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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 providing 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.

*Sa stops $p t c k k' q q'$ have glottalized counterparts; this is also valid for $m n r l y w$. - Stops $k k' q q'$ have also appropriate fricative counterparts $x x' \chi \chi'$; voiced: γ (velar?), $\varsigma \varsigma'$ (either voiced uvulars or pharyngeals). - There are also $\lambda \lambda' h ?$. - On some occasions, Sa voiced consonants $z z' \gamma \varsigma \varsigma'$ seem to match NC voiced consonants (see rxx. below).

**PSa had at least three vowels as well as their retracted counterparts: $a \bar{a} i \bar{i} u \bar{u}$ [These vowels participate in an old ablaut a/\bar{a} ; a/\bar{u} , etc.; cf. ablaut in the NC languages; Sa i is considered the stablest vowel]. Historically, retraction indicates a back articulation in the original root. Several consonants have retracted counterparts: $s c l l'$ vs $\bar{s} \bar{c} \bar{l} \bar{l}'$. 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 $q\ q'\ q''\ q'''$; $x\ \bar{x}\ x''$ \bar{x}'' ; $l\ l'\ l''\ \lambda$ [Wk only] $\bar{\lambda}$ [Wk only] $\bar{\lambda}'$ (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: $z\ \bar{z}\ y\ \bar{y}\ \bar{y}''$ (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 $m\bar{a}z'/m\bar{a}z'e$ 'flies'; $m\bar{a}c'/m\bar{a}c'e$ 'bees, hornets, wasps' // NC $*mi\bar{z}A$ stinging insect. [Alternations of the type c/z are typical also for Wk].

(2) LYNX (etc.): PSa $*mV\bar{y}aw?$ (Kuipers: $*(s-)m\bar{y}aw(?)$ 'feline, coyotte') > IS:Th $m\bar{a}yew'$, Sh $s-myew?$ // NEC $*mHarGVwV$ 'tom-cat' (> Lezg. $*marq:/aw$ > Ag. $*ma\bar{b}/aw$ / Tsez. $*ma\bar{b}:ur$, also with $*-\chi-$). [Cf. NWk:He $mau\bar{x}wa$ 'bob-cat'].

*When comparing languages on a broader scale, - i.e., not just Sa (or Sa-Wk) vs NC, but Sa, Wk, Ath[apaskan] (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 $*p'i\bar{x}''$ '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 $m'a\bar{c}-mla?$ (metathesis + partial redupl.?) // NC $*mHilaGwV$.

(4) GREASE: IS:Th $mi\bar{c}''$ - (root) // NEC $*m\bar{a}fwV$; etc..

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

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

(7) TREE: IS:MC $c'əl$ // NWC $*çəla$ < NC $*ç'ə/ōtV$.

(8) DIRT: Ts:UC $cig^{w}-i-$ // NWk $cq^{w}-, zq^{w}-; c'q^{w}-$ 'dirty'; cf. Kw $zēq^{w}á$ 'dirt' // NC $*çHq'wǎ$.

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 $q^{w}ū-q^{w}ūni$ '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 not 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 $*q'(w)ā̄m?ə̄$ 'plait, mane; hair'. [NB sound correspondences: Sa $*q^{w}$: NC $*q'w$; umlaut: Sa $*u$: NC $*a$]

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

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

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

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

(15) HARD: IS:Th $\lambda^{\circ}\sigma^w$ vs CS:Sq $\lambda^{\circ}\sigma^w$ / Ts:UC $\lambda^{\circ}\sigma^w$ / BC $\lambda^{\circ}\sigma^w$ // NC $*\underline{L}w\ddot{e}rV$. Note typical transfer of $*w$ from L -type sound to σ/χ in pre-Sa: [w] shifts to the right, to a more "comfortable" position, after $*r$ turns [σ/χ].

(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 $*dwir\chi E$ 'child, son'.

Both IS:MC and CO show the root $tw/i-$ 'boy, child', cf. also CS:Ls $tawix^w$ 'child'. - A different root (with the meaning 'little') is present in MC $t'a^{\circ}w$, CO $t'iw-$. - Accordingly, Kalispel shows $t-t\ddot{a}t\ddot{a}w/i-t$ '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 $*k'\ddot{e}mV$ 'amful, handful') and a phonetically similar root $*k'Vm?$ which means 'bite'.

There is a tendency to lump together two unrelated PSa roots: $*taw$ 'leave (behind)' and $*tup'$ (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 $p'e/an$, 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 $*n\check{r}$); $-ca/-s$ (:NC $*z\ddot{o}$);
 2nd sg. $-x^w$ (:NEC $*\beta w\bar{V}$); $-w$ (:NC $*u\ddot{o}$);
 1st p. pl. $-t$ 'we' (:NEC $*L\ddot{a}$).

[Note that NC $*z\ddot{w}\check{e}$ 'you (pl.)' has an exact parallel in Wk $*-zu$ (related to 2nd sg.). - Note also Ath 2nd pl. (subj.) $-*x^w-$ which is comparable with Sa $-x^w$: NEC $*\beta w\bar{V}$, 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. $tq'^w\text{maw}'-s-\ddot{a}n$ 'together') // NWC $*tq'/:^wA$ (> Ubykh $t\check{q}'^wa$) (:Kartv[elian] $*t'q'ub$ 'twins', a borrowing?) vs NEC $*q'Hw\ddot{a}$ 'two'. This latter also appears in $*q'H\ddot{a}mV\ddot{L}wV$ 'one of several wives' (Starostin). We may compare Sa:MC root $t'q'^w\text{maw}'-$ (in 'together', above) with NC $*tq'Hw\ddot{a}-mV\ddot{L}wV$, on which the above NEC $*q'H\ddot{a}mV\ddot{L}wV$ is based. - Cf. Tsez $\check{q}/u\ddot{a}u$ 'pitchfork' with the uvular (not velar) initial, possibly influenced by $\check{q}/a-no$ 'two' (Starostin) (:Sa in Ts:UC $q'^w\ddot{a}\chi$ 'fork; split, divide'; $q'^w\ddot{a}y\ddot{a}\lambda'$ 'cut in two' ?); see NWk $q'-\lambda h-$ 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).

(19) THREE: CS:Ls: hix^w // NC $*\lambda H\check{e}$ (:NWk: Ha $q'\lambda h-$ 'six', $*t$ '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 $*=\epsilon\lambda u$ > NWC $*\lambda^w\epsilon-$; b) CS:Ls zix^w 'first // NEC $*\epsilon wi$ 'in front, before'; c) CS:Ls $x^w u-l$ 'near' // NC xwE 'together, close to'; d) IS:MS $x^w uy$ 'go' // NEC lex. suff. $*=i\chi wV$ 'go'; e) IS:Sp $k^w i?$ 'burnt' (etc.) // NEC lex. suff. $*=ik^wV$ '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, $Q = q q' q^w q^w$, $X = x x' x^w x^w y' \epsilon^w$, $S = s z$, $L = \lambda' \lambda' l l'$, 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 $k^{(w)}\epsilon w-$ // NEC lexical suff. $*=\delta gwV$. [Sa $k^w < *k^w$ or $*g^w$].

(2) BE AFRAID: UC $q^w anu-$ // NEC lex. suff. $*=H\check{a}-GwVn$. [Sa $q^w < *q^w$ or $*G^w$].

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

(4) BARK: UC $q^w i\check{t}-$ 'cedar bark' // NEC $*q^w \check{a}iV$ 'bark'.

(5) (?) ARROW: UC $x\epsilon l\lambda a? s$ (< $*x\epsilon l\lambda a?$?) // NEC $*h w \check{a} h iV$ (also $-i$) (> Tsez. $*hel$).

(6) SPEAK: UC $x\epsilon w-\epsilon q'-$ // NC $*=i\chi wA$ (lex. sf.). [Note Sa $xew-$: NC $*-\chi w-$; cf. ex.1 above].

(7) DIRT: UC ciq^w-i- // NC $*\check{c}'H\check{q}'w\check{A}$.

- (8) SUCKLE (etc.): UC *c'am-i-* 's.' (<PSa **c'am'*) // NEC **=č'Vm-* 'gnaw, chew' (AvA **č'am-*)
- (9) DEW: UC *səx^w* 'wet, dew' (from PSa **sVx^w*) // NC **šaxwV*.
- (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 *š'əc'-* 'grow' (of plants) [*ə < *a* ?] // NEC **š'ač'č'a* (*/-ə*) 'leaf' ('plant' in some lang.) (Cf. NEC:Lezg. **š'ač'a* 'stem, stalk, leaf, grain').
- (12) LOOK (FOR): UC *š'i* 'evidently' (:MC *š'a?* and Sp *š'e?* 'look for') // NEC *š'V̄* 'look'.
- (13) (?) DEER (etc.): UC *š'alaš* 'deer' // NEC **š'āhāš* 'lamb'. [This latter doesn't match N **t'āIV* 'young (of animals)' (St. '89, no. 197); for N, cf. Sa:CS:Ls (*s-*)*t'i-t'əla?* 'young (fawn, calf, colt)'].
- (14) WOMAN: UC *šanay'*, lex. suff. *=hn(?)* [:CS:Ls *šadey?* (*d<n*)] // NEC (Darg.-Lezg.) **šāhV*.
- (15) STEAM: UC *pəx^w* (:Th *pəx^w* 'spray with mouth') // NC **pHāxV*. [NC *-V = -U* ?].
- (16) HANDFUL: UC *mo'ʔi-* '(take a) handful' (cf. *mo-mʔ* 'take a handful'; *-mʔ* to NEC **māř[š]o* 'handful') // NEC (Tsez.-Lezg.) **mHōxš* > Tsez. **məxV*
- (17) PAY: UC *mux^wi* // NC **mVxwV̄* 'price, pay' (> AvA **mix^wV* 'pay').

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

- [IS:MC vs NC] (1) HAND: (?) MC *kalx* // NEC **kwiP.i*.
- (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 **qwiṯhV*. [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-xal-wi?* 'husband' // NC **xōl'i* 'male' (human/animal).
- (6) BONE: MC *c'am'* (root; from PSa) // NEC **Hč'wējmə* 'leg bone'. [:Eyak-Ath **c'émʔ*]
- (7) TREE: MC *c'al* (root) // NWC **čəla* 'tree' < NC **č'š'ōtV* 'branch, tree'. **STAND - inoe**
- (8) STAND UP: MC *c'alix* (not related to ex. 7) // NEC **=Vm-č'Vr*.
- (9) DARK: MC *c'el'* 'shadow, dark', *c'al'* 'shady' // NEC **Hč'ōV̄* 'black' (Lezg. **c'oIV* 'black; dark berry' = raspberry, etc.).
- (10) TWO: IS:MC *tq'aw'-s* (cf. *t'q^wmaw'-s-ən* 'together') // NC **tq'Hwā* > NWC **tq'!^wA* (> Ubykh *tq^wa*).
- (11) (?) ROT, PUS: MC *na?q'* 'rotten meat' // NEC **nēwq'š* 'pus' (> Lezg. **nāwq:*) [:ST **n0k/ŋ*].
- (12) BREAK (etc.): MC *ləq^w* 'break, smash' // NEC **HlōqV̄n-* 'destroy, break, scatter'. [Note Sa *-q^w* vs NC **-qV*, possibly **-qU* ?].
- (13) (?) (TELL) A STORY: MC *may'x* (root) 'tell a story' // NEC **mḥ/š'ārχwā* 'tale'.

[IS:MS vs NC] (14) PLENTY: MS $q^{w}o/ey$ 'rich, plenty' // NC $*q^{(w)}\check{a}/\check{e}j\check{e}$ 'things, possessions'.

(15) GO: MS $x^{w}u, x^{w}uy$ // NEC lex. suff. $*=i\check{x}wV$.

(16) SPARK: MS $c?ik^{w}$ ($:cik^{w}$ 'shine') // NWC $*\check{c}V(j\check{a})kwa$ < NC $*\check{c}'w\check{f}Vkw\check{o}$ 'brand, spark'.

(17) SHEEP, LAMB: MS $\check{t}ox^{w}$ 'sh.' ($:Sp \check{t}u?$) NC $*\check{s}i\check{x}U$.

[IS:Th vs NC] (18) DRINK: IS:Th $\check{t}u-q^{w}e?$ ($:Ts:UC q^{w}o?$) // NEC $*?uq^{w}V$ or $*?oq^{w}V$.

(19) JOINT: Th $q^{w}\check{a}t-\check{x}^{w}\check{a}m'$ (2nd stem: 'lump') // NC $*q'Hw\check{a}ntV$ 'knee, elbow'.

(20) (?) ELK, GOAT (etc.): Th $t\check{a}x^{w}aq^{w}$ - (root) in $t\check{a}x^{w}aq^{w}-i?pe$ 'doe' // NC $*dVrq^{w}wV$ 'he-goat'.

(21) BEND: Th $\check{t}aq^{w}\check{a}w-t$ 'bend over' // NC $*=ilq^{w}wV(\check{t})$.

(22) ROCK: Th $\check{a}'i\check{x}^{w}$ - // NEC $*\check{z}'wehr\check{u}$ (or $-li$). [w -transfer in pre-Sa?]

(23) GATHER; HANDFUL: Th muq, moq^{w} - 'gather' // NEC $*m\check{o}q^{w}\check{V}$ 'handful' (also 'handle, hilt') (> Tsez. $*moq$).

(24) SWALLOW, THROAT (etc.): Th $m\check{a}q'$ 'satiated', $m\check{a}q^{w}$ 'hold in mouth' ($:Ls b\check{a}q'$ 'put/hold in mouth, swallow'; $b < m$) // NEC $*mVq^{w}V\check{V}V$ 'throat, larynx' (> Tsez. $*muq'$ 'throat').

(25) WHITTLE, etc.: Th $m\check{a}x$ 'wh.; sliver' // NEC $*m[\check{a}]n\check{x}wV$ 'sickle' > Lak $mirx$ (etc.). [NC also shows meanings 'plough', 'reap' in different languages].

(26) SNOW: Th $m\check{a}x^{w}$ ($:Sp m\check{x}^{w}$ - 'to snow') // NEC $*mar\check{x}aIV$ > Lezg.:Tab. $ma\check{B}^{w}al$.

(27) GREASE: Th $mi\check{s}^{w}$ - (root) // NEC $*m\check{a}fhwV$. [Voiced cons. both in Sa and NC].

(28) LYNX, CAT: Th $m\check{a}yew'$ 'l.' // NEC $*mHarGVwV$ 'tom-cat'. [As above].

(29) STINGING INSECT(S): Th $m\check{a}z/m\check{a}ze$ 'flies'; $m\check{a}c'/m\check{a}c'e$ 'bees, hornets, wasps' // NC $*mi\check{z}A$ 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 $*=ik^{w}wV$.

(2) (?) GREEN (etc.): Ls $q^{w}ac$ 'yellow, (light) green, pale' // NEC $*Go\check{z}V$ 'green color, dirt'.

(3) THOU: Ls $-ax^{w}$ // NEC $*\check{B}w\check{V}$.

(4) SCATTER: Ls $\check{x}^{w}\check{a}\check{s}$ (\check{s} from x) // NEC $*=H\check{e}\check{x}wV$.

(5) SHARP: Ls $\check{x}^{w}\check{a}c$ // NC $*fi\check{u}\check{z}w\check{A}$ > Tsez. $*?a\check{c}$ -. [w -transfer (from C to X) in Sa?].

(6) (?) EAT: Ls $\check{x}^{w}u\check{a}'$ [:NWK $\check{a}'x^{w}$ -, metath.?] // NEC $*=i?wVl$ (metath. in Lezg.:Archi $lah-$ < $*li?^{w}\check{a}$ -).

(7) BLOOD: Ls $c\check{a}\check{t}$ // NEC $*\check{c}'\check{a}\check{L}wV$. [There is no PSa $*cay$ 'blood' ($y < *\check{a}$); for Sh $ci\check{s}^{w}$, Th $c?i\check{s}^{w}$, 'bleed' (Sq root $ci?/\check{x}^{w}$), cf. Nakh. $\check{c}\check{e}gi$, Lezg.Tab. $\check{c}iwi$ (same NEC root)]

(8) CHILD: Ls $tawix^{w}$ - (root) // NEC $*dwir\check{x}E$. [Note Sa CVC - vs NC CC -].

(9) ACROSS: Ls $t'a\check{t}$ '(put) crossways, across', $t'a\check{t}=us-\check{a}n$ 'beam' // NEC $*t'w\check{e}l?e$ '(cross)beam'.

- (10) WE: Ls *-ati* // NEC **Lā*.
- (11) MUCUS, SALIVA: Ls *ʔəbc* 'm.' (*b < m*) // NEC (AvA-Tsez.) **ʔāmvčʼV* (*/x-*) 'saliva, pus'.
- (12) (YOUNG) HORNED ANIMAL: Ls *s-wiʔ-qaʔ* 'buck deer' (root **wiʔ*) // NEC **wʃfiwV* 'sheep, lamb, young (horned) animal'.
- [CS:Se vs NC] (13) HIDE, STEAL: Se *kʷal-* 'h.' // NEC **=igwVʔ* 's.'. [Sa *kʷ < *kʷ* or **gʷ*].
- (14) BEND, CURVE: Se *kʷuc-* 'bend' (v.) // NEC **kʷēwʃ* (also **čʷkʷV*) 'curved'.
- (15) (?) LUMP (body): Se *qʷemxʷ* 'lump of ankle' // NC **qʷām̄qʷ(w)ā* 'knee, leg-bone'.
- (16) GOAT: Se *xʷiʔay* 'mountain goat' // **Gwāʔā* 'doe, hornless goat' (> AvA *ʔʷaIV* > Tlan. *ʔʷeli* / Tsez. **ʔʷel* > Gin. *ʔʷil*, etc.). [NB: Altern.: NC **ʔilχU*. (Metath. **xʷilʔ-* in pre-Sa?).]
- (17) (?) DRIP, DRIZZLE: Se *cʷiqʷ-* 'drip' // NEC **čʷwqʷ* 'drizzle'.
- (18) WASH: Se *cʷəxʷ* // NC **=HāčwĀ*. [Metath. and **w*-transfer in pre-Sa?].
- (19) LOOK, EYE: Se *cʷil-* 'look for' // NEC **cʷilV* 'eye' [sic! Not 'eyelash, eyebrow'].
- (20) GIVE: Se *yat-* (from **=it-* ?) // NC **=VtV*.

c) Selected Wk - Nc Cognate Sets

Phonetically, Wk languages are more archaic than Sa [a higher amount 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 *[ʔʔqá]* // NC **fiŋqʷĒ*. [*-q-* < *RC*, as in Sa].
- (2) HOLE: Wk:Ni *kuxʷ-ak* // NEC **kHwērV*. [Wk *x < *r*, as in Sa?].
- (3) KNIFE, SCRAPE: NWk *kus-* 'scrape off with a knife, shave' // NEC **k[i]śwV* (cutting tool). [Transfer of **w* in pre-Wk ?].
- (4) SEE; VISIBLE: Wk:No *kʷa·hi*, M. (=Ma?) *kʷa·xi* 'v.' // NEC lex. suff. **=agwV* 'see'.
- (5) DUST, DIRT: NWk: *qʷxʷ* 'dust, powder' // NEC **qʷhʷwörV* 'dirt, turf'.
- (6) NECK, THROAT, GOITRE: NWk:He *qʷú-qʷūni* 'neck' // NEC **qʷwinV* 'goitre, Adam's apple'.
- (7) BUTTOCK(S): NWk:Kw *xím'a* // NEC **χfiwñχV* (also 'cheek') > Lezg. **χ/i(m)χ/* 'buttock'.
- (8) DIRT: NWk *cqʷ-*, *zqʷ-*; *cʷqʷ-* 'dirty'; cf. Kw *ʔeqʷá* 'dirt' [:Sa:UC *ciqʷ-i-* 'dirt?'] // NC **čʷHīqʷwĀ* (*/-G-*).
- (9) SLIP: NWk *caʔx-* (as in Kw *ceʔxá* 'slippery') // NEC **čirχwV*. [Delab. in pre-Wk?].
- (10) (?) FLOW: NWk:Kw *caxis* 'flowing down' // NEC **čHaχV*.
- (11) FLOW, POUR; WASH: NWk *cʷxʷ-* (as in Kw *cʷxʷla* 'overflowing') may, or may not, relate to NWk *cʷuxʷ-* > Kw *cʷuxʷa* 'wash' [cf. in Sa: UC *cʷəxʷ-* and MC *cʷaw'* 'wash' vs MC *cʷəxʷ* 'pour out'] // NC lex. suff. **=Hā-čwV* 'pour, wash'.
- (12) FAT: NWk *cnxʷ-* // NEC **cēnχwV*
- (13) SHAKE: NWk:Kw *culixa* 'shatter' // NC **=ēzweĒl*.
- (14) SHORT: NWk *cʷkʷ-*, Kw *[cʷekʷá]* // NC *čikʷwĒ*.

- (15) SCOOP: NWk *c'iq-* // NEC *čāq'wā. [Cf. next, for Wk *q* (etc.) vs NC *q'w*].
- (16) NARROW, TIGHT: NWk *c'iq'-*, *c'iq''-* (also with *q*, *q''*) // NEC *č'iq'wV 'tight plait'.
- (17) (?) POLE, STICK: NWk *c'wax-*, Kw *c'ux''-* 'insert (pole)', *c'x''-* 'stab'; *zux''-* 'log, pole' // NEC *č'wēxV 'stick'.
- (18) ARROW: No *c'ihat*, Ma *c'ixat* (Wk root *c'ix- ?) // NC *c'ānHV
- (19) FRESH: NWk:Oo *c'uta* (<*c'w- ?) // NC *=Vč'wV 'good, fresh, new' > NWC *č''a.
- (20) BLACK: NWk *c'ut-* [:Sa:BC *c'u-* 'grey' ?] // NEC *Hč'ōIV.
- (21) (TO) POINT: NWk *c'm-* 'index finger; to p.' [:c'm-t 'stand on tiptoes'] // NEC *č'ūmV 'tip, p.'
- (22) PLANT: NWk *zm-* (Kw *zmi?*, etc.) // NEC *č'āmĥV.
- (23) SHARPEN: NWk *zux''- // NC *hūžwĀ. [Metath. and *w*-shift in pre-Wk?].
- (24) MILK: NWk: Kw, Oo *zam'-a* '(suck at the) breast'; *zm-x''- 'milky' (in Oo) // NC *=āmžŪ 'to milk, to drink'. [Wk underlying root *zm- from metathesized *zVmV ?].
- (25) CROOKED, CURVED: NWk:Oo *si?k-la* 'crook-ed' // NEC *č'ūkwV 'be hooked, curved; cook'
- (26) (?) MOUTH: NWk *sm-s-*; Oo *sm-yat* 'have mouth' // NEC *žwēmV. [For phonetics, cf. Wk -s/zu 'you' (pl.) : NC žwě id.; Sa -s/ca 'I' : NC zō id. ?].
- (27) CUT: NWk *t'ew-* (in Kw verb *t'ewik''*) // NC *=āt'wV. [Wk CVC vs NC CC].
- (28) I: Kw *-en*; cf. *nus*, He *nīs* 'be mine' [cf. Sa] // NC *nč.
- (29) DIRT: NWk *niq''-* (Kw, Oo *niq''a* 'dirty') // NEC *nēq'wč.
- (30) THROW: NWk:Kw *nep'-id* // NEC *I(H)ap'V / Urartu *nāp'-* (as in *nāp'-ax-* 'overthrow'). [Wk *n* < *I(H) ?].
- (31) SHOULDER: NWk *n'ik''-* 'carry on the sh.' [:NWk *n'ix-* 'act with hand'?] // NC *nHšwĠĀ 'arm, shoulder'.
- (32) (?) BERRY: NWk *n'ux''-* (Kw *n'ux''a* 'small blueberry') // NEC *niwGV.
- (33) SWALLOW (verb): NWk *n'q''-* (Kw *n'q''a*) // NEC *=HV-q'wVn. [Metath. in Wk?].
- (34) (?) MOUNTAIN GOAT: NWk *n'ax-* (He *n'axa*) // NEC *h'šānĥV. [NB Wk CVC : NC -CC-].
- (35) FLASH: NWk:Ha *lpa* 'flash a light' // NEC *I/apV 'glitter, flash'.
- (36) BRIGHT: NWk:Kw *his-a* 'fair (complexion)' // NC *lōžV 'bright metal > Lezg. *lac:V- 'white', etc. (Lezg. languages shift the original meaning 'bright metal' to 'bright, white').
- (37) (?) KIN: NWk:Kw *lul'i?* 'nephew, cousin' (etc.) // NC *Hč'č'iwV-tV* (> NWC *č'':wəLA 'seed, kin, clan, people').
- (38) HARD: NWk: He *č'āx-* and Kw (etc.) *č'ax-* 'stiff, rigid' [:Sa:UC *č'ə''* / MC *yə''* 'hard'] // NEC *č'wērV 'hard'. [*w-loss in Wk; *w-transfer in pre-Sa?].
- (39) (?) SKIN: NWk *č'is-* // NEC *č'wājc'ā 'skin, bark'.
- (40) (ACT WITH) HAND: NWk:Kw *č'ol-* 'feel, grope with hand': NEC *č'ōrē 'hand'.
- (41) DOG: NWk:Kw *w'ac'* // NC *gwāžžē > Darg. *k'':wāč'a (etc.).

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^wa* 'tear' = *'eye+water'; cf. CS:Sq *q^wu*) / CS:Se *ca-* // Nakh. **ca-* (< NEC **c'a/V* > Darg. **čali*, with preservation of the NEC **-I-*).
- (2) DOWN: Ts:UC *lix^wi-* 'walk downward' // Nakh. **laχu-n* (cf. Chechen *loχa* 'low', *laχa* 'down, below'; *laχ-alar* 'descend, come down', etc.) < NEC (Nakh.-Lak.) **lA^ŵχV* 'low'. [Note Sa *-x^w-* : Nakh. **-χu-*].
- (3) GATHER, HANDFUL: IS:Th *muq, moq^w* 'gather' // Nakh. **muq* (< NC **möq^ŵV* '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 daughter 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 I-ges) < NEC **=HimsV* 'to look'. - The above comparison may be summarized as follows:

[=1] Sq <i>=us</i> 'eyes', UC <i>=us(-i)-</i>	And. <i>-us-</i> < AvA * <i>-us-</i> 'search'	< NEC * <i>=HimsV</i> 'to look'
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- (2) TO SCRATCH: IS:Th and MC *qəs* // AvA **qas:-* < NEC **qālsV*.
- (3) WHITE, BLUE: Ts:UC *q^wa/uχ^w* 'wh.', *q^wiχ* 'b.' // And. *q^woj* 'b.' (<PAnd. **?V-q^wo-ji-* < AvA **q:o?i-* 'wh., b.' < NEC **=əqwÄ* 'yellow').
- (4) COLLAR-BONE: IS:Sp *-q'wl-* (root) // AvA **q^wilu* (< NC **qHwōtwV* 'neck, collar'). [Note Sa *q'(w)* vs NC **qH(w)*].
- (5) LUMP, BUTTOCK(S): Ts:UC *x^wum-* 'lump' (in compounds, meaning 'elbow', buttocks'; cf. also IS:Th *q^wət-x^wəm* 'joint' vs NEC **qHwəntV* 'knee/elbow') // Wk:Kw *χim'a* [note delab. *χ*] // AvA **χ^w:^w[i]m(V)χV* (:Lezg. **χ^w/(m)χ^w-*) <NEC **χ^wh^wmχV* 'buttock, cheek'. [NB **-mχ-* > **-mVχ-*].
- (6) FAT: NWk *cnχ^w* (in Kw *cnχ^wi?*, etc.) // NEC (AvA-Darg.) **c'ənχwV*.
- (7) SUCKLE, CHEW: (?) Ts:UC *c'am-i-* 's.' (<PSa **c'am'*) // AvA **čam-* < NEC **=č'Vm-* 'gnaw, chew'.
- (8) POUR, WASH: IS:MC *c'əx^w* 'pour', *c'aw'* 'wash' : Sp *caw* (:ca^ŵ), *c'ew'* 'wash' // AvA **č:Vb-* (*b* < **w*) < NC **=Hä-čwÄ*.

(9) GROW(TH): IS:Th, CS:Ls $\acute{a}'a\acute{x}^w$ // AvA $*\acute{a}i\acute{x}^w$ < NEC $*\acute{a}'\acute{o}r\acute{x}wV$. [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 $\acute{a}e?$ / Ts:UC $\acute{a}'a?$ (etc.) (from PSa) // AvA $\acute{a}:V$ < NEC $*\acute{a}iV$ 'to look'. [Metath. in pre-Sa?].

(11) MUCUS, SALIVA: CS:Ls $\acute{a}bc'$ 'm.' ($b < m$) // AvA $*\acute{a}/\acute{a}c:V$ and $*\acute{a}/\acute{a}m\acute{c}V$ < NEC (AvA-Tsez.) $*\acute{a}mV\acute{c}'V$ (/x-) 'saliva, pus'.

(12) PAY: Ts:UC mux^w // AvA $*mix^wV$ 'pay' (> Av. mux) < NC $*mVxw\acute{V}$ 'price, pay'.

2 A FEW COMPARISONS BETWEEN Sa AND TSEZAN LANGUAGES

(1) SMOKE: Ts:UC $q^w\acute{o}?$ and q^wux^w ; CS:Ls $q^w\acute{a}\acute{s}$ ($\acute{s} < x$) // Tsez. $*q^w\acute{a}$ $*q\acute{o}$ < NC $*kw\acute{m}\acute{h}V$. [Sa q^w matches Tsez. $*q^w$].

(2) JOINT: Ts:UC x^wut' 'bent up' / IS:Th $q^w\acute{a}t-x^w\acute{e}m'$ // Tsez. $*q\acute{a}tV$ and $*q\acute{a}ntV$ < NEC $*q^wHw\acute{a}ntV$ 'knee/elbow'. [Note Sa $-t'$: Tsez. $-t-$ and $-nt-$ < NC $*-nt-$].

(3) STICK (noun): Ts:UC $x\acute{a}c'$ 'stick' / IS:Th $x\acute{a}c$ and $x\acute{a}c$ 'wooden' // Tsez.:Gin. $x\acute{i}\acute{s}u$ < NEC $*GHw\acute{a}l\acute{c}V$ 'stick, board'.

(4) ARROW: Ts:UC $x\acute{a}l\acute{x}a^?s$ (< $*x\acute{a}l\acute{a}?$?) // NEC $*fiw\acute{a}fiV$ (also $-t$) > Tsez. $*hel$ / Lezg. $*\acute{h}\acute{a}l(:)$ (etc.). [Sa shows x vs $*\acute{h}w$ (similar: NEC languages Tsez. and Lezg.). - Sa also seems to show $I \dots ?$ (from $*? \dots I ?$) vs cluster $*fi$ in NEC].

(5) SHARP: CS:Ls $x^w\acute{a}c$ // Tsez. $*\acute{a}\acute{c}$ < NC $*\acute{h}i\acute{u}\acute{z}w\acute{A}$. [w -transfer (from C to X) in pre-Sa?].

(6) GROW(TH): IS:MC $\acute{a}'\acute{a}x-$, CO $\acute{a}'\acute{x}$ / CS:Se $\acute{a}'\acute{a}x-$ (etc.) // Tsez. $*\acute{a}e\acute{x}(:)$ < NEC $*\acute{a}'\acute{o}r\acute{x}wV$. [NB preservation of $[x]$ but loss of $[w]$ both in CO, Se, - and in Tsez.].

(7) GATHER, HANDFUL: IS:Th muq , moq^w - 'g.' // Tsez. $*moqV$ (:Nakh. $*mu\acute{q}$) < NC $*m\acute{o}q^w\acute{V}$ 'h.' (also 'handle').

(8) SWALLOW, THROAT (etc.): IS:Th $m\acute{a}q'$ 'satiating', $m\acute{a}q^w$ 'hold in mouth' (:Ls $b\acute{a}q'$ 'put/hold in mouth, swallow'; $b < m$); from PSa // Tsez. $*mu\acute{q}$ 'throat' < NEC $*mVq^wV\acute{V}$ 'throat, larynx'.

(9) HANDFUL: UC $mo^?i-$ // Tsez. $*m\acute{o}xV$ < NEC (Tsez.-Lezg.) $*mH\acute{o}x\acute{t}$

(10) HANDFUL: UC $mo^?t$ // NEC $*m\acute{a}r[\acute{a}]/\acute{a}o$ 'handful, armful' (> Tsez.:Gin. $m\acute{e}\acute{a}u$ 'handful', etc.).

3 A FEW COMPARISONS BETWEEN Sa AND LEZGIAN LANGUAGES

(1) ANGER: Ts:UC $q\acute{a}l\acute{x}$ - 'angry' // Lezg. $*q\acute{a}l(:)$ > Lezgi qel (:Nakh. $*q\acute{e}l$) < NEC $*Gw\acute{a}th\acute{o}$ '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 $q^w\acute{i}x-$ // NEC $*Hw\acute{i}q^wV$ > Lezg. $*q:i$ 'today' < $*Hwq^w\acute{t}$. [Metath. in pre-Sa?]:

[=2] UC $q^w\acute{i}x-$ 'day'	Lezg. $*q:i$ 'today' < $*Hwq^w\acute{t}$	< NEC $*Hw\acute{i}q^wV$ 'day'
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(3) DRINK: Ts:UC $q^w\acute{o}?$ / IS:Th $?u-q^we?$ / CS:Se q^wu- // Lezgi q^wa- < Lezg. $*?oq^wa$ 'suck, drink' < NEC $*?uq^wV$ or $*?oq^wV$ 'drink'; actually a Lezg.-Tsez. isogloss (cf. also NEC lex. suff. $*=VqV$ 'suck').

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

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

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

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

(8) (?) ROT(TEN), PUS: IS:MC *naʔq'* 'rotten meat' // Lezg. **nāwq* > Lezgi *naḅ^w* (:Tsakh. *naḅ*) < NEC **nēwq'ū* 'pus'.

(9) LEAF, PLANT: Ts:UC *ʔəc'-* 'grow' (plants) [*ə < *a ?*] // Lezg. **ʔaça* 'stem, stalk, leaf, grain' < NEC **ʔač'ca* (*/-ə*) 'leaf' ('plant' in some lang.) [Lezg. glottalization pattern equals Sa].

(10) WOMAN: Ts:UC *ʔanay'*, lex. suff. =*ʔn(?)* / Cs:Ls *ʔadəy?* (*d < n*) // Lezg. **ʔ:ħn:(ol)* < NEC (Darg.-Lezg.) **ʔħnfiV*.

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

(11) SNOW: IS:Th and MC *məx^w-* : Sp *mX(ú)* 'to snow' // Lezg.:Tab. *maḅ^wal* < NEC **marxal/AV*.

(12) MOUNTAIN, HILL, PILE: IS:Th *mol* 'pile up (dirt or snow)' // Lezg.:Arch. *mul* < Lezg. **muhl VI* or **muʔ VI* < NEC **muHalV* 'mountain', etc. (In Tsez. also 'hillock, knoll').

(13) EYE: CS:Se *wil/-* 'peep, peer', BC *-ut* // 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)ʔay?* 'stick, log' // NC **q^wwəʔə* 'board' > Lezg. **qula* 'board, shelf, lid, small plank' / NWC **G^wə* 'board, post, pole, stake'. [Non-glott. Sa *q^w* matches NWC **G^w*].

(2) SPARK: IS:MS *cʔik^w* (*:cik^w* 'shine'; cf. Th, Sp *c'ek^w* 'shine, shiny') // NWC **çV_k^wa* / **çVjə_k^wa* < NC **ç^wʔVkwö* 'brand, spark, brilliance':

[=2] Sp <i>c'ek^w</i> 'shiny'	Tsez. <i>*çə_kə</i> 'fire-brand'	WC <i>*çV_k^wa</i> 'spark, fb'	< NC <i>*ç^wʔVkwö</i>
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(3) FRESH: NWk:Oo *c'uta* (<**c'w-* ?) // NWC **ç^wa* < NC **=Vč'wV* 'good, fresh, new'.

(4) TWO: IS:MC *tq'aw'-s* (also *t'q'^w-* in this root) // NWC **tq':^wA* > Ubykh *t'q'^wa*.

(5) DO, MAKE: Ts:UC *wi* // NWC **wə* < NC **=əhwV(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-ç[?]Vm* 'eyebrow'; this compound apparently consists of a word for 'eye' + word for 'hair' (:ST **chañ*): this latter component appears as **-c'fiwěme* in NEC (in 2 compounds, both for 'eyebrow' <'eye+hair'):

(1) EYEBROW: CSSe *ca-cum-an* / Ts:UC *cum-ay'is* (*'hair' + 'eye') // (NEC **c'aIV-c'fivěme* [rather than **c'iIV-c'fivěme*] >) Nakh. **ca-ç²Vm* 'eyebrow'; cf. next ex. where the component 'eye' is different.

(2) EYEBROW: BC *-uť* 'eye' + Se, UC *cum* in 'eyebrow' (ex. 1) // (NEC **²wilʔi-c'fivěme* >) Lezg. **²wil(i)-çʷem* > Tab. *ul-çʷi/am* (eye+*'hair'). Cf. 'eye': (Lezg.>) Lezgi *wil*; (Darg.>) Ak. *ħuli*.

The NEC component **c'aIV* and/or **c'iIV* means only 'eye': gloss "**c'iIV* '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'fivěme* (> Nakh. **-ç²Vm*, Lezg. **-çʷem* etc.)

Accordingly, in a synonymous compound **²wilʔi-c'fivěme* the 1st component means only 'eye', not 'eyelash'. The 2nd component (*-c'fivěme*) 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 **²wilʔi-c'fivěme* 'eyebrow' > Lezg. **²wil(i)-çʷem* 'eyebrow' is the underlying form for Tab. *ul-çʷi/am* id.; labial element [w] in the 2nd component indicates that it originates from NEC **-c'fivěme*. - In Sa, *wil-/wi-* (CS:Se) means 'peep, peer', and a related form *-uť* means 'eye(s)' (acc. obj. in BC *c'im-uť*); 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'fivěme*: this latter always means 'eyebrow', never 'eyelash': so, there is no "**çil-çʷem* 'eyelash'" in Lezg.:Tab. *çil-çim* 'eyelash'. This root *-çim* (Lezg. **-çim* > Tab. *-çim*) is etymologically different from *-çʷi/am* (< Lezg. **-çʷem*) in the word for 'eyebrow': *ul-çʷi/am* above.

[In Sa, *c'im-* means 'blink; contract; open and shut' (+ obj. 'eyes' in BC (*-uť*) 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.: **ç'¹*] 'blink the eyes; eyelid' reminds us on **i/a* in NEC **c'iIV/*c'aIV* 'eye'.

We may add that NC shows only nominal meanings for the above words ('eye', 'eyelash' etc.); Sa shows only nominal meanings for *ca-*, *-uť* '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. *çep-çep-aj* 'eye-lash' (from **cover-cover for/of eye?*), Kryz *çâp* id., Fit. *çip-çip* id. may match IS:MC *cəp- t -ay'* 'eyelash(es), eyelid'; Ls *c'ip-I-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' **çič* > 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).

We have, both in Sa and in NEC:

- (a) Ts:UC *cō-* 'eye' / CS:Se *ca-* // NEC **c'a/V* > Nakh. **ça-* / Darg. *-*čali* 'eye'
 (b) CS:Se *c'il-* 'look for' // (NEC **c'ilV* 'eye' >) Lezg. **čil-* 'eye' / Tsez. **čī-* 'eye'
 (c) CS:Se *wil-* 'peer' / BC *-ut* 'eye' // (NEC **?wīl(i)-* >) Lezg. **?wīl(i)-* 'eye' > Tb *ul-* 'eye', etc.
 (d): [**hair* in 'eyebrow'] Ts:UC *cum-* / CS:Se *ca-cum-*, Ls *cub-əd* // Lezg. **-c^wem* in Tab. *ul-č^vi/am*
 (e) BC *c'im-ut* 'blink the eyes' // (Lezg. >) Tab. *čil-čim* 'eyelash' : Darg. **čimi-čali* 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/x^w]*):

- (1) FINGER: IS:MC *=aks-t* // NC **k^wšj/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. *qač* 'shoulder' < NEC **qārč'wV* 'shoulder, arm'.
 (4) HORN: (I) IS:Th *q^way'* < **q^wa/ir'* (?) [*y* may originate from **l, *r*] / (II): IS:MC *qəx-*, *q^wx-* (+ stressed "instrum." suff. *-min*), Sp and MS *q^wx-* (also with suff.) // NC **qwīthV* [// N **kErV* (NB Sa stem II); St. '89 # 86].
 (5) BREAST: Wk **xu:t* (or sim.) : No *hu(ʔ)* // NC **Gwālfiē* 'udder, breast' (> AvA *ɛ^warHV* > Kar. *ɓori*, 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 **q(w)ām?ə* 'plait, mane; hair'. Cf. compounds: Sa:MC *q^wum-qən* 'head' < *'hair on the head' vs NEC **q(w)ām-čV* 'hair on the temples'.
 (7) JOINT: IS:Th *q^wət-x^wəm'* (*'elbow/knee [=joint]' + *'lump?') / Ts:UC *x^wut'* 'bent up' // Tsez. **qɔ(n)tV* < NEC **qHwəntV* 'knee/elbow'. [Note Sa *-t'* : Tsez. *-t-* / *-nt-* : NC **-nt-*. - See next.
 (8) (?) *LUMP: Ts:UC *s-x^wum=ač'a* 'elbow' (*'lump + arm?'), *s-x^wum=nač* 'buttocks, hips' (*'lump + leg?') // Wk:Kw *xīm'a* 'buttocks' // NEC **χfiwħnχV* 'cheek, buttock'.
 (9) COLLAR-BONE: IS:Sp (*s-č'im-)**ał-q^wt-t* (root *q^wl-*) // NEC **qHwōłwV* 'neck, collar' (> AvA **q^wilu*).
 (10) (?) HEAD: NWk:Kw *xum-s* // NEC *hq'wēmV̄* 'horn, head'.
 (11) BODY: IS:CO *=ic'a?* // NEC **čōrχV*
 (12) FAT: NWk:Kw *cnx^w-i?*, noun > Kw *cénx^wa'i* (noun) // NEC (And.-Darg.) **c'ēnχwV* (also **c'ēnλV*), adj.

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

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

(15) ARM, SHOULDER: CS:Ls *dəx* 'arm' (*d* < *n*) : Sq *nix* id. // NWk *n'ik^w*- in He *n'ik^w-lá* 'carry on the shoulder' // NC **nHšwGĀ*.

(16) FOREHEAD: Ts:UC *ə'ox^w-s* // NEC (AvA and Tsez.) **ə'arq'wě* > AvA **əaq^wara* (> Av. *taγúr*) / Tsez. **əəqə* forehead, cap'. [Sa *-x^w* may match Av. *-γu-*; Sa **ə'* < **ə'*; Sa *o* < **a*].

[=116] UC <i>ə'ox^w</i> - 'fhd'	Av. <i>taγúr</i> < <i>*əaq^wara</i>	Tsez. <i>*əəqə</i> 'forehead'	< NEC <i>*ə'arq'wě</i> id.
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(17) HIDE: IS:Th *əx^w* 'patch' : CO *əx^w* 'dress' : Sp *-əx^w* : MS *-əx^w* 'skin, clothes' // NEC *əə?əwni-* 'skin (of an animal)'.
 (18) EAR: IS:MS *les-n'* 'hear' (< **lex*): Ka *les-ən* 'hear' / CS:Ls *luh* 'hear' // NC **əHHe/i* or **əHHe*.

(19) FAT, GREASE: IS:Th *mi^ow*- 'grease' // NEC **məšwV*.

(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/ě/ē*); cf. CS:Se *wena?əw* // NWk:Kw *wəə'aχ* 'horn, antler' // NEC **wěna'V* 'beak, horn; head'. [**-nə'-* > Wk *-ə'-* : Sa *-n(V)?-* ?].

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

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

(1) BEND, CURVE: CS:Se *k'^wuc'* 'bend' (v.) // NEC **kš'wš* (also **č'ūkwV*) 'curved'.

(2) SHARP: CS:Ls *x^wəc* // NC **hūšwĀ* > Tsez. **əšč-*; Lezg. **əč:^wa-*.

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

(4) (?) POLE, STICK: NWk *c'waχ-*, Kw *c'ux^w*- 'insert (pole)', *c'x^w*- 'stab' (cf. NWk *zux^w*- 'log, pole') // NEC **č'wēχV* 'stick, chip, piece of wood, beam'.

(5) SHOULDER: NWk *n'ik^w*- 'carry on the sh.' // NC **nHšwGĀ*.

(6) BERRY: NWk *n'ux^w*- (Kw *n'ux^wa* 'small blueberry') // NEC **niwGV*.

(7) ROCK: IS:Th *ə'ix^w* 'rock, gravel' // NEC *ə'wěhrū* (*/-l-*) 'rock, cliff' [*w*-shift; Sa *-x^w* : **(h)rū*].

(8) HARD: Ts:UC *ə'ə^ow* (: *xəə'e-* id.) / IS:MC *yə^ow* (note shift of glottalization *ə'* to *ə'*; note *ə'* : *y*, *yə^ow*, *y* < **L*) / Ts:UC *ə'əx^w* / CS:Sq *ə'əx^w* / BC *ə'a^w* // NC. **Lwě^orV*. [**w* shifts from left to right, after **r* turns *χ*]; MC *ə* 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:

(1) IS:Th $q^{w}ət-x^{w}əm'$ 'joint' vs Ts:UC $x^{w}ut'$ '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 $q^{w}ic'$ 'twist' vs. IS:Sh, CS:Sq $x^{w}əc'-x^{w}əc'$ 'joints' : CS:Se $x^{w}əc'-q^{w}-uya$ 'wrist' / Ts:UC $x^{w}uc'$ 'bent up' // NEC:AvA-Lezg. $*q'HwəməçV$ 'hook, curved' with unstable $*-m-$ in Lezg. $q^{w}a(m)çV$ 'bend, elbow, tip, point'. [NEC $*q'$ doesn't undergo spirantization; cf. also next ex.].

(3) STICK: IS:Th $xəc, xic$ 'wooden' / CS:Ls $s-xac$ // Tsez $ħiš < TsKh *χješu, *χjōšu < NEC *GHwālcV$ 'stick, board; bolt'. [Spirantization and delabialization both in Sa and Tsez.].

(4) DEER: IS:MC $x^{w}əl(-)$ 'buck' / CS:Ls $x^{w}el$ 'deer' // Gin. $b^{w}il$ 'doe' < Tsez. $*b^{w}el$ id. < NEC $*Gwāhā$ 'doe, hornless goat' (> AvA $*b^{w}aIV$ 'hornless goat/ram'). [Spirantization both in Sa and in NC daughter languages (Nakh., AvA, Tsez.)].

(5) (?) ASK: Ts:UC $ʔo-x^{w}aṣ$ ($ṣ < x$) // NEC (AvA-Lezg.) $*HreqwA(r) > Lezg. *ʔerχ^{w}a$.

(6) EAGLE: Ts:UC $ʔixin$ / CS:Ls $yəx^{w}(-)əlaʔ$ [NB $y < ʔ$] // Lezgi $leq, Ag. liq/ < Lezg. *liq^{w} < NC *IHiq^{w}wA$ 'eagle', etc. > NWC $*la(r)q^{w}a$ (> Abaz. $lah^{w}a, Ub. dax^{w}a$). [Note delabialization in Ts:UC vs NEC:Lezgi-Ag., and spirantization x^{w} in CS:Ls vs $ħ^{w}$ in Abaz. (and Abkh.), and $χ^{w}$ in Ubykh]:

UC $ʔix$ -Ls $yəx^{w}$	Lzg. $leq < *liq^{w}$	A $lah^{w}a$ U $dax^{w}a$	< WC $*la(r)q^{w}a$	< NC $*IHiq^{w}wA$
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(7) SEW: IS:MC $ʔəx^{w}$: MS $ħ^{w}$ // NC $*=ilq^{w}Vn$ 'stick into, sew'.

We may compare a case (ex. 8) where Sa $-w-$ matches NC $*-Gw-$, indicating a shift $*Gw > *y^{w} > w$ (cf shifts of the type $x^{w} > w$ in Sa languages):

(8) IS:Th $maw-e$ 'gossip' (< Sa $*mayw-$?) // NC $*maGwV$ 'word, sound, song'. - Cf. Sa $y < *(r)G$, ex. 9. - Altern.: Th $mawe$: NEC $*mhārxwā$ 'tale' > Lezg. $*max^{w}$, etc.

(9) IS:Th $məyew$ 'lynx' // NEC $*mHarGVwV$ 'tom-cat' (> Lezg. $*marq/aw > Ag. marRu$). - Cf. NWk:He $mauxwa$ '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 $q^{w}ət-x^{w}əm'$ 'joint' (cf. Ts:UC $x^{w}ut'$ 'bent up') // NC $*q'HwəntV$ 'knee/elbow'.

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

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

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

(5) [$l < *mġ$] MOUNTAIN GOAT: NWk:Kw $p'lχ$ (root) // NEC $*bHēmġi$.

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

(7) [$c < *lċ$] STICK: IS:Th $xəc, xic$ 'wooden' / CS:Ls $s-xac$ // NC $*GHwālcV$ 'stick, board'

- (8) [*s* < **ls*] TO SCRATCH: IS:Th and MC *qas-* // NC **qālsV* (> AvA. **qas-*, Darg. **qars-*)
- (9) [*l/r* < **rH*] COLD: IS:MC *c'ət-* : Sp *c'er* // NC **č'wErHV*.
- (10) [*q^w* < **rq'w*] DIRT: NWk:He *miq^wa* 'dirty, muddy' / NC *mHīrq'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'fhw-/*Hc'w-* becomes *c'-* (and *c-* in a compound) in Sa; **fhw-* becomes Sa *m-*; **q'Hw-* becomes Sa *q^w*, etc.

TABLE I

a EC <i>*Hc'</i> <i>wěj mǎ</i> leg-bone PSa <i>*(s-) c' u/a m'</i> bone	b EC <i>*-c'fi</i> <i>wē me</i> eyebrow CS:Se <i>-c u m-</i> eyebrow	c NC <i>*c' ā</i> <i>nHV</i> arrow No <i>c' i· ħ-</i> arrow
d EC <i>*c' wī ħfV</i> stick, branch IS:MC <i>c' ə l</i> , MS <i>c' i l</i> tree	e EC <i>*fhw</i> <i>ā fhwā</i> moist, pool IS:Sp <i>m o r^w</i> flow	f EC <i>*q'Hw</i> <i>ě mčV</i> curved IS:MC <i>q^w i c'-</i> twist
g EC <i>*q'fhwǎV</i> cow, mare IS:MS <i>q^wey-q^way</i> bison, buff.	h EC <i>*ǎHwemV</i> liquid (adj.) CS:Sq <i>ǎm?x^w</i> rain, <i>ǎm?</i> dew	i EC <i>*mh ā IV</i> warm (/n-) IS:CO <i>m^ɾ a l</i> (:ma ^ɾ) warm

[To ex. a: Cf. Eyak-Ath **c'em?* 'bone' [] b: EC root is preceded in this compound by **c'ilV-* 'eye' (:CS:Se *c'il-* 'look for') [] c: Altern.: NEC **c'ā^sV* 'reed, cane; arrow' [] d: Cf. Wk:No *c'at-aq* 'branching out' [] g: Cf. Th *q^wis-p* [devoicing] [] h: N **LaHm/u* 'marsh, silt, wet' (St. '89#106) [] i: Cf. NEC:Ts. *mɔɔ: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 **ǎHhe/i* (**ǎ* because of Hurr. *lēlā* 'ear') or **ǎHhe* (if Hurr. *-lā* is a suff.).
- (2) HIDE (Sa has both a regular word and a lex. suffix): IS:Th *ǎex^w* 'patch' : CO *ǎx^w* 'dress' : Sp *=ǎx^w* : MS *=ǎx^w* 'skin, clothes' // Lezg. **ǎe?* 'skin' < NEC *ǎǎ?ǎwH* 'skin of animal'.
- (3) SWALLOW, THROAT (etc.): IS:Th *məq'* 'satisfy', *məq^w* 'hold in mouth' (:CS:Ls *bəq'* 'put/hold in mouth, swallow'; *b* < *m*) // NC **mVq'VfV* '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 *-x^waq^w* (secondary labialization in *x?*) 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. *činiq* < NEC **c'āng'V* 'lynx, panther' (etc.).

- (1) ANGER (etc.): Ts:UC $qəʔ(\ə)\chi$ - // NEC $*Gwāʔho\ə$ 'gossip, offence, anger' (UC χ : NEC $*\hbar$).
- (2) (?) WAR: CS:Ls $\chi ilix$ // NEC $*LčtV̄$. [Sa may show χ vs NC L -type cons.; same in NC].
- (3) (?) ELK, GOAT (etc.): IS:Th $tə\chi^w aq^w$ - (first stem in 'doe') // NEC $*dVrq^w V$ '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 $*rās̄wē$ 'tree, wood'.

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

- (6) EAGLE: / Ts:UC $*A'ixin$ (?) (:CS:Ls $yə\chi^w əla?$) // NC $*Hīq^w A$ (also with $*H-$, $*-q-$) > Lezg. $*liq^w$ > Lezgi leq' / Darg. $*?iy\chi$ - $liq^w an$, loss of labialization, as in Ts:UC?.
- (7) LAND, EARTH: CS:Ls $lalil$ 'to go ashore, to land' // NC $*lhēmLwš$ 'earth'. [The underlying cluster $*-mLw-$ 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 pronounced as $CVCVC$.

- (8) CS:Ls $ləbc'$ 'mucus' ($b < m$) // NEC $*\lambdaəmVč'V$ ($/\chi-$) 'saliva, pus' > AvA $*\lambda a(m)\zeta:V$ 'saliva'
- (9) IS:Th $məyew'$ 'lynx' // NC $*mHarGVwV$ 'tom-cat' [Cf. Wk:He $mauxwa$ 'bob-cat'].

1) 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 suffixes 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^wVy in Sa vs $=iCwV$ in NEC] GO: IS:MS $\chi^w u$, $\chi^w u_y$ // NEC lex. suff. $*=i\chi^w V$
- (2) [Type C^wVw in Sa vs $=VCwV$ ($-V = -U$?)] BURN: Ts:UC $kəw$, $k^wəw$ // NEC:East Dag. $*=ōgwV$ (> Lezg. $*?ok:ʔ$ / Khin. $=ek:-$ / $k:-$).
- (3) [Type $C^wVC(V)$ in Sa vs $=iCCwV$ in NC (> $=iCVC$?)] RIPE(N): Ts:UC $q^w əli$ 'ripe' (< $*ilq^w ə$, with l from $*r$?) // NC $*=iŕq^w A$ 'ripen' > NEC:AvA $*=iŕ(-VI)-$ 'ripe(n)'. [Cf. frequent $l < *r$ in Sa; pre-Sa $*q^w irV$?]
- (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 $c'ə\chi^w$ / Ts:UC $c'ə\chi^w$ [from underlying $*\zeta^w aHA?$] // NC $*=Hā\zeta^w A$ 'pour, wash', or $*=Hā\zeta^w A$ > AvA $*\zeta:Vb-$. [$*w$ 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 $\lambda'ə\chi^w$ 'cripple' : MC $\lambda'ə\chi^w$ 'die, kill' / (?) CS:Ls $\lambda\chi^w$ 'hunt' (also IS:MS $\lambda\chi^w$ -) // NEC $*=il\chi^w V-$ ($-qw-$) 'die' vs $*=il\chi^w V-$ 'kill'. [Note sound symbolism in NEC].

[=5] Sa:MC <i>ʔəx^w</i> - 'die, kill' / ? Ls <i>ʔəx^w</i> - 'hunt'	NEC <i>*=ilχwV-</i> (<i>-q^w-</i>) 'die'; <i>*=ilχwV-</i> 'kill'
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(6) [Type =VCwV in NEC] WHITE, BLUE: Ts:UC *q^wa/ux^w*- 'wh.', *q^wiχ-* 'b.' // NEC **=əq^wǎ* 'yellow' > AvA **q:oi-* 'wh., b.' > Av. *q:áħa-b* 'wh.', Chad. *qáħa-b* 'wh.', And. *q:ʷoj* 'b.' (PAnd. **ʔV-q:ʷo-ji-*).

(7) [Type C^wVC(u) in Sa vs =HV-CwVC in NEC] FEAR: Ts:UC *q^wanu-* // NEC (AvA and Lezg.) **=Hǎ-GwVn* 'tremble, be afraid' > AvA **=ibVn-* / **biVn-* > Cham. *bisin-*, Tind. *bisan-* / Lezg. *ʔǎq:ʷVn-* > Arch. *e=q^win-*.

(8) [Type CVC^w in Sa vs =iCCwVC in NC; altern.: Sa CVC^w is a metath. of CwVC] SEW: IS:MC *ləx^w*- : MS *lɛx^w* // NC **=ilq^wVn-*. - Pre-Sa may represent a metath. of the old **q^wwil-*.

(9) [Type wVC in Sa vs =VwCwV in NEC] TO OPEN: Ts:UC *wat-a-* // NEC **=əwλ(w)V* > Lezg. **ʔǎwλɛ* 'unlock'. - (Cf. Ts:UC *wax-* 'open (eyes)' // NEC **=əwλ(w)V* > Darg. **ʔawx:-* > *ʔabx:-* 'to open').

(10) [Type CVC^w in Sa vs =iCCwV(C) in NC] BEND: IS:Th *ʔaq^wəw-t* 'bend over' // NC **=ilq^wV(t)*.

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

[=11]UC <i>wi-</i> do, make	Tsez. <i>*=Vw</i> id.	WC <i>*wə</i> id. <	NC <i>*=ǎhwV(r)</i> id.
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(12) [Type CVC(V) in Sa vs =VCVC in NEC (> CVC)] SUCKLE, CHEW: Ts:UC *c'am-i* 'suckle' // NEC **=əčVm-* 'gnaw, chew' > AvA **čVm-* 'chew' / Darg. **čam-*.

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

[=13] UC <i>cu(-n)</i> <PSa	AvA <i>*=ocVn-</i> 'talk'	WC <i>*c:ʷa</i> 'talk'	< NC <i>*=[i]mcŪ</i> 'talk'
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(14) EYE, LOOK: Ts:UC *=us-i-* 'face, eye', *-al-us* 'eye' // NEC **=HimsV* 'to look' (> AvA **-us-* > *-us-* 'to search' in modern AvA 1-ges) [cf. NEC **c'il-* 'eye' : Sa **c'il-*]

[=14] Sq <i>=us</i> 'eyes', UC <i>=us(-i)-</i>	<i>-us-</i> < AvA <i>*-us-</i> 'to search'	< EC <i>*=HimsV</i> 'to look'
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(15) [Type yVC in Sa vs =iCCwV in NC] (TURN) AROUND: IS:Sp *yir* (and a borrowed *yal* ?) / Ts:UC *yəʔ* (*I* < **r*) 'around' // NEC **=irβwV* 'roll, turn around'.

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

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

(18) [Type ʔiC(C) in Sa vs =iCwVC in NEC] EAT: Ts:UC *ʔitn* // NEC **=iʔwVl* 'feed on, eat' (> Tsez. **heln-* / **hel-l-*).

(19) [Type ʔVC^w in Sa vs =iCwV in NEC (> =VCwV)] GO: CS:Ls *ʔux^w* // NEC **=iχwV* / **=iqwV* 'go, come, enter' (> Tsez. **=ux^w*).

(20) [Type ?VC in Sa vs HVCCV(C) in NEC (> =VC)] SEE: Ts:UC ?əx , ?a-?χn // NEC *Hārg'V(n) 'see, find' ($\text{> Tsez. *tq- / Darg. *=ahl-}$).

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

[=21] UC xax^w 'quick'	Cham. χ:ίχ:u 'quickly'	< AvA *χ:ίχ:V- <	EC *=āχV 'quick'
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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 , ɫ , ɬ , y , (in many cases:) x , ʕ , ʔ ; consonants x , ʕ , ʔ may be labialized ([w] represents a neighboring labial vowel or an underlying labial consonant).

- (1) DIRT: Ts:UC q'ax- 'mud, smear, paint' // NC *q'ārē (*r > x in Sa?).
- (2) BANK: MC xər'-xər'-t 'steep bank' (root metath.?) // NEC *rēGV .
- (3) DAY: Ls ləx // NC *rīhV . [Sa l may originate from *r].
- (4) HARD: PSa *ɬ'aʕ^w/x^w > Ts:UC / CS:Sq ɬ'əx^w / BC (Nu) ɬ'aχ^w vs IS:MC yəʕ^w // NC *wērV ([w] shifts to the right, to a more "comfortable position", after *r turns [x]; there is also a shift of glottalization from L' - H to Y - H).
- (5) WOOD: CS:Ls yesawi 'alder' // NC *rāšwē 'tree, wood' (Sa y- < *r , *S- becomes -saw-).
- [(6) BREAK: IS:Th $\text{ma}^{ʕ}$: CO $\text{m}^{ʕ(w)}$: MC $\text{ma}^{ʕ(w)}$: 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 mīx^w : MS mīx^w / CS:Ls mīx^w (< [mɫx/rU]?) // N *mārV]

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 y), ʔ (> '); relatively seldom to r - ɫ - 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^wəy' (y may originate from sonorants of the type y , l , ɫ , ɬ , r ; -' in -y' may indicate an underlying *H) / (II): IS:MC qəx- , qχ- (+ stressed "instrum." suff. -mīn ; loss of [w] in an unstressed root in a compound C(V)C-CVC) : Sp and MS qχ- (with suff.) // NC *qwīthV (Sa stem I *q^wə/ir' seems to match NC) // N *kErV (NB Sa stem II); St. '89 # 86.
- (10) COLD: IS:MC c'əʔ 'cool off' : Sp c'er , c'al ; cf. Ts:UC cix , etc. // NC *č'wErHV .
- (11) BOY: IS: CO t-twi-t : MC tw'i-t : MS t-t'wi-t : Th təwi-t (dimin. t?u-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 $\text{t'a}^{ʕ(w)}$ 'little', Th t?u- (etc.), cf. NC *t'ihV 'small, little' (possibly = NC $\text{*t'ihU > AvA *t'VH^wV-}$).

(12) (?) GROW(TH): PSa $*\lambda'a\chi^w$ (as both in IS and CS) 'grow(th), old' > CS:Ls $*\lambda'a\chi^w$ 'grow(th)' - Also IS:CO $\lambda'\chi$: MC $\lambda'\partial\chi$ - (root) 'grow up' / CS:Se $\lambda'a\chi-a\chi$ *'grown up' > 'old person' // NEC $*\lambda'or\chi wV$ 'sprout'. (Sa $*a$ is shown by both main branches: IS:CO and CS:Ls).

(13) ROCK: IS:Th $\lambda'i\chi^w$ 'rock, gravel' // NEC $\underline{\lambda}'w\check{e}hru$ (/-/) 'rock, cliff' [Note $*w$ -shift, from left to right in pre-Sa].

(14) (?) INTESTINE: MC $p'i?-p'i?$ 'guts, int-s' // NEC $*bf\check{e}r\lambda'V$ 'large intestine'.

(15) LYNX (etc.): IS:Th $m(\partial)y\partial w$ // NEC $mHarGVwV$ 'tom-cat'.

(16) TELL A STORY: IS:CO $m'ay?-, m'ay'a?-$: $mal\chi a?$ 'lie' (a different root?) / MC may' - (root) 'tell a story, confess' // NEC $*m\zeta/h\bar{a}r\chi w\bar{a}$ 'tale'. [CO m' - seems to match NC $*m\zeta/h-$].

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 $\lambda\partial m(?)$ 'dew' (cf. $\lambda\partial m?-x^w$ 'rain') matches easily AvA $*\lambda:imV$ - 'liquid' (as in And. $\lambda:emi$) and Lezg. $*\lambda:\bar{a}im\bar{a}$ - (but not Lak. and Darg.), as well as the more complex proto-form NEC $*\lambda'HwemV$ 'liquid' (adj.); this cannot be a coincidence, there are too many such precise correspondences. (cf. also numerous Wk-NC exact matches, such as He $q'^w\partial n-G^w a$ - 'throat' vs AvA $*q':^wan-q':^w a$ < NEC $*Gwan-Gwa$ 'throat'; or NWk = Kw $cn\chi^w$ - 'fat' vs NEC = AvA-Darg. $*c\bar{e}n\chi wA$ 'fat'; or No $k^w\partial th$ - 'tap, knock' vs AvA $*k^w\partial r\tau a$ 'hammer' [> Tind. $ko\tau a$, etc.] / NWC $*k:\partial t^wV$ '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 America 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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