Dangla-Migama and Afro-Asiatic IV:
Root initial *ḥ- with C₂ sonants

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The paper is a new contribution to revealing the Afro-Asiatic heritage in the lexical root stock of the Dangla-Migama group of Chadic languages by means of inter-branch comparison primarily using, among others, the ancient Egypto-Semitic etymological evidence.

Keywords: Chadic languages, Afro-Asiatic comparative linguistics, African linguistics, ancient Egyptian, Semitic, historical phonology, etymology.

Introduction

The present series of articles has arisen from a review of the first comprehensive lexicon of the Bidiya language composed by native speaker linguist Khalil Alio (N'Djamena, Republic of Tchad) and Chadicist Herrmann Jungraithmayr (Frankfurt a/M),[1] which was, in fact, at a time an examination of the lexicon from the standpoint of etymology.[2] The original aim of my old paper was to show the multivalence of the Bidiya sibilant affricates only and how the lexicon of this so far little-known language contributes to various aspects of Chadic/Afro-Asiatic comparative-historical phonology and lexicon. This aim has been extended

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[1] Alio, Kh. & Jungraithmayr, H.: *Lexique Bidiya: Une langue centre-africaine (République du Tchad)*. Berlin, 1989, Vittorio Klostermann. 164 p. Bidiya, which we find among the DM daughter languages, a language spoken in one of the southern provinces of the Republic of Tchad, at the western chains of the Abu-Telfan. The number of Bidiya people was estimated in 1963 around 12.500.

[2] The Bidiya lexicon has been reviewed by many authors from different viewpoints. Cf. the list of the relevant reviews in the Chadic bibliography by P. Newman (1996: 84, #1021; 2022: 12).

since then from the second part onto the etymological analysis of lexical roots of the whole Dangla-Migama group where Bidiya also belongs. Since then, the etymological entries have been arranged according to the articulation place of the initial radical.[3]

This series of etymological papers is devoted to revealing the Afro-Asiatic heritage in the lexicon of the languages of the Dangla-Migama group. Together with Dangla, Migama, Bidiya, and perhaps (?) Mokilko[4] (as well as presumably the closely related Mahwa and Mogum also) belong to the so-called Dangla-Migama group[5] of the eastern subbranch of the Chadic languages, which represent the sixth (or, according to others, fifth)[6] branch of the Afro-Asiatic (Semito-Hamitic) macrofamily (comprising the following branches: 1. Semitic, 2. Egyptian, 3. Berber, 4. Cushitic, 5. Omotic, 6. Chadic).

Dangla-Migama *ḥ- + *-r-

● **62. PDangla *ḥar-** "to be distracted" [GT]: WDangla ḥàrnìyè "être distrait, être ailleurs en pensée" [Fédry 1971: 105], EDangla ḅārē "être distrait, être dans la lune, être absent, rêver" [Dbr.-Mnt. 1973: 58]. The initial *ḥ- may reflect a lost laryngeal, e.g., like PAA **√Hbr or **√bHr or **√brH, neither of which has so far not been found in this form, but all the more in its diverse varieties. Thus, it may be remotely related to a so far uncharted PAA root family, whose original variety without the larngeal radical and with an old *-l has been known only, cf. Sem.: Ar. √bll I: balla "3. ensemencer (la terre), répandre (le grain), 7. se disperser, se séparer (se dit du peuple rassemblé)" [BK I 155; DAFA = Blachère 1967 I: 824] = "to sow (land)" [Lane 242c][7] ||| SBrb.: Ahaggar e-hlel [h reg. < *ḅ] "1. être distrait (avoir, en faisant un acte, l'esprit inattentif à cet acte et occupé d'autre chose)", 2. être dans un état de distraction et les yeux fermés tout en entendant et en comprenant à demi)"

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[3] Dangla-Migama and Afro-Asiatic I: Bidiya b-.= *Folia Orientalia* 45-46 (2009-2010), 133-148. Dangla-Migama and Afro-Asiatic II: Bidiya č- and ž-.= *Lingua Posnaniensis* 51 (2009), 119-124. Dangla-Migama and Afro-Asiatic III: Root initial *ḅ-.= *Lingua Posnaniensis* 63/1 (2021), 73-83.

[4] The position of Mokilko is debated. In JI 1994 II: XV it is classified within the same group where Dangla and Migama belong. Other works (e.g. Caprile & Jng. 1973: 40; Barreteau & Newman 1978: 305; Jng. 1981: 411; JS 1981: 16; Porhomovskij & Stolbova 1991: 329; Stolbova 1996: 8), in turn, *unisono* maintain that Mokilko represents alone a distinct group within East Chadic (this is the recent position of Prof. Jungraithmayr too, p.c. in 2002). V. Blažek (1994: 93) published his lexicostatistical result on the interrelation of four East Chadic languages (Sokoro, Jegu, Mubi, Mokilko) on the basis of the Swadesh 100 wordlist, according to which Mokilko stands closest to Mubi. But Blažek did not take the lexicon of the Dangla-Migama languages into account, so his proposal has no testimony value in this question. For the time being, my preliminary experience confirms JI 1994 II: XV, i.e. a tight relationship of Mokilko with the Dangla-Migama group (Jegu also) from a lexical standpoint.

[5] Cf. Barreteau & Newman 1978: 305; Jungraithmayr & Ibriszimow 1994 II: xv. Strangely, Jungraithmayr (1981: 411) separated Bidiya from Dangla-Migama, and placed it in the Mubi group, which cannot be supported from the standpoint of the lexical evidence.

[6] Depending on whether we accept Omotic as merely a western subbranch of the Cushitic (fourth) branch (as recently M. Lamberti and A. Zaborski maintained) or as an independent (fifth) branch of AA (as the majority of researchers suppose).

[7] In the lexicon by R. Blachère et al. (l.c.), this sense is regarded as secondary ("ext.") from √bll "mouiller, tremper".

[Foucauld 1951-2: 591] = ə-hləl "être distrait" [Prasse 1969: 54, #238] ||| HECu.: Sidamo billālla "to disperse (intr.), be scattered", billāll-isa (caus.) "to scatter" [Gasparini 1983: 40] || SCu.: Dahalo *βilaβil- "to scatter" [EEN 1989: 44] ||| WCh.: Goemay fulung [< *vʷeleŋ?] "to throw about, disarrange, disorder", û fulung pê n'kilip "the goats threw every thing in the kitchen", n'hat fulung "a pin "the wind disarranged the grass on the roof" [Sirlinger 1937: 53] (isolated in AS: Takács 2004: 389) < PAA *√bl(l) "to scatter" [GT].[8] Cf. EDE II 445 and EAAN I 62, #259.

● **63. Bidiya ḅarḅàr (ḅarḅìrí, ḅarḅìrèŋ), pl. ḅarḅàr (ḅàrḅàarí, ḅarḅàareŋ)** "mentir" [AJ 1989: 62] may be derived from Ch. *√br "lügen" [GT] provided the ḅ- is due here to *mb-, cf. WCh.: Pero búrù "to deceive" [Frj. 1985: 23] || CCh.: Mwulyen mbwármà "Lüge" [Kraft]. This is a Chadic root variety with *b- that seems to have been much more sporadically preserved than the one with *p-, cf. below:

63.1. AA *√pr "1. to lie, 2. abuse" [GT]: Sem.: Akk. (aA, jB) parû "etwa: Gemeines sagen" [AHW 837] || Ar. √fry I: farā "6. inventer, forger (un conte, mensonge)", IV "4. adresser à qqn. des reproches, blâmer qqn.", VIII "imaginer, inventer, forger (un mensonge)", firy-at- "mensonge, imposture", fariyy- "8. imaginé, inventé à plaisir, forgé (récit, mensonge)" [BK II 589] = √fry VIII "to forge or fabricate a lie or falsehood", firy-at- "a lie or falsehood, also: defamation", fariyy- "a thing forged or fabricated (hence: unknown, unheard of), also: a forger or fabricator of lies" [Lane 2391-2392] ||| Eg. p3.w [< *√pr] "etwas das sich nicht zu sagen ziemt" (MK,[9] Wb I 498, 3) = "falsehood (?), gossip (?)" (FD 87) ||| NBrb.: Tamazight-Zayan (Central Maroccan) s-fərr-ət "lügen" [SISAJa l.c.] = s-ferrer, t-s-ferrir "mentir, raconter des mensonges", i-s-firrir-n "mensonges, fait de mentir" [Taïfi 1991: 119; DRB 605: isolated in Brb.] ||| HECu.: (?) Hadiya fa/ār-[10] "to bewitch, deceive" [Sasse 1979: 18, 38] || SCu.: Qwadza pul-um- [l reg. < *r] "to cheat" [Ehret 1980b MS: 3][11] ||| WCh.: Fyer fyéràt "Lüge" [Jng. 1970: 141] | (???) Ngizim fə̀rfə̀rtú "to backbite, abuse someone when he is not present" [Schuh 1981: 56-57][12] || CCh.: Lame fár- "mentir (dans le sens de fabuler, raconter des bobards, enjoliver une histoire)" [Sachnine 1982: 293] || ECh.: Lele pōryē ~ pōryī ~ pōyrē ~ pōyrī "1. mensonge, 2. se vanter" [WP 1982: 77]. Some of these cognates have already been equated: the Eg.-Ar. parallel is due to C. T. Hodge (1966: 26), whereas the Sem.-Brb. one was proposed SISAJa I, #30.[13] The rest of the AA *comparanda* were included

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[8] Eventually derived from PAA *√bl "to lo(o)se(n)" (EAAN I 61, #256)? Cf. also AA *√pl "to sprinkle" (EAAN I 93, #440) as a remote PAA root variety.

[9] Stela of Usermontu, reign of Sesostris I, cf. Sethe 1959: 79, l. 18.

[10] Unless it derives from ECu. *fa(ˤ)l- "to curse, bewitch, deceive" [Sasse 1979: 18, 38, 61].

[11] Ch. Ehret (1980a: 147) equated Qwadza pul-um- with Ma'a -bubúsu "to startle, astonish", which he explained from his SCu. *ṗuŝ-/*ᵐpuŝ- "to fool (s'one)". False both phonologically and semantically.

[12] Semantically ambiguous. Alternatively, it might be affiliated with Eg. wf3 "Verbum des Redens: beistimmen" (MK, Wb I 306, 4) = "1. (verb) to talk about, discuss, support (a plan), 2. (noun) talk, subject of conversation" (FD 60) = 1. darüber sprechen, diskutieren, 2. verfechten (eine Sache von jemm.), 3. *vorwerfeln" (GHWb 193), equated by C.T. Hodge (1981a: 373, #26) with PCh. *p-rə "to say" and Brb. *-fihr- "to say" and, similarly, by Ch. Ehret (1995: 106, #84), i.a., with Sem.: Ar. √frfr "to cry out at" and PCu. *fār- "to call out".

[13] The Russian linguists (SISAJa l.c.) equated the Sem.-Zayan parallel with a number of semantically false parallels.

by G. Takács (2000: 76, #2.7; 2009: 191, #72; EDE II 392; EAAN I 87, #415). Eventually related to AA *√pr "bad" (above)? Cf. EDE II 392.

63.2. A further possible rare variety with *-l is known in Sem.: Ar. habl- "ruse, astuce", ʔihtabala "intriguer, se montrer faux, trompeur" [DRS 359, HBL1 with dubious parallels].

● **64. PDangla *ḅēr-** "to sprinkle saliva from mouth" [GT]: WDangla ḅèèrè "1. faire un bruit avec explosion des lèvres: 'br', 2. semer avec la bouche (grains de sésame)" [Fédry 1971: 105], EDangla ḅéeré (m) "cracher de l'eau en fines goutelettes, asperger avec la bouche, postillonner" [Dbr.-Mnt. 1973: 58] = ḅééré "(beim Sprechen) Speichel verspritzen" [Ebobisse 1979: 132]. May be the result of a contamination of the root PDangla *ḅar- "to be distracted" [GT] (described under #62 preceding) and a reflex of Sem.: Ar. barγ- "bave, salive qui coule de la bouche" [BK I 113; DRS 86: isolated in Sem.!] ‖ MSA: Soqotri √bˁr "cracher" [Leslau 1938: 92; DRS 75 with false Sem. etymologies] ‖‖ NBrb.: (???) Tamazight i-berγuy-n (pl.) "sperme" [DRB 117: isolated in Brb., not found in Taïfi 1991: 29] ‖‖‖ WCh.: Gwandara bùbúri "to vomit" [Matsushita 1972: 27] < PAA *√brγ ~ *√bγr (root vars. via met.) "1. to spit, 2. eject (???)" [GT]. See EAAN I 59, #241. Further more widely spread remote root varieties appear in:

64.1. AA *√**frγ** "to spit" [GT] > Sem. *√prγ [GT]: Akk. (jB) parû "(sich) erbrechen", (jB) parûtu ~ purâtu "Erbrochenes" [AHW 837, 880][14] ‖ Ar. √frγ I: faraγa "1. vider (un vase, etc.), faire maison nette, faire évacuer un lieu", fariγa "2. être versé et couler (se dit de l'eau, etc.)", II "1. verser (l'eau, un liquide) en vidant un vase, 2. vider (un vase)", IV "1. verser, répandre (l'eau, le sang), jeter de l'eau sur qqn., vider un vase sur qqn., 2. couler qqch. dans un moule", X "2. jeter dehors, avoir une expectoration, rendre par la bouche, 3. vomir, avoir des vomissements", furāγ-at- "sperme de l'homme", ʔistifrāγ- "2. expectoration, vomisse-ment, 3. sécrétion", mustafriγ- "1. qui donne beaucoup de lait (chamelle)" [BK II 580-582] ‖‖ Eg. f3ḫ.w (pl.) [< *frḫ, but *√frγ also poss.][15] (spitting man det.) "cracheur (?)" (CT VI 307e, AL 78.1569) = "die *Spuckenden" (GHWb 305) = (untranslated in DCT 145) ‖‖ CCh.: Glavda vərəgh [seems poss. < *√frγ][16] "to vomit (?)" [Rapp & Benzing 1968: 99]

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[14] Derived by F. Buhl (GB 660) from Sem. *√prγ > Ar. √frγ "entleeren, (min) sich einer Sache entledigen, unbeschäftigt sein" [GB] (doubtful). Cf. also MSA: Jibbali šə-fráγ "to be done, finished, empty" [Johnstone 1981: 60], Mehri əftōrəγ "(gun) to fire, go off by itself" [Johnstone 1987: 98]. The Semitic etymology of Akk. parû is, however, uncertain due to its -a- indicating rather *-h or *-ʔ as C₃ (cf. GAG 25; Moscati et al. 1964: 41-42, §8.54), although there are exceptions (cf. Kogan 1995: 160-161). J. Huehnergard (1991: 694) compared it to ES *√frh "to be afraid", which is semantically unconvincing.

[15] For the rare, albeit existing correspondence of Sem. *γ and Eg. ḫ, cf. most recently Takacs 2011: 139-154.

[16] Glavda v- < AA *f- should still be justified, cf. only Glavda var "to redeem, bring out" [RB] ‖‖ SCu.: Dahalo fir- "to take out" [Ehret 1980a: 149; EEN 1989: 23]. But the correspondence of Glavda gh to AA (Eg., Sem., SCu.) velars seems proven in a number of examples, cf. **(1)** SCu.: WRift *ḫaŝ-īt (med.) "to be silent" [KM 2004: 320] ‖‖ Sem. *√ḫŝˁ "calm" [GT]: Ar. ḫašaˁa "to be humble, submissive, faint (voice)" ‖ Geez ḫaśˁa ~ ḫaśˁa "to be calm, still etc." (Sem.: Leslau 1987: 266) ‖‖ CCh.: Glavda ghačəga-ghačəga [gh- < *Q- reg.] "still, calm" [RB 1968: 42] < AA *√Qˁˁ "calm" [GT]. **(2)** Glavda ghal "to beg, beseech, want, ask" [RB] ‖ SBrb.: Ahaggar ə-γhəl "aimer, vouloir" [Prasse 1969: 85, #570] < AA *√QHl. **(3)** Glavda ghə́l(à) "(small) sacrifice" [RB] ‖‖ Eg. ḫn [< *√ḫl] "Gaben bringen" (PT, Wb III 286, 16). **(4)** Glavda ghwàsa "knife" [RB] ‖‖ Eg. ḫws "1. (XIX.) (Tiere als Opfer) schlachten, 2. (MK) als Zuruf o.ä. in den Reden beim Zerlegen der Schlachttiere" (Wb III 249).

< AA *√frγ **"to spit, vomit"** [GT]. This Eg.-Glavda etymology is due to G. Takács (2003: 189-190, #311; EDE II 560).

64.2. Maybe both roots above were of biconsonantal origin, cf. the traces of such a supposed simplex (albeit, attested with *p- instead of the expected *f-) in Ch. *√pr[17] "to spray through the mouth" **[GT] >** WCh.: Angas por "to spit, spit out" [Foulkes 1915: 266] = pur "to sprinkle", cf. pur-po "to mince words, pretend" (lit. "to sprinkle mouth", sic) [Gochal 1994: 123][18] | Ngizim pùurú "to spray, spit out in spray" [Schuh 1981: 133] ‖ CCh.: Mofu-Gudur -pápər- "projeter de l'eau avec la bouche (sur une plaie), vaporiser de l'eau (sur une natte)" [Brt. 1988: 218]. See EAAN I 105, #500.

● **65. Bidiya ḅòr (ḅòrí, ḅòrèŋ), pl. ḅòrow (ḅòroowí, ḅòrooweŋ)** "fendiller, fissurer" [AJ 1989: 62] ‖ WCh.: Hausa ḅàmḅàrà "1. to break off (maize grains, bark, plaster), 2. to separate sg. sticking to another", ḅámḅàréé "1. to break off, 2. peel off" [Abr. 1962: 71] | Galambu ḅár-àalá "to cut (off)" [Schuh 1978: 142] | Ngizim ḅərú "1. to separate a unitary thing into parts, 2. (intr.) divide up a unitary thing into parts" [Schuh 1981: 28] ‖ CCh.: Mofu-Gudur -'ḅər- "se fendre (mur, calebasse, bois)" [Brt. 1988: 89] | Vulum (Mulwi) ḅírwí "diviser, partager, séparer" [Tourneux 1978a: 289; 1978b: 92], Musgu-Puss ḅirwi "séparer, diviser", ḅəraw "partage, division (le fait de diviser), répartition" [Tourneux 1991: 79], Mbara ḅìráw "déchirer, rompre" [TSL 1986: 257] | Masa ḅùraw "diviser (tr.)" [Caïtucoli 1983: 43] < Ch. *ḅr "to separate" (which points to AA *√bHr or *√Hbr, cf., e.g., #62 and #64 above) [GT] ‖‖ Sem. *√hbr: Ar. habara "couper en morceaux, déchirer (viande)", Egyptian Ar. habar "1. mordre dans, 2. donner un coup" (Ar.: DRS 361, HBR2).

● **66. DM *ḅ/bōr-** "unripe" [GT]: WDangla ḅɔ̀ɔ̀rè "être vert, non arrivé à maturité (exclusivement pour un fruit)" [Fédry 1971: 107], Bidiya bòor (bòorí, bòoreŋ), pl. bòròw (bòròowí, bòrooweŋ) "ne pas réussir (fruit), mal se former" [AJ 1989: 59]: the ḅ- is not clear in the light of the comparative data reflecting plain *b- without trace of a laryngeal (unless we consider LECu.: Sidamo -ʔ- in one record) or prenasalization (possibly inducing *ḅ- in Chadic), cf. ECh.: Somray bərâ "cru" [Jng. 1993 MS: 5] | Birgit bùurùny "vert (pas mûr)" [Jng. 2004: 351][19] (Ch.: JI 1994 II: 254-255) ‖‖ LECu.: Oromo burundō "raw meat" [Gragg 1982: 71] | HECu.: Sidamo bura "to be raw, uncooked, not cooked, unripe (fruit)", bura "raw, not cooked, unripe (of grains, cereals, fruits)" [Gasparini 1983: 50] = buʔr- "to be raw", buʔra "raw meat" [Hudson 1989: 121] ‖‖ SBrb.: EWlmd. ḥărăy [ḥ and h reg. < *b] "être cru (fruit, légume, viande)" [PAM 1998: 138; 2003: 344] < PAA *√br(y) "unripe, raw" [GT]. Cf. EDE II 261 (with further possible SAA cognates); Takács 2009a: 335, #64.

66.1. This root must be ultimately akin to PAA *√br(y) "new" [GT], whose Chadic reflexes with *mb- may perhaps resolve the clue of DM *ḅ- above, cf. LEg. *brj → Dem. brj "1. jung, 2. auch: neu" (DG 119, 2) → Coptic (SAL/A₂) ⲃⲣ̄ⲣⲉ, (B) ⲃⲉⲣⲓ, (S) ⲃⲏⲣⲉ, (F) ⲃⲉⲣ(ⲉ)ⲓ "new, young" (CD 43a; CED 26; KHW 27) = "neuf, nouveau, jeune" (DELC

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[17] Although PCh. *p- (not *f-) suggests a slightly distinct ultimate AA root (*√pr), perhaps a var. to AA **√fr.

[18] Mistakenly equated by O.V. Stolbova (1987: 146) with Ngizim pàaḍú "to suck" [Schuh 1981: 131].

[19] Unless it is a deviant reflex deriving from ECh. *balny- "green, blue" [GT].

30) ‖‖ LECu.: Elmolo burrída "new" [Heine 1973: 281] | (?) Oromo bar-o (sic) "new" [Muka-rovsky 1981] ‖ NOm.: Mocha bər-o (?) "new" [Bender 1971: 260, #57, not in Leslau 1959] = bor-o [Mukarovsky 1987: 234] ‖‖ Ch. *√ᵐbr(w) "new" [JS 1981: 193A]: WCh.: SBauchi *√(ᵐ)br "new" [GT]: Wangday mbùr-ni [Shimizu], Dokshi (Lushi) mboori [Shimizu], Dikshi mbori [Shimizu], Boodli (Zumbul) bwàrì [Shimizu], Dwot bə̀ri [Shimizu], Zaar-Kal mbur [Shimizu] (SBauchi: Shimizu 1978: 44, #96) ‖ CCh.: Zime-Dari mbə̄rēw "neuf, nouveau" [Cooper 1984: 17], Zime-Batna ḅrrèw "new" [Jng.] = mbìreò [Sachnine], Lame mbìrèw "new" [Sachnine 1978a: 198], Peve mbréw "new" [Venberg 1975: 37]. H.G. Mukarovsky (1981: 115, #22) compared the Coptic-Oromo-Buduma-Mocha match with Basque (Biskaya) berri ~ barri "new" as a Mediterranean areal parallel.

● **67. EDangla ḅīrḅìty** (partial reduplication < *√ḅrtʸ?) "le sursaut (de peur ou d'étonne-ment)" [DM 1973: 58] ‖‖ Sem.: Tigre bərṣ belä "sursauter de frayeur" [DRS 86, brṣ2: semantically false parallels, in fact isolated] < PAA *√br[č] "to spring from fear" [GT].

● **68. DM *ḅarḅar- "**to grill (?) food" [GT]: Bdy. ḅárḅàrre (m) "préparation rapide d'une nourriture" [AJ 1989: 62], cf. also EDangla ḅārḅàrē (m) "boule grillée sur la braise (provision de voyage)" [DM 1973: 58]. Part of a widespread and well-known root family:[20]

68.1. In principle, the DM stem may reflects the same reduplication as Sem.: perhaps Gurage (almost all dialects) bərbər barä "to shimmer, flicker (flame), burn in a bright and very wavy way" [Leslau 1979 III: 151] ‖‖ Eg. brbr "kochen" (NE, Wb I 466, 1; GHWb 256) > Coptic (SL/A₂) ⲃ̄ⲣⲃ̄ⲣ̄, (SFB) ⲃⲉⲣⲃⲉⲣ, (F) ⲃⲁⲣⲃⲉⲣ "aufwallen, sieden, sprudeln (vom Wasser), lodern (vom Feuer)" (KHW 26), hence NEg. brbr (fire det.) "ein Getränk oder Speise" (GHWb 256) ‖‖ NBrb.: Shilh (Sus) berbur "bouillir" [Wölfel] = bbr̥br̥ "bouillir (liquide), faire du bruit en bouillant" [Kossmann] ‖ EBrb.: Ghadames b̈erb̈ər "chanter (eau qui bouit)" [Kossmann] (Brb.: DRB 90, br2; Kossmann 1999: 92, #173) ‖‖ NAgaw: Bilin birbir ~ br̥br̥ "sich entzünden, (ver)brennen (intr.)" [Reinisch] = "s'allumer" [Cohen], Dembea beber- "verbrennen (intr.)" [Reinisch], Qwara beber- "verbrennen (intr.)" [Reinisch] | SAgaw: Awngi bävär "to burn, be on fire" [CR apud Dlg.] = bɨbr-ɨŋ "to burn (intr.)" [Hetzron apud Bender 1973a MS: 3, #12] (Agaw: Reinisch 1885: 40; 1887: 83) ‖ LECu.: Somali-Jabarti baburu "(Feuer)funke" [Reinisch 1904: 56] ‖‖ WCh.: Gwandara bòrèbòrè "tepid (water)" [Matsushita 1972: 27] ‖ CCh.: Bura borbor "heiß, hitzig" [Reutt & Kogan 1973: 86] ‖ ECh.: Sokoro bóribó-ti, cf. na bóribóti ókidi "ich wärme die Hände am Feuer" [Lukas 1937: 31] < CAA *√brbr "to heat" [GT].
68.2. The simplex is also widely attested: CAA *√br "warm" [Sasse 1981: 160, #4] = "1. to be hot, 2. burn" [GT] > NBrb.: Mzab a-bər "bouillir", a-bbar "bouillonnement" [Delheure 1984: 10], Wargla a-ber "bouillir" [Laoust] = a-bər "bouillir" [Delheure 1987: 27] | Nefusa a-bər "bouillir" [Laoust 1931: 205] ‖ EBrb.: Ghadames ā-ḇər "bouillir", u-bbər "bouillonnement de l'eau" [Lanfry 1973: 24, #95] = â-b̈ër "bouillir" [Kossmann], Audjila

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[20] Literature: Reinisch 1887: 83 & 1904: 56; Trombetti 1923: 116, #60; Cohen 1947: #403; Wölfel 1955: 89; Mukarovsky 1959: 18; IS 1966: 17, 19; 1971: #190; Dlg. 1966: 51; SISAJa I 95, #117; OS 1992: 192; HCVA II #132; HSED #282 & #338; DRB 90.

yu-vîra (pf., 3rd p. sg.) "bollire" [Paradisi 1960: 161] = u-ver [Kossmann] ‖ SBrb.: Ahaggar ber "bollire" [Trombetti] (Brb.: DRB 90; Kossmann 1999: 92, #173) ‖‖ NAgaw: Bilin bir- "heiß, warm w./s., sieden, kochen" [Reinisch] = bir- "chauffer" [Cohen] = bər- "to boil, be hot" [Apl. 1984: 50], Hamir bir- "heiß, warm werden/sein" [Renisch], Hamta bēro "warm (of air, water)" [Bender 1970b MS: 5, #91], Hamtanga bɨr- "to be hot" [Apl.], cf. Kemant bɨlu "warm" [Bender 1973b MS: 11, #91] ‖ SAgaw: Awngi bɨ́r- "to be hot" [Hetzron apud Bender 1973 MSa: 11, #91, so also in Dlg. l.c. and Apl. l.c.], Kunfäl bɨr-ani "warm (adj.)" [Bender 1970b MS: 5, #91] (Agaw: Reinisch 1884: 349; 1885: 40; 1887: 82; Dlg. 1966: 51; 1973: 198; Apl. 1991 MS: 7) ‖‖ NOm.: Koyra (Badditu) bōr "cuocere il pane" [Cerulli 1929: 60] = bor- "to bake" [Hayward 1982: 238] ‖‖ WCh.: (?) Pero píírò [p- < *b-?] "to make a fire" [Frj. 1985: 46] ‖ CCh.: Gude vovərə "to partly singe (of hair, leaves, etc.)" [Hoskison 1983: 289] ‖ Mafa báwár- "chauffer au point de donner une sensation de brûlure, brûler (pour le feu lorsqu'on en est proche)" [Barreteau-Bléis 1990: 92] ‖ (?) Mandara mbur [unless -r < *-n] "to boil" [OS, source not clear] ‖ ECh.: Kera bóoré "sich aufwärmen, Feuer fangen" [Ebert 1976: 33] ‖ WDangla bòòrè "activer le feu, attiser" [Fédry 1971: 96] ‖ Mubi bùrúl [dissim. < *burur (?)] "anmachen (Feuer)" [Lukas 1937: 181] = bòròl, pl. bàrál "allumer, attiser le feu" [Jng. 1990b MS: 5]. G. Takács (1999a: 26) pointed to an eventual root variety (s.v. Eg. nbjbj < AA *√bl).

68.3. Still, these parallels, reflecting plain *b-, do not explain DM *ḅ-, which could only derive from a resolved cluster of either *bH or *mb-. The former option seems to be corroborated here by Sem. *√bʕr [infix *-ʕ-?] "1. to light fire, 2. heat" [GT]: Emar buhri [*√bʕr/*√bγr] "hot" [Zadok 1991: 116, #8], Ug. √bʕr "to inflame (?)" [Gordon 1955: 248, #342, not in WUS #559] = D "1. encender, 2. quemar, 3. chamuscar" [DLU I 103], Hbr. √bʕr qal "brennen (intr.)", piel "anzünden" (ein Feuer, Holzstücke, Brandpfeile, Lampen)" [GB 108], JPAram. & NHbr. √bʕr "anzünden, verbrennen" [GB] = "brûler, enflammer" [DRS] (NWSem.: DRS 75) ‖ ES: Geez baʕara "to burn up, set (a field of grass) on fire, set a blaze" [Leslau], cf. Tigre baräʕe "the fire broke out and spread", barəʕ "fire in the wilderness" [Leslau] (Sem.: Leslau 1987: 84) ‖‖ WCh.: AS *p$^{(y)}$uγur (or perhaps *p$^{(y)}$ūr?) [*p- < *b- regular] "to singe" [GT]: Angas pur "to burn out (as of driver ants) by applying bunches of burning grass wherever they are seen" [Foulkes 1915: 268] = pùur (Kabwir dialect) "1. to burn out (ants by bunches of fire), 2. or also roast groundnuts" [Jng. 1962 MS: 34], Mupun púùr "to burn feathers, hair on carcass" [Frj. 1991: 50], Goemay piuur "to singe an animal's body to get rid of its hair" [Sirlinger 1937: 183] = pyuur "to burn just a bit (as opposed to kuur)" [Hellwig 2000 MS: 29] < PAA *√bʕr "to heat" [GT], which may well be a C₂ root extension variety of the PAA simplex *√br (above).

● **69. PDangla *√ḅrt^y** "to tear off (branches)" [GT]: WDangla ḅârtyè "ébrancher, arracher avec la main en cassant à partir du tronc, sans couteau" [Fédry 1971: 105], EDangla ḅīrtyē "ébrancher, élaguer, émonder, tailler" [DM 1973: 58] ‖ CCh.: Masa ḅírét "séparer, couper" [Ajello et al. 2001: 51]. The underlying Chadic root may have suffered the usual metathesis of glottalization (e.g., and may represent a root variety to PAA *√prç ~ *√prç̂ "to separate" [GT]: Sem. *√prṣ ~ *√prḍ "to break" [GT]: Akk. (bab., nA) parāṣu "durchbrechen" [AHW 832] ‖ (?) Ug. prṣ "Öffnung (?)" [Aistleitner 1948: 216; WUS #2280] ‖ Hbr. √prṣ qal

"1. reißen, einen Riß hervorbringen, 2. (einen Schacht) brechen, 3. einreißen (Mauer), 4. in ein Haus einbrechen" [GB 661] | Ar. faraṣa "couper en deux" [BK II 572] = "to cut" [Leslau] vs. faraḍa "tailler, faire des coches, des entailles dans un morceu de bois" [BK II 573] = "einschneiden, einen Einschnitt machen" [Barth apud GB] | MSA: Jibbali fɔ́rɔ́ḍ "to separate vertebrae from oa." [Johnstone 1981: 59-60] ‖ ES: Geez faraṣa "to break open, cut open, split" [Leslau 1987: 167] ‖‖‖ EBrb.: Ghadames e-frəḍ "ouvrir en deux (un fruit)" [Lanfry 1973: 96, #420] ‖‖‖ WCh.: Hausa fàrḍáá "to hoe up (groundnuts)", fárḍà "to slit open front of animal", fárḍè "to slit up completely, hoe up all of" [Abr. 1962: 253] ‖ CCh.: Mofu-Gudur pərḍaḍá ~ pərḍeḍé "(yeux) grand ouverts" [Brt. 1988: 219] ‖ ECh.: Mokilko pôrḍyo "fissure, passage, espace étroit entre deux grosses pierres" [Jng. 1990a: 161], Bidiya porḍòč "croquer (de la kola)", porḍòny "croquer" [AJ 1989: 108]. Cf. EDE II 484-485; EAAN I 90, #425.

● **70. WDangla ḅùrtyàm ḅùrtyàm ~ ḅìḅùrtyàm** [< *burtyam] "qui a de grosses lèvres et un gros nez" [Fédry 1971: 107] ‖‖‖ Sem.: Ar. barṭama I "3. se fâcher, froncer le sourcil et prendre un air sévère", birṭām- and barāṭam- "qui a les une lèvre grosse et comme enflée", barṭam-at- "expression de la colère sur le visage quand il paraît comme enflé" [BK I 112] = barṭama I "bouder, faire la moue, être renfrogné, se mettre en colère", birṭām- (adj., subst.) "1. grosse, épaisse (lèvre), 2. lippu (homme)", burāṭim- "lippu (homme), thick-lipped (man)", burṭūm- "trompe (de l'éléphant)" [DAFA = Blachère 1967: 550] = burṭūm- "trompe, museau (de l'éléphant)" [Dozy I 73] = barṭama I "1. faire la lippe, la moue, 2. se renfrogner", burṭūm- "trompe, (d'éléphant), babine" [DRS 84, brṭm: isolated]. Borrowed from Arabic in spite of Dangla ḅ- suggesting a cognacy with longer history?[21]

● **71. WDangla ḅàràs** "évoque le mouvement du couteau tranchant la peau en glissant en longueur" [Fédry 1971: 105] ‖‖‖ Sem.: PAram. *√brṣ [GT] > Aram. bᵉraṣ, NHbr. bērēṣ "couper entièrement par le travers", bārēṣ "trouer", Syr. bᵉraṣ "pénétrer, pouvoir" (Sem.: DRS 86) < PAA *√brç "to cut through" [GT]. Metathesis of glottalization in Chadic (cf. already some cases in Illič-Svityč 1966, then many in Stolbova 1996 and 2016).
71.1. Should be distinguished (as a remote root PAA variety) from PAA *√brs "to cut, separate" [GT] > Sem.: Ar. barrasa II "briser (les mottes)", tabarrasa "s'écraser sur un écueil", (Maghrebi) barras "casser" ‖ ES: Harari bäräsä "être aboli", Gurage √brs "démolir" (Sem.: DRS 85) ‖‖‖ (?) Eg. b3s [reg. < *√brs] "to devour" (CT I 293b, FD 78) = "ausschnei-den" (NBÄ = Osing 1976: 228-229) = "dépecer, déchirer, déchiqueter" (AL 77.1180, 78.1244) = "herausschneiden" (GHWb 242)[22] ‖‖‖ SBrb.: Ahaggar e-bres "trier (en mettant d'un côté ce qui est bon, de l'autre ce qui est de qualité inférieure)" [Foucauld 1951-2: 100] ‖‖‖ NOm.: Koyra (Badditu) burs "tagliare" [Cerulli 1929: 60] = burs [Cerulli, Hayward apud Bender] = burse [Corlett] = bur- (!) [Cumbers, Siebert & Hoeft], Kachama (Haruro)

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[21] As a cognate, SBrb.: Ahaggar bereẓreẓ "avoir la peau qui forme un grand nombre de plis de graisse (le sujet étant une personne très graisse dont la peau forme beaucoup de plis de graisse, non seulement au ventre, mais à diverses parties du corps)" (derived from erẓ "casser", hence tă-me-rreẓ-ut "pli de la peau du ventre") [Foucauld 1951-2: 102, 1679 > DRB 128] cannot be considered.

[22] Following J. Osing (NBÄ 782, n. 978), W. Westendorf (KHW 563) derived Cpt.: (B) ϥⲱϭⲓ "Meißel, Messer" from CT b3s, which is both semantically and phonologically mistaken.

burs-ā-na "tagliare", burs-ā "frammento, pezzo" [CR 1937: 641] = bur-s "to cut" [CR apud Bender] (NOm.: Bender 2003: 85, #33) ‖‖ Ch. *√brs [GT]: CCh.: Glavda birs "to take off, remove" [RB 1968] | Mofu-Gudur -bə́rs- "1. (s')effriter, 2. (se) réduire en poussière, 3. casser facilement" [Brt. 1988: 84] ‖ ECh.: DM *bors- "to crush grain" [GT]: WDangla bórsè "écraser à demi: du mil cuit auparavant dans l'eau, la terre pour le débroussage" [Fédry 1971: 92], EDangla bòrsē "1. concasser, écraser à demi des grains, 2. labourer la terre (pour un phacochère)" [Dbr.-Mnt. 1973: 51], Migama bòrzò (bòrzé, bòròzzá) "1. écraser à moitié (se dit des sésames), 2. remuer la terre pour préparer les semences des sésames" [JA 1992: 71]. Cf. EDE II 88-89 with further root vars. and alternatives in Eg.); EAAN I 56-57, #224.

● **72. DM *ḅarč/t-** "green" [GT]: Bidiya ḅaràč (ḅarčí, ḅarčèŋ), pl. ḅaràč (ḅaràačí, ḅaràačeŋ) "verdir, bleuir", ḅ̀aràači (pl.) "verdure, légumes", ḅaràčga "vert" [AJ 1989: 62], cf. perhaps also Migama ḅàytà [if < *ḅart(y)a?] (adj.) "vert (pas mûr)" [JA 1992: 73]. May be derived from *barač/ṭ due to the usual metathesis of glottalization, which, in turn, may represent the reflex of either of the following roots with palatalization of the respective glottal C₃:
72.1. CAA *√brḳ "1. to flourish, 2. be green" [GT]: Sem.: Amh. bäräqqʷa "commencer à mûrir (céréales)" [DRS 86] ‖‖ NBrb.: Qabyle bbeṛwaq "donner des feuilles abondantes" [Dallet 1982: 50] ‖‖ HECu.: perhaps Darasa (Gedeo) baR̃g-ɔ́ "green fruit" [Wedekind 1976--1979: 169] ‖‖ WCh.: AS *ᵐbarak ~/> *ḅarak "1. fresh, 2. wet, 3. green" [GT]: Sura ḅərak "grün" [Jng. 1963: 59], Mupun m̀brák "wet (about grass only)" [Frj. 1991: 36], Kofyar bàràk "wet, green, unripe" [Netting 1967: 1], Mushere ḅ̀aràk "raw" vs. baràk "wet" [Jng. 1999 MS: 1-2], Goemay ḅarak "freshness, green, damp" [Sirlinger 1937: 12] = ḅarak "to be wet" [Hellwig 2000 MS: 3] (AS: Takács 2004: 11). Cf. EAAN I 59, #239.
72.2. CSem. *√brṭ "to flourish" [GT]: NSyr. birṭā "une fleur", mberṭin "bourgeonner, fleurir", cf. also Ar. barīṭ- "sorte de jacinthe" [GT].

● **73. Bidiya ḅirič** "idéo. évoquant qqch. qui pétille ou éclate" [AJ 1989: 62] may have similarly derived from a former *birič due to the metathesis of glottalization usual in Chadic, which, in turn, may represent the reflex of either of the following roots:
73.1. It may be derived either from an AA *√brḳ with the palatalization of the respective glottal C₃, cf. SBrb./Twareg *√brγ: Ahaggar bereγreγ "produire un bruit de grelot", Niger bereγreγ "1. produire un bruit sec, 2. gronder (tonnerre)", bereqq-et- "1. produire un bruit de grelot, 2. être pilé (grains de céréale)" (SBrb.: DRB 116: isolated in Brb.) vs. its root variety with a voiceless *Anlaut*: EWlmd.-Ayr fərəγrəγ "1. faire un bruit fracassant, 2. cliqueter (noix qui s'entrechoquent)" [PAM 2003: 171]. These onomatopeic roots may eventually be connected with CAA *√brḳ "1. to flash (of lightning), 2. thunder" [GT] > Sem. *√brḳ "to flash (lightning)" → *baraḳ- "lightning (fulmine)" [Fronzaroli] = *barḳ- "Glanz, Blitz" [Eilers 1978: 129] (Sem.: GB 118-119; WUS #589; Fronzaroli 1965: 146, #3.20; Diakonoff 1970: 469; Leslau 1945: 149 etc.) ‖‖ Eg. b3q [GT: -3- regular < both *-l- and *-r-] "hell, klar sein" (PT, Wb I 424-425) ‖‖ Agaw *bərḳ- > *məbrəḳ- > *mərḳ- "lightning" [Apl. 2006: 93] ‖ ECu. *barḳ-/*birḳ- "lightning" [Sasse 1979: 49] ‖ SCu.: Dahalo ḅiríḳina "lightning" [Ehret] = ḅíriḳḳína [EEN 1989: 34] = ḅíriḳinna [Tosco 1989 MS: 130] ‖‖ NOm.: Mocha p̣arìqqi-yé "to lighten" [Leslau 1959: 45] = p̣ariḳ "to lighten, flash" [Fleming] = p̣ariḳḳi- [Dlg.],

Shinasha (Dangela) p̣ark̬-a "lightning, flash of light" [Fleming] | NOm.: Dizoid: Adikas &
Jeba ḅalg-umo "heat lighning" [Fleming] | Mao of Bambeshi pérék̬-e [SLLE] = bérk̬-e "light-
ning" [Fleming] = bɛrkɛ, pɛr(ɛ)k̬ɛ "lightning" [Siebert & Wedekind apud Bender 2003: 356,
#55: isolated in Mao], Mao-Diddesa p̣yark̬-â "lightning, flash (not thunder)" [Fleming] ||
SOm. *balak̬- "lightning" [GT: -l- < *-r-]: Ari bal'ak̬-in "lightning" [Lamberti 1993: 43],
Hamar-Banna ḅalak̬ "flash of light, lighning, small flash" [Fleming], Dimé bɛlḫant "light-
ning" [Siebert apud Bender 2003: 349, #55: isolated in Aroid] (Om.: Fleming 1974: 88, #5;
1976: 317; 2000 MS: 14-15) ||| CCh.: (?) Musgu *√ḅrh [GT: -h < *-k̬?] "to thunder" [GT]:
Musgu bára "blitzen, wetterleuchten" (Krause) [Lukas 1941: 47], Munjuk-Puss ḅirhi (ḅarha)
"1. tonner, gronder (tonnerre), 2. gronder (qqn.)" [Tourneux 1991: 79]. A well-known AA
root otherwise.[23]

73.2. Sem. *√brṣ "to flash" [GT]: Akk. (jB) barāṣu "aufleuchten (z.B. wie die Sterne mittags,
wie Kupfer)" [AHW 106] = "to sparkle (like lightning), shine brightly (the stars at the mid-
day rest, like copper), flash brightly (a man's house)" [CAD b 107b] = "s'éclaircir" [DRS] |
Ar. barīṣ- "shining, glistening" [Leslau after Nöldeke] || Geez tabāraṣa "to scintillate, flash,
redden" [Leslau] = "funkeln" [AHW 106] = "scintiller" [DRS], Tigrinya bärṣäṣä "to shine,
flash" [Leslau] etc. (Sem.: Leslau 1987: 107-108; DRS 86, brṣ2).

● **74. DM *ḅarg-** "kudu" [GT]: Bidiya ḅárgà (f) "koudou, antilope rayée (ar. nyalat)"
[AJ 1989: 62], Migama ḅârgú (m), ḅàrgá (f), pl. ḅârgée "antilope-cheval (koudou)" [JA 1992:
73] | Mubi ḅìrkí (f), pl. ḅìràayàk "gazelle cobe defassa (ar. nyalat)" [Jng. 1990b MS: 7] <
ECh. *ḅVrK- "antilope" [GT] ||| Sem. √bhr: Amharic bahor, bohar "sorte de gazelle (antilope
redunca)" [DRS 49, BHR6: isolated in Sem.].

● **75. DM *ḅarak** "to split in two pieces" [GT]: WDangla ḅarak "idéophone de /ɛ́ɛ̀rɛ̀/
'déchirer en plusieurs morceaux' et /pírgé/ 'décoller, écorcher la peau d'un animal ou d'un
fruit' " [Fédry 1971: 104], Bidiya ḅàrákà (f), pl. ḅàràk "bûche, bûchette" [AJ 1989: 62]. May
be related to either of the following two distinct AA root families (detailed sub #75.1
vs. #75.2, resp.) with numerous root varieties:
75.1. Any connection to the root family fundamentally signifying "dividing"?
75.1.1. AA *√brk̬, cf. Eth.-Sem.: Amharic bäräqqäqä "fracasser" [DRS 87, BRQQ1: isolated
in Sem.] and its kindred.
75.1.2. AA *√prk̬, cf. Sem.: Ar. faraqa I "1. (pour)fendre et séparer en deux" [BK II 582-
-583] and its kindred. Cf. EDE II 497 and EAAN I 90, #430.
75.1.3. AA *√prq "to (split) open" [GT]: MSA *√frḫ [GT] > Jibbali férəḫ "(egg) to split
open", fɔ́trəḫ "to open one's legs while lying down relaxing" [Johnstone 1981: 62], Mehri
fərōḫ "(girl) to throw the legs wide apart in playing (which is punished by slap)" [Johnstone
1987: 102] ||| perhaps Eg. pḫ3 [if < metathesis of *p3ḫ = *prḫ] "spalten, öffnen" (MK,

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[23] Cf. Greenberg 1963: 59; Dlg. 1966: 66; 1967a: 5-6, #1; 1983: 123; 1992 MS: 59, #55; IS 1971: 174; Rössler
1971: 317; Fleming 1974: 88, #5; Hodge 1976: 13, fn. 76; 1981a: 374, #36; 1981b: 406; 1988: 273; 1991: 100;
Ehret 1980a: 321; 1987: 14; 1995: 86, #23; SISAJa I #110; Sasse 1981: 146; Mukarovsky 1987: 240; Blazek 1989:
201 (ad IS 1971 l.c.); Bomhard 1990: 17-18; Vycichl 1990: 39; Lamberti 1993: 43; HSED #226, #231; Orel 1995:
147-148; Fleming 2000 MS: 14-15.

Wb I 542-3) ||| WCh.: Ngizim páɍǎk "openness" [Schuh 1981: 132] || CCh.: Mofu-Gudur
-vávə́rkw- "ouvrir (une fenêtre après la construction d'un mur)" [Barreteau 1988: 251] | (?)
Logone paraka-ze "sich zerstreuen" [Lukas 1936: 115] || ECh.: Bidiya pírkàt "avoir les yeux
écarquillés" [AJ 1989: 108]. Cf. EDE II 497 and EAAN I 90, #430.

75.1.4. NAA *√**prk** "to separate" [GT] > MSA *√frk "to get separated from" [GT] > i.a.
Jibbali əftérék "to be dislocated (joint)" (Sem.: Huehnergard 1991: 693-694) ||| NBrb.: Shilh
farkk "to separate" [Applegate 1958: 52] | Qabyle fferk·ekk "1. se fendiller, 2. s'ouvrir, 3. se
désagreger, tomber en miettes, 4. s'écailler (peinture)" [Dallet 1982: 223] || EBrb.: Ghadames
ferrek "séparer en deux" [Lanfry 1973: 97, #425].

75.2. Alternatively, shall we assume any connection to the root family fundamentally signi-
fying "(separating) bark of tree" (described in EAAN I 91, #426)? Its root varieties are
reflected by:

75.2.1. NAA *√**prk̟** "1. bark, husk, 2. shell" [GT]: Eg. p3q.t [< *√prk̟] "1. die Scherbe eines
tönernen Topfes, 2. übertragen: als Bez. der Hirnschale des Menschen, 3. von der Schildkrö-
tenschale" (Med., Westcar, Wb I 500, 1-3) = "1. shell (of turtle, skull) (Med.), 2. flake of
stone (Westcar), 3. potsherd (Illahun, Ebers)" (FD 88) ||| NBrb.: Gurara, Tuat, Tidikelt i-fraγ
(n te-zzal) "coquilles (d'oeufs)" [DRB 637] || SBrb.: EWlmd. e-fǎrǎγ, pl. a- ~ i-fǎrǎγ-ǎn
"coquille" [PAM 1998: 66; 2003: 171]. Cf. EDE II 402. Of biconsonantal origin, cf. AA
*√Pr "bark, skin" (cf. EAAN I 115, #557).

75.2.2. PBrb. *tV-fərk-it "écorce" [GT pace DRB 626-627] ||| ECh.: Sokoro fʊrkía "Rinde"
[Lukas 1937: 33] | Ubi pìriikà "écorce" [Alio 2004: 274, #273]. The Brb.-Sokoro match was
first proposed by the Russian AA team of I.M. Diakonoff (HCVA I 26, #65).

75.2.3. PCh. *√**br̩k** ~ *√**b̩lk** (?) [from **√br̩k?] "bark" [GT]: WCh.: Hausa ḅámḅáróókì
"1. bark, 2. shell of egg, of groundnut, 3. scurf of scalp-disease, scab, bits of skin from
desquamation" [Abraham 1962: 71] || CCh.: Mbara ḅólòkò (m) "écorce" [TSL 1986: 257] |
PMasa *ḅulok "bark of tree" [GT]: Masa-Bongor ḅúlók-ná "pelure", ḅúlók gúnā "écorce"
[Jng. 1971/2 MS: 77, 79], Masa ḅūlok [ḅūlōkŋā] "l'écorce" [Caïtucoli 1983: 54], Gizey/Wina
ḅúlók, Masa ḅúlók, Ham ḅólók, Musey ḅólók, Lew ḅólók, Marba ḅúlók "1. écorce,
2. coquille" [Ajello et al. 2001: 22] || ECh.: Kera ḅəlɔ́gí "Rinde (écorce)" [Ebert 1976 II: 34]
= ḅəlɔ́g də kə́pàŋ "bark" [Ebert apud JI 1994 II: 9].

75.2.4. Ch. *√**p[k]r** "bark" [GT]: WCh.: Pero ṗékúrò "husk" [Frj. 1985: 44] || CCh.:
Bachama fò-fíkādá [-d- < *-r-?] "bark" [Skinner] || ECh.: Kera fékré "harte Schale (z.B. bei
Nüssen)" [Ebert 1976 II: 45] | Mokilko pákìrtè "1. écorce, 2. ardoise (pour écrire), 3. morceau
(poterie, calebasse)" [Jng. 1990a: 160].

● **76. Bdy. ḅorok** [GT: regular metathesis < *ḅorok̟] "prompt" [AJ 1989: 62] ||| HECu.
*burk̟-aḍ- "to jump (intr.)" vs. *burk̟- "to spring (flow from spring)" [Hudson 1989: 86, 141,
cf. Sasse 1982: 42] ||| SBrb. (Twareg): Nslm.-Wlmd. a-barǎγbarǎγ (var. to a-farǎγfarǎγ)
"s'agiter" [DRB 637, frγ6: isolated in Brb.] ||| Sem.: Eth.-Sem.: perhaps Amh. bärräqä "fon-
dre sur" [DRS 86: compared with semantically too vague *comparanda*][24] < PAA *√brk̟ "to
move swiftly" [GT]. An irregular set of further cognates, if we assume an irregular C₁- shift

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[24] Listed by D. Cohen (in his DRS l.c.) among the reflexes of the Common Semitic word for "flash".

of AA *b- > Sem. *p- and Eg. f- etc., or root varieties with a voiceless C₁- (AA *p-/*f-), and with a simultaneous metathesis of the C₂ with C₃, may well be found in the following AA roots:

76.1. NAA *√frḳ "to move swiftly" [GT] > Sem.: Ar. √frqˤ I: farqaˤa "1. courir à toutes jambes", III: ʔifranqaˤa "2. courir vite, 4. s'éloigner" [BK II 585-586] ‖‖ OEg. (layer of the ancient *Volkssprache*) *fq3,[25] only attested as a NEg. imper. j.fq3 (formed by prothetic alif, i.e., O/NEg. j-): "out, quickly!" (CED 266 after Massart in MDAIK 15, 1957, 176, fn. 1) = "to move hastily" (DLE I 191) = "hastig bewegen, j.fq3 (imp.): *raus, schnell" (GHWb 307) as well as Coptic (SAL/A₂) ϥⲱϭⲉ ~ ⲃⲱϭⲉ, (B) ϥⲱϭⲓ "to leap, move hastily" (CD 625b) = "sich heftig bewegen, aufspringen, hüpfen, zucken, sich beeilen" (KHW 346-347) = "sauter, courir" (DELC 282) ‖‖ SBrb.: Nslm.-Wlmd. a-farăɣfarăɣ (var. to a-barăɣbarăɣ) "s'agiter" [DRB 637, frɣ6: isolated in Brb.]. HECu.-Eg.: EDE II 588.

76.2. NAA *√frk "to move away" [GT] > Sem.: perhaps PArabian *√frk "to leave" [GT][26] > Ar. √frk III "abandonner, quitter qqn." [BK II 585-586] ‖ MSA: cf. esp., i.a., Jibbali əftérék "to be dislocated (joint)" [Johnstone 1981: 60] ‖‖ SBrb.: EWlmd.-Ayr fərəkrək "1. bouger, 3. s'agiter, se mouvoir fortement (corps), 4. se mettre en route" [PAM 2003: 172; DRB 628, FRK15: isolated in Brb.]

● **77. Migama ḅòróòkìlá (f), pl. ḅòróòkìlée** "léopard" [JA 1992: 73]: marked as isolated in JI 1994 II: 223, but cf. CCh.: Nzangi mbárɠa "lion" [Mouchet in JI 1994 II: 227]. Perhaps Migama ḅ- < *mb-? A direct cognacy with CCh.: Gidar pālgáám [Strümpell] = bálgam [Mouchet] "leopard" (Gidar: JI 1994 II: 223 l.c.) is hardly conceivable at this moment regarding the non-implosive/glottalized C₁-. One wonders if one should ponder a cognacy with homophonous CCh.: Bata bóḷoḳe "hyène" [Mouchet in JI 1994 II: 205] ‖‖ NOm.: Gofa babarikḳe [Moreno], Kullo babarkia [Fleming] = babargia [Alemayehu] "hyena" (NWOmeto: Bender 2003: 319, #48) ‖‖ NBrb.: Qabyle a-bareɣ "renard" | Shilh barɣen "renard" (NBrb.: DRB 116, brɣ3 and brɣn1, resp.). Of biradical origin in both cases?[27]

● **78. DM *ḅer-n-V** (ext. *-n-) "slave" [GT]: WDangla ḅèrnè "esclave" [Fédry 1971: 106], EDangla ḅērrē [ḅɛ̄rrɛ̄] (m) "l'esclave, l'enfant abandonné que l'on prende en charge" [DM 1973: 58], Korlongo ḅɛrre "esclave" [Fédry], Bidiya ḅèrno (m), ḅèrna (f), pl. ḅèrna "esclave", ḅernèw (ḅernìwí, ḅernìweŋ), pl. ḅernèw (ḅernèewí, ḅernèeweŋ) "asservir" [AJ 1989: 62] | PMubi-Toram *ḅēr- "slave" [GT]: Mubi ḅéèr (m), pl. ḅèrè "Sklave" [Lukas 1937: 180] = ḅèr (m), pl. ḅòorúr "ésclave" [Jng. 1990b MS: 6], Masmaje ḅeerungo "esclave" [Alio 2004: 280, #31], Birgit ḅèrnà (m), pl. ḅèrnéy "esclave" [Jng. 2004: 351], Kofa ḅèrró (m), ḅèrré (f), pl. ḅèrrán "slave" [Jng. 1977 MS: 15, #388] < ECh. *ḅēr- "slave" [GT] ‖‖ WCh.: Hausa bárà

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[25] W. Westendorf (KHW l.c.) and W. Vycichl (DELC 282), however, explained it from NEg. fq3 "to tear out", which may equally turn out to be correct. In this case, NEg. fq3 might have probably originally come from the old (OK?) *Volkssprache* slang just like Hungarian tép- "1. (lit.) to tear, 2. (slang) run".

[26] Its semantically far-fetched Semitic cognacy was examined by J. Huehnergard (1991: 693-694).

[27] Cf. AA *√br "hyena (?)" [GT] described in EAAN I 51, #197 as well as AA *√br "lion" [GT] in EDE II 22. Cf. perhaps also the common biradical root shared Ar. hawbar- "guépard" [DRS 361, HBR7: isolated in Sem.], Ar. habraǧ- "taureau", cf. hibriǧ- "gros et corpulent" [DRS 362, HBRG3-4: isolated in Sem.]?

"servant" [Abr. 1962: 77] ‖ CCh.: Mandara bara "work, domestic service" [Skinner] ‖‖ NAgaw: Qwara bārā & Hamir bárā "Knecht" [Reinisch 1885: 43] ‖ LECu.: Somali-Jabarti bára "slave" [Reinisch 1904: 55] ‖‖ Eth.-Sem.: probably no reflex.[28] An areal *Wanderwort*? Cf. also Mande bara "work, domestic service" [Skinner] and Gbaya "esclave" [Skinner]. For affiliating some of these lexical data with both (!) Eg. b3k[29] and wb3[30] (neither correct) see Skinner 1996: 16[31] contra EDE II 97 s.v. Eg. b3k, #9.

● **79. Bidiya ḫirḅìríny** "idéo. de tournoyer dans l'air" [AJ 1989: 62] | MT *ḫir- ~ *bir- "to fly" [GT]: Mubi bír (bĕr̀, bĭrrà) "voler (oiseau)" [Jng. 1990b MS: 5], Masmaje ḫìreetì "concourir" [Alio 2004: 280, #32], Birgit bèrí (bèrá, bérò) "voler" [Jng. 2004: 351] < ECh. *ḫir- "to fly" [GT] ‖‖ Sem. *√ʔbr "to fly up" [GT]: Akk. abru "Flügel, Flosse" [AHW 7] ‖ Ug. ʔbr "fliegen (?)" [WUS], OHbr. √ʔbr hifil "sich emporschwingen (v. Habicht)" [GB] (Sem.: GB 7; DRS 5; WUS #33). Eventually related PAA root varieties:

79.1. PAA *√br "to jump" [GT]: Sem.: MSA *√brw [Johnstone]: Jibbali ebré "to jump high and succeed, etc.", Mehri həbrō "i.a. to jump (from x to y)" (MSA: Johnstone 1981: 28; 1987: 54) ‖ ES *√brr "to fly" [GT] (borrowed from Cu.?): Geez barra "to fly, run fast" [Leslau], Amh. bärrärä "to fly, run away" [Leslau] (ES-Cu.: Leslau 1987: 107) – and/or ES *√bry: Geez baraya "to bolt and flee (mount)" [Leslau], Amh. bäräyyä "to flee" [Leslau] = "s'enfuir, épouvanté" [DRS 82] (ES: Leslau 1987: 108) ‖‖ (???) Eg. b3b3 [regular < *√brbr] "Verbum in Wortspiel mit der Körnerfrucht b3b3.t (statt des alten nb3b3)" (NK, Wb I 418, 13) = "to tremble, flutter (younger var. of PT nb3b3)" (Ward 1978: 28) = "sauter, tressauter (autre forme du nb3b3)" (AL 78.1228) = "*zittern, sich hin und her bewegen, aufspringen" (GHWb 240) ‖‖ Bed. bir ~ bīr "to fly" [Reinisch 1895: 50] ‖ NAgaw: Hamir bir- "fliegen" [Reinisch 1884: 349] | SAgaw: Awngi beräru "to fly" [Leslau] = berer-əŋ (with inf. suffix) "to fly" [Hetzron > HSED] = bir- (sic) "to fly" [HCVA] ‖ LECu.: Saho -ibrir- "to fly" [Sasse] | Oromo barar- "to fly" [Sasse, Lamberti] | HECu. *barar- "to fly" [Hudson 1989: 406] =

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[28] Note that Gurage barya, Amh. barya "slave" comes from the name of the ethnic group Barya, a people in NWEthiopia speaking East Sudanic (cf. Apl. 1977: 53/95; Leslau 1979 III: 157).

[29] The origin of Eg. b3k "Diener" (OK, Wb I 429-430) = "servant" (FD 79) = "1. Diener, Untergebener, 2. Untertan, 3. Sklave" (GHWb 243) is disputed (for a thorough discussion of the alternatives see EDE II 95-97). Most likely appears, however, its affiliation with the widespread Chadic areal word attested, e.g., in WCh.: PSBauchi *ḫiyak "slave" [Stolbova] ‖ CCh.: PMatakam (Mafa-Mada) *beke "slave" [GT] | PMusgu *beke "slave" [GT] | PMasa *bʸek "slave" [GT] as suggested in OS 1989: 132; 1992: 185; HSED #273; Orel 1995: 152, #2; Takács 1999b: 107, #30; 1999c: 348.

[30] The ultimate deverbal etymology of Eg. wb3 "Diener, Aufwärter (N.R. auch als priesterlicher Titel)" (MK, Wb I 292, 1-2) = *"a household servant connected with the preparation and serving of food" (Gardiner apud Ward) = "butler" (FD) < wb3 "(einen Trank) ausschenken" (NE Mag., Wb I 291, 17) seems even more obscure. The only other author to deal with the external derivation of this title to my mind, W.A. Ward (1978: 57 and 91) was disposed to render this function from the primary sense *"one who carries food and drink" and to derive it from an alleged common Semito-Egyptian *√wbl "to bring, carry".

[31] N. Skinner's (1996: 16) equation of WCh.: Hausa bárà "servant" [Abr. 1962: 77] and Mande bara "work, domestic service" etc. (as listed above) with Eg. b3k "Diener" (OK, Wb I 429-430) and even Hausa bara "begging" (?) < Kanuri bara "to seek, hunt" etc. is untenable in this form. This theory offers no explanation for the function Eg. -k in Egyptian, which seems to be part of the root. Let alone for the meaning "to seek, hunt", which certainly represents an entirely distinct root family, cf. EDE II 263-264 s.v. Dem. brbr.

*burr-/*birr- [GT] (ECu.: Sasse 1982: 44; Cu.: LS 1997: 253-354) ||| WCh.: Hausa bíráárì
"1. jumping, 2. surging forward to get at sg.", cf. bùrbùrnííyáá "gambolling with joy" [Abr.
1962: 102, 121] || CCh.: Daba mbir "1. voler, 2. s'envoler, sauter" [Mouchet 1966: 136] =
mbə̀r "to jump" [Lienhard-Gieger], Kola ...mbír... "to jump" [Schubert] | Musgoy mbir
"(s'en)voler" [Mouchet] | Musgu b<u>ára</u> "to jump" b<u>ára</u> "(s'en)voler" [Mouchet 1950: 30],
Vulum bìrì "voler (oiseau)" [Tourneux 1978a: 288, cf. Tourneux 1978b: 93] || ECh.: Kwang-
-Mobu bə́ré "sauter" [Jng. apud Lenssen 1984: 63], Kwang-Ngam bré "voler (pour un
oiseau)" [Jng. apud Lenssen 1984: 63] | DM *ber- "to spring" [GT] > EDangla béré "sauter
en dansant" [Dbr.-Mnt. 1973: 42] = béré "(beim Tanzen) springen" [Ebobisse 1979: 127;
1987: 94], Bidiya ber (berí, bereŋ) "1. apparaître (lune), 2. sauter", pl. berèw (berèewí,
berèeweŋ) "sautiller, danser", beréwò (f) "danse" [AJ 1989: 58] | Mubi bír "voler (oiseau)"
[Jng. 1990b MS: 5], Birgit bèrí "voler" [Jng. 1973 MS] (Ch.: JI 1994 II: 211). For the AA
comparison see also Mukarovsky 1966: 19, #64; 1987: 226; SISAJa I, #112; HCVA II #119;
HSED #219 & #291; Takács 1999a: 44; EDE II 65.
79.2. AA *√pr (var. ***√pḥr**) "to run, flee" [GT]: Eg. pḥrr [infix -ḥ-?] "laufen" (OK, Wb I
541, 2-13) = "to run" (XVIII., FD 92) = "to be swift, travel swiftly, run" (DLE I 180) ||| Bed.
fōr "fliehen" [Reinisch 1895: 81] = for "to flee" [Roper 1928: 181] ||| CCh.: Masa pīìrà [-ii-
< *-iH-?] "fuir (en courant)" [Caïtucoli 1978: 73] || ECh.: Mokilko pírpírá (f) "bon coureur"
[Jng. 1990a: 162]. Cf. EDE II 492; EAAN I 89, #420.

● **80. WDangla ḅárùr** "en louchant" [Fédry 1971: 105] may be akin to Sem. *√ʕbr "to cross"
[GT]: i.a. Hbr. √ʕbr qal "1. to pull along, go on one's way, move through, 2. pass over s'one,
3. pass by (ʕal), 4. pass over, pass by, 5. go over, pass over, 6. changes of position: to go on,
go out over, go through, move through, pass on to, 7. overstep, contravene", piel "1. (arch.
tech. term) to draw (chains) across (a room), 2. (of a hull) allow the semen to spread over,
mount", hifil "1. to allow to pass over (wind), 2. allow to stride over, bring over, 3. (acc. and
ʕal) allow to pass (by), lead by, lead through, allow to go under, allow to overtake, 4. (with
bə-) allow to pass through, (with acc. of person) shout beyond s'one, 5. allow to pass,
overlook (guilt), allow an opportunity to pass, 6. allow property to pass to others (with acc.),
7. present offerings of children, 8. (with min-) take away from, remove sin, put away, bring
down, turn away, keep away from, remove (clothes)" [KB 779-780] | Ar. ʕabara I "1. passer,
traverser, franchir (un fleuve, un gué), passer à travers qqch., traverser, p.ex., un pont"
[BK II 152] || MSA: Jibbali √ʕbr > ʕɔːr "to cross, be/go far away" [Johnstone 1981: 6], Mehri
√ʕbr > ʕābōr "to cross" [Johnstone 1987: 10], Soqotri √ʕbr > ʕáber "1. passer, 2. transgresser,
violer un serment" [Leslau 1938: 295].
80.1. Less likely is an eventual cognacy with a fully hypothetic, so far uncharted AA
**√hbr (???) of dubious existence, whose variety with C₃ *-l might, at least in theory, be ES:
Tigre √hblbl > habälbälä "rouler des yeux" [DRS 360, HBLBL1: isolated in Sem.].

● **81. WDangla ḅɔrɔy** "und" [Fédry 1971: 107]: origin puzzling at this point. But highly
noteworthy is CCh.: PMasa *ḅay "and" [GT]: Lame ḅái – ḅài (connectif) "et, puis, mais
(porte la marque aspectuelle du verbe qui suit, ton haut pour l'inacc., ton bas pour l'acc.)"

[Sachnine 1982: 261], Zime-Dari ḅāy "et, mais, puis" [Cooper 1984: 3], albeit the *lautge-schichtliche* background of such a connection has not yet been cleared.

Dangla-Migama *ḫ- + *-l-

● **82. Bidiya ḅállà (f), pl. ḅàlál** "flèche", cf. also ḅàalò ~ ḅàlò (m), pl. ḅaalè ~ ḅalè "arc" [AJ 1989: 61] | MT *ḅale "arrow" [GT]: Kofa ḅàlé (f), pl. ḅálàn "arrow" [Jng. 1977 MS: 7, #138], Toram ḅele "flèche" [Alio 2004: 253, #74] | Sarwa ḅálāw, Gadang ḅālū "lance (de guerre)" (Somray gr.: JI 1993 MS: 8, #144). The history of ECh. *ḅal- "1. arrow, 2. lance" [GT] underlying these forms has not yet been comprehensively mapped in all its details: this is what an attempt is made for below. Note that, in principle, Ch. *ḅ is regular < a combination of *ʕ/*ḥ/*ʔ/*h + *b as radicals or, alternatively, may also derive from a prenasalized *ᵐb-.

82.1. The Chadic word exists with a C₂ *-r also, which may either be due to a reason lying in the historical phonology (not yet cleared) or cf. CCh.: Munjuk-Puss ḅre (m) "pointe de flèche" [Trn. 1991: 79] | Masa *ḅaraw ~ *ḅur "arrow-bow" [GT]: Masa-Bongor ḅàràu-ná "arc + carquois + flèche" [Jng. 1971/2 MS: 81], Gizey/Wina gú ḅùr, Masa ḅàràw, Ham ḅòròò, Musey gúmbùrà "arc" [Ajello et al. 2001: 6], cf. Gizey/Wina zìy ḅùr, Masa zì ḅàràw, Ham zì ḅòròò "carquois" (lit. "house of arrow", cf. PMasa *ziy "house") [Ajello et al. 2001: 11], Gizey/Wina ḅùr "flèche" [Ajello et al. 2001: 26].

82.2. A deverbal origin of the above term for "arrow" is possible, cf. WCh.: Hausa ḅíllà "to throw" [Stolbova 1996: 27] | Ron *ḅol "schießen" [GT]: Fyer ḅol, Bokkos ḅol, Daffo--Butura ḅol (Ron: Jng. 1968: 12, #143; 1970: 392) ‖ CCh.: Daba ḅàl "to throw (an arrow)" [Barreteau 1995: 225].

82.3. O. V. Stolbova (1996: 27) preferred equating this Chadic verbal root (presented right above sub #80.2.) with some reflexes of WCh. *√ʕbl "to throw (a weapon like arrow)" [GT], cf. WCh.: Kulere ḅìl "werfen (Stock usw.), bewerfen" [Jng. 1970: 351] = "to throw" [Newman 1977: 186] | Bole ʔumḅul "wegschleudern" [Lukas 1971: 133] ‖ CCh.: Zelgwa mbál "to throw an arrow" [Brt. 1995: 202]. V. Orel and O. Stolbova (1990: 80, #51) rightly compared Bole ʔumḅul with Ar. nabala "jeter, lancer des traits, des dards", nabl-at- "une flèche" [BK II 1187-8].

82.4. Elsewhere, V. Orel & O. Stolbova (HSED #1768) combined Bole ʔumḅul less convincingly with Ar. miʕbal-at- and Eg. mʕb3 (a well-known isogloss, see below)[32] < AA *mi-ʕVbal- "arrow, spear", which is untenable in this direct way, since Ch. *ᵐb- cannot be immediately equated with Eg.-Sem. *√ʕb, cf. Eg. mʕb3 "Art Speer" (PT, Wb II 47, 1-3, cf. RdE 15, 1963: 60, n. 1) = "harpoon" (FD 105) = "lance, spear, also harpoon" (Caminos 1972: 219, cf. WD I 85) = "Harpune, (Fisch)Speer" (GHWb 327; ÄWb I 516) ‖‖ CSem.: Ar. miʕbal-at- "a broad and long arrow-head or an iron (iron-head) made broad, an arrow

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[32] Literature for this Eg.-Sem. match: Ember 1926: 5, #1; 1930 = ESS, §3.c.3, §5.a.19; Vycichl 1934: 55; 1958: 372; 1983 = DELC, 108; Calice 1936 = GÄSW, #623; Cohen 1947: #57; HSED #1768.

having a broad head" [Lane 1942] = "1. fer de flèche long et large, 2. flèche au fer long et large" [BK II 159] = miˁbal-at- "a kind of arrow" [Ember after Nöldeke 1910: 55] = miˁbal-at- "arrow with a thick head" [Albright 1919: 179, #11] = miˁbal-at- "large arrow point" vs. miˁbal- "cutting tool" [Fronzaroli 1977: 164] = miˁbal-at- "arrow" [Vycichl in DELC 108] = "arrowhead" [Leslau] || ES: Geez maˁbal "sharp instrument, arrow" [Ember] = mabˁal ~ mâ(ˁ)bal "instrument, utensil, weapon" [Albright 1919: 179, #11] = maˁbal ~ mabˁal "trait, javelot" [Cohen] = māˁbal "telum, jaculum" [Vycichl] = maˁbäl "arrow" [Fronzaroli 1977: 164] = māˁəbal ~ māˁəbalt "1. tool, instrument, fittings, 2. arrow, weapon, spear" [Leslau 1987: 54]. The Egypto-Semitic stem *mV-ˁbVl- was apparently a *nomen instrumenti* formation (cf. Grapow 1914: 23), but the basic meaning of the underlying Eg.--Sem. *√ˁbl is obscure in both branches (no trace in Egyptian and highly disputed speculative hypotheses in Semitic),[33] or, at least, such an expectable verbal root does not appear in the logically expectable form, such as a nowhere attested NAA **√ˁbl "to shoot" (or sim.) [GT], which is itself a revealing circumstance suggesting that pre-Eg.-Sem. *mV-ˁbVl- had already been in use as a ready-made (pre-Neolithic, early PAA?) technical term by the time of a secondary Egypto-Semitic cohabitation the Nile valley Neolithic period (5th-4th mill. BC) when the original verbal root in both branches was no longer in use or, at least, was not the most frequented synonymous variety in both branches. Highly suspicious in this context is the trace of a possible PAA *√ˁbl, instead of NAA (where both Semitic and Egyptian belong) in SAA, namely CCh.: Munjuk-Puss ḅili (ḅəla) "1. percer, 2. enfoncer (une pointe)" [Tourneux 1991: 79].

82.5. Moreover, the weapon name can be pointed out, again from Chadic, in its simplest biradical root form (i.e., void of either C₁- *ˁ- or prenasalization) also, cf. WCh.: Tangale bal "spear with a long blade" [Jng. 1991: 70] || CCh.: Masa *bir </~/> *bil "couteau de jet" [GT]: Masa bīl [bīl̲lā] "1. le couteau de jet, 2. le courant du fleuve (métaph.)" [Caïtucoli

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[33] Most suggestive is Ar. ˁabala "to cut (off) to extirpate it" or ˁabula "to be(come) large, big, bulky, thick" [Lane 1941]. Already Th. Nöldeke (1910: 55) separated Geez māˁabal "arrow" from Geez mabˁal "instrument". Following him, A. Ember (1926: 5, #1) treated Ar. miˁbal-at- "a kind of arrow" as a borrowing from Geez māˁabal "arrow". W. F. Albright (1919: 179, #11), followed later by W. Leslau (1987: 84), combined the Geez and Ar. noun with Akk. (nA, jB) bêlu "etwa: Waffe" [AHW 120], which is uncertain. Following Dillmann, Albrigh derived Ar. miˁbal-at- "arrow with a thick head" from ˁabila "to be thick". P. Fronzaroli (1977: 160-4), in turn, saw the source of Geez maˁbäl "arrow" and Ar. miˁbal- "cutting tool", miˁbal-at- "large arrow point" in Sem. *√ˁbl > Ar. ˁabala "to cut", ˁablāʔ- "white rock, narrow strip in the blackness of the earth, the stones of which are white", ʔaˁbal- "white stone or mountain of which the stones are white" [Fronzaroli], Dathina ˁibāl (pl.) "heaps of corn" [Fronzaroli] || MSA: Soqotri pl. ˁébhaléten "sharp stones", cf. máˁbher "rock" [Leslau 1938: 293, 296], Mehri ʔaybēl [Fronzaroli] = ʔáybəl "flint(stone)" [Johnstone 1987: 10] | Geez ˁubāl "hill" [Leslau 1987: 54]. Fronzaroli set up two PSemitic etymons, namely *ˁabl-at- "a white stone" vs. *ˁibal- "white stones" (supposed source of the name of Ebla), both carrying the basic meaning "a rock of clear, shining appearence similar to flint but coarse--grained, prob. a variety of granite". In Fronzaroli's view, the occasional use of this rock as flintstone explains the Mehri and Soqotri data, while the Ar. reflexes suggest the stone *ˁabl- was used for making baldes and points. Ar. ˁabala I "10. garnir une flèche d'un fer long et large" [BK II 158]. The authors of SISAJa I #96 = Diakonoff team (1981) considered Geez maˁbal to be the metathesis of Geez mabˁal (lit. "working tool") explained from Sem. *√pˁl ~ *√bˁl "make, do". W. Leslau (1987: 54, 84) assumed in Geez the following scenarios: (**1**) Geez māˁəbal(t) derives directly from Geez √ˁbl II ˁabbala "to make, do" (which Leslau linked to Sem. *√ˁml "to work"). (**2**) Geez māˁəbal(t) is met. of Geez mabˁal ~ mabˁəl "iron tool, axe", cognate with Ug. √bˁl "to make, manufacture, work" [DUL 203] || E/OSA √bˁl "to work, excavate bedrock (travailler, creuser le soubassement rocheux)" [SD 26].

1983: 50], Masa-Bongor bíl-là "couteau de jet" [Jng. 1971/2 MS: 81], Lame bə̀rà "couteau de jet" [Sachnine 1982: 283], Zime-Dari pə̀rà "couteau de jet" [Cooper 1984: 21]. Accordingly, the underlying verbal root has become known, with no surprise, equally from Chadic, cf. WCh.: Kupto bùuléy "werfen, schleudern" [Leger 1992: 18], Geruma bèel-áalà "to throw" [Schuh 1978: 118] ‖ CCh.: Glavda bal "to throw, cast" [Rapp & Benzing 1968: 13] | Mada bál "to shoot" [Rossing 1978: 324, #635] | Puss bili "lancer, jeter (une seule chose)" [Tourneux 1991: 79], perhaps Mbara vlà [vl- < *bl-?] "jeter", vùl "lancer, jeter" [TSL 1986: 280]. Note that these Chadic cognates are to be distinguished from Ch. *ḅal- "(to shoot an) arrow" [Stolbova] (discussed above), which Stolbova (CLD I 35) erroneously equated with Ar. nabala.

● **83. EDangla ḅàlē** "couper (pour faire une lanière)" [DM 1973: 57] ‖‖ Sem.: Ar. ʕabala I "5. couper, retrancher" [BK II 158]. May be eventually akin to the root family specified in the above entry. The underlying biradical PAA root appears in PAA *√bl **"to divide, break** [GT]: (?) Eg. b3b3 [if < *√blbl] "to distribute, pour out" (NEg. BD 64, Ward 1978: 64, #182, 94-95) = distribuer, répartir" (AL 78.1230) = "*verteilen" (GHWb 241) ‖‖ NAgaw: Bilin bəl-iŋ "teilen" [Reinisch l.c. infra] | SAgaw: Awngi bell-et- "to chop up" [Ehret after Hetzron 1969: 96] ‖ LECu.: (?) Saho & Afar bal [-l correct?][34] "teilen" [Reinisch 1886: 828] | HECu.: Sidamo bōl- "to separate grain (maize)" [Hudson 1989: 354: isolated in HECu.] ‖ SCu.: (?) Qwadza bel-at- [-l- < *-r- poss.] "to be broken" [Ehret 1980b] | Dahalo ḅalal-e [ḅ- < *b-] "circumcisor" [EEN 1989: 33] (Cu.: Ehret 1987: 15, #7) ‖‖ WCh.: Tangale beli "1. to break (stalk, stick), 2. pinch" [Jng. 1991: 71] = bel "to be broken (ломаться)" [Stolbova] ‖ CCh.: (?) Bura bili [-l- < *-r- also poss.] "to break (wood etc.)" [BED 1953: 21] | Daba bəl- "frapper de la hache" [Mouchet 1966: 111] | Uldeme vàl-áy "partager, distribuer" [Sachnine 1986: 135] | Puss bili "2. couper (à la hache)" [Tourneux 1991: 77], Vulum bìlí "couper (à la hache par ex.), abattre" [Tourneux 1978: 288] ‖ ECh.: Migama bòolâ "hâche" [JA 1992: 71]. Cf. EDE II 67; EAAN I 63, #268.

● **84. PDangla *ḅal-** "to moisten" [GT]: WDangla ḅâllè "faire une aspersion rituelle", cf. also ḅàlḅìlè "mettre un liquide par dessus un solide, vg. huile sur riz ou boisson sur l'estomac après avoir mangé" [Fédry 1971: 105], EDangla ḅàllìyē "répandre une libation de réconciliation (pour réconcilier deux femmes brouillées en répandant de la farine mouillée ...)" [DM 1973: 57], Bidiya ḅàlḅàalo (m) "mets fait de petit mil mouillé puis chauffé légèrement" [AJ 1989: 61] ‖‖ Sem. *√ʔbl [DRS]: Akk. abl-ūt-u "profusion de plantes" [DRS, but otherwise in AHW 6b and CAD a 54] ‖ Can. *ʔābil > PHbr. *ʔōbēl > OT Hbr. ʔābēl II "watercourse, brook" vs. ʔubāl "watercourse, canal" [KB 7] = ʔābel "prairie (?), ruisseau (?)" [DRS] | Ar. ʔabal- "frais, vert, récent et humide (herbe et fourrage)", ʔabila "manger du fourrage vert qui en même temps tient lieu d'eau (se dit des chameaux)" [BK I 5] = ʔabila "to be content or satisfied with green pastures so as to be in no need of water", ʔubul- "the ḥilf-at-

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[34] L. Reinisch (1886: 828-829) distinguished this from Afar baḷ "abtrennen, spalten, teilen" [Reinisch] = baḷ "dividere, separare, spartire" [Colizza 1887: 111] = bax-(i)se [baḍ-(i)se] "to divide, separate, share" [PH 1985: 65]. Two distinct roots?

of (dry) herbage growing after a year, upon which camels, or the like, fatten" [Lane 7-8] = ʔabila "recevoir la pluie (to catch the rain), être riche", ʔibil- "nuages chargés de pluie (?) (rain-filled clouds?)" [DAFA 15-16, so also DRS] (Sem.: DRS 3). The ECh.-Sem. isogloss (with a C_1- as *ʕ-, whose compensatory loss has resulted in *ḅ- in Chadic) is part of a large biradical root family:

84.1. NAA *√bl "1. to moisten" [GT]: Sem.: Akk. (bab., nA, aAk$^?$) balālu "besprengen, vermischen, legieren" [AHW] ‖ Hbr. √bll qal "1. einrühren mit Öl, 2. verwirren (die Sprache)" [GB] = "1. to moisten (with oil), 2. mix up, confound (languages)" [KB 134] | Aram. √bll "vermischen, befeuchten" [AHW] | OSA (Sabaic) √bll "bewässern" [GB] = √bll "irriguer" [DRS] = √bll > bllm (adj.) "wet, moist" [Biella 1982: 44], Ar. √bll I: balla "mouiller, tremper, humecter, imbiber qqch., apporter l'humidité (la bruine)" [BK I 155; DAFA = Blachère 1967 I: 823-824]^{35} | MSA: Jibbali eblél "to give (animals) their fill of water" [Johnstone 1981: 25], Mehri ablēl "to milk partially" [Johnstone 1987: 48] ‖ ES: Geez balla "to moisten, wet, immerse in a liquid", bəlul "humid, wet, moistened, dampened" [Leslau] (Sem.: GB 101; AHW 97; DRS 67; Zaborski 1971: 56, #15; Fronzaroli 1971: 635, #7.50; Leslau 1987: 96) ‖‖ Eg. b3j "feucht sein (vom Schweiß)" (Med., Wb I 417, 11-12; GHWb 239) = "damp" (FD 77) = "to be damp, moist, clammy" (Ward 1975: 63, #1; 1978: 139-140) ‖‖ SBrb.: Hgr. belulu "être très liquide (un mélange d'un liquide et d'une substance en poudre ou en petits fragments)" [Foucauld 1951-2: 65], EWlmd.-Ayr bələwləw "être très liquide (mélange d'un liquide et d'une substance en poudre)" [PAM 1998: 10]. This AA root is present with a nasal root ext. in ECh. *ba₂lā₂ny- "wet" [GT]: Migama bálàanyí (m) "humidité" [JA 1992: 68] | Mubi bélèny (m) "déchets de chèvres (semi-liquides)" [Jng. 1990b MS: 5]. The Sem.-Eg. equation has been well known.^{36} Cf. also EDE II 45; EAAN I 64 #272.

84.2. CAA *√bl ~ *√pl "2. to wash" [GT]: Eg. b3j "Art Gerät zum Besprengen der Füße" (CT, NK, Wb I 417, 13) = "foot-ewer" (BM stela 101, FD 77) = "Fußwaschkrug, Wasserkrug (für die Fußwaschung)" (GHWb 239-240) ‖‖ SCu.: Qwadza bal- "to wash, clean" [Ehret 1980: 134, §I.A.10]^{37} ‖‖ WCh. *Pal- "to wash" [GT]: AS *pal(aŋ) > *pəlaŋ "to rinse" [GT: AS *p- < Ch. *b- reg.]: Angas palang ~ palng "to rinse" [Gochal 1994: 41], Sura pəlaŋ "auswaschen" [Jng. 1963: 79], Goemay palang "to rinse" [Sirlinger 1937: 172], Kofyar pal "to wash brewing grain" [Netting 1967: 31] (AS: Takács 2004: 279) | Tangale pálɔ̀ [p- < *b- poss.] "bath" [Kidda 1985: 209, #314], cf. Bole búlè "ewer" [Bross-Ibriszimow 1993: 95] ‖ CCh.: Mada ba̱l "se laver" [Mouchet] = bal [Hoffmann] = bàlá "to wash" [Rossing] = ábàlá "se laver, baigner, laver" [Barreteau & Brunet 2000: 68], Muktele pàláy "to wash" [Rossing], Moloko bal "to wash" [Bow 1997: 23] ‖ ECh. *√pl "to wash" [GT]: Kwang pèlē (body) [Jng.], Modgel péle [Hoffmann] | Kabalay pəl (things) [Caprile] = polo-kozu (compound) [Hoffmann], Lele pìĺ "(se) laver" [WP 1982: 76] = pìíl [Gowers], Nancere pele [Hoffmann],

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^{35} Following the tradition of Sem. lexicography, also D. Cohen et al. (DRS l.c.) classified this root together with the reflexes of Sem. *√bll "to mix". Shall we distinguish two ultimately distinct, secondarily contaminated roots?

^{36} Cf. GÄSW #175 (after p.c. by W. Vycichl); Vergote 1945: 130, §1.d.9; Dolgopol'skij 1966: 54; IS 1966: 15, 18; 1971: #20 (including Twareg too); Ward 1975: 63, #1, fn. 29; 1978: 89-91; Hodge 1978: 2, #10; 1981: 404, 411; 1988: 273 (with a PCh. root); Rössler 1981: 385. Cf. also MM 1983: 181 (Sem.-Hgr.); HSED #334 (Hgr.-Orm.).

^{37} Ehret 1980a: 134, §I.A.10: < SCu. *baŝ- "to be stripped bare or clean".

Gabri pelē [Hoffmann], Dormo pelenga [Hoffmann] | Tumak pɔ̄l (things) [Caprile] (Ch.: Hoffmann 1971: 11; JI 1994 II: 339). For Eg.-Bole cf. EDE II 44. Ultimately related to AA *√bl **"1. to moisten"** (above)? See also EAAN I 64, #272 and #273.

● **85. Migama ḅeeló (ḅéèlé, ḅéláa)** "briller" [JA 1992: 73] ‖ WCh.: PAngas *ḅel "clear (of weather)" [Takács 2004: 31]: Angas bĕl ~ bäl "clear, daylight" [Foulkes 1915: 148] = ḅēl "1. to (be) clear (of weather)", ḅèl "condition of being (of weather) clear" [Gochal 1994: 48] ‖‖ Eg. ʕb3 (reg. < *√ʕbl) "1. (XVIII.) funkeln, leuchten, 2. (GR) etwas erleuchten" (Wb I 177, 12-13),[38] ʕb3 "Licht" (GR, Wb I 177, 14) ‖‖ Sem.: Ar. ʕabila I "2. devenir blanc, blanchir", IV "1. id." [BK II 158] < PAA *√ʕbl "to light, shine" [GT]. Of biconsonantal origin (sine C₁- root ext. *ʕ-?), cf. below.
85.1. A remotely related root variety appears in **PAA *√Pl (*p- or *f-)** "to shine" [GT]: Sem.: Ar. full- "étincelle, éclat d'un tison embrasé" [BK II 626] ‖‖ NBrb.: Tamazight √fly > se-flily, sse-fliliy "briller (subitement), étinceler", a-se-flily "lumière qui brille, signal lumineux" [Taïfi 1991: 115] | Qabyle ta-fuli "1. insolation, 2. attaque", cf. flali, flili "1. surgir, paraître, 2. briller subitement" [Dallet 1982: 203, 208; DRB 564: isolated in Brb.!] ‖ SBrb.: Ahaggar √flw > felww-et "scintiller", felufelu "miroiter (réfléchir la lumière en produisant des reflets tremblants; se dit, p. ex., d'un miroir, de l'eau, du mirage, de métal poli, d'une étoffe satinée, d'un objet verni, d'une surface luisante d'étoffe, de peau, des cheveux ou de la peau d'une p. quand ils sont luisants, du poil des cheveux quand il est luisant)" [Foucauld 1951-2: 326] ‖‖ LECu.: Afar √flk [root ext. -k] > falālak-o "flash (éclair)", falālak-ite "to flash e.g. lightning (éclairer, lancer des éclaires)" [Parker & Hayward 1985: 99-100] ‖‖ WCh.: Hausa fàl "shining brightly", fàlfàlnííyáá (Sokoto) "1. brightness (of lamp), 2. sheen, gloss", fàlàù "shining brightly" [Abr. 1962: 246]. See EAAN I 117, #568.
85.2. PAA *√bʕr "to shine" (or similar) [GT]: Sem.: Ug. bʕr D "1. encender, 2. quemar, 3. chamuscar, Š "iluminar" [DLU I 103] < Sem. *√bʕr [infix *-ʕ-?] "1. to light fire, 2. heat" [GT] (see #68 above) ‖‖ CCh.: Gude ḅərə "to shine, be bright" [Hoskison 1983: 165]. Ultimately related to PAA *√bʕr "to heat" [GT].

● **86. WDangla ḅàlḅìlè** "mettre un liquide par dessus un solide, vg. huile sur riz ou boisson sur l'estomac après avoir mangé" [Fédry 1971: 105] ‖‖ Eg. b3b3 [regular < either *√blbl or *√brbr] "to distribute, pour out" (NEg. BD 64, Ward 1978: 64, #182, 94-95) = distribuer, répartir" (AL 78.1230) = "*verteilen" (GHWb 241) < AA *√blbl "pour out" [GT]. The Dangla parallel reflects an additional initial laryngeal extension not present in Egyptian.
86.1. A further root variety with the same Ch. *ḅ- (originating in the resolution of a cluster of a lost *H and a plain *b reflected by Egyptian), but with an AA *-r, is preserved by WCh.: AS *ḅʷē₂r, var. *ḅē₂r (?) → PAngas *ḅʷīr "1. to pour away, out, 2. melt away, dis-

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[38] The expression n ʕb3 (Pap. Edwin Smith 16:1 and 16:14) was rendered as one word (nʕb3, elsewhere unattested) by both authors commenting this medical papyrus, viz., as "pallor, clamminess, resp." (Breasted 1930: 408 and 414, resp.) and as "Blechheit" (Ebbell 1939: 68), but as pointed out by W. Westendorf (WMT I 137), we have to do here with the unusual alphabetic writing of the negation n + ʕb3 "leuchten, funkeln".

solve (?)" [GT]:[39] Angas bat-bwir "to capsize", bat-bir (so, without -w-) "to upset" [Ormsby 1914: 208, 315] = bwiir "1. to pour out, spill (as water, or grain from a sack), 2. upset" [Foulkes 1915: 154] = ḅwir "ausschöpfen, augießen (Hausa zúbár), (Wasser auf Pflanzen) gießen" [Jng. 1962 MS] = [ḅʷîr̃] "to throw out, spill" [Burquest 1971: 14, 41] = ḅwir "to pour, spill" [ALC 1978: 8] = (plain) ḅwīr ~ (hill) ḅīr "to pour" [Gochal 1994: 34, 61], Sura ḅɛɛr "1. verschütten (Flüssigkeiten), 2. verloren gehen" [Jng. 1963: 60], Mupun ḅēer "1. to pour away, 2. smother, 3. plaster (a house), paint" [Frj. 1991: 7], perhaps Goemay ḅèr [ḅɛr] "to fall into pieces through being overcooked, overripe" (from *"2. to melt away, dissolve"?) [Sirlinger 1937: 13] = (?) beer "to spread" [Hellwig 2000 MS: 1] (AS: Stolbova 1987: 155, #95; Takacs 2004: 42).

● **87. DM *ḅEld-** "to teach" [GT]: WDangla ḅíldé "apprendre, enseigner" [Fédry 1971: 106], EDangla ḅìldē (m) "apprendre, enseigner" [DM 1973: 58], Migama ḅèldò (ḅèldé, ḅèlèddá) "apprendre" [JA 1992: 73]: in principle, most tempting would be to assume *eo ipso* as metathesis of glottalization like *√ḅld < *√blḍ where ECh. *ḍ may reflect either AA *ṭ or a glottal sibilant affricate. Still, even after manifold scanning the relevant lexical materials in the cognate branches, my attempts at finding semantically identifiable cognates,[40] the available comparative data make it evident that the C₃ must have been a root extension and that the *ḅ- issued from a cluster of primary *b- with a lost laryngeal, cf. CAA *√ʕbr ~ *√ʕbl [GT] > Sem.: Ar. √ʕbr (prefix ʕ-?) I "7. expliquer, interpréter, p.ex., les songes à qqn., 8. examiner en détail (les marchandises ou les pièces de monnaie, pour s'assurer de leur qualité ou de leur poids), 9. signifier, vouloir dire telle chose, offrir tel ou tel sens", II "5. expliquer, interpréter (un songe, etc.), 6. énoncer qqch., 7. expliquer qqn., expliquer ce qu'il voulait dire", VIII "1. considérer avec attention, observer, 2. étonné à la vue de qqch., 3. regarder qqch. comme un example dans lequel on doit puiser un enseignement; s'instruire par des exemples, par ce qui arrive à d'autres, 4. examiner avec attention et calculer, supputer, 5. considérer, respecter qqn., 6. avoir égard à qqch., faire attention", X "4. s'instruire par des exemples, par ce qui arrive aux autres", ʕibr-at- "1. considération, estime, case que l'on fait d'une personne ou d'une chose, 2. exemple qui sert d'avertissement aux autres; événement extraordinaire d'où l'on peut tirer quelque enseignement", but cf. I "1. passer, traverser, franchir (un fleuve, un gué), passer à travers qqch., traverser, p.ex., un pont" [BK II 152-154] = II "erklären" [GB] ‖‖ Eg. ʕ3 [regular < either *√ʕbl or *√ʕbr] "eine Eigenschaft: geschickt? ausgestattet?", in: ʕ3-r3 "mit klugem Rat" (Wb I 177, 5-6) = ʕ3-r "beredt, mit klugem Rat, *kompetent" (1st IMP, ÄWb I 265, II 494-495), cf. ʕ3 "(das Schiff) kommandieren, leiten"

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[39] AS *ḅʷēr "to pour away" yields reflexes with a rich semantic dispersion. The most interesting one among all these shifts of meaning is to be seen in Angas bat-bwir "to capsize" [Foulkes]. The same shift occurs, e.g., in French *couler* "1. to pour, 6. to sink (ship, person)" (Le Robert & Collins Super Senior).

[40] It would be probably far-fetched to assume a semantical shift "to teach" < *"to torture" and a kinship with Sem. *√blṣ ~ √blṭ (root varieties?) [DRS]: Ar. √blṣ III "fondre sur qqn., assaillir", balṣ-at- (mod.) "vexation, avanie", cf. √blṭ IV "5. importuner qqn. par ses demandes" [BK I 160] = √blṣ I "faire une avanie à qqn., rançonner (exiger plus qu'il ne faut), opprimer, vexer", balṣ- "avanie, vexation", balṣ-at- "avanie, vexation, aussi: concussion, exaction, maltôte" [Dozy I 111] = √blṣ III "assaillir qqn.", √blṭ IV "4. harceler qqn., l'importuner par ses demandes" [WKAS 799-800] ‖ Tigre (tə)bälläṣä "tromper" [DRS], Amh. bälläṭä "l'emporter sur, duper" [DRS] (ES: DRS 69, blṣ4).

(PT, BD, Wb I 177, 1; ÄWb I 264) ||| WCh.: PAngas *ḅel "reason, sense" [GT]:[41] Angas bĕl "sense, reason" [Foulkes 1915: 148] = ḅɛl "Verstand" [Jng. 1962 MS] = ḅēl "2. be wise", ḅèl "condition of being wise" [Gochal 1994: 48] (Angas: Takacs 2004: 31).

87.1. One may wonder theoretically whether the traces of the ultimate biradical root (without the C₁ extension element *ˁ-?) are to be seen in CAA *√br [GT] > Sem. *√bˀr "to become visible" [GT]: Akk. bâru G-stem "1. in Erscheinung treten, sich offenbaren, 2. etwa auftauchen, greifbar werden, 3. etwa sichtbar Bestand haben", Hbr. √bˀr piel "erklären, deutlich, klar machen" (Sem.: GB 81; AHW 108; DRS 41) ||| (???) Eg. sb3 [Takacs 1994: caus. s- + * √br?] "to teach" (OK, Wb IV 83-84)[42] ||| SCu. *bar- "to know" [Ehret]: Qwadza bal-at- [-l- < *-r- regular] "to know" | Dahalo ḅar- "to know" (SCu.: Ehret 1980a: 135, §I.A.12) || ECu. *bar- "to learn" [GT]: Afar bar-, Oromo bar-aḍ- | PSam *bar-o [Heine 1978: 75]: Somali bar-o, Boni bar-o | Darasa bar-aḍ- (ECu.: Reinisch 1886: 830; Moreno 1937: 233; Dolgopol'skij 1966: 55; Zaborski 1975: 322). ECu.-Hbr.: Reinisch 1902: 85; Dolgopol'skij 1966: 55; 1967b: 279. For this Cu.-Sem. etymology of Eg. sb3 on the analogy of, e.g., LECu.: Boni bar-sīs- (caus.) "lehren" [Sasse 1980: 96] see Takacs 1994; 2000: 71-72, #1.1.

● **88. EDangla ḅálàs** "déséquilibré" [Dbr.-Mnt. 1973: 57] ||| SBrb. (Twareg) *√blẓ "to miscarry (either in speech or in giving birth)" [GT]: Ahaggar belezz-et "2. commettre un maladresse (en paroles), laisser échapper des paroles maladroites",[43] ă-blezzi "maladresse (en paroles)" [Foucauld 1951-2 I: 69], EWlmd.-Ayr bələẓẓ-ət and zə-bbələẓẓ-ət "mettre bas avant terme (femelle)", EWlmd.-Ayr bălẓo "avorton" [PAM 2003: 30] (SBrb.: DRB 71, blẓ1, blẓ(t)1-2)[44] ||| Eg. bnd [regular < both OEg. *bnḏ < AA *√blḏ or < AA *√blṭ] "als Bez. für schwere Geburt oder Fehlgeburt" (Med., Wb I 465, 1), cf. bnd "übel daran sein (Gegs. ršw)", bnd n "übel ergeht es dem, Wehe dem" (NE, Wb I 464, 14-16) = "to go ill" (DLE I 157) = "krank werden" (GHWb 255) ||| Sem.: no direct cognates though, but the assumption of the sometime existence of a possible **√blṣ "to mismanage (???)" may be supported by its variety *√blṭ attested by Ar. √blṭ IV "4. être ruiné, tomber dans la misère" [BK I 160] = √blṭ

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[41] Takacs l.c.: Any connection to AS *ḅel "clear"?

[42] Whose s-, however, may well have alternatively been the first radical of a triliteral root (as surmised in the HCVA V 22, #355 s.v. AA *cVbVr- "to learn, some to know, let know"), cf. PB Hbr. √sbr qal "1. meinen, 2. vertrauen", hifil "1. klar machen, 2. hisbīr pānīm: freundlich sein" [Dalman 1922: 282] = √sbr "insbes. meinen, der Ansicht sein, vertrauen" [Levy 1924 III: 469] = √sbr hifil "to brighten, illustrate, make clear" [HCVA] | JAram. √sbr qal "1. verstehen, 2. meinen, 3. gedenken, 4. hoffen", afel "1. hoffen, 2. hoffen machen, 3. ˀasbēr ˀappīn: freundlich sein, sich jemd. zuwenden, 4. aufklären", itpeal "1. hoffen, 2. einleuchten" [Dalman 1922: 282], Syriac √sbr "to think, expect" [HCVA] | Ar. √sbr I: sabara "sonder, explorer (une plaie à l'aide d'une sonde, etc.)", sabr- "connaissance qui résulte de l'examen" [BK I 1043] = √sbr I: sabara "1. to probe (the wound), measure (its depth with an iron or other instrument), try, examine (e.g., its extent), endeavour to learn, determine or compute (by conjecture or by the eye, its measure, quantity, size, bulk), try, prove (by experiment or experience), elicit (its true or real condition)", sabr- "examination, learning" [HCVA < Lane 1293] || Mehri səbūr "to scout, go ahead of the main party to spy out the land" [HCVA < Jns. 1987: 340].

[43] Treated by Ch. de Foucauld (1951-2 I: 69) as a fig. sense of belezz-et "être obèse (être chargé de graisse au point d'être presqu'impotent, le sujet peut être une personne ou un animal de tout âge)".

[44] DRB l.c.: the Twareg data quoted above, understandably, due to the lack of an AA context, were arranged and treated as three distinct Berber roots.

IV "3. réduire qqn. à la misère (?), pass.: tomber dans l'indigence" [WKAS 799-800] < CAA
*√blc̣ with a variety *√blṭ "1. to miscarry, 2. suffer some way (?)" [GT].

● **89. PDangla *b̦alge** "to mix" [GT]: WDangla b̦álgé "1. remuer, 2. gêner" (parler des
anciens) [Fédry 1971: 105], EDangla b̦àlgē "1. remuer (la sauce), mélanger, touiller, brasser,
2. confondre" [Dbr.-Mnt. 1973: 57] = "mischen" [Ebobisse 1979: 135; 1987: 88] ||| SBrb.
(Twareg) *√blγ < **√blḵ "to roll (i.e., in a circular movement?)" [GT]:[45] Hgr. beluleγ "rouler
(le sujet étant les yeux)", ă-blûleγ, fem. tă-blûleḵ "globe de l'oeil" [Foucauld 1951-2 I: 63],
EWlmd.-Ayr bəluləγ "être de forme sphérique" (DRB: "avoir une forme sphérique"),
a-bălalaγ "objet qcq. ayant la forme d'une sphère", EWlmd. ta-bəluləq and Ayr tə-bluleq
"1. globe, boule, sphère, 2. motte (de beurre), grumeau (de bouillie/lait), 3. brique (pour la
construction)" [PAM 2003: 26] (SBrb.: DRB, blγ/q1: isolated in Brb.) ||| Sem.: Tigrinya
ḥabaläqä (C_1 root ext. ḥ-) "1. bouleverser, renverser, 2. mélanger, confondre" [DRS 1973:
819] < CAA *√blḵ "to move circularly (?)" [GT], a number of root varies of which are
known:

89.1. CAA *√brḵ "to turn round (?)" [GT] > SCu. *biriḵ- "to turn over" [Ehret]: Dahalo
b̦irik- "to turn over", b̦irik-ēð- "to turn (sg.) over" (SCu.: Ehret 1980a: 142, §I.A.70)[46] |||
CCh.: Lame b̦úrkú "faire rouler qqch. de lourd et massif" [Sachnine 1982: 265].

89.2. CAA *√blk "1. to turn round (?), 2. change (???)" [GT] > Sem. *√blk [DRS]: Ar.
balaka "mêler, mélanger" || ES *√blk: Tigre bäläk belä "bouillir fortement", Tigrinya bäläš
bälä "déborder (vase)" (Sem.: DRS 57), cf. its quadriliteral variety with a C_1 root ext. ḥ- in
ES *√ḥblk: Tigre ḥabläka "confondre", Tna. ḥabläḵä "tourner, tordre", ḥəbluk "embrouillé",
täḥabläkä "être embrouillé" (Sem.: DRS 819) ||| (???) SCu. *balak- "to move house" [Ehret]
< *"to change dwelling (???)" [GT]: Ma'a -bále [Ehret: loss of -C# regular] "to move house",
-balé-ti (caus.)[47] "to cause to emigrate" | Dhl. b̦alak- "to move house" (SCu.: Ehret 1980a:
134, §I.A.8).

89.3. CAA *√blkt (?)[48] "to turn around, roll" [GT]: Sem.: Akk. √blkt, used in the N stirp:
nabalkutu "9. sich umwenden: a) im Schlaf, b) von Eingeweideteilen, c) von verdrehten
Augen, d) von Zunge, e) von Hand, f) von der Erde bei Beben" [AHW 695] ||| CCh.: perhaps
Mofu-Gudur -pətkwal- [met. < *√plkʷt?] "(se) rouler à terre (de douleur, en jouant)" [Brt.
1988: 222] || ECh.: Lele bīlgēdé ~ bīlgīdí ~ būlgūdú ~ bīlgādí "tourner" [WP 1982: 5].
Cf. EDE II 396 (with further possible root vars.); EAAN I 94, #302.

89.4. NAA *√lbk (Eg. var. *√lbḫ?) "to mix, mingle" [GT] > SBrb.: EWlmd.-Ayr ə-lbək
"2. se fondre, se diluer (dans l'eau)", EWlmd. ləbəkk-ət "être mouillé" [PAM 2003: 447] |||
Eg. 3bḫ (regular < *√lbḫ with an irregular -ḫ) "vermischen" (MK, Wb I 8, 8-20) ||| Sem.: Ar.

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[45] Thence, on the analogy of Hbr. gal and Talmudic Aram. gal(ə)lā "Welle" < Sem. *√gl "(sich) wälzen, rollen
(Wasser)" (GB 141; Eilers 1987: 514), cf. also Hgr. beleγbeleγ "former des vagues" treated in DRB, s.v. blγ/q3,
as isolated in Brb.

[46] Ehret l.c.: equated with false SCu. *comparanda*: ~ Irq. burq-os- and Alagwa buruq-us- "to winnow" | Qwd.
bel-et- "to winnow", bel-as- "to fold".

[47] Ehret l.c.: stem + modern -ti caus. suffix, added since C# → Ø had taken place.

[48] Some of the labial, velar, and dental correspondences are apparently irregular. But the Akk.-Lele match
indicates that the rare type quadriconsonantal verbal root with a second "sonant" was not limited to Semitic.

labaka I "1. mêler (p.ex. du froment avec du miel), 2. tasser et pétrir un mets moitié liquide, moitié solide, 3. (em)brouiller (une affaire)", II "mêler, mélanger, brouiller", IV "2. être embrouillé, en désordre, pêle-mêle (se dit des choses)", VIII "être embrouillé, en désordre" [BK II 961].

89.5. CAA *√plk (Eg. var. ***√plg**?) "1. to turn around (?), 2. change" (orig. *"to turn into" or sim.) [GT]: Sem. *√plk "to be round (?)" [GT]: Akk. pilakku (a/jB, nA) "Stilett, Spindel", (a/jB, nA) pilku "Gebiet" [AHW 863] ‖ Hbr. pélek "1. Kreis, Bezirk, 2. Spindel (urspr. wohl der Wirtel, Wertel)" [GB 643] | Ar. falak- "etwas rundes", falk-at- "Spindel" [GB] ‖‖ perhaps Eg. p3d [if < *plg with an irreg. *-g] (ball det.) "Kugel: 1. von der Kugel, zu der man Weihrauch formt, 2. ein Gebäck, runder Kuchen" (OK, Wb I 501, 9-13) ‖‖ ECu.: Yaaku -pelk- (intr.), pelk-is- (tr.) "to shift" [Heine 1975: 133] ‖ ECh.: Mubi fèlègé (fílík, fíléek), pl. fàlàgé (félík, fíláak) "échanger, troquer, modifier" [Jng. 1990b MS: 15]. Cf. EDE II 410; EAAN I 94, #449.

● **90. WDangla ḅàlàny ~ ḅìḅàlàny** "évoque qqch. rempli jusqu'au bord ou qui déborde" [Fédry 1971: 105]: the C₃ seems to be a suffix, while the biradical root *√ḅl (preserved in West Chadic also, cf. below) evidently appears to issue from the regular erosion of CAA *√ḥbl "full" [GT], cf. CSem. *√ḥbl "concevoir, être enceinte" [DRS 818, ḥbl3]: esp. Ar. √ḥbl I: ḥabila "1. être rempli, se remplir (de boisson, d'eau), 2. concevoir, devenir enceinte, grosse (d'un foetus)", ḥubāl- "état de grossesse, ou état de tout ce qui est rempli et comme gros de qqch.", ḥa/ubl-ān- "1. rempli (de boisson), 2. lourd de, (r)empli de colère, 3. (au fém. ḥabl-ān-at-) grosse (femme femelle)", ḥubāl- "état de grossesse, ou état de tout ce qui est rempli et comme gros de qqch." [BK I 370-371] ‖‖ perhaps Eg. ḥb3 [regular < *√ḥbl] "ein guter Zustand des Bieres" (Med., Wb III 62, 15) = "(unfermented?) freshly-mixed beer-mash (seems a reasonable translation)" (Ward 1978: 23, §32, 137, §§273-274, 193)[49] = "*Schaum" (GHWb 522) = "stage in beer fermentation" (HSED 289-290, #1317)[50] ‖‖ WCh.: Angas-Sura

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[49] The hapax "occurs in an incantation to drive out demonic influence, which begins ...: 'Spell for the beer. The ḏsr.t-beer of Horus of Chemmis, strained (ꜥḫ) in Pe and mashed (šbb) in Buto, you should drink it ḥb3'" (Ward 1978: 137, §273), which is why Ward (1978: 138) guesses that "Helck is therefore probably right in placing these two stages (ꜥḫ, šbb) together in the brewing process, after the dough has been made and partially baked. This is then broken up and mixed with water (šbb) and strained (ꜥḫ) through a basket-sieve by pouring date-juice out into a large jar. This mixture is allowed to set for a few days before the final stages are undertaken". As a result, it is "this mixture which is to be drunk to remove evil influence" (Ward 1978: 193). Ward thoroughly examined this context. Henceforth, he concluded that Eg. ḥb3 "describes a stage in which the beer exists at some time during the brewing process, the state of the ingredients after being mixed with water and strained but before the brewing is finished" (Ward 1978: 23, §32), thus, in his view, it appears to describe "beer at that stage where all the ingredients have been mixed together and await the final stages of brewing" (Ward 1978: §§273-274, 137).

[50] Equated by V. Orel and O. Stolbova (HSED 289-290, #1317) with their ill-founded Sem. *ḫabur- based solely on Akk. ḫabburu "kind of wine" and derived from their AA *ḫabur- "wine" (as possible cultural loanword?). Irregular Eg. ḥ- vs. Akk. ḫ-, let alone for the substantial semantical difference from Akk. (nA) ḫabburu "eine Weinsorte" [AHW 305a] = "(a qualification of wine)" [CAD ḫ 14b]. Ch. Ehret (2000 MS: 298, #2401), in turn, combined the Egyptian term with Sem.: Ar. ḥa/ibab- "bubble" and LECu.: Oromo hubbo "earthen pot for boiling" derived from AA *-ḥub- "to bubble, froth".

*γəḅəl[51] "1. to swell (in gen.), 2. be filled with food, be sat(isfi)ed" > PAngas *γə̄l, pl. *γāl[52] vs. PSuroid *γəḅəl > *γə̄l ~ *ḅəγəl[53] vs. PGoemay *həḅəl, pl. *haḅal[54] [GT] (AS: Takacs 2004: 150-151).

● **91. Migama ḅèlîlîî** (f) "lézard sp." [JA 1992: 73] ‖ CCh.: Boka ḅilaŋa "lizard" [Kraft] ‖ WCh.: AS *-ḅu₂l (> Goemay *-ḅel) ~ *-bu₂l > *-bəl (mostly with prefix *ti-/*tə-, in Suroid with suffix *-ak) "lizard (in gen.)" [GT] = *ti-bAla[k] "lizard (ящерица)" [Stolbova]: Gerka boel [ḅ/bəl] "lizard" [Ftp. 1911: 218], Sura tíbilák ~ tə́bəlák [suffix -ak] "Eidechsenart" [Jng. 1963: 85] = tibìlak "lizard" [Kraft], Mupun tə́blák ~ tə́bùlák "lizard" [Frj. 1991: 62], Kofyar doebel (so, -e-! Goemay influence?) "lizard" [Netting 1967: 7], Mushere tibuul (so, plain b-, false long -uu-) "lizard" [Diyakal 1997 MS: 227] = sim-bul (so, plain b-) "lizard" [Jng. 1999 MS: 18], Montol tubul (so) "lizard" [Ftp. 1911: 218], Goemay tibbel [-e- regular < *-u₂-] "lizard" [Ftp. 1911: 218] = toeḅel "a lizard" [Sirlinger 1937: 249] = tìḅul (so, -ɨ-) "lizard" [Kraft] = təḅel "lizard" [Hellwig 2000 MS: 36][55] (AS: Stolbova 1987: 158, #123; Takacs 2004: 37-38) | Sha ḅòlès "Mauergecko" [Jng. 1970: 283] | Geji ḅàlɨ̀kɨŋ "lizard" [Kraft], Sa/eya ḅə̀lɨḥ "lizard" [Kraft] ‖ CCh.: Boka ḅilaŋa "lizard" [Kraft] (Ch.: Kraft 1981 q.v.) < (W/P?)Ch. *√ḅl (*ḅ- probably contracted from *Hb-) "lizard" [GT]. This (West) Chadic root (so far unparalleled elsewhere in AA) may have retained the very simplex of the Common AA term (AA **√ˤbl) which is only attested with a velar root extension in the other branches (below).

91.1. CAA *√ˤbḥl "some creeping creature" [GT], if it was a metathesis of CAA **√ˤblḥ, might be regarded as a quadriliteral extension: cf. (???)[56] Eg. ˤbnḥ </> ˤbḥn "Frosch" (Med., Wb I 178, 16) = "frog" (FD 41) ‖‖ NBrb.: Beni Menacer (DRB: Central Algerian) buγlal,

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[51] The originally triconsonantal proto-Angas-Sura root has been best preserved in Suroid.

[52] Hence Angas ril (r- for γ-) [act. γəl] "to be satisfied" [Ormsby 1914: 314] = γül [act. γəl] "to be satisfied", γääl (generally used reduplicated) ~ γāl ~ gwāl (so, gw-, obscure) [different ablaut grade? perhaps *γā₂l?] "a swelling, an abscess, a blister (such as is caused by a first working with an unaccustomed tool), skin eruptions, such as pimples, etc." [Foulkes 1915: 186-187] = (Kabwir dialect) γəl (verbal noun γə̀l) "1. to be satisfied, 2. swell (intr.)" [Jng. 1962 MS] = ḥəl (sg.), ḥal (pl.) "to swell" [ALC 1978: 21] = γɨ̄l [act. γə̄l], pl. γāl "to swell", γɨ̄l [act. γə̄l] (no pl.) "to be belly-full with food" [Gochal 1994: 39, 74, note 2]. In Angas, in turn, the regular loss of AS *-ḅ- has been accompanied by the compensatory lengthening of *-ə̄-.

[53] Hence Sura γəḅəl "1. anschwellen, 2. sattwerden" [Jng. 1963: 67], Mupun ə́ḅəl [< *γəḅəl] ~ ḅə̄əl [from *ḅəγəl, met. of *γəḅəl] "to be well fed, satisfied (only about food)", also ḅə̄əl "to swell up, be filled up (e.g. with food)" [Frj. 1991: 8, 70], Kofyar oegoel [əgəl reg. both < *əγəl and from *γəḅəl] "to swell, be full of food" [Netting 1967: 30]. Note that Kofyar -g- < AS *-ḅ- is regular. The Mushere cognate is highly dubious: cf. perhaps Mushere wuul [irreg. < *γubul via *γuwul?] "to swell (Hausa kumbura) [Diyakal 1997 MS: 305]?

[54] Hence: Goemay hool [reg. < *həḅəl] (sg.) vs. haḅal (pl.) [irreg. h-] "1. to make full, be full (with food or drinks), 2. be swollen" [Sirlinger 1937: 73, 78, 79] = hool "to be satisfied, replete" [Hellwig 2000 MS: 13]. Goemay *hōl, pl. *haḅal "to be full, sated" is an irregular cognate, since Goemay h- does not correspond to AS *γ- as a rule. Goemay *-ō- < AS *-əḅə- is, however, normal (cf. e.g., AS *kəḅən "buffalo").

[55] Goemay *ḅ- due to the cluster *mb- (i.e., *tə-ḅel < *tim-bu₂l)?

[56] The Egyptian term might alternatively be equated with SBrb.: EWlmd. a-bəgəngən "lézard (qcq.)" [PAM 1998: 6] ‖‖ NOm.: Male faŋko "frog" [Siebert 1994-5: 8] ‖ SOm.: Ari (Galila) fanqá, Hamer (Karo) fanḳa "frog, toad" (SOm.: Bender 1994: 150) ‖‖ WCh.: Miya əbàngu "lizard" | Burma bə̀ngàlà "lizard" ‖ CCh.: Ngwahyi bə̀nǯà "frog" (Ch.: Kraft 1981 q.v.), whose areal parallel appears in PKoman *ḅanḳo "frog" [Bender 1983: 281]. This cognate set, by the way, supplies further evidence for the semantical dispersion of "lizard" vs. "frog".

pl. i-buɣlal-en "escargot" [Basset 1885: 163], Senhazha a-berɣlal "escargot" [DRB 116: iso-lated, with an inner etymology][57] | Tamazight a-buɣlal, pl. i-buɣlal-n "1. escargot, 2. lima-çon" [Taïfi 1991: 12] (NBrb.: DRB 83) ‖‖ WCh.: Geji ḫuɣɨllul "chamaeleon" [Kraft 1981].

● **92. Migama ɓìlìw ~ ɓìlìwníčè** (m), **pl. ɓìlìw ~ ɓìlìwnígèe** "loup" [JA 1992: 73]: the initial ḫ- may be here due to a former prenasalization, cf. WCh.: Siri mbəli "hyena" [Skinner 1977: 27]. The simplex root, viz. CAA *√bl "jackal, hyena" [GT], is more widespread in Chadic, cf. Sem.: Geez ʔabbəl "jackal" [Leslau 1987: 3: isolated in Sem.] ‖‖ CCh.: Gude bóolà "tan colored dog" [Hoskison 1983: 162] | Bata bóloke "hyena" [Mouchet 1950: 25] ‖ ECh. *bōl-"jackal" [GT] > EDangla bóolóló (f) "le chacal" [Dbr. & Mnt. 1973: 50], WDangla bɔ̀llɔ̀ "espèce de chat sauvage au pelage fauve (il creuse des galeries en terre, aboie comme un chien, se bat avec l'hyène)" [Fédry 1971: 93] | Ubi boolè "hyène" [Alio 2004: 268, #38], Jegu báló, pl. bálê & balan "Fuchs" [Jng. 1961: 110]. Cf. also ECh.: Jegoid *bolond- (?) [GT] > Jegu bólónnó, pl. bólán ~ bólónnân "Hyäne", bolonne "weibl. Hyäne" [Jng. 1961: 111], Kofa bòlóɗè (m), pl. bòlóɗân "hyena" [Jng. 1977 MS: 12]. Cf. EDE II 20 (with further discussion); EAAN I 64, #271.

Dangla-Migama *ḫ- and semi-vowels

● **93. Migama ɓàawò (ɓàawé, ɓàkáa)** "séquestrer une femme" [JA 1992: 73]: apparently isolated in the DM group and its AA etymology is equivocally puzzling:
93.1. Perhaps a tr. reflex of **CAA *√bwʔ** "to enter" [GT] from a primary sense *"to put into (a closed room, i.e., seclusion?)"? Cf. Sem. *√bwʔ "to enter" [GT] (Sem.: GB 86; Aro 1964: 176; DRS 50; Leslau 1987: 114-115) ‖‖ (?) Eg. bb (redupl.?) "entrer dans, pénétrer" (CT III 98g, AL 78.1312, cf. Osing 1978: 187) = "eindringen in" (GHWb 251) = "to wade in (m)" (DCT 120) ‖‖ SCu. *buʔ- "to put into" [Ehret]: Irq. -búʔu "to enter",[58] -búʔ-iža[59] (-j-) "to put into", -bú-tu "to apply, put"[60] | Dahalo ɓuw-aṭ- "to descend (of sun in afternoon)" [Ehret 1980a: 142, §I.A.69][61] = ɓuʔ- "1. to put into, 2. pour, 3. plant", ɓuʔ-um- "to go in" [EEN 1989: 34] = ɓuʔ- "1. to put into, 2. plant", ɓuʔ-ud- "to enter" [Tosco 1991: 130] (SCu.: Ehret 1980a: 141, §I.A.67) ‖‖ ECh.: Kwang-Mobu báyé "entrer" [Lenssen 1984: 63]. Sem.--Mobu: HSED #157. The rest of the AA *comparanda* was added in EDE II 186 and EAAN I 71, #317.

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[57] Ignoring the cognates deriving from Brb. *√bɣll, K. Naït-Zerrad (DRB 116) segmented it into two juxta-posed terms, viz. *√br (unexplained which one of the multiple homophonous roots is meant) + *a-ɣlal "coquille".

[58] Ehret l.c.: "-buʔu consists of the original stem plus the stative extension added before C# > Ø."

[59] Ehret l.c.: "-buʔija is back-formation from -buʔa 'to enter' by addition of the causative -ija, adopted from Bantu."

[60] Ehret l.c.: "-butu consists of the stem plus -tu extension after C# > Ø; -tu was apparently added for continuative sense."

[61] Ehret l.c.: ~ Irq. busi "cow obtained in Mbugwe" < SCu. *buw- "to go down" [Ehret].

93.2. Alternatively, it might be rendered from the primary sense "*to arrest", i.e., "to make stop", cf. Sem.: Thamudic bw (for bwʕ?) "faire halte (?)" [DRS 50], Ar. √bwy I: bawā "faire halte" [DRS 51: isolated].

● **94. PDangla *ḅaw-** "to go" [GT]: WDangla ḅááwè "aller (jamais dans le sens de venir /ásè/)" [Fédry 1971: 104], Mawa (close to Dangla) ḅɛŋ (ḅê, ḅa) "gehen (aller), weggehen (partir)" [Jng. 1978 MS: 2; 1980 MS: 28] | Muboid *ḅaw- "to go" [GT]: Mubi ḅau "gehen, laufen" [Lukas 1937: 180] = ḅów (ḅâ, nǯáà) "partir, aller, se promener" [Jng. 1990b MS: 7], cf. also Mubi ḅa "gehen" [Lukas 1937: 180], Masmaje ḅo "aller" [Alio 2004: 280, #34] | Sokoro ḅĕy "to go" [Saxon in JI 1994 II: 163] || CCh.: Tera ḅá "to come" [Newman 1964: 47] < PCh. *ḅV "идти, уходить" [Dlg.] = *ḅ- "to go" [NM] = *b₂- "to come, go (out)" [JI] ||| Om. *bV "gehen" [Sasse]: extended Wolayta cluster (EWC) *b- (mono-consonantal) "to go, walk" [Bender 2003: 17, #59] > COmeto *b- and EOmeto *ba(y) "to go" [Fleming] | SEOmeto *ba "to go" [Bender 2003: 117, #59] > Kachama bā "to go, walk" [Conti Rossini in Bender 2003: 87, #59] ||| ECu. *baḥ- "to go out" [Bender] || SCu.: Ma'a bű́hĕ̌ "gehen" [Meinhof 1906: 308] = buʕ ~ buh "to go" [Fleming] = -buhe ~ -bu "to go" [Ehret 1980a: 139, #50] < CAA *√bḥ "to go" [GT], which is otherwise a well-known root.[62]

● **95. Bidiya ḅiw** "idéo. évoquant un coup de poing sur le dos" [AJ 1989: 62] || WCh.: Miya ḅáá- "to beat (in gen.)" [Skinner in JI 1994 II: 14] < Ch. *√ḅw "to beat" < AA *√ḅwH [GT]? Part of a large root family existing in a few root varieties:

95.1. SAA *√ph "to pound" [GT] > SCu.: WRift *puh-um- (dur.) "to smash grains, pound grains" (cf. Sandawe pùé "to pound") > WRift *puh-uru "smashing, pounding" > (via irregular loss of *h) PIraqw *pūrú "flour" [KM 2004: 226-227] ||| WCh.: Bokkos fayî "to beat (in gen.)" [Jng.] || CCh.: Buduma (Yedina) fó "to pound (in mortar)" [Cyffer] (Ch.: JI 1994 II: 14, 269) || ECh.: Kera épé "to pound (in mortar)" [Ebert].

95.2. SAA *√pḥ "1. to strike, hit (orig. by shooting), 2. sting" [GT]: SCu. *paḥ- [GT]: Dahalo paḥ- "to hit, strike" [Ehret 1980: 144] = paḥ- "to hit, shoot" [EEN 1989: 7] = paḥ- "to beat" [Tosco 1991: 145] ||| NOm.: Mao: Hozo pā ~ pāʔ "to stab, pierce", Sezo pe, pē̌ʔ "to stab, pierce", EMao piy-a "1. to stab, pierce, 2. kill"[63] (Mao: Fleming 1988: 38) ||| WCh.: Tangale pẹyi "to kick, shoot, sting" [Jng. 1991: 131] | Ngizim vău "1. to shoot, 2. sting (scorpion)" [Schuh 1981: 167] || CCh.: Bura pwa "to strike (in shooting)" [BED 1953: 177] | (?) Mofu--Gudur váv ~ vév [redupl.?] "piquer (insecte)" [Brt. 1988: 251]. Eventually identical with AA *√pḥ "1. to find, 2. get, obtain" [GT in EAAN I 82, #380] (as shown by the semantic dispersion of Eg. pḥ?)? Cf. EDE II 488; EAAN I 81, #379.

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[62] See Greenberg 1955: 56; Fleming 1969: 25; 1974: 89; Dlg 1973: 318; Sasse 1981: 152, #4; SISAJa I #129; JI 1994 I: 38; HSED #157; HCVA II #143; Voigt 1998: 609-610. The Mubi with Ometo reflexes have already been affiliated by M.L. Bender (1975: 165) with ECu. *baḥ- "to go out" and/or Sem. *√bwʔ "1. to enter, 2. return". Bender (2003: 117, #59), in turn, equated the Ometo root with Ch. *b₂ "to go" [JI 1994 I: 78].

[63] The EMao form in the sense "to kill" may be a contamination, cf. AA *√fyʕ "1. to hurt, 2. be sick, 3. destroy" (below).

● **96. Migama ḅàayò (ḅàayé, ḅàyáa)** "jouer (à un jeu spécial)" [JA 1992: 73] ⫴ Sem. *√byʕ [DRS] > JPAram. beyāʕā, bīyʕᵃtā "joie, allégresse" [DRS 63, byʕ2: isolated in Sem.][64] < PAA (???) *√byʕ "to have fun (???)" [GT]. Perhaps the metathesis of the otherwise unattested biliteral PAA simplex of a multiply strangely triradicalized CAA (?) root, viz. *√ʕb "to play" [GT],[65] which only occurs with diverse additional C₁- root extensions (namely, NAgaw *w-, Eg. ḫ-, Sem. *l-, neither of which can regularly correspond), cf. NAgaw: Bilin waʕab ~ wāʕab ~ wāʕeb, Nebenform māʕeb "1. spielen, lachen, 2. sich ergötzen", waʕab-d "1. zum spielen auffordern, 2. zum lachen reizen", cf. māʕeb "1. spielen, lachen, 2. verlachen, verhöhnen" [Reinisch 1887: 262, 352] = wäʕab "to pass the time in conversation, be free from work" vs. mäʕab "to rest, sitting down, and mingle conversation and laughter", mäʕab "game, conversation" [Kiflemariam Hamde apud Apl.] = wäʕab ~ mäʕab "1. to play, 2. game" [Apl.] (Appleyard 2006: 73, 110: no Agaw/AA cognates) ⫴ Eg. ḥʕb (Wb III 62: also var. ḥbʕ) "(ein Spiel) spielen (alt mit Objekt des Spiels, später auch mit m, noch später mit r des Spiels)" (OK-, Wb III 42, 6-8) = ḥʕb "to play (draughts)" (CT, DCT 313) = ḥbʕ (sic: read -bʕ) "spielen", ḥbʕ (m) zn.t "das Senet-Brettspiel spielen" (late OK: Dyn. V-VI., ÄWb I 795a) ⫴ Sem. *√lʕb: OHbr. √lʕb hitpael "verspotten" [GB] = hifil "to make sport of, deride with" [KB], MHbr. √lʕb "to encourage, mischief" [KB], NHbr. √lʕb hifil "verspotten" [GB] | Syr. √lʕb etpael "seine Lust an etwas haben, gierig sein" [GB] = "to long for, be covetous" [KB] | Ar. √lʕb I: luʕiba "2. jouer, badiner, folâtrer, 3. jouer à un jeu de hasard, 4. jouer d'un instrument de musique, 5. faire des exerces à cheval avec des javelots", II "se livrer aux jeux (de hasard ou autres), se divertir, s'amuser", III "jouer, folâtrer, badiner avec qqn.", laʕb- "2. jeu, badinage, divertissement", laʕb-at- "1. un jeu, une partie de jeu, de divertissement, 2. tout ce qui sert à jouer, hochet, joujou, dé, ou tout instrument de musique, 3. fig. plastron, celui que tout le monde prend pour objet de ses plaisanteries", luʕb-at- "1. jeu d'échecs ou espèce de trictrac, 2. homme avec lequel on joue, partenaire, 3. pl. luʕab-: jeu, divertissement, partie de jeu, de plaisir", laʕūb- "gai, enjoué, qui folâtre" [BK II 999] = √lʕb "scherzen, spielen, mutwillig behandeln, quälen" [GB] = laʕiba I "to play, cheat" [KB] = laʕiba I "spielen, scherzen, spaßen, sein Spiel treiben, Possen reißen (to play games, joke, jest, fool around, play the fool)" [WKAS 779] (Sem.: GB 388; KB 532b). Bilin-Sem.: Reinisch 1887: 262. The old Eg.-Sem. match (mentioned already in the GB l.c.) with their strangely alternating first radicals was preferred by J.H. Greenberg (1950: 180) too, who wrote on Eg. ḥʕb: "I don't think we can keep apart from" Sem. *√lʕb.

● **97. Migama ḅàytà** (adj.) "vert (pas mûr)" [JA 1992: 73], cf. Bidiya ḅaràč (ḅarčí, ḅarčèŋ), pl. ḅaràč (ḅaràačí, ḅaràačen) "verdir, bleuir", ḅàràači (pl.) "verdure, légumes", ḅaràčga "vert" [AJ 1989: 62] < DM *ḅarč/t- **"green"** [GT]?

[64] SCu.*bo/ōʕ- "to be good, be in good or proper condition" [Ehret]: Alagwa boʕ "better, superior", boʕ-ot "beautiful", rawa-boʕ- "to be pleased" (cf. rawa "above") (SCu.: Ehret 1980a: 139, §I.A.48). Ehret l.c.: "This root must be reconstructed for proto-Southern Cushitic because its derivative is reconstructed in #49 following."

[65] I wonder if the underlying PAA *√ʕb "to play" [GT] is reflected in its original biradical shape by SEOmeto *ʔēb-a "fool(ish)" [Bender 2003: 109, #33], attested, in fact, in Zayse ʔʔēwa [Siebert & Hoeft] = ʔéba [Hayward], Zergulla ʔʔɛba [Siebert & Hoeft] "fool(ish)" (SEOmeto: Bender 2003: 333, #33).

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Special symbols

P: any labial stop (f, p, b, ṗ), T: unspecified dental stop (t, d, ṭ), S: any voiceless sibiland and/or affricate (s, š, ŝ, c, č, ĉ), Z: unspecified voiced sibilant and/or affricate (z, ʒ, ǯ), K: any velar stop (k, g, ḳ), Q: unspecified uvuelar or postvelar etc. (q, g̱, q̇, ḫ), H: any of the pharyngeals or laryngeals etc. (ˤ, γ, ḥ, h, ʔ). The vertical strokes signify the the degree of closeness of the language groups (e.g. Kotoko | Masa), subbranches (e.g. North Berber ‖ East Berber), and branches (Semitic ‖| Egyptian), from which the individual lexical data are quoted.

Abbreviations of languages and other terms

(A): Ahmimic, (A₂) = (L): sub-Ahmimic = Lycopolitan dialect, aA: Old Assyrian (altassyrisch), aAk: Old Akkadian (altakkadisch), AA: Afro-Asiatic (Afrasian, Semito-Hamitic), Akk.: Akkadian, Alg.: Alagwa, Amh.: Amharic, Ar.: Arabic, Aram.: Aramaic, AS: Angas-Sura, Ass.: Assyrian, (B) Bohairic, b/Bab.: Babylonian, BAram.: Biblical Aramaic, Bed.: Bed'awye (Beja), Brb.: Berber (Libyo-Guanche), Brg.: Burunge, BT: Bole-Tangale, C: Central, CAA: Common Afro-Asiatic, Can.: Canaanite, Ch.: Chadic, Cpt.: Coptic, CT: Coffin Texts, Cu.: Cushitic, Dem.: Demotic, Dhl.: Dahalo, DM: Dangla-Migama, E: East, Eg.: Egyptian, ES: Ethio-Semitic, ESA: Epigraphic South Arabian, Eth.: Ethiopian, Eth.-Sem.: Ethio-Semitic, (F): Fayyumic, GR: Ptolemaic and Roman period, Grw.: Gorowa, H: Highland (in Cushitic), Hbr.: Hebrew, Hgr.: Ahaggar, Hrs.: Harsusi, jB: younger Babylonian (jungbabylonisch), Jbl.: Jibbali, L: Late, L: Low(land), (L) = (A₂): Lycopolitan dialect = sub-Ahmimic, lit.: literature, LP: Late Period, M: Middle, Mag.: magical texts, Med.: medical texts, MK: Middle Kingdom, MSA: Modern South Arabian, MT: Mubi-Toram, N: New, N: North, nA: Neo-Assyrian, NE (or NEg.): New Egyptian, NK: New Kingdom, Nslm.: Taneslemt, O: Old, OK: Old Kingdom, Om.: Omotic, Omt.: Ometo, OSA: Old South Arabian, OT: Old Testament, P: Proto-, PB: Post-Biblical, PT: Pyramid Texts, reg.: regular, S: South, (S): Sahidic, Sem.: Semitic, Sqt.: Soqotri, Syr.: Syriac, Ug.: Ugaritic, W: West, Wlmd.: Tawllemmet.

Abbreviations of author names

Abr.: Abraham, AJ: Alio & Jungraithmayr, Akl.: Aklilu, Alm.: Alemayehu, Apl.: Appleyard, Ast.: Aistleitner, BK: Bieberstein & Kazimirski, Bnd.: Bender, Brg.: Bargery, Brq.: Burquest, Brt.: Barreteau, Cpr.: Caprile, CR: Conti Rossini, Crl.: Cerulli, Csp.: Cosper, Dbr.: Djibrine, Djk.: D'jakonov, Dkl.: Diyakal, Dlg.: Dolgopolsky, Drn.: Doornbos, Ehr.: Ehret, Fcd.: Foucauld, Flk.: Foulkes, Flm.: Fleming, Frj.: Frajzyngier, Ftp.: Fitzpatrick, GB: Gesenius & Buhl, Grt.: Grottanelli, GT: Takács, Hds.: Hudson, Hfm.: Hoffmann, Hsk.: Hoskison, Hyw.: Hayward, Ibr.: Ibriszimow, IL: Institute of Linguistics, IS: Illič-Svityč, JA: Jungraithmayr & Adams, JI: Jungraithmayr & Ibriszimow, Jng.: Jungraithmayr, Jns.: Johnstone, JS: Jungraithmayr & Shimizu, KM: Kießling & Mous, Lmb.: Lamberti, LS: Lamberti & Sottile, Lsl.: Leslau, Mch.: Mouchet, Mkr.: Mukarovsky, MM: Majzel' and Militarev, Mnt.: Montgolfier, Mts.: Matsushita, NM: Newman & Ma, Ntg.: Netting, Nwm.: Newman, OS: Orel and Stolbova, PAM: Prasse, Alojaly, Mohamed, PG: Pillinger & Galboran, PH: Parker & Hayward, Prd.: Paradisi, Prh.: Porhomovskij, RB: Rapp and Benzing, Rn.: Reinisch, Rsg.: Rossing, Rsl.: Rössler, Sbr.: Siebert, Skn.: Skinner, Smz.: Shimizu, Srl.: Sirlinger, Stl.: Stolbova, TC: Taïne-Cheikh, Tf.: Taïfi, TG: Takács, Trn.: Tourneux, TSL: Tourneux, Seignobos, Lafarge, Vrg.: Vergote, Wdk.: Wedekind, WP: Weibegué and Palayer, Zbr.: Zaborski.

References

Abraham, R.C. 1962. *Dictionary of the Hausa language*.² London: University of London Press.

AHW = Soden, W. von. 1965-1981. *Akkadisches Handwörterbuch*. Vols. I-III. Wiesbaden: Otto Harrassowitz.

Aistleitner, J. 1948. Untersuchungen zum Mitlautbestand des Ugaritisch-Semitischen. In Löwinger, S. & Somogyi, J. (eds.), *Ignace Goldziher memorial volume*, part I, 209-225. Budapest: Globus.

Ajello, R. & Karyo, M. & Melis, A. & Dobio, Ou. 2001. *Lexique comparatif de six langues tchadique central (Gizey, Ham, Lew, Marba, Masa, Musey)*. Pisa: Edizioni Plus, Università di Pisa.

AL I = Meeks, D. 1977. *Année lexicographique: Égypte ancienne*. Tome 1. 2ème édition, 1998, Paris: Cybele.

AL II = Meeks, D. 1978. *Année lexicographique: Égypte ancienne*. Tome 2. 2ème édition, 1998, Paris: Cybele.

AL III = Meeks, D. 1979. *Année lexicographique: Égypte ancienne*. Tome 3. 2ème édition, 1998, Paris: Cybele.

Albright, W.F. 1919. Notes on Assyrian lexicography and etymology. *Revue d'Assyriologie* 16(4), 173-194.

ALC 1978 = Angas Language Committee (in Cooperation with Nigeria Bible Translation Trust). 1978. *Shàk nkarŋ kè shəktok mwa nḍən Ngas. Ngas–Hausa–English dictionary with Appendix showing some features of Ngas grammar*. Jos, Nigeria: Nigeria Bible Translation Trust.

Alio, Kh. 2004. Préliminaires à une étude de la langue kajakse d'Am-Dam, de Toram du Salamaat, d'ubi du Guéra et de masmaje du Batha-est. In Takács, G. (ed.), *Egyptian and Semito-Hamitic (Afro-Asiatic) studies in memoriam Werner Vycichl*, 229-285. Leiden: E. J. Brill.

Alio, Kh. & Jungraithmayr, H. 1989. *Lexique bidiya*. Frankfurt am Main: Vittorio Klostermann.

Applegate, J.R. 1958. *An outline of the structure of Shilḥa*. New York: American Council of Learned Societies.

Appleyard, D. 1977. A comparative approach to the Amharic lexicon. *Afroasiatic Linguistics* 5(2).

Appleyard, D. 1984. The internal classification of the Agaw languages: A comparative and historical phonology. In Bynon, J. (ed.), *Current progress in Afro-Asiatic Linguistics*, 33-67. Amsterdam – Philadelphia: John Benjamins.

Appleyard, D. 1991. *A comparative Agaw wordlist*. MS. London. 13 p.

Appleyard, D. 2006. *A comparative dictionary of the Agaw languages*. Köln: Rüdiger Köppe Verlag.

Aro, J. 1964. *Die Vokalisierung des Grundstammes im semitischen Verbum* (Studia Orientalia Fennica 31). Helsinki: Societas Orientalis Fennica.

ÄWb I = Hannig, R. 2003. *Ägyptisches Wörterbuch I. Altes Reich und Erste Zwischenzeit* (Hannig-Lexica 4). Mainz am Rhein: Verlag Philipp von Zabern.

ÄWb II = Hannig, R. 2006. *Ägyptisches Wörterbuch II. Mittleres Reich und Zweite Zwischenzeit*. Bde. I-II (Hannig-Lexica 5). Mainz am Rhein: Verlag Philipp von Zabern.

Barreteau, D. 1988. *Description du mofu-gudur: Langue de la famille tchadique parlée au Cameroun*. Livre II. *Lexique*. Paris: Éditions de l'ORSTOM.

Barreteau, D. 1995. Vowel and tonal variations within the consonantal framework of the verbal system in Central Chadic languages. In Ibriszimow, D. & Leger, R. (eds.), *Studia Chadica et Hamitosemitica*, 197-228. Köln: Rüdiger Köppe Verlag.

Barreteau, D. & Bléis, Y. 1990. *Lexique mafa: Langue de la famille tchadique parlée au Cameroun*. Paris: ORSTOM, Librairie Orientaliste Paul Geuthner.

Barreteau, D. & Brunet, A. 2000. *Dictionnaire mada*. Berlin: Dietrich Reimer Verlag.

Barreteau, D. & Newman, P. 1978. Les langues tchadiques. In Barreteau, D. (ed.), *Inventaire des études linguistiques sur les pays d'Afrique Noire d'expression française et sur Madagascar*, 291-330. Paris: Conseil International de la Langue Française.

Basset, R. 1885. Notes de lexicographie berbère. *Journal Asiatique*. Ser. VIII, vol. 5, 148-198.

BED = Anonymous. 1953. *Bura-English dictionary*. (Place unknown: publisher unnamed). Master copy in the library of the Seminar für Afrikanische Sprachen und Kulturen der Universität Hamburg (inv. no.: 15 748 / JT 1526).

Bender, M.L. 29 January 1970a. *Xamta 100-item basic word list* (Investigator: M.L. Bender). MS. Carbondale, Illinois. 6 p.

Bender, M.L. 1 June 1970b. *Kunfel 100-item basic word list* (Investigator: T. Birru & Z. Adal). MS. Carbondale, Illinois. 6 p.

Bender, M.L. 1971. The languages of Ethiopia: A new lexicostatistic classification and some problems of diffusion. *Anthropological Linguistics* 13(5). 165-288.

Bender, M.L. 29 August 1973a. *Awiya basic elicitation form for linguistic fieldwork in Ethiopia* (Investigator: R. Hetzron). MS. Carbondale, Illinois. 12 p.

Bender, M.L. 29 August 1973b. *Kimant basic elicitation form for linguistic fieldwork in Ethiopia* (Investigator: H.-J. Sasse). MS. Carbondale, Illinois. 12 p.

Bender, M.L. 1975. *Omotic: A new Afroasiatic language family*. Carbondale, Illinois: Southern Illinois University.

Bender, M.L. 1983. Proto-Koman phonology and lexicon. *Afrika und Übersee* 66. 259-297.

Bender, M.L. 1994. Aroid (South Omotic) lexicon. *Afrikanistische Arbeitspapiere* 38. 133-162.

Bender, M.L. 2003. *Omotic lexicon and phonology*. Carbondale: SIU Printing / Duplicating, Southern Illinois University.

Biberstein Kazimirski, A. de.1860. *Dictionnaire arabe-français*. Paris: Maisonneuve & Co. Editeurs.

Biella, J.C. 1982. *Dictionary of Old South Arabic*. Chico: Scholars Press at Harward.

Blachère, R. & Chouémi, M. & Denizeau, C. & Pellat, Ch. 1967-1976. *Dictionnaire arabe-français-anglais (Langue classique et moderne)*. Tomes I-III. Paris: Maisonneuve et Larose.

Blažek, V. 1989. Lexica Nostratica: Addenda et corrigenda I. *Archív Orientální* 57. 201-210.

Blažek, V. 1994. Review of Jungraithmayr, H.: Lexique mokilko. *Journal of African Languages and Linguistics* 15. 92-94.

Bomhard, A.R. July 1990. *A sample of the comparative vocabulary of the Nostratic languages*. Revised Version. MS. 610 p. Published later in Bomhard, A.R. & Kerns, J.C. 1994. *The Nostratic macrofamily: A study in distant linguistic relationship*. Berlin – New York: Mouton de Gruyter.

Bow, C. 1997. *A description of Moloko phonology*. Yaoundé, Cameroun: SIL (https://www.sil.org/resources/archives/47672).

Breasted, J.H. 1930. *The Edwin Smith Surgical Papyrus*. Vol. I. Chicago: The University of Chicago Press.

Bross, M. & Ibriszimow, D. etc. 1993. Pots, potters and their language among the Hausa and the Bole: A contrastive analysis. *Berichte des Sonderforschungsbereichs* 268(2). 75-93.

Burquest, D.A. 1971. *A preliminary study of Angas phonology* (Studies in Nigerian Languages 1.) Zaria: Institute of Linguistics; Kano: Centre for the Study of Nigerian Languages.

CAD = *The Assyrian dictionary of the Oriental Institute of the University of Chicago*. Since 1956. Glückstadt & Chicago: J.J. Augustin, The Oriental Institute of the University of Chicago.

Caïtucoli, C. 1978. Schèmes tonals et morphologie du verbe en masa. In Caprile, J.-P. & Jungraithmayr, H. (eds.), *Préalables à la reconstruction du proto-tchadique*, 67-87. Paris: SELAF.

Caïtucoli, C. 1983. *Lexique masa*. Paris: Agence de Coopération Culturelle et Technique.

Calice, F. 1936. *Grundlagen der ägyptisch-semitischen Wortvergleichung*. Wien: Selbstverlag des Orientalischen Institutes der Universität Wien.

Caminos, R. 1972. Another hieratic manuscript from the Library of Pwerem Son of Ḳiḳi (Pap. B.M. 10288). *JEA* 58. 205-224.

Caprile, J.-P. & Jungraithmayr, H. 1973. Inventaire provisoire des langues "tchadiques" parlées sur le territoire de la République du Tchad. *Africana Marburgensia* 6(2). 31-48.

CD = Crum, W.E. 1939. *A Coptic dictionary*. Oxford: Oxford University Press.

CED = Černý, J. 1976. *Coptic etymological dictionary*. London, Cambridge: Cambridge University Press.

Cerulli, E. 1929. Note su alcune popolazioni sidāmā dell'Abissinia meridionale II: I Sidama dell'Omo. *Rivista degli Studi Orientali* 12. 1-69.

CLD I = Stolbova, O.V. 2005. *Chadic lexical database*. Issue I. *L, N, NY, R*. Kaluga: Poligrafiya.

Cohen, M. 1947. *Essai comparatif sur le vocabulaire et la phonétique du chamito-sémitique*. Paris: Librairie Ancienne Honore Champion.

Colizza, G. 1887. *Linga ⁽Afar nel nord-est dell'Africa*. Wien: Alfred Hölder.

Conti Rossini, C. 1937. Contributi per la conoscenza della lingua Haruro (Isole del Lago Margherita). *Rendiconti della Reale Accademia Nazionale dei Lincei, Classe di Scienze morali, storiche e filologiche*, ser. VI, vol. XII, fasc. 7-10. 621-679.

Cooper, K.N. 1984. *Lexique zime-français. Vūn tàrí*. Sarh (Tchad): Centre d'Études Linguistiques.

CT = Buck, A. de. 1935-1961. *The Egyptian Coffin Texts*. Vols. I-VII. Chicago: The University of Chicago Press.

DAFA = Blachère, R. & Chouémi, M. & Denizeau, C. & Pellat, Ch. 1967-1976. *Dictionnaire arabe-français--anglais (Langue classique et moderne)*. Tomes I-III. Paris: Maisonneuve et Larose.

Dallet, J.-M. 1982. *Dictionnaire qabyle-français: Parler des At Mangellat (Algerie)*. Paris: SELAF (Société d'études linguistiques et anthropologiques de France).

Dalman, G.H. 1922. *Aramäisch-neuhebräisches Handwörterbuch zu Targum, Talmud und Midrasch*. Frankfurt a/M: J. Kaufmann Verlag.

DCT = Molen, R. van der. 2000. *A hieroglyphic dictionary of Egyptian Coffin Texts*. Leiden: E.J. Brill.

DELC = Vycichl, W. 1983. *Dictionnaire étymologique de la langue copte*. Leuven: Peeters.

Delheure, J. 1984. *Dictionnaire mozabite-français*. Paris: Société d'Études Linguistiques et Anthropologique de France (SELAF).

Delheure, J. 1987. *Dictionnaire ouargli-français*. Paris: Société d'Études Linguistiques et Anthropologique de France (SELAF).

DG = Erichsen, W. 1954. *Demotisches Glossar*. Koppenhagen: Ejnar Munksgaard.

Diakonoff, I.M. 1970. Problems of root structure in Proto-Semitic. *Archív Orientální* 38. 453-480.

Diyakal, Ph. 1997. *Mushere-English dictionary*. Collection of words carried out by Mr. Ph.I. Diyakal started on September 10th, 1997 under the supervision of Herrmann Jungraithmayr (Univ. of Frankfurt). MS. 390 p.

Djibrine, B.A.Z. & Montgolfier, P. de (etc.). Around 1973 (deduced by G. Takács). *Vocabulaire dangaléat: Kawo daŋla*. (Place not indicated: publisher not indicated).

DLE = Lesko, L.H. 1982, 1984, 1987, 1989. *A dictionary of Late Egyptian*. Vols. I, II, III, IV. Berkeley: B.C. Scribe Publications.

DLU I = Olmo Lete, G. del & Sanmartín, J. 1996. *Diccionario de la lengua ugarítica*. Vol. I. ʔ(a/i/u)-l. Barcelona: Editorial AUSA.

DLU II = Olmo Lete, G. del & Sanmartín, J. 2000. *Diccionario de la lengua ugarítica*. Vol. II. m-ẓ. Barcelona: Editorial AUSA.

Dolgopol'skij, A.B. 1966. Materialy po sravnitel'no-istoričeskoj fonetike kušitskih jazykov: Gubnye i dental'nye smyčnye v načal'nom položenii. In Uspenskij, B.A. (ed.), *Jazyki Afriki: Voprosy struktury, istorii i tipologii*, 35-88. Moskva: Nauka.

Dolgopolski, A.B. 1967a. La permutation des *m et *b initiaux dans les racines couchitiques. In *Il Congrès International des Africanistes: Communications de la délégation de l'URSS*, 3-17. Moscou: Nauka.

Dolgopol'skij, A.B. 1967b. Struktura semitohamitskogo kornja v sravnitel'no-istoričeskom osveščenii. In *Problemy jazykoznanija*, 278-282. Moskva: Nauka.

Dolgopol'skij, A.B. 1973. *Sravnitel'no-istoričeskaja fonetika kušitskih jazykov*. Moskva: Nauka.

Dolgopolsky, A. 1983. Semitic and East Cushitic: Sound correspondences and cognate sets. In Segert, S. & Bodrogligeti, A.J.E. (eds.). *Ethiopian studies dedicated to Wolf Leslau*, 123-142. Wiesbaden: Otto Harrassowitz.

Dozy, R. 1881. *Suppléments aux dictionnaires arabes*. Tomes I-II. Leiden – Paris: E. J. Brill – Maisonneuve.

DRB = Naït-Zerrad, K. Since 1998. *Dictionnaire des racines berbères (formes attestées)*. Paris & Louvain: Peeters. [Continuous pagination in the subsequent fascicles.]

DRS = Cohen, D. Since 1970. *Dictionnaire des racines sémitiques ou attestées dans les langues sémitiques*. Paris & La Haye: Mouton. Fascicule 3-: Leuven (1993-): Peeters. [With continuous pagination.]

DUL = Olmo Lete, G. & Sanmartín, J. 2003. *A dictionary of the Ugaritic language in the alphabetic tradition*. Part One [ʔ(a/i/u)-k]. Part Two [l-z]. Leiden: E.J. Brill.

EAAN I = Takács, G. 2016. *Etyma Afroasiatica nova: Roots with initial labials (*b-, *p-, *f-, *m-)*. Berlin: Dietrich Reimer Verlag.

Ebbell, B. 1939. *Die alt-ägyptische Chirurgie: Die chirurgischen Abschnitte des Papyrus E. Smith und Papyrus Ebers* (Skrifter utgitt av det Norske Videnskaps-Akademi (Oslo), II, Hist. Filos. Klasse, Nr. 2).

Ebert, K.H. 1976. *Sprache und Tradition der Kera (Tschad)*. Teil II. Berlin: Dietrich Reimer.

Ebobisse, C. 1979. *Die Morphologie des Verbs im Ost-Dangaleat (Guera, Tschad)*. Berlin: Dietrich Reimer Verlag.

Ebobisse, C. 1987. *Les verbaux du dangaléat de l'est (Guera, Tchad): Lexiques français-dangaléat et allemand-dangaléat*. Berlin: Dietrich Reimer Verlag.

EDE I = Takács, G. 1999. *Etymological dictionary of Egyptian*. Volume One: *A phonological introduction*. Leiden: E.J. Brill.

EDE II = Takács, G. 2001. *Etymological dictionary of Egyptian*. Volume Two: *b-, p-, f-*. Leiden: E.J. Brill.

Ehret, Ch. 1980a. *The historical reconstruction of Southern Cushitic phonology and vocabulary*. Berlin: Dietrich Reimer Verlag.

Ehret, Ch. 1980b. *Kw'adza vocabulary*. MS. Los Angeles, Ca1ifornia, IV + 17 p.

Ehret, Ch. 1987. Proto-Cushitic reconstruction. *Sprache und Geschichte in Afrika* 8. 7-180.

Ehret, Ch. 1995. *Reconstructing Proto-Afroasiatic (Proto-Afrasian): Vowels, tone, consonants, and vocabulary*. Berkeley – Los Angeles, California: University of California.

Ehret, Ch. & Elderkin, E.D. & Nurse, D. 1989. Dahalo lexis and its sources. *Afrikanistische Arbeitspapiere* 18. 5-49.

Eilers, W. 1978. Semitische Wurzeltheorie. In *Atti del Secondo Congresso Internazionale di Linguistica Camito--Semitica, Firenze, 16-19 aprile 1974*, 125-131. Firenze: Istituto di Linguistica e di Lingue Orientali, Università di Firenze.

Eilers, W. 1987. Die zweiradikalige Basis der semitischen Wurzel. In Jungraithmayr, H. & Müller, W.W. (eds.), *Proceedings of the Fourth International Hamito-Semitic Congress*, 509-524. Amsterdam – Philadelphia: John Benjamins.

Ember, A. 1926. Several Egypto-Semitic etymologies. *Oriens. The Oriental Review* 1. 5-8.

ESS = Ember, A. 1930. *Egypto-Semitic studies*. Leipzig: The Alexander Cohut Memorial Foundation.

FD = Faulkner, R.O. 1962. *A concise dictionary of Middle Egyptian*. Oxford: Clarendon Press.

Fédry, J. (avec la collaboration de Khamis, J. & o/Nedjei, M.). 1971. *Dictionnaire dangaleat (Tchad)*. Thése de 3ème cycle, Institut National des Langues et Civilisations Orientales. Lyon: Afrique et Langage.

Fitzpatrick, J.F.J. 1910-1911. Some notes on the Kwolla District and its tribes. *Journal of the Royal African Society* 10. 16-52, 213-22.

Fleming, H.C. 1969. Asa and Aramanik: Cushitic hunters in Masai-Land. *Ethnology* 8(1). 1-36.

Fleming, H.C. 1974. Omotic as an Afroasiatic family. *Studies in African Linguistics. Supplement* 5. 81-94.

Fleming, H.C. 1976. Omotic overview. In Bender, M.L. (ed.), *The non-Semitic languages of Ethiopia*, 299-323. East Lansing: Michigan State University.

Fleming, H.C. 1988. Mao's ancestor: Consonant phonemes of Proto-Mao. Stage one. In Gromyko, A.A. (ed.), *Proceedings of the Ninth International Congress of Ethiopian Studies (Moscow, 26-29 August 1986)*, vol. 5, 35-44. Moscow: Nauka.

Fleming, H.C. 2000. *The eight 'blood' etymologies in Afrasian**. MS. (Paper presented at NACAL 28 = 28th North American Conference on Afroasiatic Linguistics, Portland, Oregon, 10-12 March 2000.)

Foucauld, Ch. de. 1951-2. *Dictionnaire touareg-français, dialecte de l'Ahaggar*. Vols. I-IV. Paris: Imprimerie Nationale de France.

Foulkes, H.D. 1915. *Angass manual: Grammar, vocabulary*. London: Kegan Paul, Trench, Trübner and Co.

Frajzyngier, Z. 1985. *A Pero-English and English-Pero vocabulary*. Berlin: Dietrich Reimer Verlag.

Frajzyngier, Z. 1991. *A dictionary of Mupun*. Berlin: Dietrich Reimer Verlag.

Fronzaroli, P. 1965. Studi sul lessico comune semitico. III. I fenomeni naturali. *Rendiconti delle Sedute dell'Accademia Nazionale dei Lincei. Classe di scienze morali, storiche e filologiche*. Ser. VIII, vol. XX, fasc. 3-4. 135-150.

Fronzaroli, P. 1971. Studi sul lessico comune semitico. VII. L'alimentazione. *Rendiconti delle Sedute dell'Accademia Nazionale dei Lincei. Classe di scienze morali, storiche e filologiche*. Ser. VIII, vol. XXVI, fasc. 7-12. 603-642.

Fronzaroli, P. 1977. West Semitic toponymy in Northern Syria in the third millennium B.C. *Journal of Semitic Studies* 22(2). 145-166.

GAG = Soden, W. von. 1952. *Grundriss der akkadischen Grammatik*. Roma: Pontifitium Institutum Biblicum.

Gasparini, A. 1983. *Sidamo-English dictionary*. Bologna: E.M.I.

GÄSW = Calice, Graf F. von. 1936. *Grundlagen der ägyptisch-semitischen Wortvergleichung*. Wien: Selbstverlag des Orientalischen Institutes der Universität Wien.

GB = Gesenius, W. (bearbeitet von Buhl, F.). 1962. *Hebräisches und aramäisches Handwörterbuch über das Alte Testament*. Unveränderter Neudruck der 1915 erschienenen 17. Auflage. Berlin – Göttingen – Heidelberg: Springer-Verlag.

GHWb = Hannig, R. 1995. *Grosses Handwörterbuch Ägyptisch-Deutsch (2800-950 v. Chr.)*. Mainz: Verlag Philipp von Zabern.

Gochal, G. 1994. *A look at Shik Ngas*. Jos: Jos University Press.

Gordon, C.H. 1955. *Ugaritic manual*. Roma: Pontificium Institutum Biblicum.

Gragg, G. 1982. *Oromo dictionary*. East Lansing, Michigan: Michigan State University.

Grapow, H. 1914. Über die Wortbildungen mit einem Präfix m- im Ägyptischen. *Abhandlungen der Kgl. Preussischen Akademie der Wissenschaften*. 3-33.

Greenberg, J.H. 1950. The patterning of root morphemes in Semitic. *Word* 6. 162-181.

Greenberg, J.H. 1955. *Studies in African linguistic classification*. Branford, Connecticut: Compass Publishing Company.

Greenberg, J.H. 1963. The languages of Africa. *International Journal of American Linguistics* 29.

Hayward, R.J. 1982. Notes on the Koyra language. *Afrika und Übersee* 65. 211-268.

HCVA I-V = Diakonoff, I.M. & Belova, A.G. & Militarev, A.Ju. & Porhomovskij, V.Ja. & Stolbova, O.V. 1993--1997. Historical comparative vocabulary of Afrasian. Parts 1-5. *St. Petersburg Journal of African Studies* 2-6.

Heine, B. 1973. Vokabulare ostafrikanischer Restsprachen. Teil I. *Afrika und Übersee* 56. 276-283.

Heine, B. 1975. Notes on the Yaaku language (Kenya). *Afrika und Übersee* 58(2). 119-138.

Hellwig, B. 2000. *Goemai – English – Hausa dictionary*. MS. Draft. Printed out on 20 August 2000. 42 p.

Hetzron, R. 1969. *The verbal system of Southern Agaw*. Berkeley, Los Angeles: University of California Press.

Hodge, C.T. 1966. Hausa-Egyptian establishment. *Anthropological Linguistics* 8(1). 40-57.

Hodge, C.T. 1976. An Egypto-Semitic comparison. *Folia Orientalia* 17. 5-28.

Hodge, C.T. July 1978. *Hausa and English: Related languages*. MS. (Paper presented at the International Conference on Hausa Language and Literature, Bayero University, Kano, Nigeria). 3 p.

Hodge, C.T. 1981a. Lislakh labials. *Anthropological Linguistics* 23(8). 368-382.

Hodge, C.T. 1981b. Comparative evidence for Egyptian historical phonology. In Young, D.W. (ed.), *Studies presented to Hans Yakob Polotsky*, 401-413. East Gloucester: Pirtle and Polson.

Hodge, C.T. 1988. Consonant ablaut in Lislakh. In Arbeitman, Y.L. (ed.), *Fucus: A Semitic/Afrasian Gathering in Remembrance of Albert Ehrman*, 267-276. Amsterdam – Philadelphia: John Benjamins.

Hodge, C.T. 1991. Etymological reassessment. In Mukarovsky, H.G. (ed.), *Proceedings of the Fifth International Hamito-Semitic Congress*, Band II, 95-105. Wien: Afro-Pub.

Hoffmann, C. 1971. On the classification of Nancere. *Journal of West African Languages* 8(1). 5-12.

Hoskison, J.T. 1983. *A grammar and dictionary of the Gude language (Chadic)*. The Ohio State University. (Doctoral dissertation.)

HSED = Orel, V.É. & Stolbova, O.V. 1995. *Hamito-Semitic etymological dictionary*. Leiden: E.J. Brill.

Hudson, G. 1989. *Highland East Cushitic dictionary*. Hamburg: Buske

Huehnergard, J. 1991. Further South Semitic cognates to the Akkadian lexicon. In Kaye, A.S. (ed.), *Semitic studies in honor of Wolf Leslau on the occasion of his eighty-fifth birthday, November 14ᵗʰ, 1991*, vol. I, 690-713. Wiesbaden: Otto Harrassowitz.

Illič-Svityč, V.M. 1966. Iz istorii čadskogo konsonantizma: Labial'nye smyčnye. In Uspenskij, B.A. (ed.), *Jazyki Afriki: Voprosy struktury, istorii i tipologii*, 9-34. Moskva: Nauka

Illič-Svityč, V.M. 1971. *Opyt sravnenija nostratičeskix jazykov (semitohamitskij, kartvel'skij, indoevropejskij, ural'skij, dravidijskij, altajskij). Vvedenie. Sravnitel'nyj slovar' (b-Ḳ)*. Moskva: Nauka.

JEA = *Journal of Egyptian Archaeology* (London).

Johnstone, T.M. 1981. *Jibbāli lexicon*. London: Oxford University Press.

Johnstone, T.M. 1987. *Mehri lexicon*. London: University of London.

Jungraithmayr, H. 1961. Beobachtungen zur tschadohamitischen Sprache der Jegu (und Jonkor) von Abu Telfan (Republique du Tchad). *Afrika und Übersee* 45. 95-123.

Jungraithmayr, H. 1962. *Wörterbuch der Angas-Sprache*. MS. Marburg.

Jungraithmayr, H. 1963. Die Sprache des Sura (Maghavul) in Nordnigerien. *Afrika und Übersee* 47. 8-89, 204-220.

Jungraithmayr, H. 1968. A comparative word list of the Ron languages (Southern Plateau, N. Nigeria). *Africana Marburgensia* 1(2). 3-12.

Jungraithmayr, H. 1970. *Die Ron-Sprachen: Tschadohamitische Studien in Nordnigerien*. Glückstadt: Verlag J.J. Augustin.

Jungraithmayr, H. 1971/1972. *Mulwi* (S. 1-13), *Masa* (S. 15-161). Wordlists. MS.

Jungraithmayr, H. 1973. *Dictionnaire birgit-français*. MS. Marburg.

Jungraithmayr, H. 1977. *Kofa wordlist*. MS. 18 p.

Jungraithmayr, H. 1978. *Wörterverzeichnis Mawa-Deutsch-Französisch: Index Deutsch-Mawa. Index Französisch-Mawa*. MS. 49 p.

Jungraithmayr, H. 1980. *Über die Mawa (Guera, Tschad): Ethnographische und linguistische Notizen*. MS. März 1980. 75 p.

Jungraithmayr, H. 1981. Inventaire des langues tchadiques. In Perrot, J. (ed.). *Les langues dans le monde ancien et moderne*. Paris: Éditions du Centre National de la Recherche Scientifique. 407-413.

Jungraithmayr, H. 1990a. *Lexique mokilko*. Berlin: Dietrich Reimer Verlag.

Jungraithmayr, H. 1990b. *Lexique mubi-français (Tchad oriental)*. MS. Frankfurt a/M. 50 p.

Jungraithmayr, H. (in collaboration with N.A. Galadima and U. Kleinewillinghöfer). 1991. *A dictionary of the Tangale language (Kaltungo, Northern Nigeria) with a grammatical introduction*. Berlin: Dietrich Reimer Verlag.

Jungraithmayr, H. 1993. *Lexique sibine (sumray)-français*. MS. Frankfurt a/M, versions of 20 April 1993 (ʾa-bákùgə́mī), 7 June 1993 (bàlâwràŋ-gə̄ndārā), 17 June 1993 (gə́níny-sə̀rā), 7 June 1993 (sə́r-ʾywʌʌr). 67 p.

Jungraithmayr, H. 1999. *Mushere vocabulary*. Preliminary version composed on the basis of one part (the first 70 pages) of the material "Mushere Sprichwörter". MS. Frankfurt a/M. 20 p.

Jungraithmayr, H. 2004. Das Birgit, eine osttschadische Sprache – Vokabular und grammatische Notizen. In Takács, G. (ed.), *Egyptian and Semito-Hamitic (Afro-Asiatic) Studies in Memoriam Werner Vycichl*, 342-371. Leiden: E.J. Brill.

Jungraithmayr, H. & Adams, A. 1992. *Lexique migama*. Berlin: Dietrich Reimer Verlag.

Jungraithmayr, H. & Ibriszimow, D. 1993. *Sur les langues sarwa, gadang et miltu (Groupe sibine/sumray)*. MS. (Paper presented at the meeting of Groupe d'Études Tschadiques (Paris).)

Jungraithmayr, H. & Ibriszimow, D. 1994. *Chadic lexical roots*. Vol. I. *Tentative reconstruction, grading, distribution and comments*. Vol. II. *Documentation*. Berlin: Dietrich Reimer Verlag.

Jungraithmayr, H. & Shimizu, K. 1981. *Chadic lexical roots*. Vol. II. *Tentative reconstruction, grading and distribution*. Berlin: Verlag von Dietrich Reimer.

KB = Koehler, L. & Baumgartner, W. 1994-2000. *The Hebrew and Aramaic lexicon of the Old Testament*. Vols. I-V. Leiden: E.J. Brill.

KHW = Westendorf, W. 1977. *Koptisches Handwörterbuch*. Heidelberg: Carl Winter Universitätsverlag.

Kidda, M.E. 1985. *Tangale phonology: A descriptive analysis*. Urbana, Illinois: University of Illinois at Urbana-Champaign. (Doctoral dissertation.)

Kießling, R. & Mous, M. 2004. *The lexical reconstruction of West-Rift Southern Cushitic* (Kuschitische Sprachstudien 21). Köln: Rüdiger Köppe Verlag.

Kogan, L.E. 1995. O nereguljarnyh refleksah protosemitskih laringalov v akkadskom jazyke. *Vestnik Drevnej Istorii* 2. 156-162.

Kossmann, M. 1999. *Essai sur la phonologie du proto-berbère*. Köln: Rüdiger Köppe Verlag.

Kraft, Ch.H. 1981. *Chadic wordlists*. Vols. I-III. Berlin: Dietrich Reimer Verlag.

Lamberti, M. 1993. The Ari-Banna group and its classification. *Studi Italiani di Linguistica Teorica e Applicata* 22(1). 39-87.

Lamberti, M. & Sottile, R. 1997. *The Wolaytta language*. Köln: Rüdiger Köppe Verlag.

Lane, E.W. 1863-93. *An Arabic-English lexicon*. Vols. I-VIII. London & Edinburgh: Williams and Norgate.

Lanfry, J. 1973. *Ghadames*. II. *Glossaire*. Alger: Le Fichier Periodique.

Laoust, E. 1931. *Siwa*. I. *Son parler*. Paris: Librairie Ernest Leroux.

Leger, R. 1992. Sprachproblem aus dem Westtschadischen. Kupto- und Kwamitexte. *Afrikanistische Arbeitspapiere* 28. 5-32.

Lenssen, T. 1984. Studien zum Verb im Kwang (Tschad). *Africana Marburgensia*, Sonderheft 8.

Leslau, W. 1938. *Lexique soqoṭri (sudarabique moderne), avec comparaisons et explications étymologiques*. Paris: Librairie C. Klincksieck.

Leslau, W. 1945. *Gafat documents: Records of a South-Ethiopic language. Grammar, text and comparative vocabulary*. New Haven, Connecticut: American Oriental Society.

Leslau, W. 1959. *A Dictionary of Moča (Southwestern Ethiopia)*. Berkeley, Los Angeles: University of California Press.

Leslau, W. 1979. *Etymological dictionary of Gurage (Ethiopic)*. Vol. III. *Etymological section*. Wiesbaden: Otto Harrassowitz.

Leslau, W. 1987. *Comparative dictionary of Geˤez (Classical Ethiopic)*. Wiesbaden: Otto Harrassowitz.

Levy, J. 1924. *Wörterbuch über die Talmudim und Midraschim nebst Beiträgen von Heinrich Leberecht Fleischer*. Zweite Auflage mit Nachträgen und Berichtigungen von Lazarus Goldschmidt. Bde. I-IV. Berlin & Wien: Benjamin Harz Verlag.

Lienhard, R. & Giger, M. 1975. *Daba (parler de Pologozom): Description phonologique*. Yaoundé: Société Internationale de Linguistique.

Lukas, J. 1936. Die Logone-Sprache im Zentralen Sudan. *Abhandlungen für die Kunde des Morgenlandes* 21(6).

Lukas, J. 1937. *Zentralsudanische Studien*. Abhandlungen aus dem Gebiet der Auslandskunde, Hansische Universität, Reihe B, Band 45/24.

Lukas, J. 1941. *Deutsche Quellen zur Sprache der Musgu in Kamerun*. Berlin: Dietrich Reimer Verlag.

Lukas, J. 1971. Die Personalia und das primäre Verb im Bolanci (Nordnigerien). Mit Beiträge über das Karekare. *Afrika und Übersee* 55. 114-139.

Majzel', S.S. (additions by and edited by Militarev, A.Ju.). 1983. *Puti razvitija kornevogo fonda semitskih jazykov*. Moskva: Nauka.

Matsushita, Sh. 1972. *An outline of Gwandara phonemics and Gwandara-English vocabulary*. Tokyo: Tokyo Press.

MDAIK = Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo (Wiesbaden).

Meinhof, C. 1906. Linguistische Studien in Ostafrika: Fortsetzung. *Mitteilungen des Seminars für Orientalische Sprachen* 9. 278-333.

Moreno, M.M. 1937. Appunti sulla lingua darasa. *Rendiconti della R. Accademia Nazionale dei Lincei. Classe di scienze morali, storiche e filologiche*. Ser. VI, vol. XIII, 211-240.

Moscati, S. & Spitaler, A. & Ullendorf, E. & Soden, W. von. 1964. *An introduction to the comparative grammar of the Semitic languages. Phonology and morphology*.[2] Wiesbaden: Otto Harrassowitz.

Mouchet, J. 1950. Vocabulaires comparatifs de quinze parlers du Nord-Cameroun. *Bulletin de la Société d'Études Camerounaises* 29-30. 5-74.

Mouchet, J. 1966. *Le parler daba: Esquisse grammaticale précédée d'une note sur l'ethnie daba, suivie de lexiques daba-français et français-daba*. Yaoundé: R.E.C.

Mukarovsky, H.G. 1959. Altmediterranes Wortgut in Westafrika. *Wiener Zeitschrift für die Kunde des Morgenlandes* 55. 1-48.

Mukarovsky, H.G. 1981. Einige hamitosemitische und baskische Wortstämme. In Jungraithmayr, H. & Miehe, G. (eds.), *Berliner Afrikanistische Vorträge XXI: Deutscher Orientalistentag, Berlin 24.-29. März 1980*, 105-118. Berlin: Verlag von Dietrich Reimer.

Mukarovsky, H.G. 1987. *Mande-Chadic common stock: A study of phonological and lexical evidence*. Wien: Afro-Pub.

NBÄ = Osing, J. 1976. *Die Nominalbildung des Ägyptischen*. I-II. Mainz/Rhein: Verlag Philipp von Zabern.

Netting, R.M. 1967. *Kofyar vocabulary*. MS.

Newman, P. 1964. A word list of Tera. *Journal of West African Languages* 1(2). 33-50.

Newman, P. 1977. Chadic classification and reconstructions. *Afroasiatic Linguistics* 5(1). 1-42.

Newman, P. 1996. *Hausa and the Chadic language family: A bibliography* (African Linguistic Bibliographies 6). Köln: Rüdiger Köppe Verlag.

Newman, P. 2022. *Comprehensive bibliography of Chadic and Hausa linguistics*. Fifth Edition. Bloomington: Indiana University IUscholarworks.

Nöldeke, Th. 1910. *Neue Beiträge zur semitischen Sprachwissenschaft*. Strassburg: Karl J. Trübner.

Orel, V.É. 1995. From Hamito-Semitic to Ancient Egyptian: Historical phonology. *Folia Linguistica Historica* 16/1-2. 143-155.

Orel, V.É. & Stolbova, O.V. 1989. Čadsko-egipetskie izoglossy v oblasti kul'turnoj leksiki. In *Lingvističeskaja rekonstrukcija i drevnejšaja istorija Vostoka*, čast' 1, 131-136. Moskva: Nauka.

Orel, V.É. & Stolbova, O.V. 1990. K rekonstrukcii praafrazijskogo vokalizma. 3-4. *Voprosy Jazykoznanija* 2. 75-90.

Orel, V.É. & Stolbova, O.V. 1992. On Chadic-Egyptian lexical relations. In Shevoroshkin, V. (ed.), *Nostratic, Dene-Caucasian, Austric and Amerind*, 181-203. Bochum: Brockmeyer.

Ormsby, G. 1912-1913 & 1913-1914. Notes on the Angass language. *Journal of the Royal African Society* 12 (1912-1913). 421-424 & 13 (1913-1914). 54-61, 204-210, 313-315.

Osing, J. 1976. *Die Nominalbildung des Ägyptischen*. I-II. Mainz/Rhein: Verlag Philipp von Zabern.

Osing, J. 1978. Review of CED. *Journal of Egyptian Archaeology* 64. 186-189.

Paradisi, U. 1960. Il berbero di Augila: Materiale lessicale. *Rivista degli Studi Orientali* 35(3-4). 157-177.

Parker, E.M. & Hayward, R.J. 1985. *An Afar-English-French dictionary (with grammatical notes in English)*. London: School of Oriental and African Studies, University of London.

Porhomovskij, V.Ja. & Stolbova, O.V. 1991. Čadskie jazyki. In Solncev, V.M. (ed.), *Jazyki Azii i Afriki*. IV, kniga 2, 323-383. Moskva: Glavnaja Redakcija Vostočnoj Literatury.

Prasse, K.-G. 1969. *A propos de l'origine de h touareg (tahaggart)*. Det Kongelige Danske Videnskabernes Selskab. Historisk-filosofiske Meddelelser 43(3).

Prasse, K.-G. & Alojaly, Gh. & Mohamed, Gh. 1998. *Lexique touareg-français*. Copenhague: Museum Tusculanum Press, Université de Copenhague.

Prasse, K.-G. & Alojaly, Gh. & Mohamed, Gh. 2003. *Dictionnaire touareg-français (Niger)*. Copenhagen: Museum Tusculanum Press, University of Copenhagen.

PT = Sethe, K. 1908, 1910. *Die altägyptischen Pyramidentexte*. Bde. I-II. Leipzig: J.C. Hinrichs'sche Buchhandlung.

Rapp, E.L. & Benzing, B. 1968. *Dictionary of the Glavdá language*. Frankfurt am Main: Bible Society Frankfurt am Main.

RdE = *Revue d'Égyptologie* (Paris).

Reinisch, L. 1884. Die Chamirsprache in Abessinien. II. Chamir-deutsches Wörterbuch. *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften. Phil.-hist. Classe* 106. 330-450.

Reinisch, L. 1885. Die Quarasprache in Abessinien. II. Quarisch-deutsches Wörterbuch. *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften. Phil.-hist. Classe* 109(1). 3-152.

Reinisch, L. 1886. Die ʕAfar-Sprache. II. *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften. Phil.-hist. Classe* 113(2). 795-916.

Reinisch, L. 1887. *Wörterbuch der Bilin-Sprache*. Wien: Alfred Hoelder.

Reinisch, L. 1895. *Wörterbuch der Bedawye-Sprache*. Wien: Alfred Hölder Verlag.

Reinisch, L. 1902. *Die Somali-Sprache*. II. *Wörterbuch*. Wien: Alfred Hölder Verlag.

Reinisch, L. 1904. Der Dschäbärtidialekt der Somalisprache. *Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften* 148(5). 1-88.

Reutt, T.E. & Kogan, E.Z. 1973. Materialy po leksike jazykov margi i bura. In *Bespis'mennye i mladopis'mennye jazyki Afriki*, 83-147. Moskva: Nauka.

Rossing, M.O. 1978. *Mafa-Mada: A comparative study of Chadic languages in North Cameroun*. Wisconsin: University of Wisconsin-Madison. (Doctoral dissertation.)

Rössler, O. 1971. Das Ägyptische als semitische Sprache. In Altheim, F. & Stiehl, R. (eds.), *Christentum am Roten Meer*, Band I, 263-325. Berlin – New York: Walter de Gruyter.

Rössler, O. 1981. Review of Ward, W.A.: The four Egyptian homographic roots b3. *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 131. 384-386.

Sachnine, M. 1978. Liste lexicale en Lamé du Cameroun. In Caprile, J.-P. & Jungraithmayr, H. (eds.), *Préalables à la reconstruction du proto-tchadique* , 195-201. Paris: SELAF.

Sachnine, M. 1982. *Dictionnaire lamé-français. Lexique français-lamé*. Paris: SELAF.

Sasse, H.-J. 1979. The consonant phonemes of Proto-East-Cushitic (PEC). *Afroasiatic Linguistics* 7(1). 1-67.

Sasse, H.-J. 1980. Textproben der Boni-Sprache. *Afrika und Übersee* 63. 79-101.

Sasse, H.-J. 1981. Neue Perspektiven im Afroasiatischen? In Jungraithmayr, Herrmann & Miehe, Gudrun (eds.), *Berliner Afrikanistische Vorträge. XXI. Deutscher Orientalistentag, Berlin 24.-29. März 1980*, 145-165. (Marburger Studien zur Afrika- und Asienkunde, Serie A, Band 28). Berlin: Verlag von Dietrich Reimer.

Sasse, H.-J. 1982. *An etymological dictionary of Burji*. Hamburg: Helmut Buske Verlag.

Schuh, R.G. 1978. *Bole-Tangale languages of the Bauchi area (Northern Nigeria)*. Berlin: Dietrich Reimer.

Schuh, R.G. 1981. *A dictionary of Ngizim*. Berkeley, California: University of California.

SD = Beeston, A.F.L. & Ghul, M.A. & Müller, W.W. & Ryckmans, J. 1982. *Sabaic dictionary (English-French-Arabic). Dictionnaire sabéen (anglais-français-arabe)*. Louvain-la-Neuve – Beyrouth: Peeters – Librairie du Liban.

Sethe, K. 1959. *Ägyptische Lesestücke zum Gebrauch im akademischen Unterricht. Texte des Mittleren Reiches*. Dritte unveränderte Auflage. Hildesheim: Georg Olms Verlagsbuchhandlung.

Shimizu, K. 1978. The Southern Bauchi group of Chadic languages: A survey report. *Africana Marburgensia*. Special Issue 2. 1-50.

Siebert, R. 1994-5. A survey of the Male language. *Survey of Little-Known Languages of Ethiopia (S.L.L.E.) Reports* 24. 1-12.

Sirlinger, E. 1937. *Dictionary of the Goemay language*. Jos, Nigeria: Prefecture Apostolic of Jos.

SISAJa I = D'jakonov, I.M. & Belova, A.G. & Četveruhin, A.S. & Militarev, A.Ju. & Porhomovskij, V.Ja. & Stolbova, O.V. 1981. Sravnitel'no-istoričeskij slovar' afrazijskih jazykov. Vypusk 1. p-ṗ-b-f. In *Pis'mennye pamjatniki i problemy istorii kul'tury narodov Vostoka. XV godičnaja naučnaja sessija Leningradskogo Otdelenija Instituta Vostokovedenija Akademii Nauk SSSR*, 3-127. Moskva: Nauka.

Skinner, N. 1977. North Bauchi Chadic languages: Common roots. *Afroasiatic Linguistics* 4(1). 1-49.

Skinner, N. 1996. *Hausa comparative dictionary*. Köln: Rüdiger Köppe Verlag.

Stolbova, O.V. 1987. Sravnitel'no-istoričeskaja fonetika i slovar' zapadnočadskih jazykov. In Porhomovskij, V.Ja. (ed.). *Afrikanskoe istoričeskoe jazykoznanie. Problemy rekonstrukcii*. Moskva: Nauka. 30-268.

Stolbova, O.V. 1996. *Studies in Chadic comparative phonology*. Moscow: "Diaphragma" Publishers.

Stolbova, O. 2016. *Etimologičeskij slovar' čadskih jazykov*. Moscow: Institute of Oriental Studies of the Russian Academy of Sciences.

Taïfi, M. 1991. *Dictionnaire tamazight-français (parlers du Maroc central)*. Paris: L'Harmattan-Awal.

Takács, G. 1994. Egyptian sb3 "star" and sb3 "to teach". *Lingua Posnaniensis* 36. 173-181.

Takács, G. 1999a. *Development of Afro-Asiatic (Semito-Hamitic) comparative-historical linguistics in Russia and the former Soviet Union.* München, Newcastle: Lincom Europa.

Takács, G. 1999b. The "Aleph problem" in Ancient Egyptian. *Rocznik Orientalisztyczny* 52(1). 101-122.

Takács, G. 1999c. Recent problems of Egyptian historical phonology at the present stage of comparative-historical Afroasiatic linguistics. In Lecarme, J. & Lowenstamm, J. & Shlonsky, U. (eds.), *Studies in Afroasiatic grammar 2. Papers from the Third Conference on Afroasiatic Languages, Sophia Antipolis, 1996*, 345-378. The Hague: René Moulder.

Takács, G. 2000. South Cushitic consonant system in Afro-Asiatic context. *Afrikanistische Arbeitspapiere* 61. 69-117.

Takács, G. 2003. Aegyptio-Afroasiatica XVIII. *Cahiers Caribéens d'Égyptologie* (Schoelcher, Martinique) 5. 187-202.

Takács, G. 2004. *Comparative dictionary of the Angas-Sura languages*. Berlin: Dietrich Reimer Verlag.

Takács, G. 2009a. Aegyptio-Afroasiatica IX (old version). In Shevoroshkin, V.V. & Sverdrup, H.U. (eds.), *Bygone voices reconstructed: On language origins and their relationships. In honor of Aharon Dolgopolski*, 189-210. Copenhagen: Privatforlget: Underskover Publishers ApS.

Takács, G. 2009b. Mubi-Toram lexicon in Chadic and Afro-Asiatic perspective I: Initial *b-. *Acta Orientalia Acad. Scient. Hung.* 62(3). 315-336.

Takács, G. 2011. Semitic ghayin in an Afro-Asiatic perspective. In Pennacchietti, F. & Mengozzi, A. (eds.), *Proceedings of the 3ʳᵈ Meeting of the IACS (Torino, Oct. 2008)* published in: *Aula Orientalis* 29. 139-154.

Tosco, M. 1989. *The classification of Dahalo: Another perspective*. MS. (Paper presented at the 2nd International Congress on Cushitic and Omotic Languages, Turn.)

Tosco, M. 1991. *A grammatical sketch of Dahalo*. Hamburg: Helmut Buske Verlag.

Tourneux, H. 1978a. *Le mulwi ou vulum de Mogroum (Tchad): Langue du groupe musgu – famille tchadique*. Paris: Centre National de la Recherche Scientifique (CNRS).

Tourneux, H. 1978b. Racine verbale en mulwi. In Caprile, J.-P. & Jungraithmayr, H. (eds.), *Préalables à la reconstruction du proto-tchadique*, 89-93. Paris: SELAF.

Tourneux, H. 1991. *Lexique pratique du munjuk des rizières: Dialecte de Pouss*. Paris: Librairie Orientaliste Paul Geuthner.

Tourneux, H. & Seignobos, Ch. & Lafarge, F. 1986. *Les Mbara et leur langue (Tchad)*. Paris: Société d'Études Linguistiques et Anthropologiques de France.

Trombetti, Alfredo. 1923. *Le origini della lingua basca* (Memorie dell'Accademia delle Scienze dell'Istituto di Bologna, classe di scienze morali, serie II, tomi 8-9, 1923-5). Bologna: Arnoldo Forni Editore.

Venberg, R. 1975. Phonemic statement of the Peve language. *Africana Marburgensia* 8(1). 26-43.

Voigt, R.M. 1998. Vergleichende Tschadistik heute – Fortschritte in der tschadischen und semitohamitischen Komparatistik. Besprechung von Jungraithmayr, H. & Ibriszimow, D.: *Chadic Lexical Roots*. Vols. I-II. *Orientalistische Literaturzeitung* 93(6). 607-619.

Vycichl, W. 1934. Hausa und Ägyptisch: Ein Beitrag zur historischen Hamitistik. *Mitteilungen des Seminars für Orientalische Sprachen an der Friedrich-Wilhelms-Universität zu Berlin* 37. 36-116.

Vycichl, W. 1958. Grundlagen der ägyptisch-semitischen Wortvergleichung. *Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo* 16. 367-405.

Vycichl, W. 1983. *Dictionnaire étymologique de la langue copte*. Leuven: Peeters.

Vycichl, W. 1990. *La vocalisation de la langue égyptienne*. Tome Iᵉʳ. *La phonétique*. Le Caire: Institut Français d'Archéologie Orientale.

Ward, W.A. 1975. The biconsonantal root *b3 and remarks on bilabial interchange in Egyptian. *Zeitschrift für Ägyptische Sprache* 102. 60-67.

Ward, W.A. 1978. *The four Egyptian homographic Roots b3*. Rome: Biblical Institute Press.

Wb = Erman, A. & Grapow, H. 1957-1971. *Wörterbuch der ägyptischen Sprache*. Bde. I-V.² Berlin: Akademie--Verlag.

Wedekind, K. 1976-9. Sidamo, Gedeo (Derasa), Burji: Phonological differences and likenesses. *Journal of Ethiopian Studies* 14. 131-176.

Weibegué, Ch. & Palayer, P. 1982. *Lexique lele-français*. Sarh, Tchad: Centre d'Études Linguistiques.

WKAS I = Kraemer, J. & Gätje, H. & Spitaler, A. & Ullmann, M. 1970. *Wörterbuch der klassischen arabischen Sprache*. Bd. I: *k*. Wiesbaden: Otto Harrassowitz.

WMT = Deines, H. von & Westendorf, W. 1961-1962. *Wörterbuch der medizinischen Texte*. Bde. I-II. Berlin: Akademie-Verlag.

Wölfel, J.D. 1955. Eurafrikanische Wortschichten als Kulturschichten. *Acta Salamanticensia. Filosofía y letras* 9(1).

WUS = Aistleitner, J. 1963. *Wörterbuch der ugaritischen Sprache*. Berichte über die Verhandlungen der Sächsi-
    schen Akademie der Wissenschaften zu Leipzig. Phil.-hist. Klasse 106(3).
Zaborski, A. 1971. Biconsonantal verbal roots in Semitic. *Zeszyty Naukowe Uniwersytetu Jagiellońskiego. Prace
    językoznawcze* 5. 51-98.
Zaborski, A. 1975. Material for a comparative dictionary of Cushitic languages: Somali-Galla comparisons. In
    Bynon, J. & Bynon, Th. (eds.), *Hamito-Semitica*, 321-331. The Hague: Mouton.
Zadok, R. 1991. Notes on the West Semitic material from Emar. *Annali, Istituto Universitario Orientale di Napoli*
    51(2). 113-137.