

On the Origin of Some Semitic
Names of Body Parts

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In this paper an attempt is made to research the origin of some Semitic names of body parts both by means of internal Semitic comparative evidence and by external comparison, both typological and genetic.

1. *ka¹bid- 'liver'. The stem has been preserved by most Semitic languages: Hb. kā¹bēd, Ugar. kbd = kabid-u (the vocalization reconstructed on the evidence of cuneiform syllabic transcription, cf. Jewish Aram., Syr. kabd-ā, Arab. kabid-, Eth. kabd. In the Mahra-Dofar (New South Arabian) languages the stem is used with the suffix *-at-, whence Mehri šabdīt, Harsusi šabdēt, East Jibbali šub¹det, Central Jibbali šub¹det, Soqotri (Johnson) 'šabdah. The attested Akkadian reflexes are kabīdu ~ gabīdu, kabattu, kabtatu and kabittu (CAD V 6, VIII 11-14, Soden AHW 272, 416). The last variant is a regular phonetic development of proto-Semitic *ka¹bid-at-V (posttonic syncope, see Dolgopolsky PhSS 1-12), with -tt- < *-dt-. The variant kabtatu may be explained as going back to *¹kabidatu (a prosodic variant of the regular *ka¹bidatu, caused possibly by "syntactic phonetics", i.e. by some special accentological conditions within certain phrases), with -bt- for the expected *-bd- due to the influence of kabittu. The variants kabīdu ~ gabīdu (with irregular lengthening of *i) and kabattu (with unclear second a) still defy explanation.

This Semitic stem for 'liver' is homophonous with the adjective *ka¹bid- 'heavy' (> Hb. kā¹bēd 'is heavy', Arabic kabida 'was heavy', Akkadian kabtu 'heavy' - with t for the expected *d possibly due to the influence of the fem. form kabittu < *kabidtu < PS *ka¹bid-at-u). This phonetic coincidence obviously suggests that the noun *ka¹bid- 'liver' goes back to this adjective. The trouble is semantic. Semantic explanations like "der schwere Organ" (as in Koehler-Baumgartner HAL II 435) are not satisfactory unless embedded into the proper context.

Why should one use the word for 'heavy' as designation of this particular organ? Liver is not the heaviest part of the body, it is not heavier than meat or bones. And why should liver be named precisely after its weight rather than after any other of its qualities?

In order to find the opposition lying behind the etymology of this word, we should make use of semantic typology. First of all, typological data show that in the history of languages 'liver' was not a term of anatomy and medicine (as it is today for many of us), but rather a term of butchery and cooking. In Russian the word for 'liver' is *печень*, which literally means 'something fried, baked': this Russian word first designated a dish (fried liver) and only later was transferred to the body organ. The same is true about the New Greek word *συκώτι* 'liver', going back to Late Greek *συκωτόν* 'liver', which is an ellipsis from Ancient Greek *ἥπαρ συκωτόν* 'liver of animals fed on dried figs' (attested in Galenus and Oribase). This exquisite dish was named in Late Vulgar Latin **fikatūm* ("fed on figs"), whence the word for 'liver' in the Romance languages: French *foie*, Spanish *hígado*, Italian *fegato*, Rumanian *ficat*. In all these examples the notion of 'liver' belongs to cooking. More important for us are cases where 'liver' was first a term of butchery. One of the Old Irish names of 'liver' is *tromchride*, compound of *trom*'heavy' and *cride* 'heart'. Here we find the key to solve our problem. The stem *cride* 'heart' actually means here 'pluck', so that *tromchride* literally means 'heavy pluck', which suggests that there must be an opposition of 'heavy pluck' to 'light pluck'. Then what is the 'white pluck'? Etymological analysis of Irish shows that this is 'lung': Old Irish *scam*'lung' goes back to a Celtic adjective for 'light' (cf. the Welsh cognate *ysgafn*'light', see Vendryes LEIA: S-31 and T-149). A similar opposition of 'liver' and 'lung' is found in some Turkic languages, e. g. in Turkish: *kara bağır* 'liver' (the literal translation is approximately 'black pluck') vs. *ak bağır* 'lung' (= 'white pluck'). The use of the adjectives 'black' and 'white' is accounted for by the wide semantic associations of color terms in Turkish, where *kara* 'black' is used as a designation of something strong, large, hard, while 'white' is associated with weak, tender, soft, small. The same opposition of 'liver' and 'lung' exists in Persian: *žegār siyah* (literally 'black pluck') means 'liver', while *žegār sāfid* ('white pluck') is 'lung', and in Bulgarian: *чер(ен) дроб* 'liver' (lit. 'black pluck') vs. *бял*

дроб 'lung' (lit. 'white pluck').¹ We see that the term opposed to 'liver' is 'lung'. This explains the fact, that in many languages the word for 'lung' goes back to the adjective for 'light': English *lights* 'lung', Russian лёгкие 'lung' (< pl. of лёгкий 'light'), Portuguese leve 'lung' (< 'light'). All this suggests a typologically frequent context: liver and lung are opposed as different kinds of pluck, the specific difference being their weight: liver is heavier, while lung is lighter.

Thus we have found the contextual embedding which confirms that PS *ka¹bid- 'liver' is really a substantivized adjective, etymologically identical with *ka¹bid- 'light'. This name for 'liver' is obviously a Semitic innovation which ousted an earlier Hamito-Semitic (Austroasiatic) name for 'liver' observable in other Afroasiatic languages: Egyptian *mꜣz.t* 'liver' and the North Omotic word reconstructed by Václav Blažek as *māyz- 'liver' > Male *māyzi*, Basketo *māyaz*, Doka *mayz*, She *may*, Chara *mayya* 'liver' (cf. Blažek OLBP 21, #72).

2. *lišān- 'tongue' > Hebrew st. constr. לְשׁוֹן *laššōn*, st. abs. לְשׁוֹן *laššōn*, Ph. *lasun*, Ugaritic *lšn*, Ugar. (in Akkadian syllabic transcription) {Huehn.} *la-ša-nu*, Old Aramaic *lšn*, Imperial Aram. לְשׁוֹן *lšn*, (in Akk. transcription) *li-iš-šá-an*, Biblical Aram. לְשׁוֹן *liššān*, West Syriac ܠܫܢܐ *liššān*, Arab. لِسَان *lisān*-, Sabaic 𐩣𐩨𐩪𐩣𐩥𐩢𐩪 *lišān*, Ge'ez 𐩦𐩨𐩪𐩣𐩥𐩢𐩪 *lašān*, Mehri 𐌸𐌶𐌸𐌸𐌸 *laššān*, pl. 𐌸𐌶𐌸𐌸𐌸𐌸 *laššān*, Harsusi 𐌸𐌶𐌸𐌸𐌸 *laššān*, pl. 𐌸𐌶𐌸𐌸𐌸𐌸 *laššān*, East Jibbali 𐌸𐌶𐌸𐌸𐌸 *laššān*, Central Jibbali 𐌸𐌶𐌸𐌸𐌸 *laššān*, pl. 𐌸𐌶𐌸𐌸𐌸𐌸 *laššān*, Soqotri {Lesl.} *léšín*, pl. *líšhen*, Akk. *lišān*- 'tongue'; the replacement of *i by a, ā in the Canaanite languages (Hb., Phoen., Ugar.) is due to some phonetic and analogical process(es); e.g., in Hb. and Phoen. it may be explained as a back formation from st. constr. based on the analogy with the by far more numerous nouns of the Cā¹CōC- pattern: st. c. *laššōn* - st. abs. *laššōn* like st. c. *šā¹lōm* - st. abs. *šā¹lōm*).

The stem has cognates in other Afroasiatic languages:

(1) Eg. *nś* (= {Vyc.} *[lišy-] id., cf. Vyc. GÄSW 395-6, DELC 99) > Copt. 𐩧𐩨𐩪𐩣𐩥𐩢𐩪, 𐩧𐩨𐩪𐩣𐩥𐩢𐩪 id.;

¹ I am grateful to Dr. Dimitr Ibrizimow for drawing my attention to this typological parallel in Bulgarian.

(2) Chadic {Jungraithmayr-Shimizu} * \checkmark l_s₃ > (a) West Chadic {Stolbova} *ħa-lisi-(um) 'tongue' (probably, lit. 'head-tongue', since the prefix *ħa- of body parts is likely to go back to WCh. *ħama- 'head') > Hausa hářšè id.; proto-Sura *lis > Sura, Montol, Kofyar líś, Angas {Hf.} líś; Ron: Fyer léś, Daffo-Butura líś, Bokkos alis, Kulere alús; proto-Bole-Tangale {Stolbova} *lisim > Bole lisim, Karekare lusu id., etc.; South Bauchi subgr.: Zar {Shimizu} rìsín, Boghom {J} ηελεś; (b) Central Chadic: \checkmark nš̂ (dissimilation from \checkmark lš̂ ?) in Kotoko: Logone nš̂ì, pl. š̂àš̂àn (< *lVš̂Vn ?) and in Mbara {Trn.} náš̂à̀y, as well as \checkmark ls (dissimilation from * \checkmark lš̂ ?) in Musgu {Trn.} àléś and in Musgu-Ngilenong {MB} ελεśì; (c) East Chadic *l'is- 'tongue' > Mubi {Lk.} líśì, Birgit {J} líśì, Jegu {J} lèśó, Mokilko {J} ʔ̀l̀zé, Dangla E {Fdr.} lèśé, Barein {Lk.} lisingo, Sumray {J} d̀l̀-èśé, Kwan kí-lisí id. For more details cf. Jungraithmayr ChRL s.v. 'tongue', Dolg. ChCS #22.

In order to elucidate the origin of the Sem. noun *lišān-, we must take into account two facts:

A. In Sem. there are phonetically similar verbal roots meaning 'to lick': * \checkmark lš̂š̂, represented in Arabic \checkmark lss 'to lick' (impf. ya-luss-u) and *-lVš̂- > Arabic \checkmark lws id. (impf. ya-lūs-u). These roots are obviously cognate to Hausa lāsá 'to lick'. This fact suggests that *lišān- is a derived noun, with *-ān- functioning as, or going back to, a nominal derivational suffix.

B. The element *-ān- in the Sem. word *lišān- has no parallel in other Afroasiatic languages (except for the Logone pl. form š̂àš̂àn). This fact may be interpreted in two different ways: (a) We may assume that the element corresponding to Sem. *-ān- existed in proto-Afroasiatic, but was lost in Eg., Berber and Chadic due to regular phonetic changes (e.g. reduction in an unstressed syllable), (b) Alternatively, we may assume that in Eg., Berber and Chadic the word for 'tongue' was derived from the verb 'to lick' not by means of the suffix *-ān-, but by other derivational devices (the suffix represented by Eg. *-y- in *lisy- 'tongue', or any other suffixes, tone or a plain conversion without suffixes?). The choice between these hypotheses is still open.

3. Sem. *g'irān- 'throat, neck' > Arabic ġirān- 'upper part of the camel's neck', Hebrew gā'rōn 'throat, neck' (whence Jewish Aram. gārō'n-ā or [according to Jastrow] gārō'nā); Koehler and Baumgartner

(KB HAL I 194) mention (after Holma NK 41-42) Akkadian *girru* and *girānu* 'throat', but today we know that these words do not exist. The vowel *-ā-* in Hebrew *gā'rōn* is probably not original, but goes back to morphological reinterpretation of forms like *garōnō* 'his throat', *garō'nōt* 'throats', st. constr. *ga,rōn* 'throat of, etc. (like in the case of **lišān-* > Hebr. *lā'šōn* 'tongue'). The stem **g'i'rān-* coexists with Semitic *gir(r)-* > Middle Hebrew *הַגְּרָא* *gē'rā* '(animal's) throat' (Lewy WTM I 358).

4. Sem. **ḳarn-* (or **ḳaran-*?) 'horn' > Hb. *ḳerēn* 'horn', du. *ḳar'nayim*, pl. (usually in derived meanings) *ḳarā'nōt*, Ugaritic *ḳrn* 'horn', Biblical Aramaic *ḳerēn*, st. emph. *ḳar'n-ā*, Syriac *ḳar'n-ā*, st. constr. *ḳa'ren*, Arab. *qarn-*, Ge'ez *ḳarn*, Mehri (Johnson) *ḳōn* (pl. *ḳerūn*), Harsusi (Johnson) *ḳōn* (pl. *ḳerōn*), Jibbali (Johnson) *ḳun* (pl. *ḳérún*), Soqotri (Johnson) *ḳan* (pl. *ḳarhon*), Akkad. *ḳarn-u(m)* 'horn'.

This root has cognates in other Hamito-Semitic languages:

(1) Omotic: Kaffa (Cerulli) *ḳarō* 'horn', Mocha (Leslau) *ḳaro* id. and possibly Janjero (Cerulli) *ḳalā* id.,

(2) possibly Eg. *kr.ty* '(two) horns' (with deglottalization **ḳ* > *k*).

Here, as in the previous case, **-n-* is present in Semitic and absent in other Afroasiatic languages. Is **-n-* a suffix? Widening of comparative framework may be helpful in resolving the question.

5. pS **ḳudṣn-* 'ear' > Hb. *ḳōzēn*, Ug. *ḳdn*, IA du. st. abs. *ḳḏn*, JA *ḳḏn*, WSyr. *ḳḏn*, Ar. *ḳudn*, Sab. *ḳḏn*, Eth. *ḳḏn*, Jb. *ḳōzēn*, Sq. *ḳḏn*, Mh., Hr. *ḳḏn*, dimin. Mh. *ḳḏnōt*, Akk. *uznu(m)*. The initial *ḥ-* in Mh. and Hr. goes back to a prenominal particle (a kind of article?).

This root has cognates in other branches of Afroasiatic:

(1) Egyptian *ḳdn* 'ear' ([*ḳnk*]... *szm ḳrw mḳ ḳdn ggwy* 'I am he who hears a sound/voice like an attentive ear' [Coffin Texts VII 30k (from W. Vycichl's pers. comm. to the author)], cf. Gilula IE 251, Vycichl VLE I 45, cf. also Budge EGH 103; *ḳdn* is mostly found as phonetic reading of the character representing an ear) (Erman-Grapow WÄS I 154); its vocalized form is, in all probability, **ḳudn-* or **ḳudūn-*;

(2) Central Cushitic (proto-Agaw) *was- 'to hear' (> Bilin was-, Khamtanga wāš-, Kemant was-id.; cp. Appleyard AVCN 22), (?) South Cushitic: Kwadza wata 'ear';

(3) Omotic (Blažek) **wayz- (= Dolgopolsky: *wayǰ-) 'ear, to hear' > Male wayz-, Kaffa wāy-, Janjero wēs- 'to hear', Mocha wāǰǰi 'ears' (?), Zay waye 'ear', Basketo wɔyɔci, Doka wayci, Koyra uwāše id., Shinasha wāza 'ear' (Appleyard AVCN 22, Blažek OLBP 11).

In the light of what is known from Afroasiatic comparative phonology, the Afroasiatic root in question may be reconstructed as *ʔuǰ-. In Semitic and in Egyptian the stem includes an element (a nominal derivational suffix?) *-n- or *-ǰn-.

6. Sem. *baṭ_Lǰn- 'belly, stomach' ('Bauch') > Hebrew בֶּטֶן 'beṭen, Old Canaanite (El-Amarna) baṭnu, Imperial Aramaic bṭn, bṭn?, Jewish Aramaic baṭ'nā ~ biṭ'nā, Syriac baṭ'nā 'belly', Mandaic baṭna 'large belly, pregnant belly', Arabic baṭn- 'belly, interior' (KB HAL I 116-7, Drower-Macuch MD 47); this stem may be genetically connected with Syriac bṭā 'anus, podex', Modern East Aramaic bṭā 'penis' and Mandaic buṭa 'bottom, anus' (< Sem. **būṭ-?) (Payne Smith TS I 464, Maclean DVS 27, Drower-Macuch MD 54). These two stems have parallels in Berber and Chadic:

(1) Berber *buṭ 'fond' > Ait-Izdeg (Mercier) a-buḍ 'fond, extrémité, orifice anal', pl. i-baṭṭan, Beni-Snus (Destaing) buḍ 'fond' (Mercier VTB 120); another possible (but less plausible) cognate is Berber *√^rφ|H¹ḍn 'middle' > Tahaggart (Foucauld) ā-haḍun 'the 15th night of a lunar month' (Prasse H 29 rejects the reconstruction of the Berber root *√^rφ¹ḍn and its comparison with Semitic);

(2) Chadic (Jungraithmayr-Shimizu) *√ bṭ 'belly' > (a) West Chadic *buṭ|ṭV 'belly' (transglottalization *b...ṭ > *b...t or assimilation *b...ṭ > *b...ṭ) > Sura, Angas buṭ, Montole bṭt, Gejo bṭtì, Fyer bṭtó id. (cf. Stolbova ZCh 157, #113), (b) East Chadic: Birgit bṭtùrì 'belly', (?) Mokilko bóddè 'fond d'un canari cassé' (Jungraithmayr LMok. 66, Jungraithmayr ChLR I s.v. 'belly').

As we can see, here, like in some other cases considered so far, the *n-suffix, which is present in Semitic (at least in one of the cognate stems), is absent in Berber and Chadic.

7. Sem. *ʕayn- 'eye' > Akk. ʕn-, Arab. عَيْن ʕayn-, Hebrew ʕayin, Phoenician, Ugaritic ʕn, Old Aramaic, Imperial Aramaic ʕn, Biblical Aramaic st.constr. ʕn, pl. ʕayn-ʕn, Jewish Aramaic (Targum), Jewish East Aramaic ʕayin (rare), st. emph. ʕayn-ā ~ ʕayn-ā, Syriac {PS} ʕn, st. emph. (WSyr.) ʕayn-ā, (East Syriac) ʕayn-ā, st.c. (East Syriac) ʕn, Sabaic ʕn, Ge'ez ʕayn; the same word means 'spring' in Hebrew, Ugaritic, Arabic, Jewish Aramaic, Sabaic, Ge'ez, Akkadian, etc. (KB III 773-5, KB LVTL 1107, JH DISO 207, Aistl. ##2055-2056, Levy WT 212-3, Brockelmann LS 522, Payne-Smith II 2867, BGMR DS 23, Leslau CDG 79-80). In West Semitic there is a verb *ʕayn (D-stem) 'to look, contemplate' and the like > Hebrew, Ugar., Syr., Ge'ez ʕayn (D-stem) id.; its form (D-stem) suggests that the verb derives from the noun *ʕayn- 'eye'. This Sem. root has cognates in all other branches of Afroasiatic:

(1) Eg. ʕn, ʕn *'eye' (preserved as a graphic sign: figure of an eye read as ʕn, ʕn); {Erman-Grapow} ʕn 'Name von Gewässern' (interpreted by Budge as 'well, fountain') (Erman-Grapow I 189, Budge EHD I123);

(2) ? Berber {Prasse} *ʕnh₃y ~ *ʕh₃ny 'to see, look' > Taneslemt ənh₁ = ənh₁, impf. int. i-hannəy, verb. n. a-hanay, Tahaggart əni (Pr.'s phonemic transcr.: əny), impf. intens. i-hānnəy, verb. noun ă-hanay, Ghat əni = əny, impf. int. i-hannəy, East Tawllemmet, Tayert ənəy, impf. int. i-hannəy, Tadghaq ənh₁ 'to see', North Berber: Tashelhit {Dest.} annäy, pres. y-ännäy 'apercevoir qch. qui tombe sous les yeux', Ait-Izdeg {Merc.} inni, iannay 'to look at' (Fc. III 1357, Pr. H #563, Ghoub. 152, Mercier VTB 218, Dest. VFB 296); in Prasse's opinion, the variant *ʕnh₃y is original, while *ʕh₃ny goes back to a metathesis (Pr. H 15-6), but in the light of external Afroasiatic comparison the opposite is likely to be the case;

(3) Cush.: East Cush. *int₃ ~ *ind₃ 'eyes' (< **ʕin-t₃ ~ **ʕin-d₃ with loss of *ʕ- due to the influence of the sing. *il 'eye'?) > Afar {PH} intīta, Saho {Welm.} intit, {R} intīt ~ ʕintīt 'eyes' (whence by back formation sg. Afar {PH}, Saho {Welm.} inti 'eye') † Northern Somali índó 'eyes', Boni innə, Rendille indo, Gidole índā, Dasenech ʔinni, Elmolo ínnaʔ, Arbore ʔindá 'eyes' (in all these languages there is a suppletivism

sg. *iḷ - pl.*inḏ∇); the word is likely to go back to **ʕin- 'eye' with the plural marker **-t∇; the glottalization *t>*ḏ has not yet been explained;

(4) ? Omotic: Kaffa {Cerulli} ĩnō 'salt water spring', unnō 'spring', Anfilla {Grotanelli} ino id., Gimirra {Bulatovich} аН'eye' (Black LEC 196, Dolg. SF 149-50, Hayward Arb. 340-1, PH AEFD 137, Lamberti SD 315);

(5) Chadic: A. WCh. {Stl.} *ʕʔayan- 'to see' > Bolewa {Lukas} ʔinn-, North Bauchi subgr.: Pa'a {M. Skinner} ḥan, {SIL in ChWC} hani, South Bauchi subgr.: Geji {Shimizu} yenî, {St. Lucas in ChWL} yèni, Pelchi {St. Lucas} yenũ 'to see' [data from Ron, adduced by St., are based on misreadings]. B. Chadic **Hind∇ 'eye(s)' (= Newman's *iɗə) > (a) West Chadic *ʔinda > Hausa ídò 'eye', pl. ídànú, Gwandara ńḏàni 'eye(s)'; proto-Sura {Hoffmann} *yit, {Stolbova} *yid 'eye(s)' > Sura, Gerka, Montole, Goemay, Chip yit, Kofyar y+t; prproto-Bole-Tangale *ʔiḷḷd∇ ({Stolbova} *ʔid∇) > Bolewa ìdó, Dera yéʔò, Karekare ʔìdó, Gera ì:ḏí, Geruma ìdá, Bele ìdó, Kirfi ìró, Tangale ído, {Lukas} idu, ? Pero ándò; North Bauchi subgr.: Jimbin ʔìdá, pl. ʔìdì, Siri ítà, Miya aḷti~eti; Ngizim subgr.: Ngizim, Bade dà 'eye'; words of SBauchi and Ron languages with -r-, adduces by Stolbova l.c., do not belong here, since -r- is not a regular reflex of West Chadic *-d- or *-t-; (b) Central Chadic: Tera {Newman} yiti, Dghwede {Frick in ChWC, ChWL} ńḏè; (c) ECh.: Sokoro íd, ? Dangla {Fédry} ódò, Migama {J} ʔíḏè, Jegu {J} ʔúḏê, Birgit {J} ʔúḏì 'eye'; Newman's proto-Chadic *iɗə, Jungraithmayr-Shimizu's pCh. *ʕyḏ and Stolbova's West Chadic *ʔida do not take into account the evidence for *-nd- provided by Gwandara, Pero and Dghwede (Jungraithmayr ChLR I s.v. 'eye', Jungraithmayr-Shimizu's ChLR II 96, ChWC, ChWL, Matsushita CVGD 29, Stolbova ZCh. #784, Hoffmann AGG #182, Schuh BTL 144). As we can see, the root had a nominal meaning ('eye', 'spring') in all branches of Afroasiatic except Berber, as well a verbal meaning ('to see') in Berber and Chadic. Within Hamito-Semitic we have no means to elucidate the semantic history of the root, no means to decide whether the verbal meaning ('see') derives from the nominal ('eye') or viceversa. But in any case the nominal meaning ('eye, spring') is present in Afroasiatic, and Sem. *ʕayn- 'eye' is a direct continuation of Afroasiatic *ʕayn-/?ʕin- 'eye'.

8. Sem. *šinn- 'tooth' > Akkadian šinn-*u(m)*, Hebrew שֵׁן šen (stem šinn-: šin'n-ō 'his tooth', šin'n-ayim 'teeth'), Phoen. שֵׁן 'tooth', Ugar. šnt-k 'thy teeth', Biblical Aramaic šen / šinn-, Aramaic (st. emph.) šin'n-ā, Arabic sinn-, Ge'ez san, Eastern Jibbali šín, Central Jibbali šnin 'tooth', pl. šnun (KB HAL IV 1472-4, Johnstone JL 262, Johnstone ML 609, Leslau CDG 504).

The word has cognates in Berber, Chadic and Egyptian:

(1) Berber *-sīn- 'tooth' > Tahaggart i-sīn-an 'teeth', e-sīn 'incisive tooth', Ghat i-sin 'tooth', pl. i-sin-an, Ghadamsi a-sēn, pl. sēn-än, Siwa a-sāīn, pl. i-sīn-an (āī < *ī regularly in final closed syllables, cf. Laoust S 4), Sokna, Sened i-sīn, pl. i-sīn-an; the homogeneous and consistent (throughout the whole Berber family) phonetically regular structure of the word, allowing the reconstruction of proto-Berber *-sīn-, rules out its explanation as loan from North African Arabic sanna 'tooth' (Foucauld DTF IV 1840, Lanfry G 345, #1481, Laoust S 224, Nehilil G 149, Sarnelli DBS 16);

(2) Chadic *s₂in (pl. *s₂an) 'tooth' [*s₂ (= Newman's ɛ) stands for the phoneme which yields West and East Chadic *ɣ and Central Chadic lateral *ɗ] > (a) West Chadic: Zar šin 'tooth'; (b) Central Chadic *ɗin 'tooth', pl. *ɗan > Kotoko subgroup: Logone (Lukas) šini, pl. šan, Buduma (Lukas) hínay 'tooth', Gulfei xir, Kotoko šan; Margi subgroup (with *-n > -r): Margi, Kilba xir, Padokwo šira; Tera subgr. (with *ɗ > ʒ): Tera ʒin; Matakam subgr.: Giziga šin, šin, Matakam ʒe'en, Hurza, Vame šahán, Mofu šér, Zugo ʒír; Mandara subgr.: Wandala šaré, Glavda šír-da; Masa subgr.: Masa sī-ta; Musgu subgr.: Muskum sɔyɔn, Mogrüm šínšín; (c) East Chadic: Mubi (Lukas) sɔnàn, pl. sánì, Jegu (Jungraithmayr) sàñò, Birgit sánò, Mokilko (Jungraithmayr) sɛño, pl. señèñ, Bidiya sɔntá, pl. sɔná, Kera ká-sáñ, Tumak hin 'tooth' (Jungraithmayr ChLR I s.v. 'tooth', Jungraithmayr LMok. 175, Khalil-Jungraithmayr LB 11, Tourneux LTD 20, Rossing MM 349 [753], Kraft ChWL); the forms of Kotoko and Mubi suggest that *s₂an was originally the pl. of *s₂in (formed by means of the Afroasiatic pattern of a-plurals, cf. Greenberg IP);

(3) (?) Eg. sn (= śn in Erman-Grapow's transliteration) 'Zweizack' (the phonetic reading of the character resembling a fish-spear, or, according to Gardiner, 'two-barbed arrow-head') (Erman-Grapow WÄS IV 148, Gardiner EG 514).

The Cushitic cognate of the word in question is dubious:

(4) South Cushitic: Iraqw (Whiteley IP) *sihîno* 'tooth', pl. *sihîni*, (Whiteley SI) *sêhno* ~ *sîhno* 'a tooth', Alagwa *sihîno*, pl. *sihēni*, Burunge *sihina*, pl. *sihēri* (Whiteley IC 26). This cognate is questionable, unless one finds an explanation for the unexpected word-medial *h*.

The Sem., Berber and Chadic reflexes of the Afroasiatic word in question coincide semantically: all three mean 'tooth', while the Egyptian reflex (*sn* 'Zweizack' or 'arrow-head') is semantically derivable from the meaning 'tooth' (a metaphor). Hence, the original meaning seems to have been 'tooth'.

9. Sem. **raḥim-* 'womb' > Akk. *rēmū*, Hebrew *רֶחֶם* 'reḥem, Jewish Aram., Syr. *raḥmā*, Arab. *raḥim-*, Tigre *raḥam*; for details of the reconstruction of the stem (and especially of the posttonic vowel **i*) cf. Dolgopolsky SNSE 75, 78.

This word has a cognate in Cushitic: East Cush. **rim-* 'uterus' > North Somali (Abrahams) *rīmán* 'pregnant' (of an animal), *rímay* 'uterus', Oromo *rim-* 'to be pregnant', *rimaya* 'foetus', Burji *rīmā* ~ *rimā* 'intestines', *rimayḵaf-* 'to become pregnant' (of cattle)' (cf. Sasse EDB 160).

10. Sem. **p-* 'mouth' (with stressed case suffixes: st. det. nom. **p-u-m*, gen. **p-i-m*, accus. **p-a-m*, st. constr. nom. **pū*, gen. **pī*, accus. **pā*) > Arabic st. c. nom. *fū*, gen. *fī*, accus. *fā*, st. indet. acc. *f-an*, Hebrew *פִּי* 'pē, st. constr. *פִּי*, Akk. nom. *pū-šū*, gen. *pī-šū*, accus. *pā-šū* 'his mouth'. Some forms have been re-structured on the basis of the proto-Sem. st. det.: Biblical Aramaic (st. c.) *פּוּם*, Arab. (st. indet.) *fam-un*, *faim-un*, *fim-un*. On the origin of this peculiar paradigm cf. Dolg. PhSS 3, 7-8.

This root has cognates in Cushitic, Omotic and probably in Chadic:

(1) Cush. (Dolgopolsky SF) **ʔap-*, (Ehret) **ʔaf-* ~ **yaf-* 'mouth': East Cushitic > Saho, Afar, Somali, Rendille, Boni *af*, Dasenech *ʔaf-u*, Oromo *af-ā(-ni)*, Konso *ʔaf-ā*, Highland East Cush. (G. Hudson) > Sidamo, Kasmbatta *afō*, Gedeo *afaʔo*, Burji *afa*; Agaw **ʔäp-* > Bilin *ʔäb*, pl. *ʔäfʔf*, Hamir *ʔaf*; Beja *yaf*; South Cush. **ʔaf-* > Iraqw *af*; the Cush. word passed into Ethiosemitic: Ge'ez, Tigre, Tigray *ʔaf*, Amh. *af* (Dolgopolsky SF 135-6, 230-1, Ehret PCR #191, Sasse EDB 23, Black LEC 99, Hudson HECD 102, Leslau CDG 8-9),

(2) Omotic: Dime ʔappo, Ubaner afa, Hamer ap-, Banna āpo 'mouth' (Blažek OLBP #78),

(3) West Chadic (Stolbova) *fuH- 'mouth' > Fyer, Bokkos fo, Dafo-Butura fo, foḥ (Orel-Stolbova RAAV I #92).

Teh relationship between this Sem. word and its Cush. and Omotic cognates suggests that in the prehistory of Sem. the word lost its unstressed initial syllabl: *ʔa'p-u/a/i > *'p-u/a/i.

11. Sem. *'ḡup_Lṽ_Lr- 'fingernil, clw' > Bibl. Aram. ܛܦܪܘܗܝ ʔip'r-ōhī 'his nails', Jewish Aram. ܛܦܪܘܗܝ ʔup'r-ܘ, WSyriac ܛܦܪܘܗܝ ʔep'rܘ, Arab. ظفر ḡufr-, Ge'ez ṣafr, Mehri ḡfēr, Central Jibbali ḡífér, Soqotri 'ʔɜyɜr, 'ʔɜfhɜr, Akk. ṣupr-u 'fingernail, claw'. In Hebrew the root is represented by a derived word: ܘܦܘܪܦܢ ʔip'porēn 'fingernail'.

Cognates in Berber, Cushitic, Omotic and Chadic:

(1) proto-Berber *√ʔufr (> √ʔfr) 'front part of the foot (including the toes)' > East Tawllemmeden, Tayert Twareg e-tāfār (pl. i-tāfr-an) 'pied antérieur (de la cheville aux orteils)', Tahaggart a-tfār, pl. i-tafr-ān 'partie antérieure du pied (doigt et reste du pied jusqu'à la cheville) chez les personnes' (Ghoubeïd LTF 188, Foucauld DTF IV 1885);

(2) Cushitic: (a) Agaw: Kwara (Reinisch) ʒerfa 'finger'; (b) South Cushitic *√ʔrf 'fingernail' > Alagwa, Burunge (Whiteley) ʕarafu id.; (c) ? East Cush.: Kambatta (G. Hudson) zuruʔma-ta, zuruʔm-ičuta 'finger', Alaba (Conti Rossini) zurumʔa (Hudson HECD 64);

(3) Omotic: Kaffa (Cerulli) ɣafar-ō 'finger', Mocha (Leslau) yabaro, Anfilla (Grotanelli) ɣabéro id. (Blažek OLBP #34);

(4) Chadic: (a) West Chadic: Karekare (Meek) ɣarfeto 'fingernail', (?) Bade (R. Lukas) ŝɪbar 'finger'; (b) Central Chadic: Wandala (Mouchet) ŝirba, (Meek) sirba 'fingernail'.

12. Sem. *'ḡah_Lṽ_Lr- 'back (dorsum)' > Arab. ظهر ḡahr-, Ugaritic ḡr, Akkad. ṣēr-u 'back (dorsum)', Sabaic b-ḡhr 'on teh back of, upon'.

Cognates in Berber and possibly in Cushitic:

(1) Berber *ʔihr- > Tahaggart a-ʔir 'shoulder', pl. i-ʔīran, East Tawllemmeden, Tayert Twareg a-ʔir'épaule (os et chairs)', pl. i-ʔer-ān, Taïtoq Twareg (Masqueray) aʔir, pl. ezʔiren, Ghat (Nehliil) a-ʔir, pl. i-ʔir-an (Foucauld DTF IV 1988, Ghoubeïd LTF 22, Masqueray DTF 112); ?? Zwawa (R. Basset) a-zagur 'back', pl. i-zugar;

(2) East Cushitic (Sasse) *zir > Burji (Sasse) 'dirr-i, (Hayward) 'dir-i 'backbone', Saho dir-o 'hip', Dasenech zir 'rib' (Sasse) EDB 56); South Cushitic: Dahalo 'dāēro 'neck' (Ehret-Elderkin-Nurse DL 5, Ehret SC 189).

13. Sem. *çu'baɣ- (= *şu'baɣ- in traditional transcription) 'finger' > Hebrew **יָדָא** **יָדָא** **יָדָא** **יָדָא** 'finger' (on the allophone \bar{a} of the Hebrew phoneme \bar{a} cf. Blau BNPA), Ugar. **𐎠𐎢𐎣** 'finger, claw', Syr. **ܫܘܒܐ** 't-ā, Arab. **شوبان** ~ **شوبان** 'finger', Arab. dial. (Egyptian and other dialects) **شوبان**-, Sabaic **𐩦𐩣𐩪** 'finger', Ge'ez **ሥብላኝ** [**ሥብላኝ**(ə)t], Tigre **ሕብላት** 'finger', Mehri **ሕብላት** 'finger, toe', East Jibbali **ሥብላኝ**, Central Jibbali **ሥብላኝ**, Soqotri 'ሥብላኝ 'finger' (KL HAL I 79, Aistleitner WUS #363, BGMR DS 140, Leslau CDG 45, LH WTS 627, Johnstone ML 397, Johnstone JL 5). In most Semitic languages *u of the first syllable is lost, provoking a word-initial cluster and later a prosthetic vowel.

The Sem. stem has cognates in Egyptian, West Chadic and perhaps Omotic:

(1) Eg. **ḏb** 'finger' (= **ḏb** in traditional transliteration) > Demotic Eg. **ṯb** > Sahidic Coptic **ⲧⲏⲏⲃⲉ**, Bohairic Coptic **ⲧⲏⲃ** 'finger, toe'; according to Vycichl, the Eg. word goes back to *zubaɣ (Erman-Grapow WÄS V 562, Vycichl DELC 210);

(2) West Chadic: proto-Sura *č̣VβVn 'fingernail, toenail' > Sura **č̣iβen** (transglottalization *č̣...β > č̣...ḅ), Montol **č̣igin**, Kofyar **č̣igen**, Ankwe **ṣ̣w̄n**, Angas **č̣w̄n** (Hoffmann AGG #156, Netting WLK, Jungraithmayr ChLR I s.v. 'fingernail');

? (3) Omotic: Hozo **zāb-**, **zab-a** 'finger', Sezo **zāb-i** id. (Blažek OLBP #13).

14. Sem. *šāḳ- 'leg, thigh' > Hebrew **שׁוֹךְ** **שׁוֹךְ**, Syr. **ܫܐܩܐ** **šā'ḳā** (West Syriac **ܫܘܩܐ**) id., Arab. **sāq**- 'leg'.

The Sem. root belongs to the Afroasiatic heritage, because it has cognates in Berber in Chadic:

(1) Berber *sVkā 'feet' > Siwa **tə-ška**, Sokna **ti-škā-n** 'feet', Siwa **s-ti-ska-n** 'on foot' (Laoust S 276-7);

(2) Chadic *s₁Vk- 'leg': (a) West Chadic *sVk|g- id. > Bole-Tangale subgr.: Bolewa, Karekare, Ngamo **šeke** id.; North Bauchi subgr.: Miya **šagu-hu** id.; South Bauchi subgr.: Zem **šagla** id.; Ngizim subgr.: Ngizim **zɜgɜr**, Bade **zɜgɜl** id. (Stolbova ZCh. #292); (b) Central Chadic: Mandara

subgr.: Glavda šíg, Gava siga, Dghwede sǝǵé, Ngweshe šiga 'leg'; Matakam subgr.: Matakam sáák, proto-Mofa-Mada *sik > Muktile šík, Mofa šék 'leg' (Jungraithmayr ChLR s.v. 'leg', Kraft ChWL, Rossing MM 281).

15. Sem. *^hin_la_jk- (~ *^hanak-) 'palate' > Hebrew חֶקֶץ / -כֶּקֶץ ḥikk-, Jewish Aramaic (Targumim) ḥik'k-ā, West Syriac ܚܝܩܩܗܗ ḥek'k-ā ~ ܚܝܩܩܗܗ ḥen'k-ā, Arab. ḥanak-, etc. The Afroasiatic origin of this stem is proved by its Berber and Cushitic cognates:

(1) Berber *^hin_la_jk- 'palate' > Tahaggart (Foucauld) anɣ, Rif (Renisio) anaɣ, Ghadamsi (Lanfry) ēnɛɣ, Aït-Izdeg (Mercier) anũɣ, pl. anɣ^wn;

(2) proto-Cushitic (according to Ehret) *^hank- > (a) Agaw: Kemant (Conti Rossini) angi id., (2) South Cush.: Dahalo ḥanḳara id.; Ehret adduces Beja (Reinisch) ḥanak- id., but is obviously an Arabic loanword (cp. Ehret PCR 523).

16. Sem. *^hup_lũ_jn- 'hollow of hand, (?) hand' > Hebrew חֻפְּנֵי ḥop̄en 'hollow of hand', Aram., Syr. ḥup'n-ā, ḥup'n-ā 'hollow of hand, handful', Arab. ḥufn-at- ~ ḥafn-at- 'handful', Akkad. upn- 'fist, hand'. The stem belongs to the Afroasiatic heritage and has cognates in Egyptian and East Cushitic:

(1) Eg. ḥpt 'die Arme, Arm voll' (= *^h-pāt, according to Osing NBÄ 42);

(2) East Cush. (Sasse, Black) *^hubn- 'limb, muscle' > Somali ḥubin, pl. ḥubn-o 'limb', Oromo humn-a 'energy', Konso hupn-a 'power, strength' (Black LEC 107, Sasse CP 15, 58).

17. Sem. *^kulay-(at)- (~ *^kalay-(at)-?) 'kidney' > Hebrew pl. כְּלִיּוֹת kəlā'yōt, Middle Hebrew (Babylonian vocalization) כְּלִיָּה (to be read as כְּלִיָּה?) kol'yā 'kidney' (cf. Yeivin ML'IMNB II 905; the Masoretic sg. כְּלִיָּה kil'yā is a back formation from the pl. form), Ugar. klyt, Arab. kulay-at-, Ge'ez k^walīt, Akk. kalīt-um id.

The stem has cognates in Cushitic: proto-Cush. (Ehret) *(n)k^wa_l-, (Dolgo-polsky SF) *^ṃ-k^wa(1)lV^rḡ¹- 'kidney' > (a) East Cush. (Black, Sasse) *ka_l- > Somali kél-lí, Konso xal-l-ā, Oromo ka_l-e?, etc.; (b) ? South Cush. (Ehret) *k^wa_l- or *ⁿk^wa_l- > proto-Rift *k^wa_l- 'lower back' > Iraqw karutome 'second stomach', Kwadza kolingayo 'backbone', kolima 'nape'; (c) Amar'ar Beja (Dolgopolsky) ?an¹k^wila?a, Beja (Reinisch)

ǎnk^wé1ʔa 'kidney'. Cf. Dolgopolsky SF 195-6, Dolgopolsky SEC 13, Ehret PCR #95, Ehret SC 333, 373, Sasse CP 12, Sasse EDB 113, Black LEC 16, 192.

18. Sem. * \checkmark gnḥ 'wing, arm' > Arab. جَنَاحُ ḡanāḥ- id., (dial. of Northern Egypt) ḡināḥ id., Mehri \checkmark gnḥ in the denominative verb agōn3ḥ 'to fly'. Some Semitic language (probably belonging to Canaanite) is the source of the Late Egyptian word (of the Greek period) ḡnḥ 'wing' (Erman-Grapow WÄS V 176).

The Afroasiatic origin of the word is evidenced by its cognates in Egyptian, Cushitic and West Chadic:

(1) Eg. (from the ancient Pyramid texts on) 3nḥ (= \underline{d} nḥ in traditional notation) 'wing; leg or its part' > Demotic 3nḥ 'arm, wing' > Coptic: Sahidic ⲬⲚⲁϩ, Bohairic ⲬⲚⲁϩ 'arm, wing' (Erman-Grapow WÄS V 577-8, Erichsen DW 682, Vycichl DELC 329);

(2) proto-Cushitic *g \checkmark n \checkmark ṽ- (Ehret: *ganṽ-) 'palm of hand' > (a) Beja (Reinisch) ganʔa 'palm, sole', Amar'ar Beja (Dolgopolsky) tu 'ganaʔa 'palm of (b) East Cush. *g \checkmark nn \checkmark ṽ- '(palm of) hand' > Afar (Parker-Hayward) ḡénnas 'palms of the hand, soles of the foot', singulative gennaṽ-tá, Oromo (Viterbo) ganá, (Fleming) ganna, Borana Oromo (Stroomer) ganā 'palm of hand', ? Bayso (Fleming) ḡene 'hand'; a variant of the East Cush. stem (with a metathesis) *g \checkmark ṽ \checkmark n- > Somali ḡasān, Jabarti Somali ḡaán, Boni ḡáʔan 'arm, hand' (cf. Ehret PCR #98);

(3) West Chadic (Stolbova) *ḥ \checkmark -gan \checkmark 'hand, arm' (*ḥa- is a regular West Chadic prefix of names of body parts) > (a) Hausa hánnú 'arm', (b) Angas subgr.: Angas (Foulkes) ḡwō ~ ḡwōng 'upper arm, incl. shoulder', Chip ḡ+ḡ, Sura (Jungraithmayr) kǎḡḡḡ 'shoulder', (c) South Bauchi subgr.: Dwoṭ kùḡún 'shoulder, wing', (d) Ron subgr.: Bokkos (Jungraithmayr) kōn 'Oberarm', Sha (Jungraithmayr) ḡḡāḡ 'Arm' (cf. Stolbova ZCh. 218, Orel-Stolbova RAAV I 74). On Afroasiatic comparison cp. Cohen EC #214.

19. Sem. *l¹ibab- 'heart' > Hebrew לֵב 'leb (pl. לְבָבוֹת leḇā'ḇōt), Phoen., Ugar. lb, Sabaic lb 'heart', Biblical Aram. לְבָב leḇab 'heart' (st. c.), Jewish Aram., Syriac lib'ḇ-ā 'heart', Arab. lubb- 'heart, middlepart', Ge'ez, Tigre labb 'heart', Soqotri ʔ3lb3b, Harsusi ḥ3-lbēb, Mehri ḥ3-wbēb, Jibbali úb, Akkad. libbu 'heart'. Cf. KB HAL II 488-9, Leslau CDG 304-5, Johnstone ML 250, HL 82. On the reconstruction of

proto-Sem. *¹libab- cf. Dolgopolsky PhSS 11. The stem belongs to the Afroasiatic heritage. It has cognates in Egyptian, Cushitic, Chadic and possibly Berber:

(1) Egyptian ¹b 'heart' (= *[yUb], according to Vycichl, with *¹- > ¹- [y-] preceding a labial vowel) (Erman-Grapow WÄS I 59, Vycichl VLE I 109);

(2) proto-Cush. (Dolgopolsky) *¹Vbb- 'heart' > (a) East Cush. *¹ubb- > Afar lubbi, Elmolo rup-ai? 'heart', Oromo lubbū 'soul', lúbb-a? 'life', Konso lupp-óta 'heart, soul', Sigdamo 'ubb-o 'soul', Gedeo lubbo 'life, soul', Burji lub¹b- 'soul', lub¹b-o 'life', ?? Oromo lappē 'heart', (b) Agaw (Appleyard) *¹äbäk 'heart' > Bilin, Quara läbäka, Kemant ləbäka (cf. Appleyard AVCN 15, Black LEC 259, Dolgopolsky SF 15-4, 229, Ehret PCR 312, Hudson HECD 91-2, 139, Parker-Hayward AEFD 156, Reinisch WBilS 251, Sasse EDB 135-6);

(3) Chadic *¹Vb- 'heart' > (a) East Chadic: Molilko ʔùlbé 'heart', (b) Central Chadic: Daba (Kraft) lîḅí 'stomach', Musgu (Mouchet) li b 'belly', ? Zegwan (Kraft) rúvè (pl. ár vè) 'heart', ? Padokwp (Lukas) arwa 'chest', Gulfei (Sölken) (ə)r f u 'heart' (cf. Jungrathmayr LMok. 189, Jungrathmayr ChLR I s.v. 'heart', Kraft ChWL, Sölken SA 264-5);

(4) ? Berber *¹ulh₂ (= *¹ulɸ?) 'heart' > Taneslemt Twareg ulh, pl. ulhawən, Tahaggart, Tawlemmedden, Tayert Twareg ul, Ghat ul ~ i-wl (or yul?), Awjila (Paradisi) ūl, Siwa uli, Tashelhit, Iznacen, Kabyle ul 'heart' (cf. Prasse H 26: *¹✓h₁lh₃, Woelfel EAW 46, Paradisi BA 164, Laoust S 216).

As we can see, the Semitic names of body parts (at least those considered here) may be classified in four etymological categories:

A. Those having appeared in proto-Semitic. A clear example is *ka¹bid- 'liver', going back to the Sem. adjective *ka¹bid- 'heavy'.

B. Those containing the stem-final element *-ān-: *liš-ān- 'tongue', *g^ri¹r-ān- 'throat'. They have cognates in other Afroasiatic languages, but these are without final *-ān-element. The latter seems to go back to a suffix, but its original function is not yet clear. If this is deverbal derivation (*liš-ān- 'tongue' from *¹✓lš 'to lick', *g^ri¹r-ān- 'throat' from *¹✓gr or *g^wr to swallow'), then it is unclear why the suffixless Afroasiatic cognates of *liš-ān- are nouns and mean 'tongue'.

C. Those with an unstressed (or vowelless) stem-final element *- \check{V}_n -: * $\check{\gamma}u\delta\check{V}_n$ - 'ear', * $\check{b}a\check{t}_\check{V}_n$ - 'belly', * $\check{k}ar_\check{V}_n$ - 'horn'. Their cognates in other Afroasiatic languages sometimes have the final *- \check{V}_n - (Egyptian $\check{i}d\check{n}$ 'ear'), sometimes have not (most of the registered cases). Moreover, there are probably cognate stems without *- \check{V}_n - even within Semitic: ** $\check{b}\check{u}\check{t}$ - 'bottom, anus' in Aramaic. The element *- \check{V}_n - is certainly older than Semitic. The original function of this element is still unclear: in * $\check{\gamma}u\delta\check{V}_n$ - it is probably a suffix of deverbal derivation (since the Cushitic cognate of * $\check{\gamma}u\delta$ - is a verb), while in * $\check{b}a\check{t}_\check{V}_n$ - and * $\check{k}ar_\check{V}_n$ - it is certainly not. We need more comparative evidence both within Afroasiatic and in the field of external genetic comparison for further elucidation of the original structure of these nouns.

D. Mono-morphemic stems with cognates in other Afroasiatic languages: * $\check{\gamma}ayn$ - 'eye', * $\check{l}ibab$ - 'heart', * \check{p} -(u/i/a) 'mouth', * $\check{r}ahim$ - 'womb', * $\check{s}inn$ - 'tooth', etc. Their Afroasiatic etymological ties (as well as external long-range comparison with other presumably related languages) suggest that these are primary underived stems. The author's impression is that most proto-Semitic names of body parts belong to this category.

S i g n s

In this paper we distinguish between transcription (rendering phonemes and allophones of a language) and transliteration (rendering characters of the original script). For transcription (as well as for reconstructions) a unified transcription script is used: a, b, c, d, e, etc., while for transliteration (as well for rendering the original Roman spelling of a language and for literal quoting of other scholars) a special transliteration-quotation script is used: a, b, c, d, e.

Consonants and vowels:

The under-dot denotes glottalization: $\check{t}, \check{k}, \check{ç}, \check{s}$ are ejectives, \check{d}, \check{b} (= d', b') denote preglottalized ("injective") d, b.

The sign under the letter denotes pharyngealization (as in Arabic "emphatic" consonants ط \check{t} , ص \check{s} , ظ \check{z}).

$\check{\chi}$ (= \check{h}) voiceless uvular fricative, like Spanish j

\check{x} = voiceless velar fricative (like Russian x); \check{x} -palatalized x

ħ = voiceless epiglottal fricative (= ḥ of the Orientalistic transcription)

c, ɕ, ʒ = hissing fricatives (c = Polish c; ʒ = Polish dź)

š, ž, č, ǰ = hushing fricatives (č = English ch, ǰ = English j)

ğ stands for Arabic ڡ (= ǰ, ǰ, g in different Arabic dialects)

š̂, ž̂, č̂, ǰ̂, ɕ̂, ʒ̂ = lateral fricatives and affricates (š̂ = ɕ of the Africanistic transcription)

ɣ̂ = lateral velar fricative

ɕ̂ = domal infradental labialized sibilant (in Jibbali) = Johnstone's ɕ̂, Twi hɔ

β, φ, θ, δ = fricative b, p, t, d (e.g., English [ðɪs θɪŋ] this thing)

ḅ, ḡ, ḏ, ḅ, ḡ, ḏ = fricativized b, g, d, k, p, t (originally allophones) in Hebrew, Aramaic, Syriac and the North Berber languages

ɖ = postalveolar d

ɜ = central mid vowel (= ə of the Africanistic transcription)

ə = ultra-short vowel

ɨ = central high vowel (Russian Ѣ, Polish y)

ɪ = open i

ʊ = open u

Tones and stress

ˈ (before the syllable) = full stress, ˌ (before the syllable) = weak stress.

The tones are denoted by supralineal signs of the second supralineal level (higher than regular supralineal signs). The tone signs are written over vowels letters:

ˈ = high tone,

ˌ = low tone,

ˊ = middle tone,

ˆ = falling high-to-low tone

˘ = falling mid-to-low tone,

˙ = rising low-to-high tone.

Uncertainty signs

| = "or" (a|e means "a or e").

∨ - unspecified vowel; ∨̄ - unspecified short vowel

⌈ - uncertainty brackets: ⌈a⌉ = "a or similar"

⌊ - uncertainty brackets: ⌊a⌋ = "a or nothing"

* - sign of reconstruction; ** - sign of questionable reconstruction

Capital letters stand for unspecified phonemes, e.g. H- unspecified laryngeal

R e f e r e n c e s

Aistleitner WUS = J. Aistleitner. *Wörterbuch der ugaritischen Sprache*. Berlin, 1963.

Appleyard AVCN = D. Appleyard. *Agaw Vocabulary Comparative Notes*. 1991. Ms.

BGMR DS = A. Beeston, M. Ghul, W. Müller, J. Ryckmans. *Dictionnaire sabéen*. Louvain-la-Neuve/Beirut, 1982.

Black LEC = P. O. Black. *Lowland East Cushitic. Subgrouping and reconstruction*. Ph.D. dissertation, Yale University. 1974.

Blau BNPA = J. Blau. "Bibelhebräische Nomina, die auf pataḥ-'ayin enden." *ZDMG*, CXVIII (1968), pp. 275-6.

Blažek OLBP = V. Blažek. "Omotic lexicon in Afroasiatic perspective: body parts cognates." Paper presented at the 2nd International Symposium on Cushitic and Omotic languages (Turin, 1989). Ms.

Brockelmann LS = C. Brockelmann. *Lexicon Syriacum*. Halle, 1928.

Budge EHD = E. A. Wallis Budge. *An Egyptian Hieroglyphic Dictionary*. London, 1920 (reprint: New York, 1978).

CAD = *The Assyrian Dictionary of the Oriental Institute of the University of Chicago*. Vol. I - ... Chicago/Glückstadt, 1956 - ...

ChWC = *Chadic Word Catalogue*. Collected by H. Jungraithmayr a. o. Frankfurt am Main. Unpublished file.

Cohen EC = M. Cohen. *Essai comparatif sur le vocabulaire et la phonétique du chamito-sémitique*. Paris, 1947.

Dallet DKF = J.-M. Dallet. *Dictionnaire kabyle-français*. Paris, 1982.

Delheure DMF = J. Delheure. *Dictionnaire mozabite-français*. Paris, 1984.

Delheure DOuF = J. Delheure. *Dictionnaire ouargli-français*. Paris, 1987.

Destaing VFB = E. Destaing. *Etude sur la tachelhit du Sous*. I. *Vocabulaire français-berbère*. Paris, 1920.

Dolgopolsky ChCS = A. Dolgopolsky. "On Chadic correspondences of Semitic *š." In *Proceedings of the Fifth International Hamito-Semitic Congress*, ed. H. Mukarovsky. Vol I, Vienna, 1990, pp. 213-226.

Dolgopolsky PhSS = A. Dolgopolsky. "On phonemic stress in Proto-Semitic." In *Israel Oriental Studies*, VIII. Tel Aviv, 1978, pp. 1-12.

Dolgopolsky SEC = A. Dolgopolsky. "Semitic and East Cushitic: sound correspondences and cognate sets." In *Ethiopian Studies. Dedicated to Wolf Leslau*, ed. S. Segert and A. Bodrogligeti. Wiesbaden, 1983, pp. 123-143.

Dolgopolsky SF = A. B. Dolgopol'skij. *Sravnitel'no-istoricheskaja fonetika kushitskix jazikov*. Moscow, 1973.

Dolgopolsky SNSE = A. Dolgopolsky. "Semitic nomina segolata in Ethiopian." In *Ethiopian Studies. Proceedings of the Sixth International Conference, Tel Aviv, 14-17 April 1980*, ed. G. Goldenberg. Rotterdam/Boston, 1986, pp. 71-90.

Drower-Macuch MD = E. S. Drowe, R. Macuch. *Mandaic Dictionary*. Oxford, 1963.

Ehret PCR = Chr. Ehret. "Proto-Cushitic Reconstruction.". Preprint. 1985.

Ehret SC = Chr. Ehret. *The Historical Reconstruction of Southern Cushitic Phonology and Vocabulary*. Berlin, 1980.

Ehret-Elderkin-Nurse DL = Chr. Ehret, E. Elderkin, D. Nurse. "Dahalo lexis and its source." *Afrikanistische Arbeitspapiere. Schriftenreihe des Kölner Instituts für Afrikanistik*, XVIII (1989), pp. 5-49.

Erichsen DW = W. Erichsen. *Demotisches Wörterbuch*. Copenhagen, 1954.

Erman-Grapow WÄS = A. Erman, H. Grapow. *Wörterbuch der ägyptischen Sprache*. 6 vol. Leipzig, 1926-1930 (reprint: Berlin, 1957).

Foucauld DTF = Père Ch. de Foucauld. *Dictionnaire touareg-français*. 4 vol. Paris, 1952.

Fronzaroli SLCS II = P. Fronzaroli. "Studi sul lessico comune semitico. II. Anatomia e fisiologia." *Rendiconti dell'Accademia Nazionale dei Lincei, classe di scienze morali*, ser. VIII, vol. XIX (1964), pp. 243-280.

Gardiner EG = Sir Alan Gardiner. *Egyptian Grammar*. 3rd ed. Oxford, 1957.

Ghoubeïd LTF = Ghoubeïd Alojaly. *Lexique touareg-français*. Copenhagen, 1980.

Gilula IE = Mordechai Gilula. "ǝdɾn = 'an ear'." *The Journal of Egyptian Archaeology*, LXI (1975), p. 251.

- Greenberg IP = J. Greenberg. "Internal a-plurals in Afroasiatic (Hamito-Semitic)." In *Afrikanistische Studien*, ed. J. Lukas, Berlin, 1955, pp. 198-204.
- Hayward Arb. = Dick Hayward. *The Arbore Language. A first investigation*. Hamburg, 1984.
- Hoffmann AGG = Carl Hoffmann. *Towards a Comparative Phonology of the Languages of the Angas-Goemai Group*. (Univ. of Ibadan - Jos Campus. Faculty Seminar). Ibadan (Nigeria), 1975. Mimeographed.
- Holma NK = Harri Holma. *Die Namen der Körperteile im Assyrisch-Babylonischen*. Leipzig, 1911.
- Hudson HECD = Grover Hudson. *Highland East Cushitic Dictionary*. Hamburg, 1989.
- Huehnergard UVST = J. Huehnergard. *Ugaritic Vocabulary in Syllabic Transcription*. Atlanta, Georgia, 1987.
- Jastrow D = M. Jastrow. *A Dictionary of the Targumim, the Talmus Babli and Yerushalmi*. Philadelphia, 1903.
- Johnstone HL = T. M. Johnstone. *Ḥarsūsi Lexicon and English-Ḥarsūsi Word-List*. Oxford/London, 1977.
- Johnstone JL = T. M. Johnstone. *Jibbāli Lexicon*. Oxford, 1981.
- Johnstone ML = T. M. Johnstone. *Mehri Lexicon and English-Mehri Word-List*. London, 1987.
- Jungrathmayr ChRL = H. Jungrathmayr. *Chadic Lexical Roots*. Vol. I. Forthcoming.
- Jungrathmayr DTL = H. Jungrathmayr. *Dictionary of the Tangale Language*. Berlin, 1991.
- Jungrathmayr LMok. = H. Jungrathmayr. *Lexique mokilko*. Berlin, 1990.
- Jungrathmayr-Shimizu ChRL II = H. Jungrathmayr, K. Shimizu. *Chadic Lexical Roots*. Vol. II. Berlin, 1981.
- KB HAL = W. Koehler, W. Baumgartner. *Hebräisches und aramäisches Lexikon zum Alten Testament*. Vol. I-IV. 3rd. ed. Leiden, 1967-1990.
- KB LVT = W. Koehler, W. Baumgartner. *Lexicon in Veteri Testamenti libros*. 2 vol. 1st. ed. Leiden, 1953-8.
- Khalil-Jungrathmayr LMok. = Khalil Alio, H. Jungrathmayr. *Lexique bidiya*. Frankfurt am Main, 1989.
- Kraft ChWL = *Chadic Wordlists*. Collected and edited by Ch. Kraft. 3 vol. Berlin, 1981.
- Lamberti SD = M. Lamberti. *Die Somali-Dialekte*. Hamburg, 1986.
- Lanfry G = J. Lanfry. *Ghadamès. Étude linguistique et anthropologique*. II. *Glossaire*. Fort National (Algérie), 1973.
- Laoust S = E. Laoust. *Siwa*. I. *Son parler*. Paris, 1932.
- Leslau CDG = W. Leslau. *Comparative Dictionary of Geez*. Wiesbaden, 1987.

- Levy WTM = J. Levy. *Wörterbuch über die Talmudim und Midraschim*. 2nd ed. 4 vol. Berlin-Vienna, 1924.
- Maclean DVS = A. J. Maclean. *A Dictionary of the Dialects of Vernacular Syriac as Spoken by the Eastern Syrians of Kurdistan, North-West Persia, and the Plain of Mosul*. Oxford, 1901.
- Masqueray DTF = É. Masqueray. *Dictionnaire français-touareg (dialecte des Taïtoq)*. Paris, 1893-4.
- Matsushita CVGD = Shuji Matsushita. *A Comparative Vocabulary of Gwandara Dialects*. Tokyo, 1974.
- Mercier VTB = H. Mercier. *Vocabulaires et textes berbères dans le dialecte des Aït-Izdeg*. Rabat, 1937.
- Nehlil G = Nehlil. *Étude sur le dialecte de Ghat*. Paris, 1909.
- Netting WLK = R. Netting. *A Word-List of Kofyar*. Ibadan (Nigeria), 1967 (*Research Notes from the Department of Linguistics and Nigerian Languages, Univ. of Ibadan, July 1967*). Mimeographed.
- Orel-Stolbova RAAV I = V. Orel, O. Stolbova. "K rekonstrukcii praafrazijskogo vokalizma." *Voprosi jazikoznanija*, 1988, no. 5, pp. 66-83.
- Paradisi BA = U. Paradisi. "Il berbero di Augila. Materiali lessicali." *Rivista degli Studi Orientali*, XXXV (1960), pp. 157-177.
- Parker-Hayward AEFD = E. M. Parker, R. Hayward. *An Afar-English-French Dictionary*. London, 1985.
- Payne Smith TS = R. Payne Smith. *Thesaurus Syriacus*. 2 vols. Oxford, 1879-1897.
- Prasse H = K.-G. Prasse. *A propos de l'origine de H touareg (Tahaggart)*. Copenhagen, 1969.
- Reinisch WBilS = L. Reinisch. *Die Bilin-Sprache*. II. *Wörterbuch der Bilin-Sprache*. Vienna, 1887.
- Rossing MM = M. O. Rossing. *Mofa-Mada: A Comparative Study of Chadic Languages in North Cameroun*. Ph. D. dissertation. Madison, Wisc., 1978.
- Sarnelli DBS = T. Sarbelli. *Il dialetto berbero di Sokna*. Napoli, 1924-5.
- Sasse CP = H.-J. Sasse. "The consonant phonemes in Proto-East-Cushitic (PEC): a first approximation." *Afro-Asiatic Languages*, VII (1979), pp. 1-67.
- Sasse EDB = H.-J. Sasse. *Etymological Dictionary of Burji*. Hamburg, 1982.
- Schuh BTL = R. Schuh. *Bole-Tangale Languages of the Bauchi Area (Northern Nigeria)*. Berlin, 1981.
- Soden AHw = W. von Soden. *Akkadisches Handwörterbuch*. 3 vols. Wiesbaden, 1965-1981.
- Sölken SA = H. Sölken. *Seetzen's Affadéh. Ein Beitrag zur Kotoko-Sprachdokumentation*. Berlin, 1967.

Stolbova ZCh = O. V. Stolbova. "Sravnitel'no-istoričeskaja fonetika i slovar' zapadnočadskix jazikov." In *Afrikanskoe istoričeskoe jazikoznanie*, ed. V. Porxomovskij, Moscow, 1987, pp. 30-268.

Stroomeer SOD = H. Stroomeer. *A Comparative Study of Three Southern Oromo Dialects of Kenya*. Hamburg, 1987.

Tourneux LTD = H. Tourneux. "Une langage tchadique disparue: le muskum." *Africana Marburghensia*, XI, Lief. 2 (1978), pp. 13-33.

Vendryes LEIA = J. Vendryes. *Lexique étymologique de l'irlandais ancien*. 5 vols. Dublin/Paris, 1959-1978 [Pagination according to the initial letters of the entries].

Vycichl DELC = W. Vycichl. *Lexique étymologique de la langue copte*. Leuven, 1983.

Vycichl DELC = W. Vycichl. "Grundlagen der ägyptisch-semitischen Wortvergleichung." *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo*, XVI (1958) (=), pp. 367-405.

Whiteley IC = W. H. Whiteley. *A Short Description of Item Categories in Iraqw*. Kampala, 1958 (*East African Linguistic Series*, no. 3).

Whiteley IC = W. H. Whiteley. *Studies in Iraqw. An Introduction*. Kampala, 1953.

Woelfel EAW = D. J. Woelfel. "Eurafrikanische Wortschichten als Kulturschichten." *Acta Salmaticensia. Filología y letras*, IX/1 (1955).

Yeivin ML'IMNB = Y. Yeivin. *Masoret hallašôn ha'ivrît hammištaqqefet baniiqûd habbavî* [Israel Yeivin. *The Hebrew Language Tradition as Reflected in the Babylonian Vocalization*] . 2 vols. Jerusalem, 1985.