Comparative Notes on Hurro-Urartian, Northern Caucasian and Indo-European[*]

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After the discovery of the large Hurrian-Hittite bilingual text K Bo XXXII[1] and some other recent results of excavations, it has become possible to enrich the Hurro-Northern Caucasian comparison inaugurated by the late I. M. Diakonoff[2] and continued by him together with S. A. Starostin.[3] The latter recently found many new and persuasive etymologies connected with the new data.[4] Some additions may be suggested in connection not only with Northern Caucasian but also with problems bearing on Indo-European.

An old idea (already expressed by such great scholars as HroznY in his first pioneering works on Hittite, and later by Pedersen) on possible Indo-European elements in Hurro-Urartian[5] had been studied before the present-day revival of Northern Caucasian comparison. The question of the possible genetic connections of all these linguistic groups as well as of the links between them and Kartvelian was discussed at length by G. V. Dzhaukian.[6] Although Dzhaukian's ideas were not approved by other specialists, the possibility of old (cultural) borrowing uniting Hurro-Urartian to Indo-European has been admitted.[7] A definite advance in this field was also connected with using the new results of the Northern Caucasian reconstruction[8], although the direction of borrowing in many cases has remained controversial.

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[*] This paper is dedicated to the memory of Igor Mixajloviç Djakonov (1915-1999), a great Orientalist and the founder of comparative Hurro-Northern Caucasian studies.
[1] Cf. the study of Neu 1996 with further bibliographical references.
[2] Diakonoff 1967, 165; 1971, 157-171; 1978; 1980, 103.
[3] Diakonoff and Starostin 1986; 1988.
[4] Starostin 1995a; 1998.
[5] HroznY 1916, 27, n.3 (the idea of a possible Indo-European or Hittite influence on the Hurro-Urartian Nominative-Ergative in -Í/Íe, discussed later by Pedersen); Diakonoff 1980, 104.
[6] Dzhaukian 1963; 1967.
[7] Gamkrelidze and Ivanov 1984/1995; Xachikian 1985a, 53-54.
[8] Starostin 1988.

A comparable choice between several alternatives exists in the field of Etruscan. Starting with Thomsen[9], whose remarks are still valid, several scholars have tried to show the importance of (Northern) Caucasian for Etruscan studies. Interesting ideas both on Etruscan and Urartian in their relations to Northern Caucasian were expressed by A. Gleye[10], which might also be considered precursors to recent Kartvelian-Indo-European areal studies.[11] Unfortunately, this trend of research did not bring success in the early attempts to study both Urartian[12] and Etruscan[13]. Despite Marr's unusual linguistic knowledge and intuition, these works had suffered from the lack of regular correspondences and mixture of data from Northern Caucasian, which was later proved to be cognate with Hurro-Urartian and possibly Etruscan, and Kartvelian[14], which shared many vocabulary items with Northern Caucasian and had several typological similarities with these languages but is still considered as belonging to a different (Nostratic) macro-family, within which its correspondences to Indo-European seemed particulary impressive. As a partial reaction to these attempts, several scholars have tried to find possible relations between Etruscan and Indo-European, particularly Anatolian and Greek.[15] Hurrian, which is related to Urartian and seems structurally similar to Etruscan, has given impetus to new research in the direction of comparing these languages not only to each other but also to the rest of Northern Caucasian.[16]

1. Hurrian **endan** "king" and the origin of Hurrian -**nd**- (nasal + dental stop).

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[9] Thomsen 1899.

[10] Gleye 1905.

[11] Klimov 1994, 8-9 with references to the other works by Gleye.

[12] See particularly Meshchaninov 1935 with a bibliography of his own earlier and Marr's works; Marr 1922; 1933 (with a list of his publications).

[13] Cf. Marr's published and mainly more important unpublished works enumerated in Kharsekin 1960, 488-490, Bogaevskij 1933, also Marr unpublished, and Trombetti 1928. See on Trombetti M. Ia. Nemirovskij 1930.

[14] See also Gordeziani 1980. Typological parallels between Urartian and Kartvelian were investigated in Meshchaninov 1962, 54-72. Recently, the genetic relationship between Hurro-Urartian and Kartvelian has turned into a subject of vivid polemics particularly between G. Steiner and I. M. Diakonoff.

[15] Georgiev 1943; 1962; 1971; 1979; Charsekin 1963; Durante 1968; Morandi 1984-1985; cf. the negative attitude in a critical survey: Beekes 1990, Villar 1991, 371-373; see on some Anatolian parallels also Laroche 1960b; 1966, 263; Adrados 1994; Cimburskij 1994 with further bibliography.

[16] Diakonoff 1980, 105; Ivanov 1983b; 1988; Orel and Starostin 1989.

The excavations in Mozan (ancient Urkesh) have confirmed the meaning "king" for the title **endan**. It has been known from the foundation inscription of Tish-atal, three copies of which have been preserved (in a tablet and a plaque in the Louvre and a plaque in the Metropolitan Museum of Art): **Ti-iš-a-tal en-da-an Ur-kèš^ki** "Tish-atal, the king of Urkesh".[17] The archaeological discoveries in Mozan/Urkesh have yielded numerous seals containing copies of a similar combination: **Tup-ki-iš en-da-an Ur-kèš^ki** "Tupkish, king of Urkesh"[18]; a copy with a logographic (Sumerian) spelling **LUGAL** "king" (= **endan**) was recently found.[19]

The meaning "king" established as definite by these new inscriptions was denied by Laroche.[20] He suggested instead the meaning "priestess", based on the much later Hittite-Hurrian (Southern Anatolian-Kizzuwatnian) female name of an occupation ^SAL**e-en-ta-an-ni**- (in a ritual of the Hurrian goddess Hebat, K Bo VII 60 and some other ritual texts) which might have contained the Hurrian suffixed article -**nni**[21], as well as on the Boğazköy Hurrian or Luwian **entašši**- (according to Laroche, having either an abstract Hurrian suffix -**ašši**-[22] or the Luwian suffix -**ašši**- of possessive adjectives, which seems possible if one has in mind the Luwian-Hittite interrelationship in Southern Anatolia of the last centuries of the Hittite Empire). Although the exact meaning, word structure and linguistic provenance of both the stems are not clear, Laroche's hypothesis that they both originate from Akkadian *êntu* seems plausible. This Akkadian term for a priestess occurs in Hittite-Luwian Kizzuwatnian rituals: *ŠA* ^SAL*E-EN-TI U ŠA* ^LÚ*SANGA* "of the priestess and of the priest"[23]. The same opposition is probably repeated in the

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[17] Parrot and Nougayrol 1948; Diakonoff 1967, 443; Pecorella and Salvini 1982, 15; Buccellati 1988, 31-34; Muscarella 1988, 94; Wilhelm 1998 (with a detailed history of research, and references).
[18] Buccellati and Kelly-Buccellati 1995-1996, 9-14; 1996; 1997, 80-86.
[19] Buccellati, personal communication.
[20] Laroche 1960a, 192; 1980, 82; following Laroche, several scholars, among them Nozadze 1978, 32-33, n.53; other references: Wilhelm 1998.
[21] Laroche 1980, 214.
[22] Cf. Haas and Wilhelm 1974, 135.
[23] KUB XL 2 Vs. 5', cf. Starke 1990, 206; cf. on the *êntu*- priestess in the KI.LAM festival: Haas 1994, 749, 757 a.o. (with references).

Hurrian borrowed terms **endanni**- : **Íankunni**-.[24] But the gender contrast alone of these two terms speaks against connecting an Old Hurrian title of a male person to the Akkadian name of a female priestess (having the mark *-t-* of the feminine). The meaning "priest" suggested as a solution[25] could not help in explaining the difference of this title from the Hurrian continuation of the Akkadian borrowing. If Laroche is right in suggesting the latter, then—contrary to his opinion—the two later words found in the Boğazköy texts at the period of the intensive borrowing of Akkadian cultural and religious terms have nothing to do with the Old Hurrian title of a king.

As to the origin of the latter, it has been suggested that **endan** may contain the suffix -**dan** of the names of professions[26], although it seems doubtful that "to be a ruler = king" might have been supposed to be a profession; the known examples of this suffix—like **abul-da-n(i)** "gate-keeper = the one in charge of the gate" from a later Akkadian borrowing *abullum* > *abul*- "gate"[27]—point to the other semantic field and belong to a much later period. According to Wilhelm[28], **en-dan** is derived either from a borrowed Sumerian **EN** "ruler"[29]—the solution that he prefers now[30]—or from the Hurrian nominal stem **eni** "god".

As for Sumerian **EN**: this was the main social term in Ebla[31], where contact with Hurrian is documented. Still, deriving the Hurrian title from it remains doubtful, since the suffix has a meaning that does not fit the derivation.

The Hurrian noun **eni**- "god" appears in the form **en**- (without the final vowel of the stem) before the following -**n**- of the suffixed article.[32] In the Hurrian-Hittite bilingual text K Bo XXX II 14 I 36, the Hurrian plural collective form **e-en-za-a-ri** = Hittite

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[24] On the last pair, cf. Xachikian 1985a, 66, 132, n.4.

[25] Diakonoff 1971, 111, n.123, "a priest or a priestess?"; Xachikian 1985a, 6, 9, 132, n.4.

[26] Wilhelm 1989, 11.

[27] Wilhelm 1970; Xachikian 1985a, 66. See the remark of G. Buccellati ap. Wilhelm 1998 on the function of the suffix that makes the derivation from "ruler" less plausible than that from "god".

[28] Wilhelm 1989, 11.

[29] Like Akkadian *en-t-u*, cf. Xachikian 1985a, 51.

[30] Wilhelm 1998.

[31] Cf., for instance, on **EN** = *malikum* Diakonoff 1985, 329-330; on **(in ŠU) EN-eb-la**[ki] "(in the hand) of the king of Ebla", **EN 'À-du**[ki] "king of Adu": Pettinato 1987, 26, 30-35 a.o. Other data from neighboring areas: Wilhelm 1998.

[32] Cf. the forms in Laroche 1980, 81; Xachikian 1985, 153.

DINGIR^{MEŠ} "gods" is attested. It probably contains the phoneme [Û] rendered by a cuneiform syllabic sign beginning with **z**-. The morphonemic alternation of consonant phonemes is seen in the later parallel Boǧazköy forms **e-in$^!$-Ía-a-ri** (V Bo T 14 10'), **i-in-za-ar-ri** (K Bo XXXII 26 Vs. II 33')[33], and Ras Shamra alphabetic Genitive Plural enÛ = cuneiform Hurrian **e-en-na-a-Íe(/Íi)** and Comitative Plural **enÛr** earlier interpreted as *__enna__*-*Íura*[34]. The latter may be close to the form of collective Plural **enÍ/zari**[35]: compare the similar semantic roles of **e-en-za-a-ri** in **ta-ße-e-ni-wa$_a$-a-al e-en-za-a-ri ma-a-ta-aÍ-tab i-ti-i-ta** (= **nu-za a-pé-e-da-ni LÚ-ni DINGIR^{MEŠ} Íe-e-er ßa-at-ta-a-tar Íi-iÍ-ßi-ir** in the Hittite translation) "to this man the gods have given (allocated/assigned) wisdom/insight"[36]) and **enÛr** = **en$_{Z_1}$r** in **a$^{s̄}$hn$_{Z_1}$rm hldp en$_{Z_1}$r trn$_{Z_1}$rm hldp en$_{Z_1}$r** "and you are elevated above the higher gods and you are elevated above the lower gods"[37] RŠ 24.278$_{3-6}$. According to Neu[38], the original suffix of the collective form **enzari** was *-Íâri. Denying the existence of such a suffix[39], Starostin thinks that the fricative consonant belongs to the root, which he reconstructs as Northern Caucasian ?**am**$_{s̄}$Å with further distant Yenisseyan and Sino-Tibetan cognates[40]. In that case, the Hurrian form **enzâri** [**enÛâri**] contains the Plural element -**(a)r** widely represented in Northern Caucasian. As already noticed by Thomsen (1899), the suffix is known in Etruscan in a similar grammatical function: see the identical opposition of Etruscan -**ar** (animate) : -

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[33] A form with the suffixed article *-**rn**- > -**rr**- : Neu 1996, 139.

[34] Laroche 1980, 81; with some phonetic differences Xachikian 1985a, 120, 153.

[35] On a possible meaning of -**ra** in such grammatical contexts as ÌD^{MEŠ} HUR.SAG^{MEŠ}-Íura "rivers and mountains" cf. already Speiser 1941, 111 and n.122 for North-Western Caucasian parallels.

[36] See on the translation: Neu 1996, 138-139.

[37] Cf. on the similar semantic opposition of the cognate **a**Íßui "upwards" : **turi** "down" in the bilingual text: Neu 1996, 186-188, 203-204.

[38] Ib., 39, 139.

[39] It was supposed by Neu besides this noun in only one other word, for which another explanation is also possible: Starostin 1995a, 134, etymology 15; 1998, etymology 47. But cf. other possible examples of the same suffix in two more words: Wilhelm 1992, 135.

[40] Starostin 1995b, 188. If, as suggested above, the Hurrian consonant is [Û], the phonemic correspondences are a bit different but still possible from the point of view expressed in Diakonoff and Starostin 1986.

c(h)va (inanimate[41]) and Abkhaz -r : -xᵛa. If Etruscan **eis-er/ais-e/ar** "gods"[42] is identified with Hurrian **enÍ/z-ari** "gods", the loss of -**n**- before -**s**- should be supposed.

Since on the one hand in Northern Caucasian all the words derived from the root have religious or spiritual meaning[43] and not a social one, and on the other hand it is not easy to reconcile phonetically the above reconstruction and interpretation of **enz**-**ari** with the Hurrian form **endan**, it seems that it is safer to try to find for the latter another historical explanation.

A possible way of analyzing the whole sentence, in two variants of which (depending on the difference in the royal name) the form had been used, was pointed out by Diakonoff[44]. He suggested that the final -**n** in **enda-n** is a copula of pronominal origin[45] that expresses the relation between the subject and a noun used in predicative function.

The stem **enda**- "king" can be connected to Northern Caucasian *n**Ȅwc(w)**Ā "prince, ruler", reconstructed on the basis of such words as Avar-Andi *nuco "prince" > Avar **nucá-l**, **nucí-ja-w** "prince", Proto-Western Caucasian *n**Pc:ʷa** "god" > Proto-Abkhaz-Tapant *n**Pcʷa** > Abkhaz **(a)-nÇᵛa** "god", Abaza **nÇʷa** "god".[46] The semantic link between the name of a ruler (king) and the name of the god in Urkesh may be connected to other cultural data[47]; the association seems universal for different Ancient Oriental traditions.

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[41] Cf. Olzscha 1968; Ivanov 1983a; 1988, 216.

[42] The other explanation already suggested by Bugge 1909, 126-127 and later developed by several scholars (as recently in Steinbauer 1993, 299) is based on a striking resemblance to Italic forms like Umbrian esono- "sacred, divine", but the direction of borrowing is not clear: an Etruscan source seems possible for Eastern Italic forms.

[43] Nikolayev and Starostin 1994, 243.

[44] Diakonoff 1967, 444; cf. Xachikian 1985a, 122. Other views in Wilhelm 1998 and in Girbal 1990 (according to Girbal there is no copula but only a pronoun indifferent to the opposition of person).

[45] Diakonoff 1971, 128-129; cf. Laroche 1980, 174, Speiser 1941, 171-172; Xachikian ib.; 1985b, 23. The alternative view, according to which the whole group of the first three words in the inscription of Tish-atal is a subject of the following sentence (Nozadze 1978, 31-33), is refuted by the structure of the titles that appear as self-sufficient on the Mozan seals.

[46] Cf. on all these and other related forms: Nikolayev and Starostin 1994, 854-855.

[47] Cf. Buccellati and Kelly-Buccellati 1996, 75 and n.55 (in connection with Wilhelm's etymology discussed above).

The following phonemic processes should have occurred in Proto-Hurro-Urartian and Hurrian in the pre-written history of the word **enda**-. The vowel in the first syllable of the stem was dropped as in some Northeastern Caucasian languages and in Proto-Northwestern Caucasian. A prothetic vowel developed before the initial consonant as in many other Hurrian words.[48] The final vowel was preserved. Labial sonants were dropped as in many other cases.[49] The affricate changed into a stop after a nasal. The special development of non-emphatic affricates in such a position had been discovered earlier[50], but this particular case may now be elaborated. There are at least two more correspondences proving the phonetic law according to which the original combination <u>nasal + affricate</u> > <u>nasal + stop</u>: Hurrian **wa$_a$-an-ta-ri-ni-na-a** = Hittite logogram (Sumerogram) ^{LÚ.MEŠ}**MUHALDIM** "cooks", in the description of a feast in the Netherworld in the bilingual text (K Bo XXXII 13 I 22-II 22), is understood by Neu as a Plural with an article: *[*fandarinina*]; a syncopated form of this Plural reappears in another part of the text where a half-mythological story connected to Ebla is told: Hurrian **pa-an-ta-ri-in-na** = Hittite logogram ^{LÚ.MEŠ}**MUHALDIM**.[51] The initial *f/v(a)- of the word for "cooks" is rendered in the bilingual text in the first case by a special cuneiform sign (a combination of the sign for **wa** with a sign for **a** inscribed in the lower right-hand part of the former) used only for Hurrian, Hattic and Palaic texts in Boğazköy archives to denote a specific fricative labial absent in Akkadian or Hittite. In the second occurrence of the form, the same initial is written with the sign **pa**-. In the form beginning with this specific Hurrian fricative phoneme, one may suppose a trace of the old Proto-North Caucasian prefix of the plural of the class of male human ("reasonable") beings. After the final group of suffixes -**in(i)na**- is separated, the remaining stem (**f⁄va**)-**ndar**- may be directly identified with the Proto-North Caucasian *-**ĭmdźЁr**- "to bake, roast", reconstructed on the basis of verbs like Lezghi *⁷**iÇ:ar**- "to bake, roast, boil" > **Ç:ra**, Archi **Çar**-, Chechen **att**- "to bake, roast", Northern Western

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[48] Diakonoff and Starostin 1986, 22, correspondences 23-24; 51-52, correspondences 125-126; 58, correspondence 144; 64-65, correspondences 166-167; Starostin 1995a, 133, etymology 2.
[49] Starostin 1998.
[50] Diakonoff and Starostin 1986, 41.
[51] K Bo XXXII 15 I 27'-28'-II 27'-29'. Neu 1996, 260, 336-337, 339, 450, 110.

Caucasian *źʷa- "to roast, bake" > Ubykh Ûʷa- (particularly in the second parts of compounds), etc.[52]; Hattic -Íuwa in a compound **hanti-p-Íuwa** "cook".[53] If the Western Caucasian labialization, as supposed by Nikolayev and Starostin, is caused by a lost class prefix, it might be interesting to compare it to the frozen prefix in a Hurrian noun derived from this root. The following phonological changes occurred in Proto-Hurro-Urartian and Hurrian. The initial vowel of the root was fused with the final one of a class prefix. The front short unrounded vowel *Ë̈ > Hurrian **a**.[54] The group *mdź > -**nd**.[55]

The Hurrian adjective and substantive (relative noun in Fillmore's terms) [**f/va/end-a/i**] "right; the right [side of the body]" (as opposed to **Íaphaldi** "the left [side of the body]"[56]) is written with the first syllable mostly rendered as **waₐ**- (**waₐ-an-ta-ni he-ra-**

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[52] Nikolayev and Starostin 1994, 643; Trubetzkoy 1930, etymology 98; 1987, 279; Starostin 1987, 462.

[53] Ivanov 1985, 47, etymology n.47.

[54] Cf. Diakonoff and Starostin 1986, 67.

[55] Cf. on the change **m** > **n** in other positions (before a velar): Starostin 1988.

[56] Wegner 1995, 122-123 (n.9) and 124 (n.12). Hurrian **Íaphaldi** "left" seems to have particular importance for the entire problem of the phonetic shape of a whole group of terms common to Hurrian and the other Northern Caucasian languages on the one hand and to Indo-European on the other (see on this problem below, in the section dedicated to the name for "horse"). The Hurrian word has been identified genetically with the dialectal Eastern Caucasian *ÇHapV-lV- "left" reconstructed on the basis of Dargwa *Çipil "left" > Chirag dialect Çipil "left"; Lezghian *ÇaIpVl- > Çapla "left", Agul ÇaIplan "left" (Diakonoff and Starostin 1986, 54; Nikolayev and Starostin 1994, 341); the resemblance of the word with Modern Persian Çap (Farsi and Tadzhik, borrowed into many other Iranian languages) was mentioned as a less plausible alternative possibility of an Iranian borrowing in Eastern Caucasian. But it seems that the word is truly connected to Cuneiform Luwian **ipala**- "left" (with regular loss of the initial consonant, Melchert 1994, 254). As Čop first suggested, the Luwian word within Indo-European is cognate with Tocharian B wâlyai, A ālyi "on the left" < *pal- (with palatalization of the initial Indo-European velar consonant before a front vowel that had disappeared later in Tocharian; but cf. also parallel Iranian forms: Ormuri Çéla/cêlᵃ "left-hand", Efimov 1986, 69). Phonetically, the relationship between the forms can only be explained by a supposition of an early borrowing of a dialectal Indo-European satPm lexeme (such as the Proto-Iranian prototype of Persian Çap) into Eastern Caucasian dialects and Hurrian. The Luwian word goes back to another Indo-European dialectal satPm form while in Tocharian the original centum shape changed in the period of later Tocharian palatalization. The difficulties connected to the word seem to be particularly severe, no doubt because it became a cultural migrational term, as shown by the Altaic correspondences. But in this case, it is definite that the direction of borrowing was from Indo-European into Northern Caucasian and Hurrian, and that the forms were borrowed from a satPm dialect. Also important is the participation of Luwian, Tocharian and Iranian in these lexical contacts.

a-**ri** "the right sinew = the right upper arm" in the curse repeated three times in the Hurrian-Hittite bilingual text, K Bo XXXII 14 Rs. 37) but rarely as **pa**-: **pa**-**an**-**ta**-**ni** (**pa**-**an**-**ta**-**ni he**-[**e**]-**ra**-**a**-**ri** in the same curse, ib. 59 and I 48-49[57]), cf. also **wa**$_a$-**an**-**ti**-**in** "on the right hand" in the description of the feast in the Netherworld in the same text, K Bo XXXII 13 I 25-26[58]; the spelling with initial **pa**- is attested once in Mari, but several times in Boğazköy texts.[59] According to Laroche, proper names like **Wandi**-**ku** may belong to this root, but a similar Nuzi male proper name **Wa**-**an**-**tar**-**ku** (cf. also **Wa**-**an**-**ta**-**ri**, **Wa**-**an**-**tar**-**ki**-**in**-**tar**[60]) contains a form like the stem discussed

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[57] Neu 1996, 152-153, 191.
[58] Neu, ib., 263-264.
[59] Laroche 1980, 293-294; Xachikian 1985a, 36-37, 142; Haas and Wilhelm 1974, 94; Wegner, ib.
[60] Cassin and Glassner 1977, 164.

above (if -**r**- is not a suffix here, as it seems from the opposition **wand**-**i**- : **wand**-**ar**-), but these names show no trace of the article. Proper names like **Pend**-**ip**-**Íarri** (a priest of Hurrian Ishtar-Shaushka, father of the Hittite queen of the Hurrian dynasty Puduhepa[61]), Nuzi **Want**-**ip**-**Íarri**[62], **Bant**-**ip**-**Íenni** are supposed to contain **want**-⁄**went**- "right (= not wrong)"[63], but if they are not connected to this root, they may have the passive stem of a verb in -**i**-[64], see below on a verb with a similar stem.

Just as in the form discussed above (the name for "cooks"), one may see the class prefix in the initial syllable of **w/v/f-and**- "right". In that case, the stem -**and**- "right" can be identified with the Northern Caucasian ***HândźË** "right" reconstructed on the basis of Avar-Andi ***hanΩ:i**- "right" > Andi **hanΩ:il** etc.[65]; a combination of this Hurrian adjective with the noun **herari** "sinew = upper arm" (see above) can be traced back to Proto-Northern Caucasian, since both the words belong to inherited vocabulary[66] and very often form compounds based on old phraseological combinations. In the Northern Caucasian stem "right", the following changes are supposed: the initial laryngeal ***H**- was either lost or not represented in the cuneiform orthography; the vowel of the root was preserved; the final group nasal + affricate developed to nasal + stop just as in the other words discussed above.

Besides these three etymologies (**endan**, **f**⁄**vantar**-, **f**⁄**vant**-), in which one can safely suppose traces of the phonetic law just suggested, there are some other Hurrian words in which the same origin of the group -**nt**⁄**d**- is possible. Thus in the verbal stem **pend**-⁄**pind**- = Hittite **appa tarnu**- "to let come back, to return, to set free", Akkadian

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[61] Laroche 1966, 144; Haas and Wilhelm 1974, 4.
[62] Cassin and Glassner 1977, 165.
[63] Xachikian 1985a, 142, n.68.
[64] Nozadze 1978, 65-67 on this type of compound proper names.
[65] Nikolayev and Starostin 1994, 544-545. S. A. Starostin has informed me that he has also considered the possibility of this Hurro-Northern Caucasian comparison, although he did not find it absolutely safe.
[66] See on the latter Starostin 1988, etymology 14; the Northern Caucasian protoform ***xwî?rV** "vein" is discussed in Nikolayev and Starostin 1994, 1064-1065; Trubetzkoy 1930, etymology 71; 1987, 278; Starostin 1987, 459. Etymologically, -**ari** should be a sufix. The same combination of the name for "(upper) arm" (with another suffix: -**hi** instead of -**ari**, cf. Neu 1994, 153; Wegner 1995, 122-123 on

ŠAPĀRU(M) "to send" (in the bilingual text K Bo XXXII 15 I 16–II 16; IV 6-7–III 6-7[67]), one may suggest a frozen class prefix **p**- as has been found in several other Hurrian verbs.[68] The last part of the stem -**e/ind**- may be compared to Western Northern Caucasian *-**dÛP** "to move back, to return" > Proto-Adyg-Kabardian -**dÛP** (suffix of a reverse action) > Kabardian -**ÛP**; the Western Caucasian morph is traced back to the Proto-Northern Caucasian verbal root *i**ćwË** "to come, to return" (> Avar a**Ç**-**in**-, with the -**n**- conjugation that is supposed to be of later origin[69]), which in many Eastern Caucasian languages is contained in verbs used mostly (or only, as in Khinalug) with locative preverbs. If in Proto-Hurro-Urartian (or an early dialect that had been its historical parent) this morph was preceded by a nasal element, such as a local preverb (as in cognate Eastern Caucasian stems, but cf. also in Western Caucasian morphemes like the Adyg-Kabardian directive verbal prefix **na**- of pronominal origin) or another verbal stem (as in Western Caucasian), the resulting group might have developed into Hurrian -**nd**-. But this conjecture is purely hypothetical, since no such combinations are attested in Hurro-Urartian, and their structural relation to the initial prefix (presumably a class prefix) is not clear. Besides, the type of Proto-Northern Caucasian affricate is different from all the other examples studied above. If one operates with very short morphs with rather broad meaning, as is the case with most Northern Caucasian verbal roots, the degree of certainty is much less than in the case of larger lexical units having some specific connotation.

Since, nevertheless, the other cases discussed above seem transparent[70], it can be stated that from the phonetic point of view the suggested etymology of Hurrian **endan** is quite possible.

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herari : herahi) with the adjective **pandani** occurs in the ritual of Ishtar KUB XXVII 1 Vs. II 4, Salvini 1977, 82; Wegner, ib.: **pantani hirahi** "the right upper arm (of Teshop)".

[67] Neu 1996, 323, 348, 521.

[68] Starostin 1998, etymologies 34-36.

[69] Nikolayev and Starostin 1994, 627-628.

[70] In previous studies some possible examples of another development of the group nasal + affricate in Hurrian have been discussed: see e.g. on **anz**-**an**-**uhh**- Diakonoff and Starostin 1986, 23; Nikolayev and Starostin 1994, 262; but the meaning of this verbal stem is not yet sufficiently clear (see Neu 1996, 350; cf. Nozadze 1978, 63-64).

2. Hurrian **tari**- "fire" : Avestan **âtar** "fire".

Among Hurrian words identified as a result of the study of the bilingual text, the noun **tari**- "fire" has emerged in the sentence containing a curse: **a-me-la-an-ni ta-a-re-eÍ** = Hittite **ma-a-na-an pa-ah-hu-e-na-an-za ar-ha wa-ar-nu-zi** "let the fire burn him completely"[71] (K Bo XXXII 14 I–II 6-7; repeated twice). In the verb, a common Hurro-Urartian stem **am**- has been found, reflected also in Urartian **am-aÍt**-, used exactly like the same Hittite adverb-verb combination to describe the fate of hostile countries in royal inscriptions. It is compared to Northern Eastern Caucasian *$**Vmha**$- "to burn, to be warm" > Chechen **mela**, Tabasaran **manǏ**[72]. But the Hurrian word for fire is not derived from the traditional Northern Caucasian vocabulary. It seems to be borrowed from Iranian.

Avestan **âtar** (Middle Persian **âtaxÍ**) denotes in particular the sacred and deified fire.[73] The archaic ritual meaning (the ancient date of which is documented by the Old Indian **atharvan** "the [fire] priest > sorcerer, magician"[74]) has been preserved in Ossetic folklore in the compound **Aert-xû/oron** "the deity of Fire and Sun (who may be benevolent but is also in charge of skin diseases); a sacred New Year cake dedicated to

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[71] Neu 1996, 104-107; Wilhelm 1992, 134 (further references). The Hurrian Ergative is translated by the form of the Hittite Ablative of a quasi-ergative (or animated neuter) in -**ant**- (cf. on the form Hoffner and Güterbock 1994, fasc.1, 12). The Hurrian Absolutive **tar-ri-ya** in a fragment of the Kumarbi epic KUB XLV 61 Vs. II 1 may correspond to the stem **[pa-]aß-ßur** in KUB XXXIII 1 15 I 3', although both fragments are damaged and the contexts are not clear.

[72] Starostin 1998, etymology 4, with corrections to Nikolayev and Starostin 1994, 807; cf. also North Western Caucasian *$**ma-c'**_w$ "fire" with an unexplained morph **ma**-, Trubetzkoy 1930, etymology 38; 1987, 276; Starostin 1987, 456-457; Nikolayev and Starostin 1994, 354-355 (see on Hattic Ivanov 1985, 50). On Urartian contexts: Melikishvili 1960, 389; Meshchaninov 1978, 38 (the attempt to find the noun for "fire" in this form, ib., 37, is wrong).

[73] Bartholomae 1979, 312-315; Abaev 1958, 69-70, 182; Perixanjan 1973, 442-443. The special importance of the word is motivated by its being the center of the whole semantic field of the fire lore that was essential for Iranian (and earlier Aryan) religion: Hertel 1925; 1927; 1929; Abaev unpublished, II (the second volume, prohibited by Soviet censorship, contains an important study of the Iranian fire cult); Kramers 1954; Boyce 1968; Perixanjan 1983, 161, 335, 337.

[74] A possible borrowing from Iranian (Benveniste 1969, 282) that should be very old. Cf. Avestan **âtrPvaxÍ** "the second fire priest", Bartholomae 1979, 318ff.; Middle Persian **âturvaxÍîh** "the fire priest of lower rank", Perixanjan 1973, 443. The exact phonetic prehistory of Avestan **aEaurvan** "priest" (the highest social rank, Benveniste 1932) is still unclear.

this god and eaten by the whole family but not by strangers" (cf. the same Eastern Iranian elements in the reverse order in Sogdian Gwr'rD [*xôr-arE] "the fire of the sun", the old Ossetic divine name **Xur-at-xuron** < *xur-art-xur-on "Fire, companion of the Sun"[75]), and possibly in Scythian Ψενδαρτάκη (read instead of the distorted Ψευδαρτάκη)· λόφος ἐν Σκυθίᾳ μετὰ τὸ λεγόμενον ὄρος ἅγιον (Steph. Byz.) = ***fsand**- "holy" + **art** "fire".[76] The word is continued in the other Eastern Iranian languages (Khwarazmian **'dr**, Bactrian **aE(o)Ío** "fire", Sogdian **"tr**, Yagnobi **ol** "fire", Afghani **or**, Pamirian Shugni **yôc**, Yazgulian **yec**, Mudzhan **yûr**, Yidga **yûr**[77]) and in Western dialects (Kurd **âr**). The number of Indo-European cognates with the same suffix[78] is restricted, and although they are closely related semantically, they usually do not have the primary meaning "fire". It is commonly accepted that the word is connected to Latin **âter** "black" (< blackened by fire), **âtrium** "forecourt, hall" (originally a place where the smoke from the hearth escaped through a hole in the roof, cf. Avestan **âtrya**- "ashes", Buddhist Sogdian **"Í'kw** "ash", Mudzhan **yéxyo** "ash", Sarykol

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[75] Dumézil 1978, 141-142. According to Dumézil's interpretation the name in an archaic Ossetic prayer written down by Gatiev 1876, 21, should be understood as "Sun-Fire, the son of the Sun" (on this, cf. already Miller 1882, 266-267). In Avestan religion Fire is the son of the principal god Ahura Mazda. The form was borrowed into Slavic as the name of a fiery demon or bird, Czech **Rarog**, see on the different sound shapes of the word Jakobson 1985, 7, 26-28, 47-52 (with another Iranian etymology).

[76] Vasmer 1923, 57; Abaev 1949, 158. Less clear is the interpretation of the name Ἀρθάμων (*âEr "fire" + â-**man**- "to teach, to show; to adore" > Ossetic **amonyn** used also in mythological names, cf. Milewski 1969, 157, on the meaning of the Ossetic verb; Abaev 1958, 52-53, and Zgusta 1955, 70, for other suggestions).

[77] Benveniste 1929, 91; Steblin-Kamenskij 1981, 321; Griunberg 1972, 391; Xromov 1972, 121, 127; Sokolova 1967, 14, 125; 1973, 9, 48; Edel'man 1986, 172-175.

[78] The root is connected to the Hittite verb **ha-/a-/ay-/e-/(w)a**- "to be warm, to be hot", but on the difficulties in reconstructing the initial (even synchronically for the Hittite rhyming formations) see Puhvel 1984, 9-12; on ***Hai-dh**- (Old Irish **aed** "fire"): Sturtevant 1942, 45; Pokorny 1959, 11; Watkins 1985, 1. Theoretically Iranian **âtar** might have belonged to the same Eastern Indo-European (Greek-Macedonian–Iranian) stem as Homeric Greek αἰθήρ "the upper air, the purest and most elevated radiant part of the atmosphere", Macedonian ἀδ · οὐρανός (Hsch.; with a morphonological loss of the final *-**r**, see also as a parallel formation Tocharian B **e/iprer**, A **eprer** "atmospheric space"), but several phonetic irregularities in the correspondences point to taboo distortions, quite understandable in an important sacred term. According to Jasanoff (1979, 145) the Armenian verb **ayr-el** "to burn" (previously thought to be related to the Iranian noun) may be a cognate of Greek αἴθω, with the same meaning.

Eer, Shugni Eîr, Eastern Iranian *aEr-dâna- "hearth" > Pamirian Rushan raÐôn "hearth"),

Latin atrôx "frightful (< *black-looking)".[79] An early Iranian borrowing with a still unexplained initial *v- is a common Balkan-Carpatian areal term for "hearth/fire": Albanian vatër, vatra "hearth; fireplace", Rumanian vatrÅ "fire", Gypsy vâtro/-a "campfire > camp", Hungarian vatra, Slovene vatra, Serbian vatra "fire" (Ûiva vatra "living = sacred fire"), Czech vatra, Polish watra, watrzysko, Ukranian vatra, vatryÍҫe, Russuan vatr-uÍka "a traditional cake filled with cottage cheese".[80] The spread of the word should have been connected with the prehistoric influence of the Iranian fire cult.

The same hypothesis may be suggested in connection with the Hurrian word for "fire". The source of the borrowing seems to be definitely Iranian since in the other languages the meaning is not exactly "fire". It was changed as it was borrowed from (Proto-) Iranian and accommodated into the morphonemic structure of Hurrian nominal stems: the initial vowel disappeared and the additional final vowel was added. Iranian influence on Proto-Northern Eastern Caucasian[81] and Proto-Kartvelian[82] is well documented. Still, it is not clear whether the word for "fire" was borrowed only because of the influence of the (Proto-) Iranian fire cult, or whether it was part of a more massive (Indo-) Iranian lexical borrowing in Hurrian, the other traces of which remain to be found (the supposed influence of Mitannian Aryan might have belonged to the period after the composition of the bilingual text).

3. The meaning of the Hurro-Urartian stem pur(r)a- and the Hurrian name ᵐPurra- (with a note on Latin puer-).

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[79] Ernout and Meillet 1994, 53-54; Sokolova 1967, 14; 1973, 76 n.2; Edel'man 1986, 173; Pokorny 1959, 69; Watkins 1985, 4; Delamarre 1984, 179.

[80] On the areal distribution: Klepikova 1973; Hamp 1976; 1981; Huld 1984, 124. The supposition that the Gypsy borrowing from Iranian had been a source for all the other areal terms (Machek 1957, 124) cannot be proven. The Gypsy word (see JeÍina 1886, 97, 105, on the form in the Czech area dialects) is supposed to come from Rumanian (Wolf 1987, 239, n.3648; Boretzky and Igla 1994, 298).

[81] Starostin 1988, 113-114, with bibliography; in particular, the name "mountain, hill" shows a specifically Iranian form and may be important for defining the characteristic features of the landscape of the contact area. See above on the word for "left side".

[82] Klimov 1994, with references.

As discovered by Laroche, according to the four-language dictionary from Ras Shamra (RŠ quadr. 137 III 4), Hurrian **purame** = Sumerian **ÌR** = Akkadian *ardu* = Ugaritic **(')abdu** means "slave, servant".[83] When Laroche announced his discovery in his talk on "Récentes contributions de Ras Shamra au lexique hourrite"[84], Diakonoff immediately suggested the Hurro-Urartian etymology: Hurrian **pura-me** is equivalent to Urartian **b/pura-** "slave".[85] The former contains a suffix **-me**, cf. **-pĺi** (< *-amaĺi[86]) in **pura-pĺi** "priest = servant of the god" (the stem is interpreted as [*pora-][87]). The latter is semantically close to the Urartian male proper name **ᵐHaldi-pura** (= ᵐᵈHal-di-ÌR[88]) "the slave of the god Haldi", derived from **b/pura-** "slave" (this noun is often used in similar combinations with the name of a god[89]). It has been supposed that the word is cognate with Proto-Eastern Caucasian *bHÅ£i > Lezghian **p·aÛ** "natural child", Tabasaran **baj** "boy, son".[90]

The noun **purammi-** (with double spelling **-mm-** different from later texts and possibly connected to prosodic features, as probably also -**rr**- in **purra**-) is attested in the part of the Hurrian-Hittite bilingual text that deals with its main topic, which is the setting free (**kirenzi**[91]) of slaves or prisoners, including also the god Teshop who is to be set free. The Hurrian sentence **ki-ru-un-na pu-ra-am-mi-ib ki-i-ru(-)nu-ul-mi-ib** is translated by the Hittite **tu-el ÌR**^DÁM **GÉME**^TAM **pa-[ra-a tar-na]** (K Bo XXXII 15 IV 2-3 = III 4) "let your male slave be free, let your female slave be free". The noun **ulmi-** "female slave" discovered in this bilingual text[92] may have the same suffix **-mi** as **pura-m(m)i-** "male slave". With a possible metathetic change and semantic specialization the

[83] Laroche 1980, 205, with references.

[84] 10 August 1960, Moscow, at a morning session of the XXV International Congress of Orientalists.

[85] Diakonoff 1963, 60; 1971, 77.

[86] Laroche 1980, 206.

[87] Cf. Xachikian 1985a, 48, 58.

[88] Diakonoff 1963, 51, 90, 94.

[89] Melikishvili 1960, 362; Gvaxaria 1963, 335; Meshchaninov 1978, 91-93.

[90] On the etymology and on quite different variants of the suggested Northern Caucasian reconstruction, cf. Diakonoff and Starostin 1986, 16; Nikolayev and Starostin 1994, 298-299; the etymology runs the risk of not taking into account the universal spread of such "baby" terms.

[91] Neu 1996, 9-12, with references. Regarding the equivalent Akkadian term *addur*â*rum* it is important to bear in mind the previous discussion of the term in Larsen 1976, 63-75; Hoffner 1998, 180-181.

[92] Neu 1996, 346, 451; see Laroche 1980, 280, on the other occurrences of the word.

root **ul**- may represent the same stem as that of Urartian **lu**-**tu** "woman".[93] It can be supposed that in the same bilingual text the Hurrian stem **pur(r)a**- (without any suffix and with the double spelling -**rr**-) is represented either only in a male proper name that originally might have had the meaning "Slave", or also in a noun with a generalized meaning "the Slave = slaves as a social class". The interpretation of the word as a male proper name is made necessary by the use of the determinative in the beginning of the part concerning Ebla: Hurrian **na**-**ak**-**ki**-**ma** ᵐ**Pur**-**ra**-**an a**-**az**-**zi**-**i**-**ri ta**-**am**-**ra e**-**bi**-**ir**-**na za**-**a**-**zu**-**lu**-**u**-**uĺ**-**te**-**ri** = Hittite **ar**-**ßa**-**ma**-**an tar**-**n[a** ᵐ**Pur**-**ra**-**an**-**pá]t EGIR**-**pa pí**-**ya**-**an[(-t)a**-**an A.NA IX LUGA]L**ᵐᵉĺ **ku**-**iĺ a**-**da**-**a[-an**-**na pí**-**iĺ**-**ki**-**iz**-**z]i** "and set free also Purra (= the Slave or Priest = Servant of the god), the prisoner ('the one who is given back' according to the Hittite version), who has to (or will) give food to nine kings"[94] (K Bo XXXII 19 Vs. I 3-4 = II 2-4). It is possible that the -**n** in **Purra**-**n** is a syntactic connective element (comparable to the copula -**n** in **enda**-**n**) that expresses the link between the proper   name   and   the   following   noun

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[93] For a Northern Eastern Caucasian etymology and the morphological structure of this collective plural, see: Diakonoff and Starostin 1986, 27; Nikolayev and Starostin 1994, 765 (the Northern Eastern Caucasian stem was discovered by Trubetzkoy 1922, etymology 5; 1987, 239; Starostin 1987, 443). The idea of a Northern Caucasian borrowing in the Lydian word for "woman" has often been suggested.
[94] On the translation, see Neu 1996, 396-402; the modal meaning may be suggested as an alternative to the future sense that is supposed by Neu.

related to the participle.[95] The idea that one person is (or will be) feeding nine kings makes it clear that the narration, although associated with the history of Ebla, is to be understood as a mythological one. In a parallel tablet (K Bo XXXII 20 Rs. IV 16-17) the Hurrian passage just cited is repeated. But before it a story of ᵐPurra- in connection to the Eblaitic and other kings is told (cf. the equative form ᵐPurra-nna and Genitive ᵐPurra-wi$_i$: ib., Vs. I 7', 8'). Unfortunately, without the Hittite translation, which is absent or quite fragmentary, it is impossible to understand the plot; still, it seems that Purra appears as an important historical and/or mythological person whose fate is miraculously bound to a stone.[96] If his name is really connected to the noun **purra**-"slave", it can be understood as part of the peculiar structure of the Hurrian-Hittite epic poetic narration, in which the topic of slavery and of the slave/prisoner being set free is discussed via the example of the highest god of the pantheon Teshop or of such an important Slave = prisoner as Purra.

In the other parts of the same Hurrian text the noun **purra**- is used without the determinative of a male personal name, as opposed, for instance, to the name ᵐMe-e-ki, which is always preceded by this cuneiform sign. In the corresponding Hittite text the determinative is used regularly with the Hittite ᵐPurra. Thus the Hurrian noun is not translated but is simply transliterated by the Hittite translator (or a later scribe copying the text), who understood it as a proper name (this is the interpretation followed by modern scholars[97]). Accordingly, just as in the previous cases, it is possible to understand Hurrian **Purra** (as well as the Hittite ᵐPurra that renders it) as a proper name (probably originally meaning "Priest < Slave of the God"). But as shown by Neu, in this part of the story alone, the Hittite translation (which seems to have been written in the Middle Hittite period, much later than the Hurrian text) differs from the Hurrian original. In the latter Purra does not rejoice (**Íi-in-zu-uh-ha-am-ma a-ni-ik-ki Pur-ra-a-bi** "in the second place (= on the other hand) Purra's [heart, mentioned only in the beginning of the whole passage] does not rejoice" [K Bo XXXII 15 I 22'-23']). The Hittite rendering gives the opposite picture: **ta-a-an pé-e-di-ma-kán A.NA ᵐPur-ra a-ap-pa pí-**

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[95] Cf. Speiser 1941, 171-172; Laroche 1980, 174. See above on another view in Girbal 1990.
[96] Neu 1996, 444-445, 461.

an-ti ZI-*ŠU* **an-da du-u**Í**-ki[-iz-]zi** "in the second place Purra, the one who is given back, rejoices in his spirit", ib., II 23'-25'. Whatever reason may have led to this discrepancy[98], it is accompanied by two more differences between the Hurrian original and the Hittite version. In the Hittite text the determinative of a male personal name is inserted before **Purra**. At the same time the epithet **appa piant**- "given back" (already cited in the passage discussed above) is added to this noun. It seems that the Hittite translator experienced difficulty in rendering the Hurrian text. One of the possible reasons might have been the use of the stem **purra** in the ancient meaning "Slave", going back to the primary Hurro-Urartian lexical item. As the Hittite scribe or translator knew only the derived stem **pura(m)me** in this meaning, it was not easy for him to grasp the meaning of the sentence, which may have originally meant "on the other hand the heart of the slave ∕ the prisoner did not rejoice". The Hittite translator or scribe understood **purra** as the same proper name which he had met in another passage. And yet he added a Hittite epithet which hints at the general meaning of the word. Of course our present knowledge of Hurrian is no better than that of the hypothetical scribe. Thus the whole interpretation of this mistranslation remains highly controversial.

In connection to this Hurro-Urartian stem a suggestion can be made concerning a possible Etruscan parallel. It has been discovered that Etruscan names of slaves often contain as their second part the stem -**por(a)**[99] (see a parallel in the Urartian name cited above). Although the Etruscan noun designating "slave" is not yet known,[100] it can be supposed that the stem -**por(a)/pur**- might have been used in this meaning.[101]

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[97] Neu 1996, passim.
[98] On the possible causes, see Neu, ib., 332-335.
[99] De Simone 1970.
[100] Rix 1963; A. I. Nemirovskij 1983, 127-134.
[101] Ivanov 1988, 212; the exact ethnic identity of Roman slaves having names like **Marci-por** = Latinized **Marci-puer** still remains controversial (on their "Thracian" character according to Georgiev, see Poghirc 1983, 57).

A probable connection to Latin **puer** "boy, lad, child, slave, servant" (cf. the typologically similar semantic connection of names for "slave" and "child" in Slavic and other languages) has been discussed on the basis of compound names like **Nae-por/Nei-pur/Naei-purs**.[102] The word **puer**[103] does not have a good Indo-European etymology; it is often included in a group of words probably cognate with Sanskrit **pu-tra-** "son", Oscan **puklum**, Paelignian **puclois** "to the sons", Mars. **pucle[s**, but this material may be derived from a root of onomatopoetic (*Kindersprache*) character which might have been spread universally and cannot be studied by the normal comparative method.[104]

According to Latin grammarians *puer* *et in feminino sensu antiqui dicebant… quod est antiquissimum carmen:* **mea puer***….*[105] Starting with Mommsen this remark was used to explain the expression of sacred language **puer Iouis** "the child (= daughter!) of Juppiter" (Fortuna Primigenia) equivalent to the designation of the same goddess as **Diovo.filea** = *Iouis filiae* in a Praenestine inscription.[106] The expression seems close to such Urartian nominal phrases given above as "slave = servant of the God Haldi". For the first time in Vergil, the Latin noun **puer** appears as a prominent part of the usage in poetic vocabulary[107] comparable to Hurrian-Hittite epic: **puer** is used as a sign of the

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[102] Ernout and Meillet 1994.

[103] II declension stem in short -Ø: **pur-Ø-s** > *****pu‡rs** > **puer**, Ernout 1945, §26; cf. an archaic Vocative **puer-e**, Pl. *Pseud.* 241; *Merc.* 930, *Asin.* 382. If such a segmentation is deceptive, as Brent Vine suggests to me, from a purely descriptive point of view, the word is built with the *-**ro**- suffix. As the latter is non-productive in Latin, in this derivation an argument can be made for the relative antiquity of the term. But if the word had been an old borrowing it might have entered the group of archaic nouns in -**ro**- due to later morphological reanalysis. On the reconstruction *****puH$_2$-ero**- for the Latin word and on the other cognate Italic forms supposed to rely on **put-lo**-, cf. Hajnal 1995, 130-131, n.24.

[104] Cf. the similar case of Yagnobi **pul(l)a**- "child, boy" supposed to be either a result of the development of *****puEra**- or a "baby" word (Xromov 1972, 127-128), the onomatopoetic character of the word's function being stressed in **pulla-mulla** (**pulla-mulla ast?** "has he got children at all?", ib., 93).

[105] OLD s.v. **puer**, 4b.

[106] Ernout 1947, n.14; Dumézil 1966, 68, 411; 1956, 3 essay, 71-98. For the reading **Diovo-filea** (not **fileia**, Ernout et al.) see Wachter 1987, 216.

[107] The use of the word in the language of lyric poetry can be exemplified by some citations from Catullus. A grotesque usage of the word in earlier archaizing poetic style can be seen in *nec sapit pueri instar* "he has not as much sense as the child", Catullus XVII.12, Fordyce 1978, 143. In LXIV.95 the Vocative *sancte puer* "O sacred boy" is used in a prayer–like appeal to Amor (Fordyce, ib., 175; 291). The normal meaning is referred to in the description of the four states/ages of Attis in descending order at LXIII.63: *ego mulier, ego ado*(= *u*)*lescens, ego ephebus, ego puer* "I [am] a woman = castrated, I [was]

main topic, repeated twice at the beginning and twice at the end of his famous *Eclogue* IV (**8, 18, 60, 61**).[108] The theme expressed by Vergil in *Eclogue* IV was probably similar to the Etruscan concept of time.[109] It may be supposed that such elements of Vergil's native Latin vocabulary as **puer** might have been connected to his old Etruscan Mantuan heritage.

This can be discussed in light of the controversial importance of the Etruscan (Mantuan) tradition for the great singer of the legendary prehistory of the tribe.[110] Vergil's own words, which have been interpreted in different ways[111], definitely point to the extraordinary role of the Etruscan constituent in the strength of his native city (possibly uniting several multi-ethnic groups). The passage repeats and stresses the name of the city, arranging its phonemes in a complex anagram (the parts of which are underlined):

> *Ille etiam patriis agmen ciet Ocnus ab oris,*
> *fatidicae Mantus et Tusci filius amnis,*
> *qui muros matrisque dedit tibi, Mantua, nomen,*
> *Mantua diues auis, sed non genus omnibus unum:*
> *gens illi triplex, populi sub gente quaterni,*
> *ipsa caput populis, Tusco de sanguine uires.*

In Mandelbaum's verse translation:

> There, too, another chieftain comes who from
> his native coasts has mustered squadrons: Ocnus,
> the son of prophesying Manto and
> the Tuscan river; Mantua, he gave you
> walls and his mother's name—O Mantua,
> so rich in ancestors and yet not all
> of one race; for you are the capital
> of peoples rising from three races, each
> the rulers of four towns; but you yourself

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an adult, I [was] a young man, I [was] a boy"; cf. XII.9, *puer* as a designation of a young man as also in Hor. *Carm*.I.5.I; on this meaning in an archaic context see also Dumézil 1973, 310-311, n.3.

[108] Cf. Kettemann 1982, 513, see *pueri, Aen*. VI.832, in the similar context of addressing the future.

[109] Sordi 1964; 1989, 20-28, 78-79.

[110] M. L. Gordon 1934; Nardi 1935; Holland 1935; Krause 1937; Enking 1954; Eden 1964-1965; Bloch 1967; 1972; Rawson 1978, 139; Timofeeva 1980, 25-26; Dury-Moyaers and Renard 1981; also Toporov 1993, 78 ff. (with rich bibliographical data). Among the gods mentioned in the *Aeneid* there are several of Etrurian origin, such as Saturn-(ia), Perotti 1990, 17-19.

[111] See particularly Rosenberg 1913, 129-132; Altheim 1950; A. I. Nemirovskij 1978, 143-145; 1983, 106-107; Dumézil 1979, 149-164.

have drawn your chief strength from your Tuscan blood.[112]

Recent archaeological excavations in Bagnolo San Vito near Mantua have confirmed the role of the ancient Etruscan element in the city, which according to a legend had been a center of Etruscan expansion to the north of the Po river.[113] As to the Etruscan origin of the name of the city mentioned in Vergil's lines cited above, it can perhaps be traced back to Etruscan *manEva*.[114]

4. Names for "horse" in Hurrian, Northern Caucasian and Indo-European.

It seems that one of the first important results of the Mozan/Urkesh excavations, at least from the point of view of Indo-European studies, was the discovery of a beautiful sculptural image of a horse head dating from the middle of the third millenium B.C.[115] From much later representations of horses, possibly continuing the same Hurro-Urartian tradition, one may particularly compare a bronze horse head from Karmir-Blur (VIII c. B.C.).[116] Subsequent findings in Mozan/Urkesh have shown a number of horse figurines coming from the storeroom of Tupkish's palace (about 2200 B.C.), some of which represent the domesticated animal.[117] These numerous figurines, which belong to the following period of the history of Urkesh in the last quarter of the III mil. B.C., make it clear that the horse was extremely important in the life of the society. Particularly interesting seem horse figurines showing the harness, thus documenting the use of horses in transportation.[118]

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[112] Mandelbaum 1981, 250.
[113] De Marinis 1986-1987; Moscati 1987, 161, 243.
[114] Pallottino 1980, 247, 373; on **mant(h)**- see A. I. Nemirovskij 1983, 174; cf. also the name of the Etruscan goddess Manturna, Ernout and Meillet 1994. It might be interesting to compare the Urartian toponym **Mantupa** (Diakonoff 1951a, 42 (23); Arutiunian 1985, 135-136; on names in -**ua** in Hurrian, see Laroche 1966, 354, and in Urartian, Meshchaninov 1925, 45), although the identity of geographical names in such distant areas is not easy to prove; cf. also Hurrian personal names and toponyms derived from **mant**-, Laroche 1966, 113, 350-352; 1980, 166.
[115] Buccellati and Kelly-Buccellati 1988, pl. 1.
[116] Piotrovskij 1962a, 341, fig. 44. Arutiunian 1964, 187, fig. 39. Other Urartian horse images: Khodzhash a.o. 1979, fig. 60, 124; Piotrovskij 1962b.
[117] See the descriptions and drawings of the figurines in Hauser 1998.
[118] Hauser, 1998.

These unique signs of the economic and cultural role of the horse in the northern part of the Mesopotamian area on the border of Asia Minor can be compared to the previously discovered much earlier figurines interpreted by some archaeologists as images of the harnessed horse from the Balkanic area in the northwestern part of the Circumpontic zone[119], as well as to similar figurines of horses in the Volga region of the IV mil. B.C.[120] Statuettes and vase drawings of horses and other signs of their importance as well as their bones are found in Mesopotamia (in Hafadzh, near Baghdad), Elam (Susa) and adjoining areas of Iran. [121] But it is generally supposed that the horse penetrated into these more southern areas after its domestication in the northern Eurasian steppes. Chronologically close to the Near Eastern traces of a domesticated horse are bones of horses from Asia Minor of the Bronze Age period.[122] For a comparison with the Mozan/Urkesh discoveries, data on the neighboring Norşun Tepe of a much earlier age[123] as well as on other places in Anatolia seem particularly interesting: Demirci Hüyük[124] and Yarıkkaya, where the horse appears in the second half of the IV mil. B.C. From this point of view it is interesting to compare data pointing to the early spread of horses in the Transcaucasian area, particularly adjacent Armenia (ancient Hajasa and Urartu)[125]; the earliest trace of the horse in Georgia comes from Kvacxelebi in the very beginning of the III mil. B.C.[126]

The domestication of the horse (as well as its earlier use in cultic practice, which is not easily distinguishable from its later domestication on the basis of archaeological traces) is supposed by many scholars to have begun in the IV mil. B.C. (perhaps even earlier in the V mil. or at least at the cusp of the V mil. B.C.). The Caucasian Caspian

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[119] Gheorghiu 1993; 1994 with references. The zoological interpretation of some figurines of quadrupeds (cf. for instance an item from Gavra-VI: fig. 109 in Childe 1950, 215) is not always clear.

[120] Kuz'mina 1996, n.63 (detailed references).

[121] Noettes 1931; Hermes 1936a; 1936b; Potratz 1938; Wiesner 1939; HanÇar 1955; Hänsel and Zimmer 1994.

[122] Bökönyi 1978, 54; Piggott 1979, 10; 1983; Mellaart 1981.

[123] Zarins 1979, 60.

[124] Rauh 1981; cf. Boessneck and Driesch 1976; Bökönyi 1978, 54-55 (discussion of the possibility of domesticated horses).

[125] Mezhlumjan 1965 (with a suggestion for the domesticated character of the horse from the neolithic village of Shengevit); Esajan 1966, 119; 1994; Levine 1990, 731.

[126] Kushnareva and Chubanishvili 1970, 110.

area seems to be connected to the Lower Volga culture, where horse sacrifice and the horse cult are documented at a very early age (starting with the end of the V mil. B.C.).[127] Traces of ancient wild horses and perhaps of early horse-keeping and horse-breeding (and at least horse-hunting) are found in the Volga steppes, making them one of the probable areas for the domestication of the animal in the second part of the IV mil. B.C.[128] From the point of view of a monocentric idea of acculturation of plants and animals, as developed by N. I. Vavilov and his followers, a unique area of domestication seems probable, although it is not easy to establish with precision the differences between the wild horse (perhaps *Equus caballus Missii*) and the domesticated one.[129] The steppe region between Xvalynsk (in the Volga steppes) to the east, Dereivka (on the Middle Dniepr in the North-Pontic region) and perhaps also the Cucuteni-Tripolye culture to the west have been considered as a possible area of horse domestication as well as a homeland of the Indo-Europeans, whose spread has as a possibility been connected with the use of horses.[130] In Dereivka many horse bones have been found (probably showing, as M. Levine has recently suggested, that this was the favorite food of the population and a main object of hunting). The supposition of bit microwear on the premolar teeth of a stallion from Dereivka[131] has become a *Paradebeispiel* of a trace of early domestication. It is suggested that early horseback riding originated in the same area, leading to enormous changes in the means of transportation.[132] Still the evidence seems scanty. In Dereivka a change in the teeth was found in one stallion, but comparable results are reported in only 10% of horse

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[127] Vasiljev and Siniuk 1985; Gamkrelidze and Ivanov 1984/1995, I, 476; Kuz'mina 1996, 82-83 with references.

[128] Bibikova 1967; 1969.

[129] Cf. Bogoljubskij 1979; Bökönyi 1974; 1978; 1980; Matolczi 1973; Uerpmann 1995; Adams, Mallory, and Miller 1997.

[130] Anthony 1986; 1991, 209-213, fig.1-3; 1994; 1995. For details of the Dereivka findings, see Telegin 1986. For a critical appraisal, see Häusler 1994; Uerpmann 1990; 1995; Levine 1990; Mallory 1981.

[131] Anthony and Brown 1991a; Anthony 1991, 204. But the direct non-calibrated radiocarbon dating of the skull of this stallion gives 2950 ± 100 B.C. (Telegin 1995, 11), which does not correspond to the other chronological hypotheses concerning Dereivka (Mallory 1997a; Adams, Mallory, and Miller 1997, 275-276).

[132] Sherratt 1983; Sherratt and Sherratt 1988; Anthony and Brown 1991b; Anthony 1994; 1995 (with maps and tables).

premolars from Northern Kazakhstan in the second half of the IV mil. B.C.[133] A question of a general character needs to be solved in connection with these findings. Specialists in hippology insist on the necessity of a friendly attitude towards the horse, seeing in it a necessary prerequisite to successful domestication and safe riding.[134] Is it possible that the early stages of domestication of the horse were dominated by the opposite cruel attitude (probably simply due to lack of experience)? If not, then the damaged teeth point to the cultic use of the horse, which might have been severely bitted before a sacrifice.

Early data on the spread of horses have been found to the west of the Black Sea on the Balkans as well.[135] Moreover, it seems possible that not only the whole Pontic-Caspian area but the neighboring parts of the Southern Urals, Kazakhstan and Western Siberian[136] regions as well may have been important for the early use of the horse as a preferred object of hunting and the main cultic animal, later leading to its domestication.

It is hardly possible that only one linguistic group participated in this achievement. Some types of domesticated animals were borrowed with their names[137] (thus the spread of the Eastern Asian name, like Sino-Tibetan *mrâH/mrâM, can be explained). No matter where and when exactly (in the IV-III millenia B.C.) the horse had been

[133] Anthony 1995. On the basis of experimental studies it has been suggested that the stallion was bitted over a period of no less than 350 hours of riding (Anthony ib., 559) (for the interpretation using methods of experimental archaeology, see Spruytte 1977; Antony ib.).

[134] Starke 1995, passim.

[135] Semenov 1974, 294; Bökönyi 1974; 1978; Gheorghiu 1993; 1994; Häusler 1994. On the other parts of Europe, see Uerpmann 1990; Benecke 1994; Østmo 1997, 288 (with bibliography).

[136] Levine 1990. It seems possible that the domestication of an Eastern Asiatic type of wild horse has been reflected in the name widely spread in Sino-Tibetan languages (*mrâH/mrâM) and borrowed into the other languages of Eastern and Southern Asia (Polivanov 1928, 52-54; 1968, 123, 337-338; Gamkrelidze and Ivanov 1984/1995, I, 471, 832; Peiros and Starostin 1996, 35-36 (N 126)); on Nahali mav "horse" and Dravidian terms (Tamil mâ "horse" a.o.), cf. Burrow and Emenau 1986, 425, N 4780; on the words of Indo-European languages possibly connected to this term, see below. The problem of the precursors of the later Petrovka and Arkaim-Sintashta metallurgical city culture of the II mil. B.C. seems particularly interesting, for which Iranian parallels have been suggested (Zdanovich 1988; 1989; Kuz'mina 1997, 87-88 (bibliography)). According to the typology established by Childe, metallurgy is needed for work on chariots.

[137] Thus the Indo-European homeland need not be identical to the area of horse domestication, but should be connected to it. The ways in which names and technical knowledge (particularly of training devices, Starke 1995) spread should be explored.

domesticated in this large area, according to HanÇar's work and some recent studies[138] it is only with the beginning of the II mil. B.C. that we find direct evidence of its military use to draw chariots in the Ancient Near East; to the same period belonged the looped rods which had earlier been identified as bridle-bit cheekpieces.[139] Before that period the proto-chariots (without yokes, poles and spokes) were drawn by oxen[140] (indications about these older devices are also found in the descriptions of battles in archaic Hurrian mythological poetic texts, particularly in the Song of Ullikummi from the God Kumarbi Cycle).

The Hurrian data found by the Mozan/Urkesh excavations are quite exceptional from this point of view. Here for the first time the use of horses in a palace economy and everyday life is documented in the last part of the III mil. B.C. (also in connection with the more advanced type of chariots[141]). In the beginning of the next millenium the role of horses as well as of special officials (***RABI SÍ. SÉ. E***) who were in charge of them is known through Old Assyrian tablets from Asia Minor.[142] An archaic Hittite poem (originally composed in the old capital of Nesa = Kanish) mentioning the god Pirwa belongs to approximately the same period (known through a copy from a later period). In Hittite texts the god is described as being connected to the horse[143], and his name can be traced back to an Indo-European one.[144] Theophoric names containing this element are well represented in Old Assyrian tablets. The military function of chariots drawn by

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[138] HanÇar 1955; cf. Bosch-Gimpera 1961, 71. For the same view, see Levine 1990; Trifonov 1987, 26, n.28.

[139] Trifonov 1994, 358; detailed literature in Kuz'mina 1996, 84, 79-81 (arguments against the early spread of horseback-riding, which still do not seem to contradict the assumption of primitive horseback-riding as a possible initial step of domestication).

[140] On Littauer's point of view, see Anthony 1995.

[141] Häuser 1998.

[142] Kammenhuber 1961, 13 with references. On the meaning of this Old Assyrian term (probably "an official in charge of charioteers"?) cf. Starke 1995, 121, n.244; Jankovskaja (1968, 38 and 220) suggested the meaning "chief of stall-keepers".

[143] Kammenhuber 1961, 36, n.142; Otten 1952-1953; Haas 1994, 412-425, 499, 782 a.o. (with bibliography). In later Hittite texts, besides a sacred horse, Erama, a deified horse (written logographically ᴰANŠE.KUR.RA "the God-Horse", K Bo XX 245 I 5'), in the (H)iĺuwa festival is mentioned (Haas 1994, 417, 856, n. 32). But the name of the god is missing here as well as in many places where the horse deity is meant; see the chapter on horse deities and horse cults in the recent handbook by Haas (1994, 412-428).

[144] Gamkrelidze and Ivanov 1984/1995, 695-696.

horses is first attested in the Old Hittite inscription of king Anitta.[145] The outstanding role of the horse as a primary domestic animal and terms connected to its training are well documented in the old version of the Hittite laws.[146] Although it is not clear to what extent Hurrian cultural influence could be found at this early stage in Asia Minor, in the next period horse-training in the Hittite Empire was apparently at least in part influenced by the Hurrian-Aryan Mesopotamian tradition of Mitanni. The Hittite hippological texts of this time are composed by Mitannians using Mesopotamian Aryan and Hurrian (also Luwian) technical terms.[147] In the light of the Mozan/Urkesh discoveries it seems possible that this Mitannian tradition was not determined only by Aryan influence but might also to some extent continue older Hurrian customs, since the Urkesh period precedes this Hurrian-Aryan symbiosis of the second millenium B.C. However, linguistic data suggest earlier contact between Hurrian (and/or possibly Northern-Caucasian) and Indo-European in this particular branch of activity.

The Hurrian name for "horse" is of utmost importance for this problem as well as for the whole question of Indo-European origins and migrations insofar as it is related to the domestication and use of horses.[148] The name was deduced by Otten from a fragmentary Hurrian-Luwian-Hittite bilingual text belonging to the hippological cycle. After a short Hittite introduction a Hurrian passage mentioning horses (*iĺ-ĺi-ya-na-a-ĺa*) is introduced, followed by a Hittite translation of a corresponding Luwian fragment

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[145] HroznY 1929; Neu 1974; Starke 1995, 121, 124, n.244.

[146] Gamkrelidze and Ivanov, ib.; Starke 1995, 125. The specific character of sexual laws concerning horses (cf. Puhvel 1987, 167) may not be only a trace of ancient ritual customs but may also point to a symbiosis possibly characteristic of an early stage of primitive domestication of horses (see below on the Indo-European verb with the meaning "to rape, to domesticate"); cf. also the role of the ass, a sexual object as seen in the old Hittite Zalpa story and reconstructed by Freidenberg for different ancient cultures (cf. Ivanov 1997, xii).

[147] Kammenhuber 1961. On the relationship between native Hittite, Luwian, Hurrian and Aryan traditions in connection to hippology, see Starke 1995. The habit of praising good Urartian trainers of horses is still evident in the remark in Sargon II's tablet about an area of Urartu (Subi) famous for just this ability of its inhabitants, Diakonoff 1951, 167; cf . Arutiunian 1964.

[148] Hänsel and Zimmer 1994.

where horses are designated by a Sumerian logogram (KUB XXIX 44 + 48 + 55 + K Bo VIII 50 = CTH 285, 1 Vs. I[149]):

4   *I.NA É* [LÚ.MEŠ]*IŠ* (= iÍ- for iÍmeriyaÍ?[150]) **-kán an-da-an** [...]

5   **Íi-pa-an-taß-ßi nu** [D]**Pí-ri-i[n-ka]r** [[D]*IŠTAR*]

6   **ßal-zi-iß-ßi nu ßur-li-l[i ki-iÍ-Ía-an]**

7   *iÍ-Íi-ya-na-a-Ía* **pa-a-a[ß-ri-e-e?**[151]**]**

8   [D]**Pí-ri-in-kar** [D]*IŠT[AR*

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9   **lu-ú-i-li-ma-at ki-i[Í-Ía-an]**

10 *A.NA* **ANŠE.KUR.RA**[HI.A] **an-da aÍ-Í[u-li]**

11 **ar-du-ma-at**

In the house of the coachmen [...?[152]*] = in the stable*[153] *I am delivering a prayer accompanied by sacrifices. And I am addressing Pir[inka]r (and) [(Hurrian) Ishtar (= Shaushka)]. And I am [speaking in] Hurrian [in the following way]: "Pirinkar (and) (Hurrian) Isht[ar] (= Shaushka)! [make] the horses prosp[erous!]" And in Luwian I [am speaking] in the follow[ing way]: "for the prosperi[ty] of the horses apply yourselves!"*

   The interpretation of the divine name **Pirinkir** (which is also connected to horses and to the stable in the festival CTH 644[154] and is considered to be a *Pferdegottheit*[155])

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[149] Otten 1953b , 13; 1953a, 24-29; Rosenkranz 1952, 3-4; Kammenhuber 1961, 150-151; Starke 1985, 370-371. The text presents a later copy of the original dating from around the XIV century B.C. On the interrelationship of Hurrian and Luwian elements with respect to this text, see Starke 1995, 123 and n.252.

[150] According to a suggestion by Rüster and Neu 1989, 162, the cuneiform sign for [LÚ]**IŠ** "charioteer, coachman" probably stands for the first syllable iÍ of a Hittite metonymic Genitive [LÚ]iÍmeriyaÍ "man of the bridle, a palace official" (on the meaning and suggested Indo-European etymologies, see Puhvel 1984, 429; Gamkrelidze and Ivanov 1984/1995, 626; Melchert 1994, 155).

[151] A damaged continuation of the Hurrian stem [**fahr**-] "good" should contain one of its derivatives, cf. for those forms which appear in the texts: Laroche 1980, 292-293; Neu 1996, 66, 252, 434.

[152] A lacuna may be absent, Kammenhuber, ib.

[153] Cf. Urartian **É** (?)**Íur-i[Í](?)-hi** for which the meaning "house belonging to Íur-i" = "stable" has been suggested, Melikishvili 1960, 206 (with references), a Karmir-Blur inscription on the harness N 118a. The unclear character of the form and meaning of the Urartian word makes any comparison to Proto-Northern Caucasian *[ʔ]**xwi̥r̂î** "bridle" too tenuous.

[154] The horses seem to be the central symbol of the festival: KUB XXIX 56 + K Bo VIII 54; 83 + K Bo X 44 + K Bo XXXIV 172 + V Bo T 128 + KUB LI 14 + KUB LIV 43, cf. Kammenhuber, ib., 40-41, n.4; Haas 1994, 416, n.36.

[155] Haas 1994, 415-416.

was given by Laroche[156] on the basis of the lexical equivalencies in a Meskene ⁄ Emar list An:

N 185 **NIN.SI$_4$.AN.NA** = ^{D}**Wi-re-en-gi-ru-un**

N 205 **U$_4$.UG** = ^{D}**Bi-re-en-gi-ru-un**

N 206 **U$_4$.UG.URU.KI** = ^{D}**Bé-re-en-gi-ru-un ar-ta/du-ma-an-zi**

Thus the goddess **P/Wirinka/ir**- *[**Firinki/ar**] **arta(/du)manzi** ("of the city") who appears in Hurrian Boğazk_y texts in the sequence **allai** ^{D}**Pirinkir** "the lady [,] Pirinkir" (KUB XXXIV 102 II 12) was identified with the Mespotamian "(Great) Lion(ess)" (one of the images of Mesopotamian Ishtar-Inanna[157]) and with the Babylonian goddess Ninsianna, who was considered to be the planet Venus and was also quite similar to Ishtar or one of her *avatars*.[158] The image of a shining astral body explains why in the Boğazk_y texts the goddess Piringar is a solar disc (KUB XXIX 71 I 13). She appears (as in the passage just cited) as belonging to the group related to Ishtar (Hurrian Shaushka, designated by the Mesopotamian logogram for Ishtar). Both deities are bisexual in Mesopotamia (in one Old Babylonian letter[159]) as well as in Asia

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[156] Laroche 1980, 201 and 54; 1989, 10 (spelling Wirengirun), N 206 corresponds to ^{D}*ÛM* ^{D}*ĀLI*^{KI}, ^{D}**UD.UG** = *ÛMU*, cf. important comments in Güterbock 1982, 35; Haas 1994, 415, n.32 (all the references in these publications are to the quotations from the list in Laroche).
[157] See Fauth 1981; Wolkstein 1983, 84-85. On the images of lions in connection with Ishtar see also Trifonov 1987, 23 with further references.
[158] Langdon 1926, 18, n.1, 26, n.4, 28, n.4, 30, line 16, 42 with references.
[159] Güterbock, ib., with further references; on Hurrian Ishtar, cf. Archi 1977, 299 ff.; Wegner 1981; Beckman 1983, 222-223.

Minor: in Yazılıkaya Pirinkir belongs to a group of male gods according to Laroche and Güterbock (n.31).[160] In her female form she may be harmful[161] (related to sorcery and to the "curse"—Hittite ßurtiyaÍ, K Bo XXI 41 + Ro 69) and is connected to the temple of the Black Goddess.[162] Her identification with a lion(ess) seen from the Meskene lists cited above was used by Laroche to explain the origin of her name. He suggested a phonetic change **PIRIG.GAL** > Hurrian **Piringir**[163]; Haas links the name to the highest goddess of the Elamite pantheon of the III mil. B.C. (known also in Neo-Elamite inscriptions) **Pinikir**.[164]

As suggested by Laroche, the temple that had been built by Tish-atal was dedicated to the deity **PIRIG.GAL**, the Hurrian interpretation of which is given by the list from Meskene/Emar. His inscription cited above after introducing his title says according to Laroche's reading: **pu-ur-li ᴰPIRIG.GAL pá-'à-àÍ-tum** "he built a house = temple of the god(ess) Great Lion(ess)"[165], where the interpretation of the last verbal form as a transitive perfect (< participle) is confirmed by the equivalence Hurrian **pa-aÍ-tu-u-um** =

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[160] Güterbock 1982, 35, fig. A and C.

[161] Cf. Langdon 1926, 26, line 16.

[162] Kronasser 1963, 241 ; Haas 1982, 180; Beckman 1983, 169, 182, 187-188.

[163] On the synchronic identity of the Sumerian logogram and the Hurrian name of the deity, see Laroche 1980, 201; that identification was also accepted by Güterbock, ib. On variants of the name, see Haas and Wilhelm 1974, 179. For Laroche's diachronic explanation of the origin of the Hurrian name as a reshaping of the Sumerian one, the only possible difficulty consists of the final part of the word following the name of the lion(ess). Perhaps one may also think about a possible morphological adaptation, see the type of Hurrian names like **Fazanigar**, Neu 1996, 364, cf. also **Pizikarra** (ib., 592: index s.v.) reminiscent of **Piringar** (*ꜰiriͫa/ir** may be an interpretation in the old Hurrian period, cf. the variants **Pi-ri-ki-ir/Pi-ri-kir**).

[164] Haas 1994, 415 (with references). For a plausible semantic comparison to the Hurrian-Hittite **Pirinkar** the connection to the sky is important, cf. in a Neo-Elamite inscription: ᴰ**Pi-ni-gir ki-ik-ki gi-li-ir-ra** "the goddess Pinigir who governs this sky", König 1965-77, 71 A+B; Grillot-Susini and Roche 1987, 62. Having in mind the possible Elamite-Dravidian relationship (cf. Diakonoff 1967, 108-112; Macalpin 1981) one may also cite Tamil **piṟaṅkal** "greatness, height" from the root of **peṟṟam** "greatness", Burrow and Emenau 1986, 392, N 4425. But there are other possible etymologies for the Hurrian name of this goddess. As another plausible interpretation one might have considered a combination of **Pirig** with **Na-gar** mentioned in the following part of the same inscription of Tish-atal (see Wilhelm 1998): **Pirig** + **Nagar** > **Piringar**?

[165] Cf. Parrot and Nougayrol 1948, 14; Diakonoff 1967, 444; Xachikian 1985a, 90; Nozadze 1978, 28, n.44; before the Meskene/Emar discoveries (Laroche ib.) all the scholars followed the Hurrian reading of the divine name as **Ner(i)gal** as Haas 1994, 542 (on the same name in the Araphe region, see ib., 544)

Hittite **ú-e-te-et** "he (has) built it" in the bilingual text K Bo XXXII 15 Rs. 35-40, 48-49 = 41-47, 50-52.[166]

The main objection that has led many scholars to accept the reading **Nergal** instead of **PIRIG.GAL** concerns the geographical and temporal differences in the attestation of the name (see Wilhelm 1998). But there is still the possibility that a very long Hurrian tradition was connected to it.

In light of the recent Urkesh excavations and Meskene lists, it can be suggested that the role of horses and their images near the temple (according to Laroche's hypothesis) of the Great Lion(ess) in Urkesh might have been connected to the beginning of this old tradition still continued in the Hurrian hippological rite of the XIV c. B.C. cited above. Such characteristic symbols as the image of a reclining lion on the seal of Tupkish, the Hurrian king of Urkesh[167], as well as of the image of a star on the seal of the Urkesh queen may be connected to the iconography of Mesopotamian Inanna-Ishtar of approximately the same period.[168] The bronze lions of Tish-atal, in connection to which the inscriptions of the king were written, seem to represent the lion(ess) image of the goddess. As for the Hurrian goddess Shaushka designated by the logogram of Akkadian Ishtar, there are many indications of the ancient connection of this Mesopotamian and Anatolian goddess to the horse.[169] From typological studies of militant goddesses of the type of Hurrian Shaushka, some of whom have a lion-like image[170], it is known that one original cult may be split into several deities at late stages of the development of the mythology.[171] The Great Lioness was originally only one of the avatars of Ishtar. Thus for the Urkesh period it is probable that the Hurrian reading of logographic **PIRIG.GAL** (if one accepts Laroche's interpretation) might have been *Š**au**́**ka** which was at the same time *Firi**Mar**. But more than half a millenium later the

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still does although he cites Laroche's findings. See also remarks against the reading **PIRIG.GAL** in Wilhelm 1998 where the reading **Nergal** is likewise accepted.

[166] Neu 183-185. On the structure of the sentence cf. also Wilhelm 1998.

[167] Buccellati and Kelly-Buccellati 1996.

[168] See for instance, Williams-Forte 1983, 189, fig. 52; 92, fig. 92; 195, fig. 100; 196, fig. 102.

[169] Leclant 1960; Cornil and Lebrun 1972, 13-14; Haas 1994, 414-415; Levi 1951.

[170] Diakonoff 1990, 100, 145, 158, 159, 170, 215 a.o.

[171] Ib., 229, n.129; Goetze 1974, 132-134, Laroche 1980, 321, on the number of avatars of Ishtar; on the previous literature on Ishtar the Destroyer, cf. Ivanov 1997, xiii-xv, n.3.

Hittite translation uses the verbal form of the Second Person Plural while addressing both Pirinkar and Ishtar = Shaushka; they have become two separate deities retaining the link to horses.[172] It is possible that the latter may be explained by the military usage of horses important for the militant goddess. Since in the time of the Hittite Empire Shaushka protected mainly or only the members of the ruling Hurrian dynasty[173], it might be interesting that Hattushili III in his biography while praising the protective force of Hurrian Ishtar begins his career as "a man of the bridle". Both this official position of his as a young prince and his lifelong obedience to Ishtar may reflect the ancient Hurrian tradition.

The Hurrian Dative Plural form **iÍÍiyanaÍa** "to the horses" in the ritual text quoted above contains a postposed (suffixed) definite article and a morph of the Plural. The stem **iÍÍiy-** "horse" has an initial vowel **i**-. Most of the other cases in the Boğazköy texts have an initial vowel **e**- written with *Pleneschreibung*: the Ergative Singular with a suffixed article **e-eÍ-Íe-e-ne-e-eÍ** "by the horse (as an active agent)" (K Bo XI 19 Vo 17); an Absolutive Singular **e-eÍ-Íe-ni-e-** (+ the associative-enclitic **ma**, K Bo XXI 18 10); a Comitative (**e**)-**eÍ-Íi-ra** in a list of weapons and other military objects (K Bo XV 1 IV 23, 37). Thus the main Hurrian shape of the stem may be **eÍ-Íi**- [**eÍ-ÍP**]; the corresponding Urartian noun is always hidden under logographic writing or its Akkadian complement as in **ANŠE. KUR.RA**^MEŠ-**Ú**-**Ú** "horses" (= **SISÛ**^MEŠ).[174] Since the meaning of the Hurrian word was discovered, it has been supposed that it was an old borrowing from an Indo-European satPm dialect.[175] Although this still remains a possibility, the situation now seems more complicated and the importance of this word more evident.

First of all it was supposed that the Hurrian name for the horse might be related to the Northern Caucasian one reconstructed as *ħɪ[**n**]ÇwÈ on the basis of Lezghi *ˀɪn**Í**ʷ >

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[172] Still in describing the ritual for the goddess, Laroche (1971, 126-127 [CTH N 718 with references]) spoke of one deity "Ishtar-Pirinkir"; in the recent computerized version of CTH by B. J. Collins (http://www.asor.org/HITTITE/CTHHP.html) a neutral spelling **ISHTAR pirinkir** was accepted.
[173] Laroche 1966, 293.
[174] The context is not clear: Melikishvili 1960, 158-159.

Lezghi Íiw "steed", Archi **noIÍ** "horse" (with a probable metathetic initial **n*- and an original weak **-Íʷ* seen in the Ergative form **niIÍ-i**); Avar-Andi **ʔiÇʷa* "horse, mare" > Avar **Çu** "horse", Andi **iÇa** "mare", Akhvakh, Tindi and Karata **iÇʷa** "mare"; Lak **Çʷu** "horse", Khinalug **pÍi** "horse"; North-Western Caucasian **ÇʷP* > Abkhaz **a-ÇP** "horse", Adygh **ÍP** "horse".[176] To accept this Northern Caucasian etymology of the Hurrian word one must suppose that the nasal phoneme had been dropped at an early stage (as in most Northern Caucasian dialects, which makes its reconstruction controversial), since the group **-nd*- would have been expected otherwise (see above, section 1 of the present article).

If the Hurrian form is traced back to this Northern Caucasian prototype its relationship to Indo-European can be seen in light of the general problem of the terms of cattle-breeding, agriculture and related semantic fields shared by these linguistic families. In a special work on this subject Starostin suggested that all these terms were borrowed from Proto-Northern Caucasian (or from a dialect of it) into Proto-Indo-European in the beginning of the V mil. B.C.[177], perhaps in the area of the Near East to the South of the Transcaucasus[178]; thus the term "Northern Caucasian" has only a traditional conventional meaning since the protolanguage of the family was spoken

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[175] Otten 1953a, 25; Dzhaukian 1967, 52, 181, n.61.

[176] Nikolayev and Starostin 1994, 520; Diakonoff and Starostin 1986, 34; 1988, 179, etymology 67; Trubetzkoy 1930, 277, etymology 50; Starostin 1987, 458. BlaÛek 1992, 10, also suggests a link between the Indo-European and North Caucasian word with the Yenisseyan **kuʔs* "horse" (understood by him as a second part of a compound), but see its explanation as a borrowing from a **centum** Indo-European dialect: in Gamkrelidze and Ivanov 1984/1995, 832, n.2, and another North Caucasian etymology: Starostin 1995b, 240. The ancient Northern Central Asian area of the homeland of Proto-Yenisseyan (as seen through hydronyms) seems to lie near the region of the early domestication of horses.

[177] Starostin 1988, 153-154.

[178] Starostin 1985, 89.

in this Southern area. Among the forms discussed in this way Starostin also enumerates the Northern Caucasian and Indo-European terms for the horse.[179] There are several questions that should be discussed in connection with this particular group of words.

First, the borrowing of the name for horse (as for many other domestic animals) should be motivated by its domestication. Although distinguishing between the names for wild and domesticated horses is indeed not easy[180], the fact of borrowing still points in this very direction and helps connect linguistic and archaeological data. There is no reason to borrow a name for a wild horse. But immediately after its domestication the name is borrowed together with the necessary technical knowledge. Archaeological data make it possible in the III mil. B.C., less probable in the IV mil. B.C., but no earlier (see the references above). In linguistic terms this means that the borrowing might have come through the dialects of the protolanguages which should have been dispersed by that time. But in that case Starostin's main argument for the direction of borrowing (from Northern Caucasian into Indo-European and not the other way) loses its force, since it applies to the bulk of the oldest borrowings and not to one isolated loanword. For all of them Starostin notes the absence of a special subsystem of simpler phonological rules in Northern Caucasian.[181] No matter how valid this reason for the bulk of the borrowings might be, it does not seem relevant for a name for horse if it were borrowed much later. In this case one should take into consideration the phonetic correspondences. The fricative ÍÍ [š] in the Hurrian name for horse and a corresponding affricate *Ç (> Í) in the forms of the other Northern Caucasian dialects correspond to a Proto-Indo-European palatal stop *k̂ which became an affricate *Ç and then a fricative Í/s in Indo-European dialects of the satƏm type. The same correspondence is seen in the other borrowings discussed by Starostin.[182] If he is right and there was a system of regular correspondences in an ancient period, it might be that a Northern Caucasian affricate absent in Proto-Indo-European might have been

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[179] Starostin 1985, 77, etymology 13; 1988, 114-115, etymology 2.
[180] Hamp 1990; Mallory 1996, 9.
[181] Starostin 1988, 153.
[182] Starostin 1985, 92, n.28; 1988, 145-148.

reinterpreted as an old palatal. But for a later dialect of the satPm type which should have existed in the III mil. B.C. (and possibly even earlier), one may think in terms of borrowing forms with affricates and/or fricatives from one dialect into another or from a third language having a similar system of affricates and/or fricatives (see below on Semitic); as an example one may cite the word for "left side" discussed in the first section of the present article. In that case the direction of borrowing can only be from a Proto-Indo-European dialect of the satPm type into a Northern Caucasian dialect, since otherwise the existence of a parallel Proto-Indo-European **centum**-dialectal form would have remained mysterious. As to the latter, if such a dialect (of the **centum** type) were in contact with a language having affricates and fricatives, a system of equivalences like the one suggested by Starostin might have been created (at some later stage of history as well). Such synchronic equivalencies, created in a situation of bilingual contact, are artificial from the point of view of diachronic "natural" phonetics describing usual processes inside a single language. Historical development means a choice between several existing options, each of which obeys typologically valid laws. From the point of view of such general typology the phonetic development of a palatal or palatalized velar stop to an affricate and fricative is a normal one; but the reverse movement from an affricate of the dental type to a velar stop seems quite extraordinary, although to bilingual speakers the equivalency of these phonemes may be obvious.

In connection with the Indo-European name for the horse the idea of borrowing has often been suggested because of the phonological difficulties in comparing the dialects.[183] In fact, two quite different, if not completely incompatible forms can be reconstructed for Indo-European:

1. The form $^*(\textbf{H}_1)\textbf{é}\textbf{k}\textbf{wo}$-, with an initial vowel $^*\textbf{e}$ and an original palatal stop $^*\textbf{k}$ + $\textbf{w}$[184], existed before the change of palatals in the **satPm** area and is common to all the

[183] E.g., Lehmann 1986, 15; 1993, 247.
[184] Hamp 1990; Meid 1994; Adams, Mallory, and Miller 1997, 274; on the reconstruction of the accent on the initial syllable, see Lubotsky 1988, 93-94. On the basis of laryngealists' general avoidance of initial vowels a laryngeal ($\textbf{H}_1$) is reconstructed in the beginning of the word (e.g. Lubotsky, ib.; Hamp, ib.; BlaÛek 1992, 10; Watkins 1995, 12; Andersen 1996, 148). Probably this may run contrary to the real history of the term if it appeared after the loss of laryngeals at least in some dialects.

dialects including Luwian (the Hittite, Armenian, Albanian and Slavic data are not clear) with the exception of Greek. For Proto-Indo-European and for the earliest periods of the history of its dialects, the original stage before the split into **centum** and **satPm** groups might be reconstructed as palatalized stops.[185]

1a. **satPm** dialects:

I. Eastern Indo-European. Indo-Iranian (Aryan).

A. Mesopotamian Aryan -**aÍwa**- in composite proper names: **Bi-ri-ya-aÍ-Íu-wa** in Alalah (= **PiriyaÍba** in the Elamite/Iranian rendering of the name, *prîyá + a wa-), **Bi-ri-da-aÍ-Íu-wa** = ***Pritá-a wá**- in Yanuamma (perhaps the combination goes back to Proto-Aryan: it has been compared to Vedic **prî-ˆâ + a vân, prîˆâtâ vân** "(you) show your love for horses!" (*¶g-Veda* X.101.7), which in its turn had been identified with the Avestan compound proper name **Frîn-âspa**- "whom the horses like"[186]); probably also **aÍÍu**- (as the second part of a hybrid Hurrian-Aryan compound with a Hurrian postfixed article **aÍÍu-Ía-nni** "horse-master", the second element of the suggested compound still remaining unclear[187]).

B. Indo-Aryan: Old Indian á va- "horse", á vâ- "mare"[188], Marâthî **âsupâthî** "on horseback"; Dardic: Kalasha **haÍ**, Gilgitî dialect of Shina **ÅspË**, Kohistânî dialect of Shina **ÅÍp**, Gurêsî dialect of Shina **ÅÍap**, Palêsî dialect of Shina á**Ípô** "horse, mare", Brokpâ dialect of Shina **apÍ**.

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[185] On Old Indian, Nuristani and Indo-Iranian, see Morgenstierne 1945; Ivanov 1958; Thumb-Hauschild 1958, 203, 283-285 with references.

[186] Bartholomae 1979, 1025-1026; Mayrhofer 1979, 65-66; 1982, 80; Gindin 1993, 161-163 with further bibliography. Another explanation may be based on a possible comparison with Old Indian **B‡had-a va**- "Big Horse".

[187] Bailey 1957; Mayrhofer 1959, 6-14; 1966; 1974; 1982, 75-76; Kammenhuber 1961, 19, n.73; see below on an attempt to deduce the word from Luwian. On its borrowing into Akkadian and later history in this language, see Ebeling 1951, 11, n.5.

[188] The derivative with feminine suffix *-**H** preserves the accentual scheme of the barytone primary noun, Lubotsky 1988, 102.

C. Nuristani Kati **w/vuĺúp/(v)úĺup** "horse" (Direct Case); **vúĺ (u)p-a** (Indirect Case, Masculine Gender), **uĺp-á-sti** (Possessive Singular); **vuĺp-o** (Plural), **vúĺp-o-ĺti** (Possessive Plural).[189]

D. Iranian: <u>Avestan</u> **aspa-** "horse", **aspâ-** "mare", **asp(a)ya-** "belonging to horses, equine"[190] (from Proto-Aryan: Old Indian **a v-[i]ya**), **aspô.stâna-** "horse-stable" (from Proto-Aryan: Old Indian **a va-sthâna-**, Dardic Shina **aĺtôn** "groom" > Burushaski loanword **ĺtân**[191]), in compound proper names like that of the father of Zarathustra **Pouruĺaspa-** (from **pouruĺa** "grey" + **aspa-**).

<u>North-Western Iranian</u>: Midian ***aspa-** (in a Midian borrowing in the Old Persian proper name **Aspa-Çanah**[192], the Midian name of an Old Persian king **Viĺtaspa**[193]); a probable northwestern form of Midian type is reflected in Modern Persian and Tadzhik **asp** (borrowed into many other dialects).

Beludzhi **(h)asp**, Kurmandji dialect of Kurd **h'Psp-**[194]; Talysh and Gilyan **asp/asb**; Mazendran, Sangisari, Lasgerdi, Shemerzadi, Yarandi and Farizandi **asb,** Semnani and Nayini **äsp**, Surkhei **ȧsb**, **ȧsm**, Bijabuneki and Vonishuni **asp**, Keshei and Zefrei **asm**, Yazdi **asb/âsp**, Natanzi **asm/asb**, Soi **äs** (with loss of the final *-**p** preserved in intervocalic position in comparable forms), Xunsari **äsb**, Parachi **ösp**[195], Kaniguram

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[189] Turner 1989, 40, N 920; on the use of the forms of the Kati noun, see Griunberg 1980, 42-43, text II, blocks 4-7 (description of Nuristani ritual horseraces in this and subsequent Kati ethnographic narrations are important for comparison to other Indo-Iranian and Indo-European traditions, including Hittite); 49, text V, blocks 4-5; 60-61; text VIII, blocks 1, 4-6; 115, text XV, blocks 3-4; 154-155, sentences 138-139, 141-145; 175-176; 186; 198; 203; 258; 267. The Dardic and Nuristani sound shapes for horse names are possibly due to the later spread of the Northwestern Iranian type of the word, but see below on the initial phoneme.

[190] Bartholomae 1979, 217.

[191] Turner 1989, 41. On Avestan, see Bartholomae, ib., 219.

[192] Bartholomae 1979, 217; Efimov 1986, 80.

[193] Modern Persian **Guĺtâsp**, Bartholomae, ib., 1473-1474; Milewski 1969, 171-172.

[194] **hespê**, Rudenko 1982, 78, N 56.1 a.o.; Kurdoev and Cukerman 1950, 34, lines 169, 176; 50, 21 a.o.

[195] For these dialectal forms, cf. Oranskij 1979, 156-157.

dialect of Ormuri **yâspa** "mare", barytone feminine stem from which the secondary masculine stems **yâsp** and Logar dialect **yȧsp** were derived[196]).

Eastern Iranian : <u>North-Eastern</u>. Scythian Ασπα- "horse" (developing into Ossetic **aefsae/jaefs** "mare"[197]) in proper names like Ασπουργος < ***aspa**- + **ugra**- "strong" (the combination can be traced back to Proto-Aryan: Vedic **a vam… ugram** "miraculously strong horse" about the horse of Ashvins, *¶g-Veda* I.118.9; Avestan **aspahe aoȭ** "the strength of a horse", Yt. 19. 68) > Ossetic **aefsûrǧ/aefsorq** "miraculous kind of horses (in mythology and folklore)"[198], Βορασπος < ***bor**- "yellow" (Ossetic **bor**-/**bur**- "yellow", also used as the first part of names of several mythological creatures; Modern Persian **bor** "fox"[199]).

Sogdian **'sp**[200], Khwarezmian **'sp**, the Bactrian name of a goddess Ιροοασπο (< **druva**- "strong, mighty" + **aspa**- = Avestan **Drvâspâ**, a female deity connected to the male **GPuÍ Urvan** "Soul of the Cattle"[201], represented as a male with a horse on the Bactrian coin bearing this inscription), Mundzhan **yosp**[202], Yidga **yasp** "horse", **aspPlan** "stable" (< ***aspa-dâna**), Pashto (Afghani) and Vanecî **âs**.

<u>Vakhan-Khotanese</u> subgroup[203]: Vakhan **yaÍ**, Khotanese Saka **a ä**- "horse".

<u>South-Western Iranian</u> subgroup: Old Persian **asa**- in **asa-bâr-ibiÍ** "riders"; Middle Persian **asvâr**, Modern Persian **suvâr**)[204], Tat **äs**.

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[196] Efimov 1986, 9, 80, 133.
[197] Abaev 1958, 563.
[198] Abaev 1949, 157; 1958, 112-113; Vasmer 1923, 34.
[199] Vasmer 1923, 36; Zgusta 1955, 56; Abaev, 1958, 271-273; Milewski 1969, 161.
[200] Gauthiot 1914-1923, 60, 127, 157; barytone paradigm: Livshic and Xromov 1981, 375. Yagnobi **asp**, very often used in the crucial parts of folk tales (Andreev a.o. 1957, NN 1, 11, 12, 15,), might have been borrowed from Tadzhik.
[201] Bartholomae 1979, 783; Steblin-Kamenskij 1981, 321 with references.
[202] Griunberg 1972, 390.
[203] Oranskij 1975, 185; Edel'man 1986, 41, 84-85; cf. Sokolova 1973, 3. For references to individual languages: Griunberg and Steblin-Kamenskij 1976, 507, also 43, proverb 19, and 47, riddle 13 (ablative **yaÍ**-Pn); Gercenberg 1981, 247. The first part of the Khotanese **a para**- < ***a a-para**- *Medicago sativa*

II. Eastern Indo-European. Armenian. The general Indo-European word for horse was substituted by **ji**, related to the Vedic poetic term **háya** "steed".[205] Pedersen and several other scholars after him[206] suggested that Armenian êÍ "donkey" reflects the old Indo-European name for the horse; the process could be described as a chain reaction during which the widening of the sphere of usage for the poetic term (**ji**) led to a change of meaning in its synonym êÍ. But according to another idea followed by Benveniste[207] the latter goes back to Sumerian **ANŠE** "donkey", which in turn Starostin[208] explains as a borrowed Northern Caucasian term for horse (discussed above); the weakness of this etymology is the root element -**n**-, which is not well documented in Eastern North Caucasian and is absent both in Hurrian and Western North Caucasian (see above). According to Starostin the Armenian word as well as Mediterranean *Wanderwörter* like Latin ***asinus*** can be traced back to the Hurro-Urartian source having the suffix -**n**- (another explanation of the Latin word as a compound *****as-onos** "weight-bearer connected to Asia" was suggested by Pisani[209], who at the same time accepted the link between the Sumerian and Armenian terms; see below on the name *Asia*). Having the large number of Hurro-Urartian loanwords in Armenian in mind, Starostin's suggestion of a possible connection between Hurrian **eÍÍe** "horse" and Armenian êÍ "donkey, ass" seems plausible. In this example one can see how difficult it is to distinguish between Hurro-Urartian, Northern Caucasian and Indo-European, particularly in a case where phonetic development has caused a shortening of the form, with only two phonemes remaining.

corresponds to another dialectal variant in the Old Iranian name of the same cultural plant **asp**-**asti** (Steblin-Kamenskij 1982, 66).

[204] Bartholomae 1979, 207, 219-220; add. 121; Oranskij 1979, 156-157, 169; on the second part of the compound, see the next section of the present article. Cf. Modern Persian **astar** "mule" < *****asa**-**tara**-, Steblin-Kamenskij 1982, 30.

[205] Gamkrelidze and Ivanov 1984/1995, 463; for an areal interpretation, cf. Porzig 1954; Ivanov 1956.

[206] Lamberterie 1978, 262-266, n.1. Werner Winter in his recent study of the word suggests that the Hurrian name for horse was borrowed from Armenian, meeting semantic difficulties: at the time of borrowing the Armenian word should have had the original Indo-European meaning which later changed.

[207] See Ernout and Meillet 1994, 51.

[208] Starostin 1988, 115.

III. (Southern) Anatolian. Luwian-Lycian: Hieroglyphic Luwian **as/zu(wa)**- "horse" is attested in different case forms in several inscriptions, including the Karatepe bilingual text.[210] The phonetic complement -**u**- after the logographic Sumerian **ANŠE.KUR.RA** "horse" in Cuneiform Luwian[211] makes it possible to suppose a form comparable to the Hieroglyphic Luwian one. Cuneiform Luwian **a**-**aÍ**-**Íu**- is repeated twice (KUB XXXV 102 + 103 Vs. I 7'; 107 + 108 Rs. IV 22' = Starke 1985, 221, 240, I.1.A and III.1) in a group of birth rituals where also the semi-logographic spelling **ANŠE.KUR.RA**-**uÍ** "horse" (KUB 107 = 108 Rs. IV 7', Starke 1985, 239) is used with a hippological epithet **waÍÍanti** [212]; a logogram for "horse" (KUB XXXV 128 Rs. III 7') and the horse-god Pirwa also appears in the other fragments of the same group.[213] See below on the -**tt**- derivation from **aÍÍu**- "horse" in Luwian. The Hieroglyphic and Cuneiform forms reflect the normal development of palatal *ḱ in Luwian not only before **u**[214], but in other positions as well: thus the classification of Luwian as a **satPm** language has been proven.[215] But it was a language in which only the first two stages of the development of the velar stops took place: the palatal stops had already become affricates and fricatives (and some of them then disappeared), and the labiovelars had

[209] Pisani 1979, 495.

[210] Starke 1995, 118-119, n.237, with a discussion of the reading **su** (and not **zu** as suggested by Melchert 1994, 234).

[211] Otten 1953a, 40; Laroche 1959, 119; Meriggi 1980, 252. On the possibility of finding the spelling with -**zu**- in Cuneiform Luwian as well as in Hieroglyphic Luwian, cf. Melchert 1993b, 38-39, 44. In the text K Bo XIII 260 III 24, where Melchert has suggested the form **az**-**zu**-**wa**-**an**-**za** as derived from **az**-**zu**-**wa**- "horse" in several lines, the Luwian name for a (wooden) object **tu**-**u**-**ri**-**in** is repeated, which may be derived from the Hittite root **turiya**- "to harness, to yoke" and may have the meaning "pole of a carriage" (see below in section 5).

[212] Starke (1995, 43) suggests "gathered, assembled" as a meaning referring to the position of the horse. On the meaning of the Luwian word, cf. Starke ib., 118, n.236; see also below in the next section of the article, on **a**-**aÍ**-**Íu**-**ut**-**t[i**-.

[213] Starke 1985, 252-254 and 231. Comparable contexts with Pirwa and **UR.MAS** "lion" are present in KUB XXXV 145 Rs. III 13'-14' and Bo 1391 Vs. I 6 (Starke ib., 256).

[214] Melchert 1994 with references. See earlier discussions: Meriggi 1980, 265, §265; Gamkrelidze and Ivanov 1985, 87.

[215] On the language of the Hieroglyphic texts, see Bonfante and Gelb 1944. For examples of the change *ḱ > **s/z**, see Morpurgo Davies and Hawkins 1986; Melchert 1994 with further references.

already been palatalized in the position before a front vowel (see the next section for this suggestion) but not yet merged with plain velars.

Since the form of the name for horse can be explained by this internal process in Luwian itself, there is no necessity to construe the name as an Aryan borrowing.[216] The possibility of finding a corresponding Cuneiform Luwian form **aÍÍu**- in the term **aÍÍu-ÍÍa-nni** in a Hittite hippological treatise, reinterpreted as a Luwian word[217], is not absolutely ruled out. However, the general cultural context of Kikkuli's treatise still makes the Hurrian element (see above on the explanation of -**nni** in this term as a Hurrian postposed article) more plausible than the Luwian one.

Lycian **esbe** "horses, cavalry" has been considered as a borrowing from Iranian (for instance, by Meriggi), which still seems plausible. But recently it has been reinterpreted as a continuation of a Proto-Luwian form reconstructed as *****ass/zwa**-[218] or of Proto-Anatolian *****ekwo**-[219]. Aside from the use of the word in Lycian inscriptions as a military term (Instrumental **esbedi**, TL 44a, 36) or in connection with the "sacrifice of a horse" (TL 128, 1: **axã/uti esbe[h]i** = a**Í**vamedha)[220], it occurs (in the Genitive/Adjective **esbehi** > **esehi** "[the coin] of the Horse") on Lycian coins with the representation of a winged horse.[221] It is also supposed that a similar stem with a root vowel **a** < **e** in two different variants is represented in the second half of the name of a god-rider in Lycian (or Southern Anatolian in general?)[222], but for a long time it was thought to be Thracian[223]:

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[216] Szemerényi 1976.

[217] With a possessive suffix -**ÍÍa**- and a Luwian suffix -**nni** according to Starke (1990, 221, 502; 1995, 117-118); Melchert takes the opposite view (1994, 234).

[218] Starke 1990, 69, n.151, 502, n.1852; 1995, 121, n.246.

[219] Melchert 1994, 288, 295, 302, cf. also 326 on the reconstruction of barytone /**éswe**-/.

[220] Hajnal 1995, 116, n.124; 232, n. 295. Melchert (1993a, 8) suggests the reading **axãti**. On the parallels to the horse sacrifice in other Indo-European traditions, see Ivanov 1974; Puhvel 1987, 261; 269-276. If the Lycian noun **axãti** can be traced back to *****e/oHem**-**dh**-**i**, it can perhaps be compared to Old Indian **medha** < *****(H)m(y)a(i)dh**- (with Avestan and possibly Old Irish and Gaulish parallels according to Puhvel), although the root structure is transformed in one of these Indo-European dialects. The Lycian variant **axu**-**ti**- seems similar to Lithuanian **au**-**ka**, but the latter is thought to be an innovation.

[221] Carruba 1993, 16-17.

[222] Heubeck 1961, 87; Gindin 1967, 145-146; Neumann 1979, 265-6; 1994, 184-185. On the phonetic peculiarities of variants pointing to a borrowing into Lycian, see Hajnal 1995, 20 and 36, n.29; the general label "from Asia Minor" (*kleinasiatisch*) is used; cf. below on another Lycian **centum** variant that seems to have been borrowed from Northern Anatolian.

Κακ-ασβος/Κακ-αθιβος (with variation suggesting an unusual sound shape of the word); the same second part with another first stem in Τρικασβος.[224]

Pisidian, of which the evidence for connections (along with Sidetic and Carian) to late Luwian-Lycian is becoming stronger[225], might have had a similar stem with another initial root vowel **e** or **i** (due to a change *e > i known in Hittite for instance, but for another possible explanation see below): cf. a Pisidian toponym Εσουα-κομη[226] and a composite name Μασναν-ισβας[227] < ***masana**- ("god" in Luwian-Lycian with a stem in -**n**[228]) + *****isba**-[229]. A similar second element is supposed in the Pisidian secondary formation Αβ-ισβ-ιανος[230] and the Anatolian names Δορμ-ισπας/Δορμ-ισβας[231]. Pamphylian Μαγασ-ι[**ssw**]ας with a rare sign for a special phoneme interpreted as [**ss**] < *****t**ˢ < *****ky** before digamma seems less clear.[232] Heubeck interprets this word as a compound containing the same second element in its original form *****isswa**-, somewhat different from the widely spread Iranian type. The form Παρισπας, which is sometimes mistaken for a name of Iranian origin[233], shows the main difficulty in appraising all these Anatolian forms, including the Lycian forms cited above. All of them seem so similar to the most widely spread Iranian form of the name for horse that the possibility of borrowing is not excluded. However, the unusual vowel

[223] Pisani 1959, 101, 128. There were several possible explanations for the first part of the compound: either "bad, evil" (Greek κακός, Phrygian κακουν if not a Greek borrowing, Albanian **keq**) suggesting the name "evil rider" or "mighty" (Heubeck 1969); the translation "horseback" (Slavic **skok**-, Runic "Proto-Norse" **hahai** in only one inscription) was also suggested with a general meaning similar to the epithets of the Thracian figure Heros discussed below.

[224] Neumann 1979, 266; 1994, 185 (with the tentative meaning "the one with a wild (?) horse").

[225] Neumann 1994, 227ff.; Melchert 1994, 44-45; Starke 1990; Hajnal 1995 a.o.

[226] Starke 1995, 119 ("Pferde-Dorf").

[227] Zgusta 1964, 302, §878; 555, section 189.

[228] Melchert, ib., 309, 320-327. A Semitic origin of the stem seems evident.

[229] Reconstructed as [**isswa**-] and compared to the Hieroglyphic Luwian and Lycian noun for horse by Heubeck 1961, 84ff.; Gindin 1967, 144-146; 1993, 18.

[230] Zgusta 1964, 45-46, §9. Cf. Sidetic **ab**- (Hajnal 1995, 202).

[231] Zgusta, ib., 152-153, §300-4, 5; the first element is known in inscriptions thought to be Phrygian, cf. Hajnal 1995, 32, n.12 on names with the first element Δορυ-.

[232] Zgusta, ib,. 277, §840-2, n.12 with references; also Heubeck 1962, 84; Shevoroshkin 1965, 91, n.3. For the new phonemic interpretation according to Brixhe, see Brixhe 1976, 7ff. and Hajnal 1995, 23 and 19 (on the first element of this compound Μαγας = Lycian **Maxah**, cf. other parallels; Kammerzell 1993, 60, Ex.93).

[233] Zgusta, ib., 418, §1206.

in the Pisidian forms as well as the form with a digamma still makes their native origin more probable.[234]

Another recently discovered late Southern Anatolian language of the Luwian group, Sidetic, probably has the stem -**a/esb**- "horse" in proper names like **Josbija** < ***Yu(w)-a/esb-ija**.[235]

Among all the compounds in *-**isswa**- > -ισβα- studied by Heubeck and his followers, ᾿Αρίσβη seems particularly interesting, which was known both as the name of a town in the Homeric Troad (᾿Αρίσβηθεν "from Arisbe" Β **838** a.o.) and as anthroponym of two important female persons in the Trojan mythological story. As more facts point to the role of the Luwian-Lycian strata in Troy (Luwian **Wiluía**) the significance of each name possibly belonging to it should not be underestimated.

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[234] Cf. Gindin 1967, 145.
[235] Starke 1995, 119-120, n.241 (with references).

The etymology of the old name for the area of the northwestern part of Asia Minor with a Luwian-Lycian population, called in the Hittite texts **Aͮͮuwa**[236] and in Mycenaean Greek **a**-**si**-**wi**-**jo**-, may be important for the question being discussed. Although the name of Asia was well known to Mycenaean Greeks, it would have been of Anatolian ("Asianic" in somewhat antiquated terms) origin.[237] The idea of deriving it from the Hittite adjective **aͮͮu**- "good"[238] does not seem particularly successful, since in Luwian the corresponding word has the form **waͮͮu**-, and the name would have originated in a Luwian environment. For this reason alone it is tempting to derive it from the name for horse, which was so important for the historical and military context of the whole Trojan narrative (the story of the wooden horse may be a characteristic example; another is the folk motif of a prophesying horse, etc.). It seems remarkable that in the *Iliad* a hero called "Asian" comes with his *horses* from the town of *Arisbe*, since in such a formula the same ancient name for horse might reappear several times in different variants.

IV. Thracian. Among those Paleobalkanic Indo-European languages that are supposed to belong to the **satPm** group, Thracian might have retained an old term for *horse*, possibly seen in the proper names Εζβενις/**Hezbenus**/**Esbenus**/Εσβενειος (having the characteristic -**n**- suffix; see above on the type of Latin **asinus** and a possible Hurrian parallel) with a (partial) voicing of the intervocalic consonants preserved as voiceless in the second part of the compounds Βετ-εσπιος, Ουετ-εσπιος, Ουτ-ασπιος. Since in the inscriptions of the Varna region these compounds function as epithets of the Thracian god-rider Heros, all of them can be understood as equivalent to Επιπιος = εφ-ιππιος "riding the horse"; the first element of the compound, etymologically connected to Old Indian **ud**-, was deciphered on the basis of Cypriote υτυχα = ἐπὶ τύχῃ.[239]

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[236] Goetze 1974, 180; Gindin 1993, 130 with bibliography.
[237] Watkins 1995, 151, 290.
[238] Heubeck 1961, 72-73, n.76.
[239] Detschev 1952, 80, n.2; Gindin 1993, 18; Poghirc 1983, 65 (5.2.2), 66; 81. On the type of compounds like Greek Ἐφίππος, see Milewski 1969, 117, II 7. For the suffix, cf. Old Indian **a viya**-.

Again there remains the possibility of an ancient Iranian borrowing. To this one may add that, since the form of the Thracian stem is closely related not only to Iranian but also to some Anatolian words cited above, and the Thracian language is known mainly through disparate names given by classical authors, it is not possible to state definitely that these terms continued the original Indo-European tradition directly and not through borrowing from neighboring dialects. In any case the words given above may contain a possible trace of the Indo-European word for horse in one of the Paleobalkanic languages considered to be a source of Modern Albanian. The latter lost this word.[240]

V. Northwestern Indo-European. Baltic and Slavic. Old Lithuanian has preserved the feminine derivative of the Indo-Eropean word in a phonemic form **aĨvà** "horse", practically identical to the Vedic (the masculine counterpart was lost in Baltic). The only difference consists of the shift of accent towards the final syllable which had acquired the acute tone on the vowel becoming long after the loss of a final laryngeal (the mark of the feminine common to Indo-Iranian and Baltic; see below on the correspondences in other dialects): *éḱwe/o-H > *éḱwaH > *éḱwâ > eĨvá > aĨvá. The initial vowel **e** was attested in Old Lithuanian **eschw**5 = [eĨvu] in the speech of Bretkũnas who often changed old **a** > **e**[241], thus it is not clear whether here one may definitely speak about an archaism (as it is usually described in the handbooks), but cf. also the Lithuanian river names **EĨvìn&** : **AĨvìn&**. Recently it has been suggested that the word in the dialectal form **osa** < *asa "mare" < *asva was preserved in Old Latvian (in the XVII c.).[242] The common Baltic character of the older vowel change *e > a[243] is seen in Western Baltic: Old Prussian **aswinan** "the milk of a mare" with an -n- suffix as in Lithuanian dialectal

[240] Aside from some later borrowings discussed below, in Albanian there is the word **mës** for a male foal of an ass or a horse (corresponding to Illyric Messapic **Menzana**), which can be connected either to an Indo-European term for "male" or to a verbal stem "to suck": Porzig 1954; Pisani 1959, 127; Gamkrelidze and Ivanov 1984/1995 I, 474-475.

[241] Bûga 1961, III, 300-301.

[242] Karulis 1992, I, 468-469; II, 564.

[243] Andersen 1996, 54, 148.

aĺvíenis "work horse"[244]). Bûga supposed that the vowel **a** (instead of ***e**) in the Baltic word for horse was caused by Iranian influence. This idea seems interesting if one takes into consideration the importance of a (Northwestern and -eastern) Iranian term for many other languages into which it was borrowed. Later in Eastern Baltic the old term for horse survived only in Zhemaitic and some other Lithuanian dialects. The word disappeared in prehistoric Slavic.[245] Its use in hydronyms like Lithuanian **Aĺvà**, Latvian **Asva**, Prussian **Asswene**, cf. Slavic **Osva**, can be traced back to the Eastern Indo-European metaphor describing rivers as horses, well documented in the ancient Indo-Iranian languages.[246]

From these data on the name for horse in the **satPm** dialects it follows that the immediate source of the Hurrian form (if no serious changes are supposed in its prehistory) can be seen only in the consonant structure of the Southwestern Iranian form (which is—probably a marginal Southern form opposed to Central Northwestern and Eastern Iranian innovations—also phonetically similar to the Vakhan-Khotanese dialectal shape, but the latter is found at such a distance from the Near East that any idea of a historical link would seem far-fetched). The vowel in the Hurrian word, if it is a dialectal (Iranian) borrowing, still seems to go back to the time before the change ***e** > **a**. If this suggestion is accepted, it may lead to a study of those groups of speakers of Southwestern Iranian dialects which might have been instrumental in introducing

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[244] Toporov 1975, 136; MaÛiulis 1988, 106. It is supposed that the -**n**- suffix in Old Indian **a v-in**- and some other Indo-European forms may be related to the Old Prussian word (Eckert 1995, 55). But the parallel in Latin **equînus** (cf. Umbrian **ekvine** borrowed from it or cognate to it) now seems excluded if, according to Nussbaum and Vine, the latter contains a secondary denominative suffix *-**no**- added to the original Genitive Singular form **equî**. See Vine, "Latin -înâre/-înârî", §5. (this volume).

[245] It was ousted by such synonyms as ***komon**- (on the meaning, see Odincov 1980, 25-32; probably cognate also to Prussian **camnet** "horse" is ***kumel**-, cf. Toporov 1975, 268-270; 1984, 191-196; Eckert 1995, 57; Lithuanian **kumĺl&** "mare", Latvian **kumele**), from Eastern Asiatic words like Tibeto-Burman Kukuchin (Jinghpaw) **kumraM** "horse" < Tibeto-Burman ***ku(m)r(t)aM** (reconstruction after Matisoff, Proto-Lolo-Burmese ***myaMĩ**, Burling 1967, 84; cf. Peiros and Starostin 1996, fasc.1, 35-36; see above on the root in Eastern Asian languages of different families) borrowed through some intermediary Eurasian language (of some of the nomadic horse-riding tribes). A related name for horse with another initial became widespread in Eurasia and entered Germanic and Celtic (Gamkrelidze and Ivanov 1984/1995, I, 471, 832 with references).

[246] Porzig 1954; Vanagas 1981, 50.

horse-training among the Hurrians possibly in the first half of the III mil. B.C. (before which oxen were used as the main transport force as well as in a military context, as reflected in the description of a battle in the epic of Kumarbi and in other mythological Hurrian texts). Striking correspondences between the devices of horse-training as seen in Kikkuli's treatise and in the *Avesta*[247] might be of some interest from this point of view, although the Avestan language belongs to a different Iranian dialectal group. In this light a possible Iranian origin for Hurrian **tarr**- "fire" (discussed above in part 2) looks particularly intriguing.

If, however, one supposes that the Hurrian word might have undergone such changes as the loss of the labial glide, then it (and some other dialectal Northern Caucasian forms) can be derived from the forms suggested for Mesopotamian Aryan or Luwian, which would correspond to their homeland being located somewhere close to the oldest Hurrian kingdoms. A **satPm** dialect of Proto-Indo-European that might have been a precursor both of Proto-Aryan and Proto-Luwian might have been a source of (dialectal) Northern Caucasian terms. The Kartvelian form ***acua**, in which a borrowing either from Northern Caucasian[248] or from Iranian[249] or some other Indo-European[250] source has been supposed, can be traced back to the same archaic dialect where the old palatals were reflected as affricates and the labial glide was preserved after such an affricate in the name for "horse" (the vowel **a** can be accounted for both by the rules of later Aryan and Luwian phonology).

As for the possibility of a later borrowing in the reverse direction from a Northeastern Caucasian language into an Indo-European **satPm** dialect, the only probable candidates for this might be the Anatolian forms like the Pisidian one with the vowel **i** in the stem.

It seems that Bûga was the first linguist to suggest, as early as 1923 in his review of Schrader's *Reallexikon*, that the name for horse helps to establish the absolute

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[247] Hauschild 1959. From the same point of view descriptions of horse races in Hittite rituals at the time of the Hurrian dominance in the Neo-Hittite Empire might be interesting: Haas 1994, 792.
[248] Nikolayev and Starostin 1994, 520-521.
[249] Klimov 1994.
[250] Gamkrelidze and Ivanov 1984/1995, 479, 813.

chronology of the **satPm** dialects[251] (at that time he could fix the *terminus ante quem* in the Aryan dialects attested in Asia Minor by the middle of the II mil. B.C.). Unfortunately, his remarks, published only in Lithuanian, did not find any immediate continuation. But we may say now that the chronology of the domestication of horses (starting with the IV mil. B.C.), of the spread of early Indo-European dialects (the same date according to glottochronology), of the restructuring of consonants in their **satPm** branch, and of their contacts with Hurrian and other Northern Caucasian dialects and Kartvelian (see also below on Semitic), makes it possible to search for the important synchronic intersection of these events at the cusp of the IV and III mil.B.C.

1b. **centum** dialects:

VI. (Northern) Anatolian. Hittite. The logographic (Sumerian) rendering of the word *horse* hides its phonetic shape, but the phonetic complements -**uÍ** in Nominative Sg. (K Bo XVII 15 Rs.' 9'; Neu 1980, 73; K Bo III 34 II 36) and -**un** in Accusative Sg. (K Bo VIII 36 Vs. 4') make possible the stem in -**u**-[252], which is formally similar to Cuneiform Luwian (K Bo VIII 36 I 4)[253], although the consonants before that phoneme should have been different in the two languages. **Ak/gu(w)a**, which appears both as a toponym and the anthroponym of two male persons[254] in Old Assyrian documents (in a kind of archaic cuneiform writing that does not distinguish ancient voiced/voiceless), theoretically might have been a Hittite **centum** correspondence to the Luwian words cited above (although the first vowel seems more like that in a Luwian form), but the ethnic identity of these personal names is not clear and the toponym may be a variant of **Amkuwa** (a city name in Old Assyrian tablets)/Hittite **A(n)kuwa**.[255] The probable Hittite form of the

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[251] Bûga 1961, III, 680-681.
[252] Starke 1995, 120, n.240; cf. Friedrich 1957, 25.
[253] Meriggi 1980, 252, §6.
[254] Laroche 1966, 25, N 19; 268. Balkan considered the name native while Garelli thought **Agu**-**(a/za)** was Assyrian: Larsen 1976, 358, n.14 with references; cf. Larsen 1967, 52, 54 (different texts mentioning **Agua**); MatouÍ and MatouÍová-Rajmová 1984, 161, 51b; 73, 109 (a cuneiform inscription mentioning **A-gu₅-a** in combination with a semi-hieroglyphic symbolic scene in a native style); on **Aku-za**: Shilejko 1921, 359; Jankovskaja 1968, 181 (**Aku-za** and **Aku-t-um**), 183, 186, 193; in a text analyzed by Shilejko and Jankovskaja (ib., 193) the sister of the sons of Akuza has a name or a title related to the local cult of Kubaba.
[255] Ünal 1984; Cornil 1990, 11-12.

name for horse might have been **e[k]ku(wa)-/I[k]ku(wa)-**.[256] The 'Lycian' proper name **Icuwe**[257] (if not originally from the Lycian language but borrowed from a Northern Anatolian **centum** dialect) may have some similarity (by chance?) to the reconstructed Hittite form. The meaning of the latter Lycian word is not known, but the sense "horse" is almost certain for the second half of the "**centum**" name of the Anatolian god-rider known through a Lycian (borrowed) form **xaxakba** (< ***kak-akwa**), which is equivalent to the **satPm** (Lycian/Southern Anatolian and/or Thracian) variant κακασβος/κακαθιβος discussed above. If in Anatolian there are really two variants for the name of this god-rider[258] differentiated by the **centum/satPm** isogloss, it might be particularly interesting for the history of the horse-name in these Indo-European dialects. But the root vowel **a** of the Lycian name is influenced by the normal Luwian form seen in another variant.

VII. Tocharian. On the basis of Tocharian B (Kuchean) **yakwe**, A **yuk** "horse" it is possible to reconstruct Proto-Tocharian ***yékwos** < ***éḱwos**, with a secondary development of the initial ***y-** similar to the beginning of the word in Eastern Iranian

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[256] The same suggestion is found in Starke 1995, 120. For a possible double spelling of ***kʷ** in the enclitic combinations see **ták-ku**, **ne/i-ik-ku** (Oettinger 1979, 209, n.64; 538 with references); the situation with nouns and verbs may be complicated due to the influence of other factors such as the place of the accent/tone. The earlier etymologies trying to find a **satPm** trace before a labial glide in Hittite were wrong: Melchert 1994, 119 with references.

[257] Zgusta 1964, 194, §461.

[258] A suggestion made by Hajnal 1995, 36, n.29. A similar **centum** variant for the name of the "earth" is found in Hieroglyphic Luwian **takam-** as opposed to the Cuneiform Luwian **tiyam-**.

Ossetic (but absent in Scythian), Mundzhan, Yidga, Vakhan and North Western Iranian Ormuri (where in other cases it alternates with **h**- and **w**-[259], and thus may be compared to the same initial prothetic **h**- in the name for horse in North Western Iranian Kurd, Beludzhi and Dardic Kalasha and to **w**- in Nuristani Kati). One may think that the appearance of the new phoneme *y- (/**w**-/**h**-) in initial position was an areal process common to Tocharian and some Iranian dialects of the same Central (Eur)Asiatic linguistic zone; if there was an initial laryngeal (see above) it had been lost before that process started. The unstressed final syllable lost the last consonant of the ending and was reduced in Tocharian B and dropped in A. The old palatal stop + *w developed into the group *kw (coinciding with old labiovelars) which was preserved in B but developed into -**uk** in Tocharian A after the loss of the final vowel[260]: *$ye\underset{.}{k}wos$ >

*$y\ddot{a}\underset{.}{k}w\ddot{a}$ (with the characteristic palatal quality of the whole word typical of Tocharian) >

*$y\ddot{a}kw$ > **yuk**. The possibility of expressing the old combination **k** + **w** both by **kw** (in Tocharian B) and by **uk** (Tocharian A **yuk** sometimes written in Brahmi with a subscript $_u$: y_uk) may hint at a tendency towards its monophonemic interpretation. The combination of the palatal stop + **w** constitutes the main problem in the phonological history of the word.[261] In the earliest period of the history of the **centum** dialects three different types of segments may theoretically be opposed to one another:

$$*\underset{.}{k} + *w$$
$$*k + *w$$
$$*k^w$$

Although in **centum** dialects in principle *$\underset{.}{k}$ and *k merge, in this particular position before *w they may preserve some traces of the former opposition.[262] Tocharian (where, unlike the ancient **centum** dialects, labiovelars and velars started to merge as in **satPm** languages) does not show this difference.

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[259] Efimov 1986, 91-92.
[260] Lane 1960; Van Windekens 1970, 114, 116-117, 120-121; 1976, 56; Ringe 1996.
[261] See Ivanov 1958 with references.
[262] Ivanov, ib.

No trace of a feminine stem in *-â formed from this word is found in Tocharian. Among the archaic formations derived from the name for horse one may single out the Tocharian B adjective **yäkweññe** "relating to a horse", cognate to those archaic *-**n**-formations that are represented in most ancient languages[263]: Old Indian **A vin**- (name of divine twins also represented as two horses), Old Prussian **aswinan**, Lithuanian **aĺvíenis**, river name **AĺvÌen&** (see above on this type of suffix). Morphological and semantic isoglosses show that after the separation of Proto-Anatolian-Hittite and Proto-Anatolian-Luwian-Lycian the remaining Indo-European dialects were still developing together before the **centum**-**satPm** division was created. This means that to the speakers of these dialects the difference between a palatal stop and a corresponding velar sound did not yet prevent the identification of stems which included these phonemes.

VIII. (North) Western Indo-European ("Old European"). Germanic: Runic "Proto-Norse" **ehwu** = Dative *e**hw**-ê "to the Horse" (in inscriptions on the magical amulets often bearing horse images as well)[264]; Old Icelandic **jôr** "horse", Gothic compound **aihva**-**tundi** "bramble, pricky bush"[265], Old English **eoh** "horse; name of a rune" (the latter meaning corresponds to Old Danish **eor**, Gothic **eyz**[266]) < *é**hwaz** (old barytone type[267]), Old Saxon compound **ehu**-**scalc** "horse-servant". The feminine stem in -â is not attested.

Gothic Ѳ = [**hw**] is one letter which is considered to render one phoneme. It seems that all three types of segments enumerated above (*ḱw, *kw, *kʷ) developed into a single labialized fricative phoneme designated by this letter. Labiovelars in general are unstable[268], thus after becoming a labiovelar the segment usually develops into a non-labialized phoneme or a labial losing one of its integral parts. Because of this, from a

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[263] Van Windekens 1975, 64. See above on a comparison to the Hurrian article and on the Baltic stem in -**n**- and its cognates.

[264] With a mixture of the runes **e** and **u**; Krause 1993, 58, §38; for an older interpretation, see Marstrander 1929, 74-77 (this view is not widely accepted).

[265] Use in the names of plants similar to Greek: Lehmann 1986, 15, A 67; Chantraine 1990, 467.

[266] On different attempts to understand this distorted name (for horse?), see Lehmann, ib., 100, E5.

[267] Lubotsky 1988, 93, 162.

structural point of view, the shape of the horse name in **centum** dialects was transformed to a much greater extent than in the **satPm** ones. The latter seem to be innovative on a superficial phonetic level in changing old palatals, but they kept the general phonemic scheme of the word without significant changes.

IX. Western Indo-European ("Old European"). Italic and Celtic. Latin **equus** < **equos** "horse" (masculine) corresponds to a derivative **equa** "mare" (feminine) which becomes a counterpart of masculine **caballus** in late Latin and survives in Romance: Spanish **yegua**, Portuguese **égoa**, Catalan **egua**, Provençal **ega**, Old French **ive**, Sardinian **ebba**, Rumanian **iapÅ** (cf. the survival of the "marked" feminine form also in Lithuanian, Ormuri and some other Iranian dialects). The feminine stem in long -â (originally a final laryngeal added to a thematic masculine stem) is equivalent to the one found in Indo-Iranian and Baltic and can be traced back to the late Proto-Indo-European dialectal period of the formation of the three-gender system after Anatolian (Hittite and Luwian-Lycian) had separated from Indo-European (or "Indo-Hittite"). Some rites, the name of which includes Latin **equus** like **Octôber Equus**, also go back to the period of the dialectal connections of Italic and Indo-Iranian.[269] Latin **q** [**kʷ**] was a single phoneme into which, in intervocalic position[270], merged the three segments described above. It may be supposed that the development *ḱw > *kw > *kʷ was a common phonemic process at least in some Western Indo-European ("Old European") dialects such as Proto-Germanic (where later *kʷ > hʷ) and Italic.

The Venetic language has a name for horse which closely resembles the proto-Italic form: Accusative Singular **ekvon**/Latin **equum** < *equom.[271]

The monophonemic treatment typical of the Western Indo-European development of *ḱw is particularly clear in Celtic: Gaulish archaic (in the name of a month) **equos** (Nominative = the early Latin form), **equi** (Genitive), Later Gaulish **epo**- "horse" (in proper names), **Epona** (the name of a goddess), proper name **Epot-so-ro-vidus**; Breton

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[268] See Polivanov 1968, 64, 120-125, 327-328 (on the name for horse: 123, 331); 1928, 163-164.
[269] Dumézil 1966.
[270] On initial position, cf. Ivanov 1958.

ebeul, Old Cornish **ebol**; archaic Goidelic-Old Irish (in Ogam inscriptions) **ECCEGNI** (cf. the later mythological name **Echen**), diminuitive of *__eqas__ "horse" > **ech**; **EQQODI, EQQOD** "usually dealing with horses"[272]; Old Irish **ech** (with the normal disappearance of the labial feature[273] *^{w} typologically similar to delabialization in Latin **ecus** < **equos**).

The magical role of the horse is particularly clear in this area as well as in Roman tradition and in Germanic. Here the common features of these Western dialects and of Indo-Iranian may be seen as marginal archaisms preserved in the extremities (Western and Eastern) of the Indo-European world. Thus the Mesopotamian Aryan, Vedic and Avestan proper names and expressions continuing the combination of a term for a horse with the stem *__prî__- (see 1. I A above) correspond to a composite proper name in which its synonym combines with the same stem: Old English **Frid-h2ngest**.[274]

2. X. Eastern Indo-European. Greek.

Mycenaean Greek **i-qo** (with the variant **i-po**- in the compound **i-po-qo-qo** = later Greek ἱππο-φορβός "horse-breeder"[275]) and later alphabetically written ἵππος with a dialectal variant ἵκκος and a corresponding proper name Ἴκκος (showing later

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[271] Pisani 1959, 166, n.2 with references.
[272] Pokorny 1948-1949, 57; Korolev 1984, 153.
[273] Thurneysen 1946, 124, §203d.
[274] Gamkrelidze and Ivanov 1984/1995, 472, with references.
[275] Explained by regressive dissimilation:*__kw__…*__g__^{w}: Lejeune 1972, 47, n. §33-3; Panagl 1985, 286; cf. Mycenaean **poqewija** = φορβεία "halter" and possibly **poqa** = φορβή "forage, fodder", Chantraine 1990, 1187-1188.

delabialization) make it possible to reconstruct ***hikʷkʷo-** "horse", which has three phonetic features different from the rest of Indo-European and defies the normal laws of Greek development[276]: 1) initial ***h**- (absent in the dialectal variant and in some composite proper names with this second element[277] which sets some scholars thinking about the relatively late—probably post-Mycenean?—age of this initial); 2) vowel **i** in the root; 3) gemination of intervocalic labiovelars (or simple velars in the dialectal variant). These abnormal features make it clear that the word does not belong to the ordinary vocabulary. There are several possible explanations:

α) One can suppose that the Greek word continues an unusual Indo-European prototype only distantly related to the general Indo-European name. To account for the Greek form within the parameters of the phonemic rules, it is necessary to suggest an ***s**- *mobile* followed by a *schwa indogermanicum secundum* (Güntert's *$_e$); one can then suggest the expressive gemination of ***kʷ** like that found in the Homeric Dual ὄσσε "two eyes" and Present ὄσσομαι[278] "to see, to forbode, give to foresee" (from the Indo-European root *(**s**)**okʷ**- "eye", "to see", but some irregular forms have led to the assumption of a phoneme like ***kˢ** at the end of this root[279]). In that case, an Indo-European protoform ***s**$_e$**kʷkʷo**- "horse"[280] is reconstructed which can be considered related to **ekwo**- > **ekʷo**- in its dialectal Western Indo-European **centum** form discussed above. Yet such a form does not fit the usual reconstruction: the **s**- *mobile* is not confirmed by cognate forms in the other Indo-European dialects (but see below on

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[276] Lejeune 1972, 83, n.1; 190, n.2; 280, n.1. Cf. Chantraine 1973, 334; 1979, 2; Panagl 1985, 283; see the discussion in Adams, Mallory, and Miller 1997, 274. It seems possible to suggest a correlation between these linguistic data and the unexpectedly late time of the appearance of the horse in continental Greece (on the latter, see the remark by Mallory 1997a, 68-69, where the possibility of the relatively late arrival of the Indo-European Greeks to Greece, as suggested by Gamkrelidze and Ivanov 1984/1995 I as well as by Carruba, is not taken into account).

[277] As B. Vine has pointed out to me, the **h**- is absent in initial position as well in ἱππομένεος in an inscription from Asia Minor which otherwise does not drop **h**-. See Blümel 1993, 32.

[278] Lejeune, ib., 46.

[279] Chantraine 1990, 813. The important difference from the name for horse consists in the following *-**y**- which may explain the development of ***okʷ**-.

[280] Cf. a similar protoform reconstructed by Goetze in an attempt to reconcile forms of different families: Goetze 1962, 35; Gamkrelidze and Ivanov 1984/1995, 478, n.21. The first to propose an old form ***sesqw**- > **sêqw**- was Marr 1922; 1933, 142-143, but as usual his brilliant idea is lost among a number of absolutely fantastic suggestions.

Semitic) and is invented *ad hoc*; *schwa indogermanicum secundum* even if accepted does not usually follow this type of initial **s-**[281], and the reasons for the gemination of the labiovelar stop remain unknown[282]

β) Another hypothesis also based on the reconstruction of the initial ***s-** > **h-** might suggest a link of the Greek *hik^wk^wo- < *sik^wo to the Semitic name for horse: Akkadian *SISÛ* (possibly from *$sis\hat{a}'um$, cf. the spelling ANŠE.ZI.ZI = *[$^{ANŠE}SÍSÍ$] in Southern Mesopotamian texts at the end of the III mil. B.C.[283]), Aramaic **sûsyâ**, Ugaritic   **w/ssw** (**sswm**, feminine Dual   **stm,** also in personal names), Hebrew **sûs**. The Semitic noun together with Egyptian   **m.t**[284] has often been thought to be borrowed from Indo-European with a possible later reduplication.[285] But if the Semitic word is connected to the Indo-European one, virtually the Proto-Greek stem with the initial ***s-** alone seems to present a valid parallel. In the prehistoric Semitic-Greek contacts it was usually Greek that borrowed.[286] If the direction of borrowing in this case was the same the Semitic word itself should have been borrowed earlier from some other language where the intervocalic group was closer to the Greek type.[287]

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[281] Another suggestion to account for the Greek ι in this word was recently made by Ruijgh (1995) who, starting with the reconstruction **H₁kwó- > kwo- > ikwo-**, sees in the **i-** of Mycenaean **iqo-** a *voyelle d'appui*.

[282] Preservation of length supposed for Greek does not seem to apply here according to strict rules.

[283] Civil 1966; Gamkrelidze and Ivanov 1984/1995, I, 478.

[284] References to horses begin to appear only with the XVIII dynasty; on the ritual context: for which see Struve 1925. The military use of horses and chariots drawn by them found by that time is ascribed to the influence of Hittite and Hurrian technology. In a fairy tale about the taking of the town of Yoppa, which has structural similarites to the story of the horse of Troy ("is it just a stratagem to bring his people in this wise into the city along with the horses?", Erman 1922/1966, 168, n.1; Goedike 1968; Livshic 1979, 84-86, 241-246), the feeding of horses seems to have a functional role in the narrative, where **mrjn** "Syrian warriors" equivalent to Hurrian **mariya-nni** (of Aryan origin, Laroche 1980, 168) are mentioned.

[285] Bibliography by Ellenbogen 1962, 123; Gordon 1967, 450-451 (item 1780).

[286] Masson 1967; Szemerényi 1974 (with references).

[287] See Gamkrelidze and Ivanov 1984/1995, 482, on the possible traces of a very old migratory term in Egyptian **sk** "foal of ass", Coptic **sêǧ** "foal of an ass, horse" (ČernY 1976, 175) comparable to Old Turk **eÍk/g/j/0äk** "donkey", Classical Mongolian **eljigen** "donkey" (going back to an Altaic dialectal word at the Proto-Turc-Mongol chronological level); cf. also below on the Northeastern Caucasian Proto-Tzez-Khvashi *$Íig^wP$ "mare" > Tzezi *$Íıg^wP$, in other dialects the name for donkey, Nikolayev and Starostin 1994, 444-445. The main problem here is one of historical semantics: it seems that in many languages the horse was later called by a name initially referring to another equid that, before the domestication of

γ) From a purely phonetic point of view the best solution might be to suppose a borrowing into Proto-Greek of this dialectal Northern Caucasian form of the type Proto-Tzez-Khvashi *Íig^wP "mare" (> Tzezi Íɪg^wP "mare" > Ginukh Íeg^wP[288]). The initial fricative in Greek before becoming **h**- might have had variants *Í-/*s- < *s-. The only difference in Greek would be the voicelessness and gemination of the intervocalic labiovelar stop. There are two main difficulties with this comparison. First, in a number of dialects it is the name for donkey[289], and it is not a general term for horse (with the exception of a compound with a collective meaning "horses" into which it enters as the first element). Second, there is no known historical reason to compare just this Northeastern Caucasian dialect to Proto-Greek. Among other Northern Caucasian languages in which the word had forms comparable to the Greek, Western Caucasian Ubykh could be a more understandable source of borrowing from the point of view of historical geography: if the hypothesis about the early spread of Proto-Greeks in the Southern Transcaucasian area is accepted, the southern group of Western Caucasian dialects might have been in the vicinity of the early Greeks before their migration to eastern Asia Minor. But Ubykh forms (**cPg^wP**, **ÇPg^wP**) are less similar to Greek, particularly insofar as the initial consonant is concerned (for the same reason as well as because of chronological inconsistency the early reconstructed protoforms of the word could not be compared to Greek). A possible objection to the suggestion of such a borrowing might refer to the lack of sufficient documentary data on any Northern Caucasian language besides Hurrian[290] (and Hattic, where the name for horse is

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horses, had been more important from the economic point of view (as donkeys were at the time of the Old Assyrian colonies still in Asia Minor).

[288] Nikolayev and Starostin 1994, 444-445. Cf. Trubetzkoy 1930, etymology 51; Starostin 1987, 458.

[289] So it may be a Northern Caucasian representative of a migratory term for "ass, donkey" found in Egyptian and Altaic, discussed above.

[290] For a probable Greek loanword from Hurrian, see below on the name of Artemis. On Hurrian **ashi** "skin, hide" (with a possible link to Northwestern Caucasian *ʔwärćwP "skin", cf. also Diakonoff and Starostin 1986, 47; 1988, 185; Nikolayev and Starostin 1994, 228-229 on a very complicated semantic reconstruction) for ἀσκός "skin, hide", see Neu 1996, 114, n.38 (with a reference to Gamkrelidze and Ivanov). As to Szemerényi's suggestion regarding the link of σιγαλόεις "shining, glistening" to Hurrian Íehel- "pure" (Szemerényi 1974, 153; critically mentioned by Chantraine 1990, 1001), it seems confirmed by the stem in -**al**- of Íeh-**al**- "pure" (Neu , ib., 194, n.195) and by a similarity in the usage

unknown) that could have been in contact with Greek at that time. Still, such contacts are supposed on the basis of several Greek words considered to be borrowed from some Northern Caucasian languages[291]; on possible cultural reasons for borrowing see below in connection with the name of Artemis.

δ) Another Northern Caucasian word for horse—*˙ɪ**(n)ζwÈ̀**, discussed above—might have been borrowed from Northern Caucasian into Greek either directly (from a dialect perhaps different from Hurrian, since the Hurrian noun is less closely related to the Greek than many other Northern Caucasian forms) or indirectly through one of the Anatolian dialects. In Northern Caucasian a laryngeal phoneme is reconstructed in initial position which may account for the Greek **h**-. The vowel **i** is reconstructed for the protoform and is attested in several branches of Northern Caucasian. The reflection of a geminate group of intervocalic labialized fricatives in the Greek geminate labiovelars is the most difficult part of the suggestion (see above). The general historical difficulty mentioned in connection with the preceding word is valid here as well.

ε) The explanation of the Greek word as a borrowing from the Anatolian form of the **satPm** Pisidian type, in which the palatal is reflected as in Luwian-Lycian, seems more plausible, but the root has initial **i** as in many Hittite words with **i** < ***e**. This explains the vowel **i** present in these Anatolian (Pisidian and Pamphilian) forms and may continue the former ***e.** The appearance of Greek labiovelars in intervocalic position can be explained as an attempt to identify the group *-**issw**- of the borrowed term with the geminated -**ikkw**-/**ikʷkʷ**-.

To test this hypothesis, a probable equivalence of the Mycenaean Greek proper name **A-ri-qa** and of Homeric Ἀρίσβη cited above seems particularly interesting. If

referring to ritual objects, but the word penetrated Hittite as well and might have been borrowed into Greek through this language; on Luwian Íihual- "luminous object", see also Starke 1990, 342-343 (with an Indo-European etymology *seH-ul- "sun"); a Luwian loanword in Greek seems possible.

[291] Nikolayev 1985, 66-73 (some of the etymologies are far from acceptable, for which see below). In some of these borrowings (ib., 68, etymologies 14 and 15) Northern Caucasian affricates are reproduced by Greek combinations of a velar and another stop. An old borrowing from a Northern Caucasian language like Hurrian or from an Indo-European satPm dialect may be present in the Mycenaean Greek

this identification is possible it might prove an equation reminiscent of the parallel forms for the name of the divine rider (**satPm** Κακ-ασ/θιβος : **centum x**αx-ακβος): Anatolian -ισβη = *-**isswa**- / Mycenaean -**iqa**- = *-**ikʷa**-.

This can be seen as a confirmation of the hypothesis similar to the one put forward by Starostin (on the equivalence of fricatives and palatals), but for much later contacts between the speakers of Greek and of an Anatolian **satPm** language with a reflection of consonants of the Luwian type. Such equivalences lead to the irregular behavior of certain phonemes.

At the time when these contacts might have taken place the two groups of Indo-European dialects became split due to the **centum/satPm** division: the Eastern Indo-European group lost Greek which, without becoming a **satPm** language, was separated from Indo-Iranian and Armenian by the Anatolians. At the same time in the Anatolian group Luwian-Lycian, becoming a **satPm** language, shifted to the west and to the south of Hittite and other **centum** dialects of Northern Anatolian. The Luwian-Lycian dialects became the neighbors of Greek in the northwestern part of Asia Minor. At that time **satPm** words may have been borrowed into **centum** dialects and caused such abnormal structures as that of the Greek word for horse, possibly being borrowed from a Pisidian form close to the Luwian one. Southern Anatolian languages might have been a source of borrowing for the Northern Caucasian languages.

ζ) Phonetic difficulties in accounting for the intervocalic group of consonants can be avoided if the centum (Hittite-Lydian-Palaic, that is "Northern"[292]) Anatolian languages are suggested as a source. The Indo-European palatal was reflected before ***u/w** as a velar in initial position in the Lydian name for "dog" Κανδαύλης[293] and in a corresponding noun suggested in Hittite ᴸᵁ**kuwan/kun**-.[294] In Hittite the old voiceless phoneme in intervocalic position should have been rendered by a double cuneiform

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izza- if really a synonym for **iqija** "vehicle" (Panagl 1985, 289-290 with an improbable phonetic explanation by an internal Greek development).

[292] Melchert 1994, with data on the development of palatals in each dialect.

[293] Ib., 359; Ivanov 1964: "dog-strangler (= killer)".

[294] Melchert 1989.

sign spelling to reflect either a fortis/lenis contrast or a difference in length (gemination).[295] Thus Northern Anatolian might have had a term with the structure of this group similar to *-**kwkw/kʷkʷ**- though not yet attested. The development of the former **e** > **i** is normal in Hittite, Lydian and Palaic. Homeric ἰχ ρ /ἰχῶ "the blood of the immortal gods" may be cited as another example of the same type which had been borrowed from a Northern Anatolian form cognate to Palaic **eÍßôr** < *__**eÍßôr**__ (Tocharian A **ysâr** < *__**yäsôr**__ > B **yasar** "blood")/**eÍßa** < *__**éÍßar**__ (Old Indian **ás‡-k** "blood"), Hittite **éÍßar** > **iÍßar** "blood"[296] (Luwian **aÍßar**, quasi-ergative **aÍßa-Ía** = dialectal Tocharian B Perlative **yasârsa**).

To understand the possible links of the Mycenaean word to the (Northern) Anatolian tradition as well as (although in an indirect way) to the Hurrian one, it is important to study parallels with the title of the Mycenaean goddess [**po**-]**ti-ni-ja** *i-qe-ja* = **Potni**âi *hiqqʷeiai* "(to) The Lady of *horses*".[297] This epithet is a more concrete variant of the title Πότνια θηρῶν "Lady of the Wild Beasts", which refers to a Cretan goddess who matches Cybele and Artemis in Asia Minor.[298] The Greeks

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[295] Ivanov 1963; Melchert 1994, 20-21. It is not yet clear which member of the opposition was really geminated.

[296] Sayce 1929, 273; Kretschmer 1930, 10: "wir kommen zu der überraschende Annahme, das ἰχ ρ die hethitische oder einer kleinasiatischen Sprache angehörige Form des idg. ê**sôr** = Griech. αρ ἔαρ ist, die im Hethitischen *ißar geschrieben worden wäre"; Heubeck 1961, 81; Gamkrelidze and Ivanov 1984/1995, I, 798. The relatively old age of the vowel in the oblique cases of the Old Hittite noun is supposed by Starke 1990, 558; on Palaic forms important for finding the accentological reason of the absence of -ρ in ἰχῶ, cf. Melchert 1994 , 226 a.o.

[297] PY 312=An 1281, Ventris and Chadwick 1973, 483, 548; Lejeune 1958. On the archaeological evidence, cf. Levi 1951, fig. 4a.

[298] Hanfman and Waldbaum 1969; Laroche 1960c; Diakonoff 1977. Some of the places dedicated to Artemis had names linking them to horses, e.g. Πωλ in Thasos. For recent etymological studies on Artemis, cf. Szemerényi 1994.

themselves had a recollection about an Anatolian origin for the cult of Artemis. In Sparta, where both her images (one related to the initiation of young males and another with the different function of raising small babies) were well integrated into the life of the state[299], "there were Spartan rituals that centered on Lydian themes, such as τῶν Λυδῶν πομπή, the 'Procession of the Lydians' mentioned in Plutarch *Aristeides* 17.10 in connection with the cult of Artemis Orthia. We may compare an event known as the 'Dance of the Lydian Maidens', at a festival of Artemis at Ephesus.'[300]

Mycenaen **A-te-mi-to** = Ἀρτέμιτος (Genitive)/**A-ti-mi-te** = Ἀρτίμιτει (Dative) corresponds to Dorian and Beotian Ἄρταμις, Ἄρτεμις in Delphi, etc., and shows the instability of the vowel **e/i/a**. The name of the Lydian goddess corresponding to Greek Artemis in the form **Artimu-** is attested many times in Lydian inscriptions: Nominative Singular Animate gender **Artimu-** (with loss of the ending before enclitic -**k**: **Artimu-k** in the Lydian-Aramaic bilingual text[301]: Lydian **artimu- ib imsis artimu-k kulumsis** = Aramaic **'rtmu zy klw w'pḪy** "Artemis of Ephesus and Artemis of Koloe"), Dative-Locative **artimu-λ**, Accusative **artimu-ν**, possessive adjective **artimu-lis**.[302]

The Meskene/Emar list AN cited above makes possible a suggestion on the origin of Greek **Arte/i/ami-s** and Lydian **Artimu-** from the Hurrian epithet of the goddess **ar-ta/du-ma-an-zi** = **URU**ᴷᴵ "of the City, belonging to the City", **ar-du-ma-Íe-na-za**.[303] The epithet is derived from Hurrian **ardi-** "city" (Urartian **ardi-ni** "The City = Mu a ir, the capital of Urartu and the cultic centre of the god Haldi", cf. **Ardi** as an Urartian name for a goddess[304]). According to the Meskene/Emar list, that was the epithet of the Lioness-

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[299] Vernant 1986, 15-24.
[300] Nagy 1990, 273, n.18 (with an emphasis on the local Spartan interest in such quasi-foreign rites important for the state and the city).
[301] Kahle and Sommer 1930, 66, with a suggestion followed by all specialists about a purely phonetic reason for the disappearance of the ending before an enclitic (otherwise one might have thought of a zero *Casus Indefinitus*, known in Hittite particularly in proper names).
[302] Heubeck 1969; Gusmani 1964 s.v.
[303] Laroche 1980, 54 and 201; 1989, 11 (n.205). Laroche gives the second cuneiform sign of the name in two different readings.
[304] Diakonoff 1951, 28 a.o.; Arutiunian 1985, 34-35; Meshchaninov 1978, 349-352; Melikishvili 1960, 147-149; 417. As a Northern Caucasian correspondence the stem ***HdËrV** "plot of land, yard, enclosure" is reconstructed on the basis of Archi **dori** "place for community meetings"; Chechen **arda**-Í "allotments,

Ishtar—Hurrian Firingar. This Hurrian epithet refers to the quality of the goddess which was preserved and developed in the archaic Greek tradition for which "the connection between the 'polis' and the female divinity"[305] was particularly important. The link between *the City*-πόλις and a female goddess and her priestess is particularly clear in the cult of Pamphylian Artemis:

> À Pergé, en Pamphylie, dans le sanctuaire d'Artémis *Pergaía*, divinité 'poliade', la prêtrise ne pouvait être exercée que par une femme, citoyenne (*astê*), résidant dans la ville (*ástu*), née de parents habitant la cité depuis trois générations en ligne paternelle et maternelle. Prêtresse à vie, elle se charge de tous les sacrifices publiques et privés; et à chaque nouvelle lune, elle doit sacrifier pour le 'salut de la cité'… Sacrifice *politique* dont la référence à la cité est triple: fonction 'poliade' d'Artémis; appartenance de la prêtresse à la ville-cité sur la profondeur de trois générations; commensalité réservée aux épouses légitimes, vicaires des citoyens les plus intimement associés aux décisions de la cité.[306]

It is the relation alone of the goddess to the City-Polis ("fonction 'poliade'"—"urbanistic function") that is expressed in the Hurrian epithet. Although the adjective referring to this aspect of the goddess might seem to contradict the wild element inherent in her cult, it has been shown in recent studies that in Artemis not so much nature by itself but its carnival relation to society was stressed.[307]

If the name of Artemis was borrowed into Greek from Hurrian through probable Lydian mediation, it may hint at the direction in which cultural influences might have worked in ancient Asia Minor. As the Anatolian goddess was connected to horses, the origin of her name may shed light on the way in which the Greek name for horse was changed. It might have been borrowed from one of the Northern Anatolian Indo-European languages. The weakness of this hypothesis on the borrowing into Greek from Northern Anatolian, despite all its merits, is the absence of any textual evidence for the respective Anatolian forms (incidentally preventing one from deciding on the source of the initial **h**- in the Greek word, which in Anatolian might have had a

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plots of arable land" (Plural); Western Caucasian *d^wP "plain, field" > Abkhaz **a-dw**P, Diakonoff and Starostin 1986, 26; 1988, 175; Nikolayev and Starostin 1994, 557.

[305] Freidenberg 1997, 277. See a special article on this subject by Vernant with an analysis of Artemis' social role: Vernant 1988, 37-38. Cf. on Trezene: Calame 1996, 228.

[306] Detienne and Vernant 1979, 195-196.

laryngeal as its first phoneme). Excavations in progress might help find such documents. In any case it is probable that the Greek term was borrowed (either from a Northern Anatolian language or from a Northern Caucasian one) and because of this alone does not fit into the common Indo-European scheme. All other Indo-European groups surveyed above continued the old tradition without interruption.

It is interesting that (unlike Indo-Aryan and Italic) Greek does not show an opposition of masculine and feminine stems, the former of which serves both functions. Thus it seems that Greek possibly did not participate in the creation of a feminine counterpart[308] to the old name after the two-gender system preserved in Anatolian had been substituted by that consisting of three genders. Also unexpected is the practical absence of typical Indo-European "horse" personal names[309] noticed in Mycenaean (the only example that remains unclear being [**I?**]-**qo-te-wo**[310]). This feature of Mycenaean onomastics differs both from later Greek tradition with its marked predominance of names with first or second element ἱππο-[311], and from the rest of Indo-European, where such names also remained popular. But derivatives and compounds with **iqo**- > ἵππος as well as many Indo-European formulae containing the word were continued in the Greek tradition, although the sound shape of the word had changed. The new shape of Greek ἵππος excludes phonetic similarity to ὠκύς "swift", such as may be presupposed for the Proto-Indo-Iranian-Greek (Proto-Eastern Indo-European) dialect. This substitution caused the distortion of the anagrammatical structure of a poetic formula like Old Indian Vedic **á vâs... â ávas** "swift horses", Avestan **aspàMhô âsauuô** (with the same meaning), which might be understood as a *figura etymologica* by scholars

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[307] Dawkins 1927; Ellinger 1984; Vernant 1989, 183-209.

[308] On the ambiguity of the long vowel in Homeric ἱππημολγός see Chantraine 1979, 25 (cf. there also on a proper name Ἱππή; these forms may still be traces of a lost feminine stem similar to the old Indian one).

[309] With the substitution of a new lexical item for an old one this semantic tradition is continued in such Slavic last names as Russian **Konev**, **Konevskoj**, hinted at in Chekov's short story "A horse last name" ("Loshadinaja familija").

[310] Landau 1958, 231; Milewski 1969, 149-150 (with a strictly cultural explanation for the absence of this type of name).

[311] More than 230 names are recorded in Bechtel and Fink 1894 (Chantraine 1990 s.v. mentions 150 compounds with the Greek noun). In Sanskrit there are approximately 70 names with the corresponding

supposing that the noun was derived from the adjective.[312] The phonetic similarity of the two parts of compounds like ἱππ- κης "riding in a swift chariot" is no longer discernible. In this way they differ from the corresponding (though differently sequenced) Old Indian **á vâspa** = Avestan **âsu.aspa-**, cf. **âsu.aspô.tPma-**, **âsu.aspî-** "having rapid mares", **âsu.aspya** "the richness consisting in rapid mares".[313]

The semantic structure of these Indo-European compounds may help in solving another problem concerning the connections between Hurro-Urartian, Northern Caucasian and Indo-European terms related to names for horses. According to I. M. Diakonoff, S. L. Nikolayev and S. A. Starostin, the Urartian name for horse seen in Menua **[a]r- i-bi-ni** (for which no interpretation in the inscription is given) can be understood as a member of a large group of Northern Eastern Caucasian names for *eagle*, the protoform of which, despite many phonetic and morphological difficulties[314], has been reconstructed by them as *(ʾ**âr)-çwäm**ʾ**V**. These scholars suppose that the

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noin; in Avestan 19 names (in a text that is relatively much shorter than those known in the two other traditions: Milewski 1969, 59, 67).

[312] An old idea of Curtius revived in our century by Güntert and Specht, see bibliography in Lehmann 1986, 15; 1993, 247; BlaŪek 1992, 10 (as an alternative to Sino-Caucasian borrowing). The reconstruction of the Indo-European prototype of the formula in Watkins 1995, 12, presupposes *H_1 in the initial position of each of the two words, see on such a reconstruction above.

[313] Bartholomae 1979, 339.

[314] The main morphological problem is the initial *ʾ**âr**- which, besides the Urartian word, is found in Proto-Nakh * **âr-çiw** "eagle" > (Chechen **är-zû**, Ingush **är-zi**, Bacbi **ar-çiw**), Lak **b-ar-zu**, Proto-Lezghian ***m-ar-ç** "eagle"and Proto-Dargwa *'**ar-çimi**, but is absent in Avar-Andi *çûm?**i** "eagle", Tsezi ***cuhV**, Khinalug **çimir** "bird". The place of metathesized labialization in initial position is phonetically irregular in Lak (**b-**), Proto-Dargwa and Proto-Lezghian (**m-**, where also the feature of being nasalized had moved) and the kind of affricate reflected in Dargwa as well as the initial consonants in several Tsezi languages, see Nikolayev and Starostin 1994, 371 on all these difficulties. On relations to the forms in other languages, cf. Diakonoff 1951b, 115-116; Diakonoff 1978, 31; Nikolayev 1985, 61; Diakonoff and Starostin 1986, 45; 1988, 184; Gamkrelidze and Ivanov 1984/1995, 92, n.23; 457; Xachikian 1985a, 54, 141-142, n.59. A Hurrian equivalent to the Urartian word is not known, but in a Hittite Boǧazköy text of Kizzuwatna provenance the name "golden eagle of Teshub" is given as **e-ri-bu-u-uÍ-ki-iÍ** (K Bo XV 37 I 21), on the basis of which Hurrian **eribuÍki** may be deduced (Laroche 1980, 83), where -(**u**)**Íki**- can be a Hurrian suffix (on other words with this suffix, cf. Xachikian 1985a, 65); on a possible link to Nuzi **erupu**- see: Haas 1982, 228, n.293; on the name of the Urartian city **Erebu-ni**, cf. Ivanov 1993, 119, n.47. If Hurrian **eribu**- is equivalent to Urartian **ar ibi**- the retention of *-**r**- before a lost fricative is exceptional in Hurro-Urartian diachronic phonology, where such groups are usually simplified in the opposite manner through the loss of *-**r**-; it might be seen as a trace of a name of foreign origin. Cf. also the discussion on **er**- "eagle (?)" (Akkadian **erû[m]**) in Neu 1994, 45.

Armenian form **arcui** "eagle" (dialectal **arciw/arciv**) as well as Georgian **arc'ivi** "eagle" is borrowed from Northern Eastern Caucasian; Nikolayev adds to this as another borrowing the Hittite term **ßaÍtapi** describing a bird used in oracles (although it need not be an "eagle", and the phonemic relationship does not seem simple, cf. below on another possible solution).

There is another hypothesis which states that the Urartian term is a relatively late borrowing from Indo-Iranian (cf. Avestan **PrPzi-pya**- "eagle < swiftly-rushing", Old Persian ἄρξιφος· ἀετὸς παρὰ Πέρσαις "eagle in Persian" (Hes.), ἀρδύφιος, ἀρδύβιος, Modern Persian **âluh** "eagle", Old Indian ‡**jîpya**- "flying straight ahead" usually as an epithet of the eagle in the *¶g-veda*[315]). From the semantic point of view the Indo-Iranian forms seem to produce a good explanation for the use of the compound as a horse name. Avestan **PrPz-ra**-[316] = Old Indian ‡**j-ra**- "swift" is closely

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[315] Bartholomae 1979, 354, add. 144; Benveniste 1946, 67; Grantovsky 1970, 291-297 (N 63); Dzhaukian 1982, 136. The ξ in the first Greek form seems to stand for ζ = [z]. As it is supposed that the Indo-European adjective *$H(e)/or\acute{g}$-**i**- had two meanings: "bright, brilliant > white" (Hittite **harki**- "white" = Tocharian A **ârki**) and "swift" (as for instance in compounds related to the Urartian word) it is interesting that Northern Caucasian seemed to have also borrowed an Indo-European derivative from the first use meaning "silver" (Lafon 1933). A remark on the suffixed form of "silver" in Indo-European as different from the root forms in Northern Caucasian (Starostin 1988, 131-132) does favor the Northern Caucasian provenance. As metals are usually named on the basis of their color the adjective should be the original source. Indo-European adjectives always have suffixes. On the age of the use of silver in connection to lead in the ancient world, cf. Ivanov 1983a.

[316] Bartholomae 1979, 355. On the relationship between the suffixes *-**i**- : *-**ro**-: Wackernagel 1905, 59-60; Benveniste 1935, 12, 80; Chantraine 1990, 104.

related to **PrPz-i**- = Old Indian ‡**j**-**i**-, the latter being its substitute in the first part of an archaic compound according to the old Indo-European rule; the archaic use of adjectives in -**i**- in Indo-European compounds is supported by the Hittite name for a bird **pattar-palß-i**- "< wing + broad", where the first root may be identical to *$p(t)$- in the compounds cited above. Later the rule concerning the change of -**ra**- > -**i**- ceased to be obligatory. In a period when the rule had no longer been valid a stem in -**ra**- was combined with the name for a horse in a compound that might be easily reconstructed for the late stage of Indo-Iranian : Avestan **PrPzrâspa**- = Old Indian Vedic ¶**jrâ va**-[317] < *‡**ǵ-ra-akwa** < *H‡**ǵ-ro-ekwo**-. From this Indo-Iranian etymology it follows that the adjective formed from the stem *‡**ǵ**- was used to describe the quick movement of a horse or of a bird; the comparison of horses to birds is a usual one in ancient Indo-European traditions as seen both from mythopoetical texts and from material objects.[318] This semantic interpretation is supported by synonymous compounds: Homeric Greek ὠκύ-πος "swift-footed" (about horses), ὠκυ-πέτης "swift-flying"; with the reverse order of elements: ποδ- κης "swift of foot, fleet-footed" (also ποδ- κεια "swiftness of foot"), πτερυγ- κυς "swift-winged" (Aesch.). Thus these Indo-Iranian forms help in discerning the internal semantic structure (the *inner form* in Humboldt's sense) of this epithet as applying to *horse* and the role of -**i**- in a compound, though the Northern Caucasian form is enigmatic from this point of view. This difference points to a probable borrowing from Indo-European into Urartian and later into some Northeastern Caucasian dialects such as Nakh, Dargwa, Lak and Lezghian. Armenian, where the form may be a normal correspondence of the Indo-Iranian

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[317] Bartholomae 1979, 355. On the relative chronology of this element of a compound, see Wackernagel 1905, 61.

[318] Ivanov 1974. On the emotional side of calling a horse "a bird" (Yagnobi **jarmâr**, **janvâr**) in an archaic Iranian tradition, see Andreev a.o. 1957, 146, n., 266. As B. Vine has observed, the same association can be seen in the suggestion of a possible connection between Luwian **pißa Ĺĺa Ĺĺi-Ĺ** (cf. Starke 1990, 103 ff.) "shine, lightning" and the name of Pegasus, on which see Hutter 1995.

one[319], might have been one of the sources of borrowing into Georgian and the Northeastern Caucasian languages. To the **satPm** dialectal Eastern (Indo-Iranian-Armenian) Indo-European compound *‡ǵi-pyo- there is a **centum** correspondence in Homeric Greek αἰγυπιός "hawk"[320], Ancient Macedonian ἀργιόπους· ἀετός, Μακεδόνες "an eagle in Macedonian" (Hes.) , cf. Homeric Greek ἀργιπόδας "swift-footed"[321]; thus there is a possibility of reconstructing the compound *H‡ǵi-p(t)yo-/**ped**/- for the early period of the history of Indo-Iranian-Armenian-Greek (Macedonian seems closely related to the latter within the same Indo-European dialectal group). Nikolayev, supposing along with Starostin a direction of borrowing from Northeastern Caucasian into Indo-European, suggested that "in Indo-European one may observe a regular substitution of palatalized velars for Northern Caucasian frontal affricates."[322] But as it has been stressed above, there is a possibility for such a substitution only in an earlier period when no affricates existed in Indo-European. If in this case the borrowing should be shifted to the dialectal period when Urartian was in contact with separate Indo-Iranian dialects, such a substitution would have seemed unnatural, since the latter had affricates at that period. Thus the direction of borrowing from an Indo-Iranian dialect into Urartian can be corroborated by phonetic reasoning as well.

In **centum** Western Indo-European the reconstructed Eastern form has its semantic counterpart in Latin **accipiter** "bird of prey, hawk, falcon" identified with Greek ὠκύ-πτερος "swift-winged" (see above on the other combinations of the same type). Just as in a Common Slavic name for *hawk* (Russian **iastreb** < *jasËtr2bË < *Hôk̂-**u**- + **p**e**t-r**- with voicing of the metathesized labial stop), where a **satPm** correspondence to the

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[319] Hübschmann 1897∕1972, 425-426; Acharian 1971, I, 319-320; Greppin 1978, 45; Lamberterie 1978, 251-262. The word belonged to the category of Armenian terms corresponding to those of Vedic poetic language, see above on **ji** and references on the type of Armenian words: Porzig 1954.

[320] D'Arcy Thompson 1936, s.v.; Chantraine 1990, 31; Meier-Brügger 1995 (with further bibliography). It is supposed that the initial syllable has been changed due to the analogical influence of two other words in the same semantic field.

[321] It is supposed that one has to read the Macedonian gloss as ἀργίπους: Kalléris 1954, 106, 238; Chantraine 1990, 104; Poghirc 1983, 43-44.

[322] Nikolayev 1985, 61.

Latin form can be seen[323], it seems that Hittite ßaÍtapi, if it was borrowed, might represent a corresponding form of a **satPm** Luwian dialect (*$HaÍ + tap/b$- < $Hôk + *p_et$-r-, with loss of -**r** in a final non-accented syllable and metathesis of the labial stop of the same type as in the Slavic word).

There are at least two more Northern Caucasian words for *horse* that might be compared to dialectal Indo-European terms.

The local Indo-European term for "foal" *$pôlo$-**s** is found in a group of dialects but still belongs to the relatively old part of Indo-European technical vocabulary since it is attested in Mycenaean Greek (**po-ro**, Homeric πῶλος "foal"), Albanian **pelë** "mare" < *$pôln$â and in all the ancient Germanic languages: Gothic **fula** "foal, colt", Old Icelandic **foli** (masculine), **fyl** < *$fulja$, Old English **fola**, Old High German **folo**. It seems possible to compare it to the Northern Caucasian *$farn$ê, reconstructed on the basis of Avar **x^{w}áni** "horses" (collective form); Khvarshi x**aram** "foal"; Lezghian x^w**ar** "mare"; Western Caucasian *x^w**ara** > Adygh **fâra** "thoroughbred horse".[324] The Northern Caucasian word belongs to a very small class of lexical items beginning with **f**-. From seven words included in this class in the dictionary by Nikolayev and Starostin, two other lexemes (the numeral "five" and the noun "fist" related to it) are also shared with Indo-European.[325] The connection between the Northern Caucasian and Indo-European terms of this class seems beyond doubt. To establish the direction of borrowing one has to keep in mind the relative chronology of the dispersal of

[323] Ernout and Meillet 1994, 5 (-**i**- may be explained by the use in a compound, see above on the old rule); Machek 1957, 177 (with the suggestion **p_et-r**- > *$trep$- > *$trebb$- and of a later change of the geminate *-**ebb**- > -**2b**-); in Hittite the single -**p**- points to a former voiced (or glottalized) phoneme. However, according to Vey, the Slavic group **st** < *pt-, which would have explained **jasËt**- < **asËst**- < ôkË-**pt**-, but in that case the labial stop belongs not to the root in the Slavic word, but to the suffix *-**emb(h)**-.
[324] Nikolayev and Starostin 1994, 425-426. On the Indo-European word, see Lehmann 1986, 130.
[325] Starostin 1988, 119.

Northern Caucasian, which is close to the earliest date of horse domestication (around V mil. B.C.).[326] Thus a Proto-Northern Caucasian term should have penetrated into some Indo-European dialects. The place of the borrowing depends on the historical geography of migrations. At least for Greek as well as for Albanian, which belonged to the **satPm** Eastern Indo-European dialectal group, the possibility of borrowing from Northern Caucasian is quite real. If the word was borrowed from Northern Caucasian, then the Indo-European -**l**- (*-**ln**-) in intervocalic position is the result of the accommodation of the original -**r**- (*-**rn**-) in the source of the borrowing.

There is a possibility of a distant (and accordingly very old) relation between this group of words and the Hittite word **kurka**- "a foal" compared to Greek κύρνος[327], which might be a common borrowing from the same Northern Caucasian stem to which different suffixes were added in each of the Indo-European dialects. The stem in Northern Caucasian might be ***gẇȧlV** "horse" > Nakh ***gile** "horse, steed" > Chechen **gila**, Proto-Tzez-Khvarshi ***guRu** > Tzezi **gulu** "stallion, horse".[328] The Proto-Tzez-Khvarshi root could have been the source of both the Greek and Hittite words, with a characteristic change of voiced into voiceless consonants depending on the rules of Hittite phonology. Another borrowing from the same source (but without a suffix and the diminutive sense connected to it) might be Latin **caballus** "work horse" which ousted the earlier general term in Romance.[329] This word and such dialectal terms

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[326] As the earliest possible area of domestication is near the proposed proto-Finno-Ugrian homeland, a possible link to the Ugrian name for horse reflected in Hungarian **ló**, Mansi **lo(w)**, Khanty **t/law** deserves to be discussed (the Tocharian etymology suggested for the latter does not seem persuasive; see Napol'skix 1996 on a later borrowing in Altaic). It has been suggested (Ivanov 1984) that the Indo-European term can be traced back to an an earlier compound, the second part of which consisted of this word cognate to Ugrian ***lo** and the first of which was the name for "child" spread in different families, but the weakness of the suggestion is the universal character of the first element, see above on Latin **puer**, Yagnobi **pulla**-.

[327] Forssman 1980; Melchert 1994, 132. It is not easy to conclude whether the words should also be compared to Iranian terms like Persian and Tadzhik **kurra** "foal", since the latter is connected to the onomatopoetic appeal to address horses: cf. Vakhan **kurr-kurr** "Come!" in this function and **kurrást** "neighing of a horse", Griunberg and Steblin-Kamenskij 1976, 371-372, 656.

[328] Nikolayev and Starostin 1994, 445-446.

[329] On a possible non-Indo-European source in a language of Asia Minor, see Ernout and Meillet 1994, 80.

related to it as Albanian **kâl** "horse"[330] may have been borrowed from the source common to this Northeastern Caucasian stem. A direct borrowing is excluded because of the difference between the voiced consonant in Nakh and Tzez-Khvarshi and the voiceless one in the Latin loanword as well as between the -**w**- glide in the former and the group -**ab**- in the latter. The possible intermediary language remains unknown, although a language with the consonantal structure of the Hittite (Northern Anatolian) type might be possible. But the term might have had an earlier link to another important word for "foal" discussed above.

Both Indo-European terms definitely connected to the Northern Caucasian lexemes with the initial rare phoneme ***f**-—the numeral "five" and the noun "fist" semantically linked to the first word—show an alternation of the initial voiceless labial stop ***p**- with a corresponding labiovelar *k^w- : ***penk**ʷ**e** > Proto-Celtic *k^w**enk**ʷ**e** "five"[331], Latin **quînque** (with dissimilation contrary to the assimilation in Gothic **fimf** < ***pemp**-); Old English **fy̑st**, Proto-Slavic *$p2stÈ$ "fist": Lithuanian **kùmst&** "fist".[332] The same connection between Proto-Northern Caucasian ***f**- and Proto-Indo-European **p**- alternating with Hittite **ku**- < *k^w- may be suggested also for the names for "foal", but in this case too the difference between -**r**- in Northern Caucasian and Hittite and -**l**- in the rest of Indo-European should be taken into consideration.

5. Some names of wheeled chariots and of related objects.

The borrowing of a word for *horse* should have been connected not only to the domestication of the horse but to the use of *wheeled vehicles-chariots* of a new type. From the works of Childe it is clear that the spread of vehicles played an important role

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[330] Although the main Indo-European word for horse was ousted by this borrowing in connection to the latter, some old formulae were preserved: thus in an Albanian folksong the expression **kualt te putise ze te sh-krehe** "to water (< modern Greek **potisë**) horses and to clean them with a brush" (Lambertz 1959, 200-201) contains a trace of an old Indo-European technical meaning for a verb also preserved in Slavic (Russian **skresti** "to clean" about a horse, **skr-eb-nica** as the name of a special instrument); another dialectal synonym is represented in Luwian **kuÍ-ala**- as a similar name for an instrument, Starke 1990, 327-328, 515.
[331] Thurneysen 1946, 246, § 392.
[332] Gamkrelidze and Ivanov 1984/1995, 361, 366, 747 (with references).

in the early Indo-European migrations. Recent studies[333] have shown an absence of the exact correspondence between the probable area of the domestication of the horse and the early spread of wheeled vehicles, particularly of the light two-wheeled chariots that by the II mil. B.C. had become the main weapon of separate groups speaking Indo-European dialects and of their neighbors. It seems that the intersection of the two achievements—the invention of light chariots (for technological reasons more probable in a region near the Near East) and advanced methods for horse training—was decisive for the Indo-European migrations of the II mil. B.C. as well as for the use of chariots drawn by horses in the armies of the Near Eastern empires of this period. From this point of view the discovery of this type of chariot in Mozan/Urkesh seems extremely important.[334]

A study of the temporal and spatial distribution of the main terms for wheeled vehicles may serve as an introduction to the topic. The word *hu/iluganu(m)* in Old Assyrian tablets from Asia Minor, considered as a borrowing from an indigenous language as well as a Hittite term for this kind of a chariot ß**uluga**-**nni**- (already in the most archaic texts[335]), seems to have been borrowed from

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[333] Haudricourt 1987; Häusler 1985; 1986; 1994; Littauer 1977; Littauer and Crouwel 1974; 1977a; 1979; 1977b; 1986; Piggott 1968; 1969; 1974; 1979; 1983; 1992; Sherratt 1986; Kozhin 1985; Gorelik 1985; Trifonov 1987; Kuz'mina 1997, 87, n.28 (bibliography); Anthony and Vinogradov 1995; Adams and Mallory 1997, 640-641. For earlier literature, cf. Wiesner 1939; Childe 1950; 1951; 1954a; 1954b; Piotrovskij 1962a. The earliest types of Urartian vehicles (carts and chariots) of the II mil. B.C. are described in detail in Esajan 1966, 131-143; 1994.

[334] G.Buccellati, personal communication.

[335] The Old Hittite ritual K Bo XX 18 + K Bo XXV 65 Rs. 7', Neu 1980, 140; 1983, 69-70, n.291. Particularly interesting is the ritual KUB XXIX 1 I 23-24 (a later copy of an archaic Old Hittite text) in which the king says that the (divine) Throne has brought him the power and the vehicle (GIŠß**u-lu-ga-an-ni-en**), on the interpretation of which, see: Ardzinba 1982, 88-89, 194-195 (with literature). Cf. also the role of this symbol in the rite of the tempest: K Bo XII 74 + K Bo XXI 25 + ABoT 9 Vs. I 28; the ritual of Hattic women *zintuhi*: K Bo XI 73 Vs. 14', 21'; a fragment concerning the Hattic god Zithariya: KUB X 61 II 6 5; a fragment on the royal journey to Nerik: K Bo 2691 Rs. VI 5'; the festival of Antahĺum: KUB X 17 I 21, 22, 27; the autumn festival: K Bo XXI 78 III 13; ritual fragment VAT 7474 Vs.II 2', a fragment mentioning the god of Defense: K Bo 3339 Vs.II 9'; a fragment of a rite for the queen and the king: K Bo 2689 Rs. V 8': Alp 1983, 210, 239-240, 252, 286, 290, 296, 358; see also below on this word in connection to the royal palace gate.

Hurrian.[336] It is connected to the Proto Northern Caucasian term for the wheel *__hwPlkwê__ > Chadokolob dialect of Avar __horkó__ "carriage", Lak __harkᵂ__ "carriage wheel axle", Dargwa __ˀarkᵂ__ "axle, carriage" > Akushi dialect of Dargwa __ark__, Western Caucasian *__kᵂ:P__ > Adygh __kᵂP__ "carriage, vehicle". A form having (like __kurka__- discussed above) *-__r__- corresponding to *-__l__- (that has been retained in the Hurrian form just cited, see above on -__l__- < -__r__- in *__pôlo__-) was possibly borrowed into the Indo-European dialect reflected in Hittite, (Hieroglyphic) Luwian and Tocharian: Hittite __hurki__- "wheel", probably also Hieroglyphic Luwian ᶜᵁᴿᴿᵁˢ__wa/i__ + -__ra/i-za-ni/nî-ná/na__ "chariot" (Karkamis A 11b, 3; A 12, 2) with a development of the palatal phoneme according to the __satPm__ type[337], Tocharian A __wärk-ant__- "wheel", B __yerkwantai__ "wheel". The dialectal distribution of the terms seems particularly interesting: a Northern (probably Eastern) Caucasian dialect that was the source of this loanword had separated from Hurro-Urartian before that time, and the Indo-European dialect that borrowed the word is a predecessor of the __centum__ Northern Anatolian (Hittite) and Tocharian and possibly of the __satPm__ Hieroglyphic Luwian, but not of the other dialects (which of course might have lost the word later, as it might have been ousted by new terms related to technological innovations).

From the four Indo-European dialectal terms for "wheel, wheeled vehicle" discussed in recent studies[338], Hittite, Luwian and Tocharian shared this *first* word borrowed from Northern Caucasian, but Tocharian also had another reduplicated term for vehicle (A __kukäl__, B __kokale__ "carriage") going back to the *second* term common to Eastern Indo-European (reduplicated Old Indian __cakra__ "wheel"; Avestan __Çaxra__-"wheel", Middle Persian __chr/cxr__, Parthian __cxr__, Modern Persian (Farsi) __Çärx__, Eastern Iranian Ossetic __calx__,

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[336] Ivanov 1963, 15 (not attested in Hurrian proper); 1980, 115; on Northern Caucasian in its relation to Indo-European: Nikolayev 1985, 62; Starostin 1985, 88-89; 1988, 130; Nikolayev and Starostin 1994, 498.
[337] Starke 1995, 126, n.259. A comparable loss of the initial laryngeal occurs in Milyan (Lycian B). On the Hittite word and its comparison to Tocharian cf. Ivanov 1980, 112-115.
[338] Gamkrelidze and Ivanov 1984 ⁄ 1995, I, 621-623; Delamarre 1984, 125-127; Meid 1994; Mallory and Adams 1997, 640-641; cf. Anthony 1995, 557, fig. 1, where, unfortunately, important terms connected to

Khwarazmian **cxr** "wheel", Sogdian **ÇGr/ÇrG** "cakra", Vakhan **cPtr** "spindle"[339]; Homeric Greek κύκλος "ring, circle", κυκλέω "wheel away, carry forth", εὔ-κυκλος "well-wheeled", τετρά-κυκλος "four-wheeled", the personal name Κυκλεύς = Mycenaean **ku-ke-re-u**[340]; Phrygian κίκλην· τὴν ἄρκτον τὸ ἄστρον. Φρύγες (Hes.)[341]) and Germanic (Old Icelandic **hvêl** < *$k^wek^w_el$-[on] > *hwe[h]wlaz > Old English **hwêol/hweogol** "wheel"[342]). A non-reduplicated derivative from the same root designates "wheel" in Western Baltic (Prussian **kelan** and derivatives like **kelle-wesze** "driver", **kele-ranco** "one of the poles in the frame of the wheeled vehicle"; in Eastern Baltic preserved only in an archaic compound: Latvian **du-celis** < *d^wi- *k^wel- "two-wheeled vehicle"[343]), Slavic (*__kolo__ "wheel", plural *__kola__ "wheeled cart") and Celtic (Old Irish **cul** "carriage"). It can be suggested that Luwian (Hieroglyphic) **zal-al**- "carriage, vehicle", Cuneiform **zal-war/n**- "riding in a chariot" derives from the same root having

[339] The last word (Griunberg and Steblin-Kamenskij 1976, 318) is contaminated with another stem. See on the data: Abaev 1958, 287-288; Oranskij 1979, 140- 142, n.16; Edel'man 1986, 157-158; Benveniste 1929, 91. The Iranian word for "wheel" in its mythological meaning was borrowed into Northwestern Caucasian variants of the Nart folk epics, on the motif of which see Dumézil 1978, 95-122. A probable Kassite borrowing in Akkadian ᴸᵁÍakrumaÍ "an officer related to chariots and horses; a commander of two chariots on a military campaign" (= Egyptian **jdnw n tj-n-˙˙tr**, Edel 1994, II, 24, 30, n.7) belongs to possible Mesopotamian Aryan terms. A link to Old Indian **cakra**- seems probable.

[340] It seems possible to suggest a connection to the name of **Kikkuli**- as representing the **centum** (possibly Northern Anatolian) variety of the stem, but the name is to be connected to the Hurrian name Kiklip-atal (Laroche 1966, 92, n.572) and to similar Kutean names; in all these cases an Indo-European etymology is not absolutely excluded.

[341] In spite of a skeptical remark by Chantraine (1990, 597) the interpretation of this gloss seems beyond doubt because of a number of exact semantic parallels to the representation of Ursa major (Big Dipper) as a carriage: Gamkrelidze and Ivanov 1984/1995, 592; 622; the Old Russian name is derived from the same root as Phrygian. The connections of Phrygian (although the facts known about the language are not numerous) and Tocharian are corroborated by other isoglosses (as well as Greek-Tocharian relations already stressed in the classic study of Benveniste on the dialectal place of Tocharian). It seems definite that Phrygian entered the Eastern Indo-European (Indo-Iranian-Armenian-Greek) dialectal group belonging to the centum branch which included Greek and Ancient Macedonian.

[342] Among possible disputable ramifications cf. Old English **gêola** "month (December/January)", Gothic **fruma jiuleis** "the month before the Yule month"; Old Icelandic **jôl** "heathen festival lasting 12 days" with a generalization of the intervocalic voiced (glottalic according to the glottalic theory) consonant repeated also in the first syllable of reduplication (on the phonological obstacles, see Lehmann 1986, 211, J8); cf. Greek Κυκλει ν , name of a month called after the festival τὰ Κύκλ(ε)ια.

undergone an early palatalization of the initial labiovelar (*k^wel- > *zel- > *zal-).[344] A corresponding verb existed in some Indo-European dialects and can be reconstructed for the oldest periods of the prehistory of the protolanguage[345], but it has undergone semantic shift after the invention of devices based on rotary motion (wheel, spindle, etc.). Some probable verbal derivatives without reduplication are also used in reference to vehicles and their parts in other dialects: Mycenaean **qe-re-me-ne-u** is supposed to be equivalent to πληmνόδετον "a ring with which spokes are fixed to the hub"; cf. Homeric πλήmνη "hub or nave of a wheel" derived from *k^wel-**H**-.[346]

Another (*third*) name for the wheel/cart often shifted to the meaning "road, path, way". It has also been reconstructed for Tocharian: A **wkäm**, B **yakne aikne** "manner, way" < "road" (a semantic parallel to the cognate English **way**), very often as a second part of a compound, A **tämne-wäknâ kakmu** = Sanskrit **tathâgata** = Tibetan **de-bẪin-**
Ꮐ egs-pa "he that walks in the same ways [as his predecessors]"[347] in an archaic construction with a verb of motion. The stem in *-**n**- of this Tocharian derivative from Indo-European ***weǵh**- has been rightly identified in Old Indian Vedic **vâhana**- "any vehicle or draft animal" (**deva-vâhana-s a va-s** "a horse that carries a god" in the *¶g-Veda*[348]), Mitannian (Mesopotamian) Indo-Iranian **waᏚanna** "prescribed path of the

[343] Toporov 1980, 305-307, 310; MaȖiulis 1988, II, 157-158, 160; Eckert 1995, 50-53 (a possible Curonian borrowing according to Bûga).

[344] On the meaning, see: Starke 1990, 337; synchronically Starke suggests the formation as derived with the suffix -**al**-, but historically an old reduplication (intensive ***zal-zal**- or normal ***zazal**-) might have been transformed. The phonetic development, typologically similar to palatalization of labiovelars in the other **satᏢm** dialects (Gamkrelidze and Ivanov 1984/1995, 79-80), can also be seen in several other stems, see Ivanov 1999.

[345] Pokorny 1959, 639. On the Nostratic parallels, see Illich-Svitych 1971, 326-327. The original meaning referred to roundness as a visual archetype.

[346] Plath 1994 (the laryngeal might belong to the suffix as also in *ret-**H**-). The traditional etymology linking the Homeric word to the verb "to fill" (πίmπλημι) does not seem semantically satisfactory: Chantraine 1979, 215. But the suffix -mνη seems to point to an archaic formation.

[347] Jäschke 1987, 565-566 (a modern native interpretation; for the other possible meaning: "Buddha = thus gone or come": Edgerton 1953, 248).

[348] In connection with the Old Indian image of **vâhanas** "the animals which the gods ride" one can suggest a comparison to the Hurrian deities standing on animals in the Yazılıkaya rock pictures (Güterbock 1982, fig. B, C) and a similar Urartian representation of the god Haldi standing on a lion, Khodzhash a.o. 1979, 73, fig. 41, 57-58.

horse during the training"[349], Sogdian ('**nxr**)-**wzn** "path (of the stars) = ring of zodiac"; Crimean Gothic **waghen** "currus", Old Icelandic **vagn** "carriage", Old English **waegn** "wagon", Old Irish **fén** "vehicle"; a related thematic stem with the meaning "vehicle" is present in Homeric Greek ὄχος, pluralia tantum "chariot(s)" (Mycenaean **wo-ka** in Pylos different from **i-qi-ja** in Knossos[350]) corresponding to Slavic *vozЁ and (with morphonemic recoding of Brugmann's law[351]) to Old Indian **vâza** = Avestan **vâza** "vehicle, draft animal"; also common to Greek (gloss ἔχεσφι· ἅρμασιν (Hes.)) and Old Indian (**vahas**- "shoulder of a draft animal") is a stem in *-**s**. One of the most ancient forms among these stems might be Old Indian **vahitra**- "square chariot with pole" (in lexical lists); "boat", Greek ὄχετλα· ὀχήματα (Hes.) and Latin **uehiculum**.[352] In Baltic an -î/**i**- (/-**yo**-) stem can be found in the second part (*vezîs) of the Old Prussian compound **kelle**-**wesze** "driver", **wessis** "sledge for riding", Lithuanian **vâÛis**, **vâÛÁ** "small sledge".[353] A corresponding verb from which all these nominal stems (in *-**n**, thematic vowel -**o**, suffixes -**s**- , -**i**-/-**î**- and *-**tlo**-) have been derived has the technical meaning "to ride on a chariot" in Eastern Indo-European (Old Indian Vedic **vahati** "drive", Avestan **vazâite** "drive", Greek Pamphylian Ϝεχετô), Balto-Slavic (Lithuanian **veÛù**, Proto-Slavic *vezoN), Western Indo-European: Italic (Latin **ueh**ô, Umbrian **aÂveitu** "aduehitô", **kuveitu** "conuehitô"). The root in this meaning has been discovered in Hieroglyphic Luwian **wiza**- "drive".[354]

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[349] Starke 1995, 95-108.

[350] According to Plath 1994 from Proto-Greek *ikkʷiyâ *wokʰâ "a horse-driven vehicle".

[351] If this rule is accepted a remark in Porzig 1954 (in a book that in general should be singled out for its careful investigation of the dialectal relationship of vehicle terms in Indo-European) on the relatively late character of this thematic term loses force. In many Indo-European dialects derivatives of this root acquired the meaning "weight" (originally "weight that an equid can bear").

[352] On the age of the noun and its morphology see: Vine 1993, 122-125; Meid 1994 (late Indo-European or post-Indo-European according to Meid).

[353] MaÛiulis 1988, II, 160; Eckert 1995, 51-65.

[354] Meriggi 1962, 147 (with an antiquated reading of the phonetic sign for the initial syllable); Starke 1990, 308, n.1055, 314, 509, n.1874. Since the voiced aspirated palatal disappeared in Luwian, the -**z**(**z**)- morph should be traced back to the sigmatic suffix *-**sk**-.

Thus the distribution of the verb and its nominal derivations is the same as that of the second term; the area includes both Tocharian and Southern Anatolian, but not Northern Anatolian (at least in this meaning).

A *fourth* name for the wheel/ chariot is shared by Indo-Iranian (Old Indian **rátha-,** Avestan **raEa** "military chariot; carriage", Middle Persian Turfan **rhy** "chariot", Old Persian **u-raEa**- "having good chariots", Sogdian **r**δδ-, Khotanese Saka **raha** "chariot", Ossetic **raetaen-aǧd** "thill < thigh of a cart"[355]), Italic and Celtic (Latin **rota** "wheel", Old Irish **roth**), Western Germanic (Old High German **rad**) and Eastern Baltic (Lithuanian **rãtas** "wheel", plural **rãtai** "wheeled chariot", **dvi-rãtis** "two-wheeled vehicle" = Latin **bi-rotus**, which seems to be a synonym of a similar and probably more archaic compound with *k^w**el**- preserved in Latvian, see above). The word (like the two previous items) is a deverbative noun (cf. the verb reflected in Lithuanian **ritu** "I turn around", Old Irish **rethim** "I am running").[356]

Comparing these data one may suggest several major stages in the development of Indo-European wheeled transport. First, all the terms belong to the period when the dialectal dispersal had already started (probably early III mil. B.C.). The oldest term common to Anatolian (Hittite and Luwian) and Tocharian has links to Northern Caucasian and Hurrian terminology. Connections (still disputable) both to the Northern Caucasian and Kartvelian terms were also suspected with respect to another word related to the harness, which belongs to this earlier period when Hittite had not yet separated from the rest of the dialects including Eastern Indo-European,

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[355] See Abaev 1973, II, 383 on a possible trace in Scythian.
[356] A participial element in Latin **rotundus** may be a trace of a verb that had disappeared: Ernout and Meillet 1994, 578. B. Vine reminds me of the possible identity of the -**H**- in Latin **rota** < *$**rot-éH_2**$ and of the element reflected in the voiceless aspirated stop in Indo-Iranian *$**rót-H_2-o**$-.

particularly the Old Indian dialect continued in Vedic. It is the name for one of the crucial elements of the new type of chariot-yoke. The widely spread stem is of the thematic type in *-**o**- : Hittite **yukan**; Vedic **yugám** "yoke", Nuristani Prasun **yû** , **üyû** "plough"[357]; Eastern Iranian Yazguliam **yoɢ** "yoke", Shugni **yuɢ**, Mundzhan **y gh/yîg**[358], Armenian **lowc**[359]; Greek ζυγόν "yoke"; Old Church Slavonic **igo**; Old Icelandic **ok** "yoke", Gothic **yuk** "pair", Latin **iugum**; Lithuanian **jùngas**, with reshaping of the noun under the influence of a verbal nasal infixed stem similar to Old Irish **cu-ing**- < ***com-jung-os**, Old Indian **a-yu©g-as** "unpaired". As with some other words in the same semantic field with a clear inner form due to the connection to a primary verb (see above on derivatives from ***weǵh**- "drive"), there are several other nominal stems with partly synonymous meanings. A stem in *-**s**- is attested in Mycenaean Greek (Dative plural **ze-u-ke-si** "for pairs", also with a derived -**u**- stem: **ze-u-ke-u-si** "for those who are in charge of the harness", cf. the unexplained -**u**- in Gothic **jukuzi**), Latin (**iûgus**) and Slavic (*iÛ-es-e); a comparison to the Hittite form **i-ú-ga-aÍ-Ía** "yearling" seems possible[360] (the metaphorical temporal development of the main technical meaning of the root is shared by all the ancient dialects as well as its application to different kinds of couples and pairs). In Old Indian (**sa-yuj**-), Greek (σύ-ζυξ) and Latin (**con-iux** "spouse; husband or wife") archaic compounds, the athematic

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[357] In general the diffusion of the plough studied by Vavilov and Haudricourt (Haudricourt and Delamarre 1986; Haudricourt 1987) is connected to that of the wheeled chariot, and many terms are transferred from one field into the other; the details and some special cases are to be discussed separately; for Eastern Iranian see: Steblin-Kamenskij 1985 with references. In the literature on comparative Indo-European symbolic anthropology the problem has been discussed in connection with the role of "the plough with a yoke" among Scythian symbols, Benveniste 1938; Dumézil 1978; Xazanov 1975; Raevskij 1977; 1985, 27.

[358] Andreev a.o. 1957, 366; Griunberg 1972, 392 (**yax** in the text on reaping, 168, sentence 5); Steblin-Kamenskij 1985, 161.

[359] The initial **l**- < ***j**- in the Armenian form, apparently influenced by Northern Caucasian laterals (for other internal Armenian explanations see references in Lehmann 1986, 212, J 12), is particularly interesting for comparison to those Northeastern Caucasian forms of the word with the same meaning that have an initial **r**-.

[360] But cf. Puhvel 1984, 497-499.

nominal stems have been preserved (in a derived social meaning that should be reconstructed for the proto-language). The verb from which all these nominal stems have been derived is present in all the main groups of dialects (on Hittite see below) with an old set of different types of conjugation (nasal stems, sigmatic stem and mediopassive stem in *-**dh**- etc.): Old Indian **yuj**-/**yu**-**na**-**k**-**ti**; Nuristani Prasun **üpP**-, Imperative **yúpu** "to prepare", Kati **yipô**[361], Waigali **yüpoy**, Avestan **yaog**-; Greek ζεύγνυμι, Latin **iung**ô, Lithuanian **jùngiu**. The network of archaic semantic and grammatical connections makes it evident that the name for yoke belonged among the older elements of the Proto-Indo-European language.

The Indo-European terms for yoke resemble Northeastern Caucasian words with the same meaning: Nakh ***duq** "yoke" > Chechen **duq**, Avar-Andi ***ru**λ**:V** "yoke" > Avar **ru**λ**:** ; Lezghian *?**är**λ**:**ᵂ "yoke" > Tabassaran **jurk:-aR**, Tsakhur **ok**, Kryz **uk**-**ar**, Khinalug **ing** "yoke", Western Caucasian ***b(P)GP** "yoke" > Kabardian **bÃP** "yoke", on the basis of which North Caucasian *?**r‰gwË** "yoke" is reconstructed, different from ***rikwV** "yoke stick" seen to be reflected in Lak **ruk** "yoke", Dargwa **duk** "yoke".[362] The forms of concrete languages that may be explained by later multichannel borrowing are particularly similar. As the date of the invention of the yoke is much closer to us than the dispersal of Proto-Northern Caucasian and even of the Proto-Northeastern branch, there is no use in discussing the relationship of protoforms, which might be a scholarly illusion. The word might have been borrowed several times, as is clear for Tabassaran **uRin** "yoke for two oxen" and some other later borrowings.[363] The main source of borrowing seems to be different Indo-European dialects, particularly of the Eastern group: Iranian and Armenian, probably Greek as

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[361] The Nuristani and Dardic forms were based on the analogical reshaping **yujjati** > ***yujjai** > **yuppai** "is joined, is fitting = is made ready"; the Waigali form may have been borrowed from Dardic Pashai: Turner 1989, 607. This case is methodologically important as it shows that the value of Nuristani linguistic forms for historical studies should not be overestimated.
[362] Nikolayev and Starostin 1994, 220, 954; Starostin 1985, 80.
[363] Nikolayev and Starostin 1994, 220-221.

well. Northeastern Caucasian (particularly Avar-Andi, Lak and Darwa) names for the yoke with the initial **r**- may be directly compared with later Eastern Iranian forms like Vakhan **rig** "two plaits made of twisted twigs that fasten a thill to a yoke"[364], Rushan, Huf, Bartang **ray**âg < ***fra**-**yuga** "twisted twigs that fasten a thill to a yoke", Avestan **fr**â-**yaog**-, Old Indian **pra**-**yuj**- "to yoke". Such words can be considered to be directly and maximally close to the prototypes for similar forms in separate Northern Caucasian languages. A comparable problem may be discussed in connection to the Kartvelian terms: Swan ûƓwa-, **uƓwa** "yoke", Megrelian **uƓu**-, Laz **uƓu**, Georgian **uƓel**-Ɠ "yoke" are supposed to be relatively later borrowings from Iranian.[365] In that case, despite objections by Klimov, it might be possible to compare to the type of Georgian **uƓleul**-, Megrelian **uƓul**- "pair, yoke of oxen" such dialectal Indo-European forms as Old lndian **yugala**- "pair, couple" (attested in the *Pañcatantra*), Pali **yugala**- "pair", Dardic Khowâr **juwalu** "couple (usually of humans)", Marâthî **jûval** "pair of twins, pair"; Mundzhan **ghûwela** "twisted twigs that fasten a thill to a yoke", Yidga **ghûelo** "yoke-rope" < ***yûƓelo**, archaic Greek (Homeric) ζεύγλη "yoke-cushion, between neck and yoke"[366]; Latin **iugulum** "throat < *joint", **Iugula**, the name of a star and a constellation. The Semitic facts constitute the greatest difficulty regarding the intersection of several language families in connection to the name for yoke. But if Illich-Svitych was right in connecting the Indo-European term to the Semitic name for shackles, fetters (Akkadian **allu/illi/ullu, 'll** "chains, shackles", Hebrew **'ol**, Canaanite **hullu**[367]), then all the important linguistic groups of this part of the Ancient Near East participated in transmitting the word.

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[364] Griunberg and Steblin-Kamenskij 1976, 438, 274, fig.1-6, 161, block 3; Steblin-Kamenskij 1985, 160.
[365] Klimov 1994, 68- 72.
[366] Steblin-Kamenskij 1985, 160 (see also 163 on the type of Tadzhik dialectal **yuγlol** < ***y(a)uga-d**â**ra**-); Griunberg 1972, 304; Chantraine 1990, 398 (with references).
[367] Illich-Svitych 1965, 364-365. Klimov 1994, 70, strongly opposes the suggestion. Nikolayev and Starostin (1994, 220) accept links between Semitic, Kartvelian and Indo-European, but refuse to consider Indo-European influence on Northern Caucasian.

The history of the word for yoke is particularly important for the whole semantic field, the most important parts of which came from Indo-European into the other groups, although the technological and linguistic exchange and interborrowing was so active that it would be a simplification to search for only one direction.

Besides the names for the chariot (**ßuluganni**), the wheel (**ßurki**) and yoke (**iukan**) in Hittite, three more terms are known which can help reconstruct terminology of wheeled transport. The Hittite name for the thill **ßiÍÍa** is identical to Old Indian Vedic î â "pole of carriage or plough" (**eke a** "having one pole"), Pali and Prakrit **îsâ** "pole of plough"; Avestan **aêÍa** "plough", Modern Persian **xêÍ**; Homeric Greek οἴηκες (Plural) "yoke-rings, through which the reins passed", οἰήιον "tiller, helm, rudder" (with the development of sea-travel meanings typical of Greek and Germanic: Old Icelandic **âr**, Old English **ár**), Slovene **oje**, **ojesa** "thill", Serbian-Croate **oje**, Czech **oj**, Old Polish **oje**, High Luzhitian **wojo**, Low Luzhitian **wójo**, Ukrainian **woje**, Belorussian **ojiÍte** "thill" (Proto-Slavic stem in -**s**-), Lithuanian **iena**, an old Baltic borrowing in Finnish **aisa** < *__oisâ.__ The Hittite verb **turiya**- "to harness, to yoke" is derived from a noun cognate to Old Indian Vedic **dhur** "pole of a car". Since the verb is already used in the oldest Hittite texts (as in the collection of stories about palace officials and in the first variant of the Laws) and the noun had disappeared by that time, the word is important for the chronology of the whole semantic field in Hittite.[368] Corresponding terms displayed an extraordinary wealth of additional meanings in Vedic. The whole mythological picture of the universe was expressed through this terminology of wheeled vehicles. As an example, two lines from the *¶g-Veda* (VII.63.2) may be cited:

> **sam**ânám *cakrám* **pari**â**ví***urts***an**,
> **yád Eta ó** *váhati* **dh***û***r ú yuk**tá ˙

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[368] On a possible correspondence in the Cuneiform Luwian noun **turin**, see above.

> ...desiring to *revolve* **hither the universal** *wheel,*
> **which Eta a**, *yoked* **to the** *pole, draws*

As another similar example, one can also cite the combination ‡**tásya ... dhurí** "by the pole of the Universal Law" (*¶g-Veda* III.6.6 a.o.). In later Brahmanic texts **dhur** as a symbolic yoke becomes the main object of veneration.[369]

To the Indo-European terms connected to vehicles one can possibly also trace back Hittite **iÍmeri**- "bridle", mentioned above in connection to the ritual and social use of the term. Its phonetic interpretation and etymology is disputable: although the Hittite ritual use does not contradict comparison to Palaic (also Northern Anatolian as Hittite) **Íameri**-, used as an epithet of the chief god Zaparwa[370], nevertheless the meaning of the latter is not clear. But the heteroclitic alternation of an archaic suffix -**ri** and -**n**- in **iÍmanala**- "eqerry, groom" makes the ancient type of the noun evident. A comparison to Homeric Greek ἱμάς/Genitive ἱμάντος "reins; halter; leather strap or thong in which the chariot-box was hung" is possible only if the initial **i**- is not added as a purely orthographic device. The Greek term is also comparable to another Hittite word **iÍßimana**- "rope, cord".[371] The latter is derived from the verbal stem **iÍßiya**- < *sH_2-**yo**-, for which a special meaning "to bind a horse" may be reconstructed: cf. Avestan **hita**- "horses yoked together", **Hit**-**aspa**- (mythological proper name).[372]

The next stage after the separation of Northern Anatolian includes Southern Anatolian (Luwian), Tocharian, all the Eastern Indo-European languages, as well as (in another non-reduplicated variant of the second term for the wheeled vehicle) Balto-Slavic, Germanic and Celtic. All these areas are covered by the second and third terms

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[369] See the text of the *Śatapatha Brâhmaˆa* analyzed in connection with the problem of the yoke as a sacred symbol in Indo-Iranian traditions in Dumézil 1978, 177, n.4.
[370] Melchert 1994, 155; on different Greek words compared to this Hittite term, see: Gamkrelidze and Ivanov 1984/1995, 626; Puhvel 1984, 429. Comparison to μήρινθος "cord" does not seem well chosen, since the suffix points to a foreign origin for the word.
[371] Watkins 1995, 454-455, 457.
[372] Bartholomae 1979, 813; Ivanov 1981, 165; Haudry 1978, 205, 260, 427.

for wheel/chariot discussed above. These two isoglosses that are approximately identical enabled the suggestion of such a variation of the Indo-Hittite hypothesis in which, after the separation of Hittite (Northern Anatolian), the Southern Anatolian dialect developed still united with the other groups.

In the following period Luwian and Tocharian do not participate in the isoglosses, but Greek still does. Such distribution is characteristic of the term for axle, having different stems formed from the same root: a thematic stem in *-**o**- in Indo-Iranian (Old Indian **ak a**-, Avestan **aĺa**-), archaic heteroclitic stems in *-**en**-/-**on**- in Greek and Germanic (Mycenaean Greek **a-ko-so-ne** = ἄξονες, plural, Homeric ἄξων, Old High German **ahsa**), -**i**- in Balto-Slavic and Italic (Old Prussian **assis**, Lithuanian **aĺís/eĺís**[373], Slavic ***osè**, Latin **axis**), -**l**- in Italic (Latin **ala**). An old type of compound is represented by the Greek compound ἄμ-αξ-α "four-wheeled wagon; Big Dipper". In Greek tradition the term for axle was used in a cosmological description similar to the Vedic one cited above. The relatively late age of the noun can be inferred from its phonemic shape since the root contains the vowel *Å.[374]

The same phonological feature characterizes the term that was one of the main Mycenaean terms for parts of the harness: **a-mo** (cf. Homeric ἄρμα "chariot"), dual **a-mo-te**, plural **a-mo-ta** (cf. Homeric ἄρματα "chariots"), referring to parts of the vehicle (wheels or axles/frames of chariots[375]). The main terms connected to the construction of chariots are derived from this stem in Mycenaean Greek: **a-mo-te-wo** = *ἁρμοτēϝος "of a cartwright (?)" (Genitive), **a-mo-te-wi-jo** "decorated by cartwrights (?)", **a-mo-te-jo-na-de** = *ἁρμοτει ναδε "towards the workshop of cartwrights (?)"; the full work done over a chariot or lack thereof is described respectively by **a-ra-ro-mo-te-me-na** = *ἀραρμοτμένα / **a-na-mo-to** = *ἀναρμό(σ)τοι. The exact semantic

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[373] Secondary dialectal development: Andersen 1996, 26, 57; on Baltic words see: MaÛiulis 1988, 105; Eckert 1995, 54.
[374] On the specific position of this phoneme, see Gamkrelidze and Ivanov 1984/1995 with references.
[375] Lejeune 1968; Chantraine 1990, 111.

correspondence to Old Indian Vedic compounds **á-ri -ta-ratha** "(whose) cart (is) non-damaged" (as well as the combination **á-ri -ta-s ratha-s** "non-damaged chariot" in the *¶g-Veda*, cf. Avestan **a-iriÍta-** "non-damaged"), **á-ri -ta-nemi** "having a non-damaged rim" (**ári tanemim rátham** "a chariot with non-damaged = whole rims of wheels") makes it possible to suggest a common Eastern Indo-European prototype of such privative constructions at the level of meaning. Close semantic correspondences to this Greek term are found in Slavic (***jarâmo** "yoke with a thill for two oxen", with unexplained length of *â). In Ossetic **ar** "thill", possibly in some other dialects as well[376], the stem was often contaminated with a term for "arm".

Among specific Indo-Iranian-Greek (or maybe Proto-Eastern Indo-European) innovative terms, one can mention Old Indian **amya**- "yoke pin" (in the *Śatapatha Brâhmaˆa*), Lahndâ **sam** "horizontal stick of a yoke which passes under a bullock's neck", Avestan **sim**â < ***sami**- "wooden ring around the neck of a horse attached to a yoke", Mundzhan **sâm** "yoke-peg needed to immobilize the neck of an ox", Vakhan **sam(Íúng)** "vertical pegs on the yoke", **samdarÇ** "a rope binding together the vertical pegs on the yoke", **sPn-vPr** "yoke" < ***sami-bara**-, Ossetic **saemaen** "axle".[377] The term is cognate to Greek κάμαξ which, besides a general technical meaning "pole" ("vine-pole, vine-prop", Σ 563), also has a special nautical sense of "tiller, helm", coinciding with one of the main meanings of Armenian **sami-k'** "yoke pin; tiller, helm". Although it has been supposed that the latter might have been an Iranian (Parthian) loanword in Armenian[378], the parallel nautical meaning in Greek (characteristic of the other Greek terms in this semantic field) may point to an earlier Eastern Indo-European transport term.

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[376] On Eastern Baltic (Lithuanian and Latvian) terms which are considered to be later borrowings from German, see: Toporov 1980, 69 (cf. there also on Gaulish). Cf. also below on Old Indian **ará**- "spoke of a wheel", which may be connected to the same root.

[377] Abaev 1979, III, 64-65; Griunberg 1972, 168, 353; Griunberg and Steblin-Kamenskij 1976, 161, text on agriculture, sentence 3, 274, fig. 1, 445; Steblin-Kamenskij 1985, 161-163.

The next stage seen in the fourth term for wheel/chariot is marked by the absence of Greek and by the beginning of the dialectal dispersal of some groups like Balto-Slavic (with clear Eastern Baltic innovation opposed to an archaism preserved in Western Baltic and Slavic as marginal dialects). To this period the name for hub may belong: Old Indian Vedic **nâbhi** "nave of a wheel; navel", **nâbhyam** "nave of a wheel", Sinhalese **saknäba** "hub" < ***cakra-nâbhi** "nave of a wheel", Old Prussian **nabis** "nave of a wheel, navel", Old English **nafu**, **nafa** "hub of a wheel" (**nafogar** "auger" < ***nabô-gaizaz** "tool for piercing wheel hubs"), Old Icelandic **nǫf**, Old High German **naba** (the transfer of the names for parts of the body to denote parts of the wheel or carriage is characteristic of different Indo-European traditions, see above on Ossetic[379]). Greek has another term probably derived from ***kʷel-(H)**- (see above on Mycenaean **qe-re-me-ne-u**). Dialects that do not participate in the isoglosses of this chronological level have their own original words. An interesting "Scythian-European" dialectal term that spread in Eastern Iranian, Albanian, Balto-Slavic and Germanic may be seen in Ossetic **fsondz** "yoke" (**fs**- < ***sf**- < ***sp**-), Albanian **pendɛ** "pair of yoked oxen", Latvian **spanda** "a rope to bind a plough to the yoke", Old High German **spannan** "to stretch" (German **Ge-spann** "team, couple"), Old English **spinel** "spindle".[380] Ossetic **stî/evdz(ae)** "vertical pivot connecting a yoke to the thill" is supposed to have entered a similar isogloss, since comparable technical terms are found in Baltic, Slavic (Russian **spica** "spoke"), Germanic and Latin[381], but only some of these words are specialized in meanings related to vehicles.

To the period of separate dialectal migrations of some Western Indo-European dialects belong such local isoglosses as the word common to Italic (Latin **currus**) and Celtic (Old Irish **carr**, Gaulish **carros** > Latin **carrus** "four-wheeled chariot") but known

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[378] Benveniste 1964, but cf. Dzhaukian 1982, 136.
[379] Abaev 1973, II, 149, suggested that the Indo-European term for "navel" had been borrowed into Western Caucasian, but for a different explanation of these words see: Nikolayev and Starostin 1994, 306. On Old Prussian as an archaism cf. Eckert 1995, 53.
[380] Abaev 1958, I, 485; 1965, 9-11; Delamarre 1984, 123.
[381] Abaev 1979, III, 152; Delamarre, ib.

also to a certain **satƏm** dialect (probably of a Paleobalkanic Thracian or Southern Anatolian type) from which the gloss σάρσαι· ἄμαξαι derives.[382]

The appearance of the fifth name for vehicle/road **we/ort-on**- (> Avestan **vâÍa** "vehicle", Western Iranian Parthian **wardyûn** "chariot; vehicle", Eastern Iranian Sogdian **wrtn** "chariot", Ossetic **waerdon** "cart", Mesopotamian Aryan **wartanna** "circular track for training horses")[383] could be assigned to a period of the separate development of Indo-Iranian. The term from the ancient Alan dialect was borrowed into Nakh (Chechen **varda[n]**, Ingush **vorda** "cart"), Lak (**warda** "two-wheeled cart") and Abkhaz-Abaza (Abkhaz **a-wardƏn** "cart", Abaza **wandƏr** < **wardƏn** "cart").[384] Some of the Indo-Aryan terms, correspondences to which in the other dialects are not clear, may be considered either innovations of the last period or archaic survivals (e.g. Old Indian Vedic **ará**- "spoke of a wheel", Panjabi **ar** "one of the crosspieces in a cart-wheel", Oriya **ara** "felloe of a wheel"[385]).

Among verbs related to vehicles and horses, the prototype of Old Indian Vedic **abhi dhâ**- "to harness, to yoke", **abhidhânî**- "halter", Avestan **zaranyô.aiwiδâna** "having a golden rein" (in a long series of epithets for a horse: Yt. VIII. 18)—cf. Ossetic **zaerîn** + **(w)idon/jidonae** "rein(s)", **widadz** "bridle"; Khotanese Saka **byâna**- "rein", Pamirian Sarykol **wiδân**, Yidga **awlân** "rein"[386]—can be referred to Proto-Indo-Iranian.

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[382] Porzig 1954; Ernout and Meillet 1994, 102, 160.

[383] Abaev 1989, IV, 92; Gamkrelidze and Ivanov 1984/1995, 465, 623.

[384] Abaev unpublished, 335-336; 1989, IV, 92. As Abaev has suggested, the borrowing of these terms shows that wheeled vehicles were introduced into the Caucasus by Alanian invaders. This fact demonstrates that the borrowing of another term for "wheel/wheeled chariot" (possibly of another more archaic type) cognate to Hittite **hurki**- "wheel", which went in the opposite direction, should have occurred before the speakers of Proto-Northern Caucasian had come to the Caucasus from more Southern areas (according to Starostin's suggestion, see above). To a much later period belong such Northern Caucasian borrowings in Ossetic as **g°yffae** "body of a cart" from Kabardinian **gufä** "thill", Abaev 1958, I, 529.

[385] This term, which enters some widely spread compounds (Old Indian **araghatta**- "wheel for raising water", **nemiyâra**- "felloe-spoke"), might originally have had some connection to the stem of Ossetic **ar** "thill" (see above).

[386] Bartholomae 1979, Reichelt 1978, 395, 503; Abaev 1989, IV, 107 (with a discussion on the phonetically irregular correspondence of the closely related Avestan and Ossetic terms).

An important innovation in this semantic field in Iranian languages is a general term for horseback riding: Avestan **bar-** "to ride horseback"[387], Old Persian **asa-bâra-** "rider"[388], Middle Persian Pahlavi **asaβârân** "riders"[389], Modern Persian **suvar** < **asvâr**, Eastern Iranian Khotanese Saka **a a-bâra-** "rider", Sogdian β**'r'k** "rider", Yagnobi **vóra** "rider; horseback"[390], Ossetic **baraeg** "rider". In Shugni-Iazguliam and Ishkashim Pamirian languages a new name for horse is derived from this stem: ****bâraka-** > Shugni **vorj** "horse", Iazguliam **varâg**, Ishkashim **vPrôk** "horse", Sarykol **vProk**, **vorak**, Rushan **vûrj** "horse", Ossetic **bairag** "foal", cf. in Western Iranian Pahlavi **bârak**, Modern Persian **bâragî** "horse".[391] In the ancient Alanic (Scythian) dialect the names **Anbal** (known in the XII c. A.D. from Old Russian chronicles) and Ανπαλαν (attested in Old Alanic Zelenchuk inscriptions of the X-XII c. A.D.) derive from the same stem as does Modern Ossetic **aem-bal** "companion", cf. also **bal** < ****bâr-ya-** "a group, detachment, gang < *detachment of riders", **balc** "travel, trip; military excursion (in the

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[387] Bartholomae 1979, 936, meaning 8, n.14 (from ****bhur-** "to move quickly", attested in this original function in Sanskrit).

[388] Kossowicz 1872, 12; Bartholomae 1979, 219, add. 121

[389] Perixanjan 1973, 440; 1983, 17. On the borrowing of Persian **asbâr-** in other medieval Iranian and Middle Indo-Aryan documents, see: Livshic 1969, 66, n.95 (with references); Steblin-Kamenskij 1981, 323; cf. Lukonin 1987, 242, n.48.

[390] Andreev a.o. 1957, 346. The typical Yagnobi expression corresponds to the parts of the Old Iranian compound: **asp‰vóra** "horseback" (ib., 15, N1, sentence 75; 101, N17, sentence 10; 139, N28, sentence 29; 144, N28, sentences 68 and 77; 154, N31, sentence 32; 193, N43, sentence 15; 196, N44, sentence 10 a.o.). The phrase **vóra vunáy-t vóra vu** "you sit down on what you are going to sit" is used as a euphemism when the name of a horse is avoided (ib., 346); cf. in the Yagnobi secret language **rËbÇdËyma** "horse = broom-tail" (in a folk narrative: **rËbÇdËymóte rítis pártowt** "throw him to the horses", ib., 315 with parallel names for animals in the other Pamirian languages), the Tadzhik (Persian)-Yagnobi secret name for the horse **dym-zîr** "horse = tail-broom" (Xromov 1972, 167, without interpretation); although the order of the elements is different, the Iranian word for *tail* is present in both the "secret" (taboo) compounds, cf. the combination of this noun (Yagnobi **dËym**, **dum**, Sogdian δ**wnph** = **δ**umb** "tail", δ**wnp'k** = **δ**umbâk** "having a tail", Benveniste 1929, 94) with the name for horse in a number of stories: Andreev a.o. 1957, 88, N 10, sentence 26 (**ásp‰dúmesint**), 94, N 14, sentence 43 (**áspt‰dúm‰**), 189, N 41, sentence 71; 206, N 44, sentence 65 (**aspP dúym‰s**).

[391] Morgenstierne 1974, 85-86; Abaev 1958, I, 232, 237; Sokolova 1953, 202, Yazguliam text 1, sentence 27; 1973, 13; Andreev a.o. 1957, 346.

traditional folk epics)" < ***bâr-ti**, **bal-xon** "leader".[392] As Nikolayev and Starostin have suggested, Alanic (Scythian) ***bal-ti**- was borrowed into Lak (**burt:ij** "on horseback", **burt:ijhu** "rider", Proto-Darwa ***murta:** "rider" > Akushi dialect **murda**, Chirag dialect **mart:a**). It is also supposed that the name for horse in Avar-Andi (***bar-ti** > Avar **bárti** "stallion"), Lak (**balÇan** "horse"), Darwa (cf. Akushi **bartken** "deer" with a semantic shift) and Lezghian (**balkan** "horse") are old loanwords from Alanic, as are Chechen **bêrî**, Ingush **bäri** "a fine guy, dependable horseman".[393] This etymology suggests that horseback riding (probably of a more sophisticated kind) was introduced into the Caucasus by Alanic invaders, as was at least one type of wheeled vehicle. The term for this type of transport had been an Iranian innovation. Corresponding Indo-Aryan words with the meaning "horseman, rider, groom" were borrowed from Middle Iranian into Indo-Aryan at a relatively late period: Prakrit â**sa-vâra**-; Lahndâ **haswâr**, Pânjâbi, Gujarâtî, Marâ†hî **asvâr**, Hindi and Kumauni **aswâr**, Oriyâ **asuâra**, Old Mârwâ<u>r</u>î **asavâra**. Some of them were changed in a sort of accommodation to Indo-Aryan forms: Sanskrit **a vavâra**- "horseman, groom" (first attested in the *Śi upâlavadha*); Niya Kharoshti Prakrit **a pa-vara**-, Kashmiri **a Øwâr**.[394] Only some Indo-Aryan dialects have a trace of another compound derived from the combination of the Indo-Aryan term for horse with the term for rider (Prakrit and Pali **ârôha**, cf. Niya Kharoshthi Prakrit

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[392] Abaev unpublished, 42, 57, 262, 266; 1958, I, 135, 232-234.

[393] Abaev 1958, I, 237; Nikolayev and Starostin 1994, 285. Alan-Chechen connections were first studied by Abaev in his important work of the early 1950's, prohibited by official censorship and never published: Abaev unpublished. Among other words, Abaev suggested that Ossetic **rox** "bridle, reins" was borrowed into Chechen **urx** (Plural **arxaÍ**), Ingush **urx**: Abaev 1973, III, 422. Nikolayev and Starostin (1994, 234-235) suggest a proto-Northern Caucasian stem *ˀ**xwîrî** "bridle, reins" (see above on a problematic link to the Urartian term). In that case this Ossetic word (probably as was an enigmatic folkloric name for a precious bridle **xaerx**, Abaev 1979, IV, 182; 1958, I, 193, see as a Dargwa parallel Urakhi **hurhur** "bridle") was borrowed from Nakh (or another Northeastern Caucasian language), as was Ossetic **baex** "horse": it comes from Nakh ***baqe** "foal" > Chechen **beqa**, Ingush **baq**: Abaev 1958, 256; Nikolayev and Starostin 1994, 1049.

[394] Turner 1989, 41, N926.

arohag'a "saddle (?)"): Sanskrit **a vâroha** "rider" (*Kathâsaritsâgara*), Pali **assâroha** "horseman", Sinhalese **asaruvâ**.[395]

The Ossetic words concerning vehicles (discussed above: **calx** "wheel", **raetaen-aǧd** "thill", **ar** "pole in a cart; thill", **saemaen** "axle", **fsondz** "yoke", **waerdon** "cart"[396]) belong to different chronological strata of Indo-European dialectal vocabulary. In this they differ radically from the lexical group of words concerning horseback riding, most of which belong to the Iranian layer or entered the language much later: -**tong** in compounds like **aex-tong** "strap, belt, thong serving as a support", **dymi-tong** "tail belt"[397], cognate with Afghan **ta-tang**, Persian **tang**, Kurdish **tang** "strap"; a compound **aeǧd-yncoj** "stirrup" (with the same first element as the second one in the Ossetic compound word for thill discussed above + **aencoj** "to support", from a preverb-verb combination ****ham-ʦ[y]âna**-); **zǧaellagkom** "bits" (a compound with an inner semantic form "metal + mouth", for which parallels exist in many linguistic traditions of Central Asia, including Yenisseyan and Tibetan); a verbal derivative **aeftawgae** "horse-cloth" (from **aeftawyn** "throw over, to tie horses to"); **(j)aexs(ae)** "whip, lash" with unclear etymology; some of the terms are borrowed as **sarǧ** "saddle" (from Arabic), **dû/oǧ** "(funerary) horseraces" (perhaps from Turk).[398] The study of this group

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[395] Ib., 41, N929, 60, N1333 with further references.

[396] The terms for the rein (**widon**, **widadz**) occupy a specific place, since a corresponding term in the *Ṛg-Veda* refers to a horse being yoked onto a chariot, and beginning with the *Avesta* the Iranian terms refer to horse-riding.

[397] On Eastern Iranian terms for the tail of a horse, see above in connection with the Yagnobi secret names for the horse. On the second part of these Ossetic terms, see: Abaev 1958, I, 222-223, 382. Although the stem ****twengh**- "to press in on" seems to be old (Pokorny 1959, 1099; Watkins 1985, 72), its use with respect to the horse is an Iranian innovation.

[398] On these words, see: Abaev 1958, I, 122-123; 1989, IV, 308; 1958, I, 114-115; 564; 1979, III, 34-35; 1958, I, 373-374.

of terms throws light on the chronology of the development of horseback riding. It appeared early in the history of Iranian dialects after their separation from Indo-Aryan and other Aryan groups. Some general terms (such as *sed- "to sit") acquired in Iranian a specialized meaning connected to riding a donkey (Bactrian **x**αροβαλανο with a possible meaning "sitting on a donkey"[399]) or horse, but this meaning cannot be reconstructed for Proto-Indo-European. This conclusion is corroborated by the data from other Indo-European dialects. Only some of them (such as Baltic, Germanic and Celtic) have terms specialized for horseback riding, but they derive from the terminology of movement particularly connected with vehicles, cf. for instance Lithuanian **jóti** "ride horseback" cognate with Hittite **iya**- "move by vehicle".[400] A recent suggestion concerning the Proto-Indo-European form reflected in Latin **eques** "cavalryman = knight (a social status); horse" = Homeric Greek ἱππότα "horseman, knight" as an Indo-European word for horseback rider[401] still relies on the relatively late development of the individual dialects. Judging from the linguistic data, one should conclude that, if horseback riding really began at the turn of the IV mil. B.C. before the dispersal of Proto-Indo-European, it did not leave traces in the vocabulary of the later dialects: the older terms connected with horseback riding were not specific or may have been ousted by later terminology. Thus it cannot be proven that this type of ancient (probably quite primitive) horseback riding had originally been connected with Indo-Europeans. Since archaeological traces of horse riding, at least in its rudimentary form, become numerous in Northern Kazakhstan in the second half of the IV mil. B.C., the Proto-Yenisseyan language is a likely candidate. And so the possible link between

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[399] Livshic 1969, 60, with references on comparable Iranian (Scythian and Ossetic) terms; Steblin-Kamenskij 1981, 323-324.

[400] Gamkrelidze and Ivanov 1984/1995, I, 627. The main data have already been collected in Buck 1988, 714-715 (meaning *a*, mostly denoted by verbs derived from the name for horse). Some of the verbs that Buck gives with meaning *a* ("to ride horseback") are found in the most ancient languages under meaning *b* ("to move in a vehicle").

[401] Meid 1994; cf. Adams, Mallory and Miller 1997, 277. It seems worth noting that a comparable suffix can be seen in Cuneiform Luwian **a**-**a**Í-Íu-u-ut-t[i (KUB XXXV 100 Rs. 3, Starke 1985, 408; 1995, 118, n.236); according to an old suggestion by Sturtevant (recently discussed again by Schmalstieg) the sign -**u**- might have a phonetic value [**o**] as in Hurrian cuneiform writing. Unfortunately, the text is broken, and the meaning of the derivative in Luwian is unclear. A similar suffix -**uti**- can be supposed in Lycian **axuti** "sacrifice" but there it alternates with -**ãti**- (see above).

Proto-Yenisseyan and Proto-Indo-European terms for horse (see above) is particularly important.

The Indo-European proto-language had a general term for taming or domesticating animals and raping women, from which several dialectal names for oxen are derived[402]; this might be a sign of a more ancient period. In some traditions, particularly in Homeric Greek, the root (as in ἱππό-δαμος "horse-taming" of the Trojans[403]) can be applied to the taming of horses, but the linguistic evidence is less promising than with respect to the earlier sphere of cattle-breeding. The acquaintance with the domesticated horse can be considered as roughly contemporaneous with the end of the common Proto-Indo-European period. It seems reasonable to find in the distribution of words connected to this field of activity, particularly the distribution of names for vehicles and their parts, traces of those migrations accomplished by means of these new technological devices.

Among the Hurrian terms related to vehicles and rotary motion, Hurrian **tiyari- (t-)** "spindle, chariot" seems particularly interesting. The first meaning is attested in the Ras Shamra vocabulary (RŠ quadr. 137 II 22): Hurrian **te-a-ri** = Sumerian **SUM.BAL** = Akkadian ***PILAKKU*** = Ugaritic **pilakku** "spindle". There are several places in Hurrian rituals where the word ^{GIŠ}**ti-ya-ri-ta** can be translated as "spindle" (or something similar), such as in a Boǧazköy list of objects where it is mentioned after a ladder; a borrowed Luwian noun probably had the same meaning.[404] But at two places in the Hittite translation of the Hurrian epic song of Ullikummi, the meaning "military chariot, wheeled vehicle" is evident. A description of a battle includes the lines: ^D**U-aÍ-kán** ^{GIŠ}**ti-ya-ri-da-aÍ Ía-ra-a ga-aÍ-ga-aÍ-ti-pa!-aÍ ma-a-an wa-at-ku-ut** "the God of Thunder (= Teshop) jumped up on the chariot as when it goes up from the royal palace gate" (KUB

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[402] Gamkrelidze and Ivanov, ib., 403-4, n.23; 491.
[403] Bearing in mind the legend of the Etruscans' Trojan origins, the Etruscan term δάμνος "horse" (Pallottino 1980, 429) seems intriguing. On the meaning of the Indo-European root, cf. Benveniste 1955; it seems possible that it referred to a more cruel and primitive type of domestication.
[404] I Bo T II 129 Vs. 5, Haas and Wilhelm 1974, 178; Starke 1990, 219.

XXX III 106 21).[405] In a damaged passage in the beginning of the same description (ib. 3-7), a logographic denotation of a military chariot is used twice in the same context (with the same verbs); after its second use, the word ^GIŠ**ti-ya-ri-ta** appears before the verb **ni-ni-in-ki-iĺ[-ki-iz-zi]** "he is winding up", which should refer to the yoke or the horse team.

Hurrian **tiyarit** "spindle, chariot" is cognate with Western Northern Caucasian *t:arPdP > Proto-Abkhaz-Tapant *darPdP > Abkhaz **(a)-dardP** "spindle" (Bzyb dialect **a-dPrdP**), Abaza **dadPr-**; the Eastern Northern Caucasian forms (*tîrungV "spindle" > Dargwa *duruk > **durug**, Lezghian *tinug > Archi **tung** "spindle's pivot"), though comparable to Indo-European *tork^w- "spindle"[406], are definitely far from the Hurrian word. In this rare case, the Hurrian form coincides with the Western Caucasian and not with the Eastern one. The Hurrian and Western Caucasian words (in which the second *-d- might be due to assimilation) may also suggest parallels in Greek τροχός "wheel, potter's wheel", Armenian **durgn** "potter's wheel", Genitive **drgan** < *dhrôgh-; Old Irish **drogh** "wheel".[407] It seems that when the idea of rotary motion was discovered, its early technological applications, as well as corresponding terms, spread among the Indo-Europeans and their neighbors who spoke Northern Caucasian dialects; the form may show a relatively later dialectal level of borrowing.

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[405] The word for palace gate **kaĺkaĺtipa-** (from Hattic, cf. Hattic **aĺka-** "gate", Ivanov 1985, 43) was written with the wrong sign (-**ya**- instead of -**pa**-, which both contain similar parallel horizontal cuneiform lines), probably a scribal error. The whole section dealing with this passage in Starke 1990, 219-220, is wrong, since the meaning of the word is known and is not a hapax. For a text describing the appearance of a royal vehicle (**ßuluganni-**) coming from the palace gate (**kaĺkaĺtipa-**), see: I Bo T I 36 I 8, 67; II 26-28; IV 27, Jakob-Rost 1965, 182-184; Ardzinba 1982, 143, 147, 219, n.191; Alp 1983, 106-11. Starke's remark on the chariot of Teshop is correct but should be applied directly to the text (without the unnecessarily complicated metaphorical scheme).

[406] On this comparison and on Northern Caucasian, see: Starostin 1985, 85-86, 89; Nikolayev and Starostin 1994, 993. According to Abaev 1949, 313; 1989, 65, the Abkhazian word is derived from Ossetic **waerdaert(t)** "a heavy ring put on the spindle to make it stable" < *vartaEra- "rotating instrument" (cf. Yagnobi **watra** "mini-spindle"). If it is an old borrowing in Hurrian like the word for fire (see above), the source should be Proto-Iranian, and the change due to the reshaping of the beginning of the word has to be ascribed to Proto-Western Caucasian, making this hypothesis tenuous.

[407] On the Indo-European word, see Adams and Mallory 1997, 640-641.

Several terms in Indo-European, partly discussed above, have been reconstructed which refer to the harness and its details.[408] Many formal difficulties among them are connected with one represented by Mycenaean Greek **a-ni-ja**, **a-ni-ja-pi**, **a-ni-jo-ko** "charioteer, reins-holder", Homeric νία "reins", νί-οχος "holding the reins, charioteer" (Laconian ἀνιοχίον, without aspiration), Middle Irish ê**(i)si** "reins, bridle", Old Indian **nâsyâ** "bridle passing through a nose" (with probable influence from the word for nose), and are comparable to several technical terms denoting a hook (Old Prussian **ansis**), a handle (Latin â**nsa**), perhaps with an original stem in *-**m**- (> -**n**-).[409] If one accepts this reconstruction and considers the meaning connected with the horse harness as primary, a possible Northern Caucasian match could be found in ***HxPmV** "leather strip, rope, string" (> Nakh ***mɦêxV** "harness thread", Avar-Andi *ʔ**inλo** > Tindi **iλa** "leather rope for donkey tethering", Proto-Tsez-Khvarshi *ʔ**öλ** "leather rope", Lak **xumu** "rope, string", Western Caucasian ***xa** "thread in a spindle"[410]) on the one hand and in Hurrian **himz**- "to bind, to tie up" (**hi-im-za-at-hu-u-Ši** = Hittite **an-da iŠ-ßu-zi-ya-it** "girdled"[411], K Bo XXXII 13 I–II 10-11) on the other.

6. The Hurrian Voluntative in -**l**- : an areal feature?

The Hurrian epic text begins with the formula **Ši-ra-ti-li** "I would like to sing", 1st Person Singular Voluntative of the verb **Šir-âd**- "to sing, to narrate"[412] (K Bo XXXII 11

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[408] Gamkrelidze and Ivanov 1984/1995, 621-627; Delamarre 1984, 117-127.

[409] Toporov 1975, 92-93 (with bibliography); Chantraine 1990, 413; Watkins 1995, 7-8, n.1 (reconstruction *H_2**ans-iyo/aH_2**).

[410] Nikolayev and Starostin 1994, 623.

[411] Neu 1996, 248-249. The Hurrian verb may be linked genetically to Proto-Dargwa *-**imx:Vr**; on the different variants of the reconstruction, cf.: Starostin 1985, 86; Nikolayev and Starostin 1994, 655. A connection with the Indo-European word for girdle ***yôs(-to-)** can also be suggested. But the morphonemic relations between all these words seem too complicated, and some of these hypothetical etymologies should perhaps be abandoned.

[412] Neu 1994, 8, 30, 33-34, 38, 41, 257-258; 1988, 243, n.33; the semantic link between Hurrian **Širi** = Hittite **kapuwar** "enumeration, computation, number" and **Šir-âd**- "to sing = narrate" (cf. Chamalal **al-id**- "to read" < *-î**ʒwĒl** "to count", Nikolayev and Starostin 1994, 628-629), as in XVI-XVII-century English "(ennobled) numbers" (R. Herrick; *numbers* as opposed to *prose* in Shakespeare) in the meaning "verses,

Vs. I 1). Two other similar verbal forms follow: **ta-al-ma-aĺ-ti-i-li** "I will praise" (ib. I 2-3; derived from the stem of **talmi** "great" by means of the verbal suffix -aĺt-) and **kat-ti-il-li** "I will speak" (ib., I 4 and 7; the stem of the verb **kad-** "speak" in -**il**-). In the next part of the bilingual composition, a Voluntative form based on another stem (in -**ul**-) of the same verb is used: **ka₄-du-ul-li/ka₄-tú-li** "I will add (to this) = I will give you another fable" (ib. I 23-24; 25; 40; IV 7; 8; 21; 33; 34; 53; 54). In the bilingual Hurrian-Hittite text, the modal forms of the other persons in -**l**- with other morphs are also used: **a-me-la-a-an-ni** "let (the fire) burn him" (Optative, with a sequence of two modal elements as in Urartian forms in -**le-ne**; see above on the whole formula in connection with the name for fire), **i-ti-la-an-ni** = Hittite -**ma-na-an wa-la-aß-zi** "let (the god Teshop) strike him" (K Bo XXXII 14 I 6-7), Hurrian **sí-ik-ku-ú-ul-li** = Hittite **ma-an… ar-ßa(-)du-wa-ar-na-at-ta-ri** "let (his arm) be completely broken" (ib., I 47-48 = II 47-48; Rs. 37 = 43-44); Hurrian **e-ße-eb-ĺu-li** = Hittite **…ma-an…ú-i-ĺu-ri-ya-at-ta-ri** "let it be constricted" (ib., I 48-49 = II 48-49; Rs. 37 = 43-44). Such combinations confirm that in the dialect of the bilingual text, as in other variants of Hurro-Urartian[413], the marker -**l**- in combinations with other morphs in the same agglutinative chain expressed different modal meanings. Among them, the Voluntative forms of the 1st Person (also known in the Mitannian letter and in other dialects) stand out because of the unusual typology of addressing an order to the self.

Although such forms are typologically unusual, they are encountered at approximately the same time in three different languages belonging to three different families but in cultural contact with each other: Hurrian, Hittite and Akkadian. The morphs expressing this unusual meaning in all three languages contain -**l**- and in general can thus be compared to one another (keeping in mind all the difficulties of

poems" can be connected with the counting of the number of the verse units; the conscious approach to the structure of a musical and metrical poetic composition may be deduced from the cuneiform notation of a Hurrian song. E. Neu suggests the parallel German **Zahl** "number": **erzählen** "to tell a story"; B. Vine adds English *recount, tell* "count" (Shakespeare), Modern *bank-teller* and *tell a story*. On the following Voluntative forms and their Hittite correspondences, cf. Neu, ib., 35-36, 37, 105-106, 123-124; 151-152, 154 (with bibliography).
[413] Xachikian 1985a, 104ff.

comparing grammatical features of languages genetically different from one another or related only in a distant way).

In the bilingual text, the Hittite Iterative forms of the Present Indicative are used as translational equivalents of the Hurrian Voluntative: **[kad-ul-li]** = Hittite **[mem-i-Íki-mi]** "I shall speak about more things".[414] A corresponding Hittite form of the Voluntative (or 1st Person Singular of the Imperative) of **mema-** (-ßi conjugation) in the Middle Hittite period is not yet attested (the form **me-ma-al-lu** "I will speak" occurs twice in the prayer of King Muwatali[415]); few forms of the -ßi conjugation like **ak-kal-lu** "I will die" belong to Middle Hittite. But according to Benveniste's suggestion, accepted by several other scholars, the formation of the Voluntative of the **-mi** conjugation of the type **eÍ-li-t/eÍ-lu-t** "I will be" (with a parallel form **aÍ-all-u**) might be very archaic, since it can correspond to Old Lithuanian **esle**, Slavic ***jestÈ** + ***li**, Tocharian B **nasäl** < ***no-es-l-**, A **nesalle**; the protoform for Balto-Slavic is reconstucted as a combination of a particle (Old Prussian **lai**) with a verbal form.[416] In that case, one may simultaneously see in these forms an original Hittite form in **-l-u-t** (the second element in the agglutinative chain being the usual morph of the Imperative, the third one a mediopassive ending probably < *-**dh**-) and a form similar to the Hurrian voluntative in -**li**. The -**l**- (also found in Hittite in isolated modal forms like **dalug-nu-la** "that should be made longer" and in some nominalizations based on verbs) can be compared to the Lydian infinitive in -**l** and past tense 3rd Person ending -**l**[417]**,** thus presenting an isogloss uniting

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[414] On the meaning of the form in archaic texts: Dressler 1968, 218, 225; Hoffner and Güterbock 1986, 256-263.

[415] KUB XXX 14 III 74; VI 46 IV 42; Hoffner and Güterbock 1986, 254; **mamallu** "I will speak" belongs to Neo-Hittite when the verb had shifted to another class, cf. **tar-aß-ßa-al-lu** "I will overcome", K Bo XII 58 + Vs. 5; the vocalism in **Íe-ig-gal-lu** "I will know", which should have had old **a** < ***o** in the Singular, also points to a later date; cf. secondary Neo-Hittite **ú-wi₅-el-lu-ut** "I will see", **peÍgellu** "I will give", KUB XXX 14 + III 66, coexisting with **ú-wa-al-lu** "I will see", **uÍgallu** "I will see", **peÍgallu** 'I will give'. On the chronology of the forms: Oettinger 1979, 45, 54, 83, 221, 486-487, 200; Melchert 1994, 157.

[416] Toporov 1984, 418-436, with detailed documentation.

[417] Rosenkranz 1978, 134; Meriggi 1980, 346, §217-219; Melchert 1994, 341-342, 363, 379 (with further references). According to Illich-Svitych 1976, 20-21 (N 253), this type of verbal adjective can be traced

Northern Anatolian with Tocharian (modal and past forms in -**l**), Armenian and Slavic (perfect participle also used in the modal function as in Tocharian), possibly with Italo-Celtic (particularly Umbrian) verbal forms in -**l**- as well. In Hurro-Urartian, the morph -**l**- is the mark of several moods in contrast with the Indicative. In Akkadian, the main difference (determined by the general prefixal tendency of Semitic, as opposed to the suffixal one of Hurro-Urartian and Indo-European) lies in the position of the Voluntative morph at the beginning of Akkadian forms like **lukĺud** "may I attain" and **lumßa** "I want to strike, I will strike". Although the initial **l**-**u**- of the Babylonian Precative, as opposed to **l**-**i**- and the prefixes **a**-(**e**-) and **u**-, may be described synchronically as a prefix added to the stem of the past tense[418], it is quite plausible, from the point of view of the history of the language, that it originated in a particle like Akkadian -**lû** (Old Babylonian dialect of Mari **itti ĺarrim lâ innamru** "may he not meet with the king"), Arabic **li** (**li** + **jaqtula** "so that he may kill").[419] Thus, if the situation in Semitic is to be compared to Indo-European dialects, the closest match will be found in Balto-Slavic, where the origin of a verbal word form from a combination with a particle is also evident. The other dialects (such as Hittite) as well as Hurro-Urartian show the word form already made. But it seems possible to suppose that in all three groups of languages, the initial stage was similar to that in Semitic and Balto-Slavic. Volition could be expressed by a combination with the particle. When (due to some common features of cultural and psychological development) the need for a form expressing this mode arose, the three languages chose a similar way, perhaps borrowing the particle from one of them from which the stimulus for this development had come. The borrowing of particles is not unusual (as

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back to Nostratic and in that case is an archaism in these Indo-European dialects. For **dalugnula**, see further the author's "Old Novgorodian **Nevide**…" (this volume) on **parganula** (with n.17).

[418] Riemschneider 1973, 124, §18.8.

[419] Gelb 1969, 100.

opposed to the borrowing of grammatical morphs, a rare event possible for the most part only during the interaction of closely related languages). But, since there might be other important grammatical coincidences between the languages in question, the explanation just given may not be the only possible one.

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