sp *c'er, c'al*; cf. Ts:UC *cix̣*, etc. // NC **č'wErHV.*

(11) BOY: IS: CO *t-twi-t* : MC *tw'i-t* : MS *t-t'wi-t* : Th *təwi-t* (dimin. *tʔu-t* 'little boy' may come from a Sa root for 'little') / CS:Ls *tawix^{W}-* 'child/offspring' (root in pl. form 'children') // NEC **dwirχE* 'boy, son'. - As for IS:MC *t'aʕ$^{'W}$-* 'little', Th *tʔu-* (etc.), cf. NC **t'iHV* 'small, little' (possibly = NC **t'iHU* > AvA **t'VH^{W}V-*).

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(12) (?) GROW(TH): PSa *ƛ'aχ^{w} (as both in IS and CS) 'grow(th), old' > CS:Ls *ƛ'aχ^{w} 'grow(th)' - Also IS:CO ƛ'χ : MC ƛ'əχ- (root) 'grow up' / CS:Se ƛ'aχ-aχ *'grown up' > 'old person' // NEC *ƛ'orχwV 'sprout'. (Sa *a is shown by both main branches: IS:CO and CS:Ls).

(13) ROCK: IS:Th ƛ'iχ^{w} 'rock, gravel' // NEC ƛ̲'wĕhru (/-l-) 'rock, cliff' [Note *w-shift, from left to right in pre-Sa].

(14) (?) INTESTINE: MC p'i?-p'i? 'guts, int-s' // NEC *bĥĕrƛ̲'V 'large intestine'.

(15) LYNX (etc.): IS:Th m(ə)yəw // NEC mHarGVwV 'tom-cat'.

(16) TELL A STORY: IS:CO m'ay?-, m'ay'a?- : malχa? 'lie' (a different root?) / MC may'- (root) 'tell a story, confess' // NEC *mʕ/ħārχwā 'tale'. [CO m'- seems to match NC *mʕ/ħ-].

II. Conclusion

Sa(-Wk) languages seem to originate from a prehistoric language (languages) which was (were) very similar to NC (being later "torn away" as a result of some prehistoric migration, ending up in the North-West America?). Sa languages may, or may not, be a part of NC languages [as represented by NCED]; on occasions, they show close parallels either to AvA, or to Lezg., or to NWC languages: for instance, Sa:Sq łəm(?) 'dew' (cf. łəm?-x^{w} 'rain') matches easily AvA *λ:imV- 'liquid' (as in And. λ:emi) and Lezg. *λ:äl'mä- (but not Lak. and Darg.), as well as the more complex proto-form NEC *ƛ̲Hwemv 'liquid' (adj.); this cannot be a coincidence, there are too many such precise correspondences. (cf. also numerous Wk-NC exact matches, such as He q'^{w}en-G^{w}a- 'throat' vs AvA *q:^{w}an-q:^{w}a < NEC *Gwan-G̲wa 'throat'; or NWk = Kw cnχ^{w}- 'fat' vs NEC = AvA-Darg. *c'ēnχ̲wA 'fat'; or No k^{w}itḫ- 'tap, knock' vs AvA *k^{w}irṭa 'hammer' [> Tind. koṭa, etc.] / NWC *k:əṭ^{w}V 'axe').

We would expect such state in a separate group(s) of languages which are closely related to the languages in question (i.e., NC). Lexico-grammatical material of Sa languages - which connects these languages with NC - is enormous.

Beside Sa-Wk languages, there are several other languages in North Amewrica which are related to North Caucasian (or, broader, Sino-Caucasian) languages of Eurasia: first of all, some languages-"isolate": Chemakum, Kutenai, etc.; Eyak-Athapascan, Tlingit, Haida; Algic (possibly also Keresan and Siouan), and others.

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