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Central Asian Roots and Acculturation in South Asia:
Linguistic and Archaeological Evidens from Western Central Asia,
the Hindukush and Northwestern South Asia
for Early Indo-Aryan Language and Religion

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Abstract

The roots of the oldest text of India, the Rigveda, have been discussed ever since a close linguistic relationship between the north Indian and European languages was discovered at the beginning of the 19th century. This connection goes back to their common ancestor, the prehistoric Proto-Indo-European (PIE) language. The closely related Old Iranian and Old Indo-Aryan (Vedic) languages, likewise, can be traced back to an Indo-Iranian (II) ancestor, one of the several branches of PIE. Generally, the homeland of II speech has been located to the north of Iran and Northwest India, somewhat between the Southern Uralis and the Hindukush. People speaking Old Indo-Aryan (OIA) are supposed to have passed through these wide steppe and desert belts before crossing the Hindukush and entering Gandhara and the Panjab, (viz., in the case of Old Iranian, before entering Iran proper)

However, recently discovered evidence indicates a substantial body of lost words from Central Asia that have been preserved independently from each other both in the oldest Indian and Iranian texts. They reflect the non-Indo-European, pre-Indo-Iranian language(s) spoken in the area bordering N. Iran and N. Afghanistan, i.e. the Bactria-Margiana Archaeological Complex. These loans include numerous words from agriculture, village and tombs, life and fauna, ritual and religion. They were taken over and then transferred to Iran and N. India by the speakers of the various Old Iranian and Old Indo-Aryan languages. Importantly, some of them also appear in Eastern Central Asia, in Tocharian, as well as in a western offshoot of OIA: the Mitanni Indo-Aryan of Stryi-Arakh, around 1400 BCE, and in the language of the contemporary Kassites in Mesopotamia. All these loans represent a series of intrusions by Indo-Iranian speakers into the world of the great Mesopotamian, Bactro-Margiana, and Indian civilizations as well as their individual, local acculturation.

This study is based on a small monograph (Witzel 2000: SPP 127, dated Dec. 2000, released in August 2001 = 51-5, 52) and Witzel 2004 = 56 (that is partly a paper in Hooken and Grifiths, Nov. 2004), as well as a few extracts from Witzel 1999a, b regarding the linguistic prehistory of the Panjab. Sindh, Uttar Pradesh and Indo-Aryan acculturation in these areas = 55. This paper is a detailed follow up on earlier notes (Witzel 1997: 103, 1999; xx, xxx), lectures (Erlangen, Indogermanische Gesellschaft, Oct. 1997 = Witzel 2000: Philadelphia Congress and Exchange in the Ancient World, May 2001 = 3rd Harvard Round Table on the Ethnogenesis of Central and South Asia, May 2001, preprint: http://www.fas.harvard.edu/~yansk/images/C_Asia.pdf Leiden, Third Intl. Ved. Workshop 2002 = Critical, b), and investigations (Witzel 1999a: 58-60, 1996a: 350-355, Witzel 2000a, 2000b ...). Special thanks are due to John Cowan; he has suggested (Spring of 2001) a substantial number of additions and corrections to my SPP monograph, especially from Caucasian; they are quoted below as "A. Galashnik, pers. comm." - Caucasian transcriptions have been simplified to gene extent: $e^c$ = c > back.
These loan words and their inherent concepts, as well as the earlier ones from the Ural area, the steppes and the high mountains of Central Asia are studied in this paper. They provide decisive information about the track of the speakers of Indo-Iranian and pre-OIA before they entered the mountains of the Hindukush and descended into the plains of the Indian subcontinent. There, they first appear in Gandhāra and in the Panjab proper, the OIA homeland as reflected by the majority of Vedic hymns. In the last section, IA acculturation in the Vedic northwest as well as later Vedic developments in Kurukṣetra and Uttar Pādesh are studied.

§ 1.1. Introduction: Prehistoric Western Central Asia

Over the past few decades, archaeologists have discovered an increasing number of sites of the great Oxus Civilization, perhaps better known nowadays as the Bactria-Margiana Archaeological Complex (BMAC), as well as its Neolithic and Chalcolithic predecessors. While they have filled in a large gap between the great civilizations of Mesopotamia and the Indus, so far no written documents have been found, with the exception of the seal from Anau reported by F. Hiebert. However, little to nothing is known about the language(s) spoken in the areas east of Mesopotamia (Hurrite, Akkadian, Sumerian, Elamite), and those west of the Indus area. The language(s) of the Indus civilization also are by and large unknown, that is if we neglect the materials that can be distilled from the materials contained in the earliest texts in Indic-Aryan, the Vedas, but which have unfortunately been overlooked for that purpose. Nevertheless, these serve as a guide of what language(s) may have been present in the subcontinent in c. 2000 BCE.

The picture can be enlarged and projected back in time by using the oldest Iranian counterparts of the Vedas, the Avestan texts of the Zarathustrans, as well as the Old Persian inscriptions. Since Old Iranian and Old Indic-Aryan (Vedic) are so closely related, items common to both languages can be used to reconstruct the common Proto-language, Indo-Iranian.

Otherwise, we have virtually no evidence for the areas between the great civilizations and those north of Greater Iran as they are too distant from the Near Eastern, Indian, and Chinese cultures to have been discussed or described in details in their texts. However, the seal recently discovered at Anau should alert us to the possibility that early writing might be

2 Hiebert 2002, Colledge 2002, however, see Mair 2001. A few Elamite seals have been found in S. Turkmenistan.
3 Languages known from barely more than the names given to their speakers in Mesopotamian sources, such as those of the Uru and Lullubi at c. 2250 BCE, are neglected here. For the contemporary situation on the Iranian plateau, see Vahid 1980, 1985, 1993; Steinbauer 1983, 1989; Blaude 1999. For (possible) connections between Elamite and Vedic names see Blaude 2002.
4 For all (loan) words see Witzel 1999 a,b.
5 For a discussion see Witzel 1999 a,b, 2001b and forthc. a.
6 For some such data see, however, §2, where the linguistic boundaries of W. Central Asia are discussed.
found in the area after all. In the meantime all that we can establish for the languages used in the western Centre Asian area comes from early Near Eastern and Indian (and also Old Iranian) sources. There are some references in the Sumerian and Akkadian documents of the 3rd to 1st mill. BCE, but they deal just with the border areas of Mesopotamia and furnish only some vague references such as that to Aratta, probably Arachosia. Similarly, we have only a few vague reminiscences in the earliest Indian texts (Rgveda) composed in the Greater Panjab (c. 1200 BCE-1000 BCE) which seem to refer back to the area along the Volog (Rasat) and secondly, to the people along the River Sindus (Tacitus’ name for the Merw or Tedzhon river): the Dasa or O.P. Dahe (whom the Greeks called Da[r]jai, the Arii, and the *Parma (Ved. Parhi, cf. Ptolemy, Geogr. 6.10.2 Parmi, Daast/Parni, Dacae, otherwise Dahae). Pinault (2003) connects Parma/Parma, as loan word from the west, with Common Toch. “pariya” that which belongs to wealthy people > Toch. B petiya, A pati “splendor” and takes the Gr. form Parn-as as reflecting a local variant of Ved. Pani with “intrusive” -r-. (cf. Kuiper 1991:70-81), however see below §5. (Blazek 2002: 219-226) compares Vedic dasyu with Elamite talati-p “people”, “talati “man”; note Roman das “non-Gipsy” in RV dásu).

In addition, after the sparse attestation found in the old Iranian and the much later Middle Iranian sources of most of these areas became Turkish speaking after about 1400 years ago; this has obliterated much if not most of the older Iranian and 1st. record, frequently even that of topographical names.

Even in this unfortunate situation, we can retrieve, based on the records of neighboring Indo-Iranian peoples and on old loan words, an increasing amount of details of the pre-1st. Iranian languages of the area, notably that of the BMAC (c. 2400-1600 BCE).

7 Sec, however, V. Mair 2001: yet note Proto-Elamite seals close by, at Tepe Hisar, as well as at Shahdad, Shahr-i Sokhta, etc., and recent finds to the west of Tehran at Tepe Uzelki.
8 Such as the Guti and the Lulubii; similarly, the texts of the Hitite and Urartu realms for the boundary areas of Ardashir, NW Iran.
9 Lapis lazuli is found in the nearby Chagai Hills (just south of Arachosia/Aratta) and in Badakhshan. Note Steinakeller 1982: 250 with details about a green variety, “carnelian with green spots,” possibly turquoise, from Marboli. However, the blue Badakshian variety is more famous, until today. For Aratta see Steinakeller 1982, Vasil’kov and Gurv 1995, Gommery and Ivanov 1989: 36, Wittek 1999: 220-1; Blazek 2002b: 215-218.
10 The lowest date depends on the date of iron, c. 1000 BCE; see Fossey and Gullapalli 1999. For present purposes, “Greater Panjab” indicates the area from Gandhara (Peshawar) and Swat in the west to Delhi and the Upper Daxi in the east, from the lower Pamir/Himalayan ranges in the north to the borders of Sindh and the Bolan in the south, however, the clear area of the Sindicic area is western and eastern Panjab/Haryana.
11 A few texts in Bactrian, Khorezmian, and Parthian as well as (frequently mythological) data in Pahlavi, and in the Greco-Roman sources.
12 We may note the proliferation of Central Asian place names ending in Turk. -us, -us, -um, etc. See the paper by P. Golden in Mair (forth.), for information concerning the rise and the spread of the Turks. Needless to say we do not have adequate etymological dictionaries of Turkic, or even for the Ir. languages (with the exception of one for older Turkic by G. Clasen, the dated one of P. Horn for Persian, and G. Morgenstierne for Pathon, H. Bailey for Khotanese Saka).
13 Based on new carbon dates; see Francfort and Kaufmann 1998: 468; 2400-1500 BCE (post urban: 1800-1500 BCE) in Francfort 2001: 152. “Greater Afghanistan” signifies the territory covered by this country and some adjacent surrounding areas.
and of Greater Afghanistan. However, it is precisely these Indo-Iranian sources that have largely been neglected so far.\textsuperscript{14}

For some years (1995-2002) I have drawn attention, mostly in brief and passing fashion, to a common body of words in Old Indian and Old Iranian texts that do not seem to be of Proto-Indo-Iranian (thus, Proto-Indo-European) origin. These words represent the non-IR languages spoken in Iran and in the northwestern part of the Indian subcontinent at the time these texts were composed, that is late in the second and early on in the first millennium BCE. As such, they are invaluable materials for the study of the language(s) preceding the introduction of Indo-Aryan (Vedic) and Old Iranian (O.Persian, Avestan). More importantly, both hieratic scripts are a common substratum that can only be that of S. Central Asia. As will be seen below, it cannot come from elsewhere as both Vedic and Old Iranian individually imported it into their particular habitat, the Greater Panjab and Iran/Afghanistan.

Such substrate words are quite common in languages that have occupied the territory of an earlier people speaking a different language.\textsuperscript{15} In English, for example, such common words as sheep (Dutch schap, German Schaf) belong to the Neolithic substratum\textsuperscript{16} of the North Sea coast of Northern Germany and Denmark, the homeland of Anglo-Saxon.

\section{1.2. Sources}

In order to evaluate the scarce materials at our disposal properly, a brief look at our sources is in order.\textsuperscript{17} The Vedas were composed (roughly, between 1500-500 BCE) in parts of present day Afghanistan, northern Pakistan, and northern India. The oldest text at our disposal is the Rigveda (RV): its is composed in archaic Indo-Aryan (Vedic Sanskrit). It is followed by a number of other Vedic texts, usually listed as Samhitás, Bráhmaṇas, Ārānyaṇas, and Upaniṣads. Linguistically, however, we have to distinguish five distinct levels: Rigveda, other Samhitás (Mantra language), Yajurveda Samhitá prose, Bráhmaṇas (incl. Ārānyaṇas and Upaniṣads), and the late Vedic Sūtras (Wittels 1987, 1997a).\textsuperscript{18}

The language of the RV is an archaic form of Indo-European. Its 1,028 hymns are addressed to the gods and most of them are used in ritual. They were orally composed and strictly preserved by exact repetition through rote learning, until today. It must be underlined that the Vedic texts are "tape recordings"\textsuperscript{19} of this archaic period. Not one word, not a syllable, not even a tonal accent were allowed to be changed.\textsuperscript{20} The oral texts are therefore better than any manuscript, and as good as any well-preserved contemporary inscription. We can therefore rely on the Vedic texts as contemporary sources for names of

\textsuperscript{14} For initial suggestions see Wittels 1995a, 1999a,b; see below n. 158, 195, 264.

\textsuperscript{15} Exceptions are the territories of Australia, Polynesia, and the Americas when first settled.


\textsuperscript{17} For the sparse Mesopotamian sources, see below (Steinkeller, Vallat).

\textsuperscript{18} For abbreviations of the names of texts see attached list.

\textsuperscript{19} The middle/late Vedic redaction of the texts has influenced only a very small, well-known number of cases, such as the development Cw > Cr.

\textsuperscript{20} They even preserve very special cases of sentence innovation, see Klein 1997, Wittels 2001a.
persons, places, and rivers (Witzel 1999c), and for loan words21 from contemporary local languages.22

The Rigveda was composed in the Greater Panjab,23 and is to be dated before the introduction of iron in the northwestern subcontinent around 1000 BCE (Poseeh and Gullahali 1999). Later texts cover all of northern India up to Bengal and southwards towards the Vindhyâ hills.

Some 4% of the words in the Rigvedic hymns are composed in an archaic, poetic, hieratic form of Vedic, clearly of non-IE, non-Indo-Aryan origin. In other words, they stem from pre-IA substrate(s).24

The situation is similar but not quite as beneficial as far as the Old Iranian texts are concerned. Only about a quarter of the original Avesta has been preserved. The oldest parts are Zarathustra's RV-like poems, his 5 long Gañsas (Yasna 28-53), and his (?) contemporaneous ritual text embedded among the Gañsas, the Yasa Hastaghâtri, a collection of Mantras used for fire worship. The rest of the Avestan texts is post-Zoroastrian and composed in Young Avestan language. However, the initial oral tradition of the Avesta has been converted in Sassanid times (c. 400 CE) into a written tradition whose surviving earliest manuscripts are not earlier than a thousand years and have been corrupted by centuries of decline during the early Islamic period of Iran.25 Nevertheless, the philologically restored Avestan texts offer some data from Greater Afghanistan as Zarathustra's homeland was probably situated in northwestern Afghanistan (near the Khuraf River)26 and much of the latter Avesta was composed or redacted in southern Afghanistan (Sistan, Arachosia). However, in spite of being geographically closer to the Mesopotamian cultures with datable historical information, the Avestan texts are even less amenable to absolute dating than the Vedâ verses. Mesopotamia (or early China) simply do not figure in all these texts.

The older Avestan texts (Gâñsas/Yasa Hastaghâtri) point to a copper-bronze age culture quite similar to that of the RV. The younger texts might overlap with the expansion eastwards of the Median realms (c. 700-550 BCE).27 The few Old Persian inscriptions that

21 Summary and discussion for RV words by Kaiser 1991; for post-RV texts, see Witzel 1999a,b.

The Vedas are followed by the ancient Tamil "Sangam" (Canikam) texts from the beginning of our era, all virtually unexplored for substrates and abhisedas. On the Iranian side, there are sources such as the Pahlavi and zoro New Persian texts (Shah Nameh, etc.); all beyond the scope of the present paper. For place names, see Elgers 1982, 1987, Savina 1964, Schmitt 1995. Such Investigations, however, are largely lacking for Afghanistan (note, however, Guynenberg 1980, Falathima 1976, Rosenfield 1951 for the northeast). For the toponyms of present day Iran, see the useful website at Tokyo Universitê Daiyaku: http://www.an.ufc.ac.jp/~kami/Abshirane.html.

22 See Witzel 1997a, 2012a: roughly, from Eastern Afghanistan, Gandhara, Panjab up to Delhi and even up to the Ganges (twice mentioned); and from the Pamir/Himalayas southwards to the Bolan area.

23 See Kaiser 1991, Witzel 1999a,b. This situation is remarkable: if we were to apply it to a Near Eastern context, it would mean that an ancient Jerusalem temple ritual might contain Islamic, Hebrew, Akkadian, Egyptian, or other "heathen" words. The Indian situation also differs remarkably from that of the Hittite empire, where the preceding non-Elamite language, Hattic, was actually used as the ritual language.

24 Modern recreation depends on these written texts and cannot be used in the same way as Vedic recreation.


26 Discussion by Shawro 1995. However, the Yâvest local name of Râcin (Ratish) is attested earlier, in the Atharvaveda, see Witzel 1980. Current estimates for Zoroastrian range from the 14th to the 7th c. BCE. However, an early date is indicated by the name of Ahuramazda: O.Avest. ahaunha aaha (or ahauna aaha), Y.Avest. ahauna aha, ahaunha aha.
have survived date from 519 BCE onwards. However, other than is the case with old Indian texts,28 the "foreign" words in the Old Iranian texts have not been evaluated so far. Researchers apparently were of the opinion that only a few could be found: the matter simply has been neglected (see n. 14, 158, 195, 264).

§ 1.3. Loan words and substrate languages

At this stage, a few words about linguistic substrates are in order. "Words from substrate languages" are defined here as all those words in early Vedic and OIr. that do not conform to Indo-European/Indo-Iranian word structure (including sounds, root structure and word formation) and have no clear IE/ItL. etymology.29

We have to distinguish various types of loans (Anttila 1989: 154 sqq.). Some are due to cultural and economic contacts, such as the modern guru or karma (from India), or the slightly older coffee (from Arabia), cocoa, chocolate (from Meso-America), or tea (French thé, etc.) whose origin can be traced to S. Chinese (Amoy 1'e), while the Russian, Indian and Japanese chai/tcha, Nep. chyia are from a N. Chin. dialect. The Indian word has thus come overland and not by sea. The example would also be instructive if we did not know the history of transmission: linguists would be able to pinpoint the origin of the loan in two areas of E.Asia. Similar examples will be found below for Central Asian words. This kind of introduction of loan words is from an "adjoining" language, an atestate. Examples abound in multi-lingual societies (India) or of societies in close contact (ancient and modern W. Europe, with cases such as street < Latin (via) strata, Kaiser < Cæsar, castle < castellum, cellar < cellarium, cella, etc.).

Loans stemming from previously existing languages, upon introduction of a new, dominant language, are different (Anttila 1989: 171 sqq.). The new language may function as superstrate, properly used and understood only by a minority at first (such as Latin in Celtic France), but it then spreads by assimilating an often large number of local words from the previous language, the substrate (note the Celtic place names in England, below).

Sometimes the superstrate does not become dominant (as Norman French failed to do in England); in this case we may still expect a large number of words from the superstrate in the persisting local language (French beaute > beauty, ancêtre > ancestor, where the English form reveals the older French one, with -er-).

Even if the source of the loan remains unknown, many loan words from "foreign" (substrate/substrate) languages can be easily detected by linguistic means, and even if they belong to a long disappeared language. The reason is that all languages follow certain patterns, allowing only certain sounds or groups of sounds while others that are difficult to pronounce must be substituted by local ones. A typical example from English is that, until fairly recently, German and Yiddish words beginning with the sound sh- (schnitzel, strudel, to shpiel) would have been impossible as English allowed only s-, as in snit, strud, ship. By now, these sounds

and in Old Persian (519 BCE) already one word, a[5]ramazak. For the transfer of Zoroastranism into Persia (the modern province of Iran, i.e. southwestern Iran) see K. Hoffmann 1992.

28 The ongoing debate, since the mid-19th century, especially S. Levy, Przyluski, Kipfer, and the relevant summaries in Mynnerhofer, KZWA and BNA; last update in Wittig 1996a.b.

29 Lubovsky (2003) adds also some less indicative features: limited geographical distribution, specific semantics, i.e. a category which is particularly liable to borrowing.
have been accepted and are pronounced correctly. Similarly, even today words beginning in eg. -eng etc. are not allowed (though by now a few African names have been locally adopted, such as Johannesburg). Words with such uncharacteristic sounds or sound clusters therefore indicate a certain cultural influence, even if the native speaker (or a latter day scholar) may not know where these words had come from originally.

This is especially true when we have to deal with toponyms and hydronyms that have come down to us from prehistory. It is well known that place names, especially names of (larger) rivers, are very conservative. Even today they may reflect languages spoken many thousands of years ago. For example, we have the Rhine (Lat. Iam) word Rhenus = Celtic *Rhenu > IE *(reno), Danube (Lat. Danubius = N. Iran. Dānūs) Don, Gr. Tanais (from pre-W. Circassian *t'anai), and "Don", L. Carolusso, pers. comm.), Tigris (Latin, Greek < O.P. Tigā, cf. O.P. tīgā "quick"; Arab. [Nahr al] Dījāt, both < akkād. [ti]-di-ag-lat / Sumerian digina, all from a pre-Sumer. substrate?), Euphrates (cf. Arab. [Nahr al] Fannī) which has been taken over from Greek < O.P. [h]u-ērēta (close to [h]u-ērēta "good brother") ; Sum. Eriñāru / Akkad. Parrittum / Hamm. a-ip-śa-tu-š, all from a pre-Sum. substrate more than 5,000 years ago.

The early river names of most of Europe belong to one and the same old system. A different prehistoric system is found in Greece and the Aegean area, with the typical pre-Greek *-el-, *-el- suffixes. This phenomenon has been extensively discussed for much of the 20th century. The detailed investigation of both regions mentioned just now can serve as a guide and as warning post for the following deliberations.

It is important to keep in mind that names taken from a previous language (or from an astreadate) have more often than not lost their original meaning. If the source language is little known or unknown we can only analyze and compare the outward form of the names involved. This includes the sound system as well as typical suffixes and prefixes that frequently indicate the type of name, such as "river, place, mountain, plain" or that describe the item in question, such as "quick/slow, white/black" (river), "high/low" (place). However, these names have often been adjusted or re-interpreted by later languages, frequently by popular etymology (see above, Tigris as tīgā "quick"). As may be seen in the discussion of the pre-Hellenic and Old European place/river names, these conditions may lead to many pitfalls. Some examples appear in this exploratory paper as well.

The particular situation of Central Asia may be approached by a comparison with that of place names in England. We know that the early form of English, an Old Saxon dialect (a part of the Germanic branch of IE) has overlaid, in the middle of the first mill. CE, the Celtic (and Latin) languages of Britain. Both Celtic and Latin have left a number of loan words in Old English as substrate words, such as London < Celtic Lugdunum "town of the god Lug", chester < Latin castrum "fortified settlement". Later on, English saw the superimposed

30 Not all loans are as easily discernible as the American loan words tips, squash, papoose, Mametou, etc.; note however, the more difficult words nose < nosu, chipmunk < sotoma, or woodchuck (Marmota monax) from Algonkian octech, relg. adjfk "fiber, woven"; nevertheless, the English folk etymology gives the word away (Witzel 1987b).

31 Exemplified, since H. Krabe, as an "old European" layer of IE (summary by W. P. Schmid 1995): this layer of river names has several elements that seem to differ from, and to predate PIE; note also that many Germanic words or names in the North sea/Baltic area belong to a pre-IE substrate. see Polone 1990, Huld 1990.

(superstrate) influences of the Viking language (N. Germanic, with words such as egg, they, she, ha, place names - as -rik, -sia), then of Norman French with a large number of loans (beauty, ancestor, ville, etc.), and finally an equally huge amount of learned, newly formed Greco-Latin words, as well as various minor adstrate influences from the neighboring languages such as Dutch (words such as dike, boss, mate, etc.). Most interestingly for our purpose, Old Saxon and Germanic in general can be shown to have a large percentage of non-IE substrate words (such as sheep, ed, rue, boar, lentil, land, delve, prick) derived from a long-lost prehistoric Northern European language.  

The situation in the Greater Panjab (the area of the earliest Vedic texts) and in Greater Iran (the area of the Avestan and O.I. texts) is quite similar. A brief, simplified summary would look like this.

<table>
<thead>
<tr>
<th>Greater Panjab</th>
<th>Greater Iran</th>
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<tbody>
<tr>
<td><strong>English loan words</strong></td>
<td><strong>English loan words</strong></td>
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<tr>
<td>Urdu/Per-Arabic superstr. loans</td>
<td>(development to modern Iranian)</td>
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<tr>
<td>influx of learnt (Sanskrit) words</td>
<td>Arabic superstrate loans</td>
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<td>(development to New Indo-Aryan)</td>
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<tr>
<td>influx of learned (Sanskrit) words</td>
<td>some Old Greek loans</td>
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<td>(dev. of various Prakrit)</td>
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<td>Old Greek loan words</td>
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<td>Old Persian/Iranian loan words</td>
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<td>(development from Vedic to MIA)</td>
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<tr>
<td>Later (Rg)Vedic</td>
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<tr>
<td>OIA dialects</td>
<td>Old Iranian superstrate</td>
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<td>Dravidian strate</td>
<td>&lt;-----immigrant OIA in Iran</td>
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<tr>
<td>&lt;-----immigrant Old Indo-Aryan</td>
<td>*Sarasvati, Sarasu, etc.</td>
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<tr>
<td>Harappan language (see below)</td>
<td>Central Asian substrate</td>
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<tr>
<td>unknown local language(s)</td>
<td>Indo-Iranian in C. Asia, south of Uralic, Ket (Yen.)</td>
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<td></td>
<td>&lt;-----Indo-European</td>
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§ 2. Triangulating the Central Asian Area

As has been indicated earlier, we know even less of C. Asia than about the substrate situation of Iran and Northern India since we do not have any old Central Asian written or other traditional records, such as the orally transmitted Avestan texts. In addition, in most of these areas, people have been speaking Turkic languages for the past 1000-1500 years, which has obliterated much of the older Iranian, Hitt and pre-Hitt local record. Yet, even there we can make out, based on the written records of neighboring peoples and on old loan words, some details of the pre-Hitt/Iranian languages of the area, notably of the BMAC (Oxus civilization) region.

As western Central Asia and the lands south of it were later on occupied by speakers of the various Indo-Iranian languages such as Saka, Avestan, Median, Old Persian, Nuristani, Vedic, etc., many of which have left us texts, it is best to begin with this language family. The original speakers of Proto-Indo-Iranian (PlIr., sometimes also called Aryan) have been located in various areas, such as the southern Urals and northern Kazakhstan, the Ukraine and the Caucasus area, or in recent Indian revisionist writing, even in Northern India.

However the combined data of the reconstructed PlIr. language allow us to pinpoint the general area where the still unified Indo-Iranian prototype-language was spoken. PlIr. data reflecting material culture, when compared with archaeological data, can be used to determine a time frame and a date ad quem (see §7). All of this points to a copper/bronze age civilization, using the horse-drawn spoked wheel chariot for war and sport, a mainly cattle-based tribal economy, three social classes, and a common ritual and a religion stressing both nature worship as well as deities of social obligation. The large amount of PlIr. data permits us to find loan words from Hitt. languages and accompanying cultural contacts with neighboring languages and language families. These are those of the Uralic (Finno-Ugrian) and Yeniseian (Ket) languages to the north, the two Caucasian language families to the west, Altaic and Sino-Tibetan as well as early on (though attested only much later) an Indo-European language, Tocharian, to the east, and finally the various Indo-Iranian languages themselves in their post-immigration homelands, in Greater Iran and in the Greater Panjab, to the South.

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34 Some of these deities may be reflected in the BMAC, see Witzel 2000a, b, and below of, n. 150-154 for the same origin of some of the Hitt. deities.
35 Occasionally the Mesopotamian sources can provide some data such as on Aratta, see Steinkeller (1982), and in great detail Vasil'kov and Gurov (1995) who discuss Dravidian possibilities. Chinese sources are geographically too distant for most of the time before Zhang Qian (2nd cent BCE); though some loans from IR into Sinitic can be discerned, see below, n. 61.
Map 1. Languages and peoples, c. 2000-500 BCE
(Map adapted from B. Capra, ed. G. Ligabue and S. Salvatori, Venezia 1988)
2.1. The Northern Border

§ 2.1.1. Uralic, Finno-Ugric, and Yeniseian

Starting in the extreme north, it is very important to note that early Ilt. loan words are preserved in Uralic and more specifically, its branch, the Proto-Finno-Ugric (PFU) languages. They establish the existence and spread of P-Ilt., in the areas bordering the PFU homeland36 in the East European and Siberian woodlands and, thus, also the relative age of the speakers of Ilt. This etymology is based on the exact form of Ilt. that the various loan words preserved in Proto-Uralic and its somewhat later western branch, Proto-Finno-Ugric, have retained; in other words, these loans form virtual "archaeological" layers of a contact situation that persisted for several millennia.

Koivulehto (2001: 236-238) adduces 11 loans from PIE into Proto-Uralic (PU) and PFU, such as PIE *swed-o- (< *water* (cf. Rédei 1986: 43)) > Finn. vesitved-, PAnsoyed *wit-; PIE *wes- "bought object, merchandise, ware* (Hitt. wšš "to buy", Ved. Skt. vas- "price") > Ckremis vësə "price", Finn. vesi-ta > estu "to buy": PFU *g̣alghu- "long thin pole" > PFU *sarka, Finn. salka, Mordvin selgo. The rest of the words are, surprisingly, verbs: to fear, to plait/braid, shall/must, to walk/wander, to exchange/sell, to wash, to bore, to lead/draw (PIE *weds- "to lead, marry") > PFU *veda, Finn. veta, Hug. veerit). To be noted is the preponderance of words relating to exchange, commerce and cultural borrowing. Koivulehto adds 15 words that have come from PIE into western FU languages, among which PIE parkас- (see below), and 5 that are not attested in northwestern IE languages.

The remaining 26 words are from the stages of (P)Ilt. and (P)Ilt. In 1986, Rédei had mentioned only a few loans that might be attributed to the Proto-IE period, such as PFU *m̥ete "honey" > PIE *medhū (cf. Koivulehto 2001: 247) or PFU wete "water" < PIE *wed-ər-

Harmatta (1992) has mistakenly subdivided the Ilt. loans into 17 stages37 which must be collapsed into just a few linguistically attested stages.

About half of the loans discussed by Koivulehto (2001) and even more of them in Rédei (1986) come from the Proto-Ilt. (or pre-Proto-Ilt.) period during which PIE *kw-, *xh-, gʷh, gʰh became *k, *kh, *gh, *gh; thus, PU *warka(s) "wolf", P-Ansoyed *warko "bear" < PIlr. *vrko-s < PIE *warksu-s, etc. Another early, pre-Proto-Ilt. loan is *kr̥fvro "spindle" > Finn. krekä, kretä, Mordvin štëje, kiriš (Koivulehto 2001: 249), with the retention of PIE *e- < Ilt. *e-. Later on, *P-Ilt. *śi-, *śi, *śi, *śi, *śh developed to Ilt. ši, šh, ši, ši, šh as seen in PU, F-Volg. *porcaš, porčaš "piglet" (Koivulehto 2001: 242) derives this from PIE, but runs into problems.

36 See the brief summary by Kuz'mina (2001: 291) and other relevant papers in the same volume (Carpelan et al. 2001).
37 Rédei has the following oldest loans: *miže "to give, sell," *nuksa "to wash," *rême "name" (which may rather be Nostratic, cf. Ipn. mi, etc.), *sine "short," *šaš "to bring," *nuška "metal" *wešte "water".
38 Harmatta's (1992: 360-367) specific level of Ilt. are as erroneous as the dates ascribed to them; however, all of this was taken over, with some modification, by S. S. Mira (1992, 1999) to establish that Yedic-Sanskrit was spoken around 900 BCE in the neighborhood of the Finno-Ugrics and that the various IE languages are derived from this hypothetical Central Asian SK, and from a still earlier Punjabi-based Sanskrit; for a discussion see Witzel 2001a, cf. Hock 1999. For further details on Uralic and Ilt. see Joki 1971, Rédei 1986, 1988, Katt 1985, 2001, Koivulehto 2001.
with W. FU derivatives:); still inter., Hr. c' > E FU "tata '100" (Koivulehto 2001: 248), FU "tsaka, sawa 'goat" (Rède 1986: 59), FU "rešma < *rasc'mi.39

Finally, some forms in FU point to Iranian developments: FU "pakrus(c) 'god' < Hr. *bhaq-s, Hr. 'share, [God] Bhage' > common Iranian (Median, Scythian, Sogdian) 'god, Lord, Mr.' > Pahlav. šaaste 'god'.40

It is important to underline that the bulk of the data come from the PIIr. period and this allows us to posit speakers of PIIr. at the northern fringes of the steppe, just south of the taiga belt, -- in other words, the linguistic and cultural ancestors of the later Vedic and Iranian tribes were the southern neighbors of the Uralic tribes (cf. below, §7).

§ 2.1.2. Another northern neighbor is the isolated Siberian Ket language that is still spoken on the lower Yenesei river.41 It belongs to a group of related languages (Arin, Ket, Assan, Yugh, Pumpokoli) that have now largely disappeared. Their toponyms show that they must have covered a much larger territory, from the lower Yenesei to Tuva, and from the Middle (and to a lesser degree, west of the Upper) Yenisey almost to the Angara. in short, roughly the territory between the Irtysh and the Yenisei-Angara rivers (Vajda 1998: 10; Blazek 1998: 27). Their hydronyms are typified in Ket i's 'rivers', as well as in names ending in -ces, -set, -set, -set: -ul, note also Yen. "xuri "water", Ket "kem, Pump. sten 'river'.

Like Uralic, the Ket (Yeniseian) languages have a number of old loan words: Ket ar'ta 'true, veritable' < Hr. *t'la, Ved. rta, OAvest. arta, O.P. [arta], Median arha, Yavest. arta, Mitanni (and Greek historians) with the spelling arta; Ket č'ak 'force, Ket c'agua 'strong' < Hr. č'ak > Ved. ták "to be able, force," perhaps also Ket k'ut, Ykg k'ut, Ket hasa, Arin kus, Pumpokoli kus 'cow' < Pre-PIIr. *g'wus, PIIr. g'us, Iran. gous and Tocharian A ko, B kus, but note, rather, an origin of the Yen. words in P-Yen. "k'us 'house'.42

§ 2.1.3. Some words may shed more light on the old (west) Central Asian language(s) of the area that are now lost. IE *nerus' 'honey, meat'43 has already been mentioned. It appears as

39 See Rède 1986; Koivulehto 2001: 250 reconstructs an unattested (proto-)source *rešma (Ved. ršmi). However, while the early vocabularies may be in order, early PIIr. would still have had *ňan'u. There are indeed problematic representations of certain vowels in Uralic when compared with their successive sources in (P)IIr. or older (pre-IIIr.) old IE. Pre PIIr. *a > PIIr. *a in F-Volg. > Hr. *avta, or CommonLate PIIr. (k' > c) in F-Volg. *avan > Hr. *avanu > PIIr. *avanu > Pahlav. *avanu > Koivulehto's preserved IE *a in a form taken from early PIIr. (FU *ašta 'old' < PIIr. *avina > Ved. yūnata). The FU representation is often due to the necessities of the FU sound system, FU vowel harmony, and certain substitutions (c' > i.e. u, as seen in F-Volg. *retsma < *ret'mi. Cf. also Rède 1986: 33 sqq.) for similar substitutions of Iranian vowels in Permo-Slavic loans, such as d 'o, n 'u, etc. -- Harlamov's FU and IIIr. forms (1992) are not reliable.

40 The word, via normal Slavic sound shifts, derives from N. Iran. (Scythian), i.e. Aryan 'god'; likewise many of the Ukrainian's Russian river names (Don, Donets, Dnestr, Donetsyt, etc. < IE *yana 'water'). Only in some areas of Iran, the Hr. word *bhaga 'god, lord, share' has developed the meaning 'god, lord'. The word thus is derived from Old Iranian, not directly from IE. PFU *pakrusi 'bad'; *Mordvin. puas 'bad' shows the older meaning, from IE *bho's > PIIr. bhage 'share,' see above.

41 For a detailed discussion see several articles in the journal Mother Tongue IV, Boston 1998: 4-32.

42 Yug k'us, Ket k'ut, Arin kus, g'us, Assan kud > Proto-Yen. *k'us 'house' (Blazek 1998: 27); see n. 66.

Ved. madhu "sweet, honey, mead", Avest. maθu (cf. Brt. mel "wine, from grapes"), Sogd. mow, mow'"wine", Toch. s. mot "brandy", Toch. m meli "honey" < "m"st < IE *medh-, Gr. mēdu "wine", etc. and it has been widely borrowed by neighboring languages, both northward into Uralic *meθu, mete Finn. mete, Hung. mete "honey", as well as eastward into Proto-Turk. mirt, Chit. mi < *miθi/mti.24 Sino-Kor. mi1, mi2. mirti < *miθi(ta). Its Iranian form, Iran. mādū > Turk. and Mong. bal, Korean bal (beol) "bee" (cf. Jpn. hachi; note Arab. मध्य, finally also into Toch. B. in its specialized meaning mθt "intoxicating drink"). However, there is also another source of the word for "honey, mead", which must be different from the C. Asian source.25 *medh-, discussed so far: Gr. μέλις, Hitt. midit. Lat. mel, mell-, Gothic milti point to a more western source.26 *mellt, perhaps in the Balkans/Anatolia. Note that the early reconstructions of Nostratic27 list both forms under *maθu > Ural. maθu, Draw. mirt, mirt (DEER 4662 murtu), Altai imir, bula.28

All of these points to an early northern source of *miθ, coinciding more or less with the heavily wooded taiga belt of Russia and Siberia.29

The old Central Asian word for "lison"25 *mēdθ̣a/singha has a similar spread and variation (cf. Beh. nird, Blažek, n.d.; Ved. simha "lion" < *ṣṃθ̣a < *ṣṃθ̣a). However this differs, even within Indo-Iranian, from the Proto-Iran. form *sarθ̣ that has resulted in Khot. šar, Khoresm. sarə, Sogd. śarv/rav, Parth. šarvä, Pahlavi šar, Syr. N.Persiaš šar (Horn 1893, no. 803; cf. also Elamite-O.P. šarvu-datu (Ša-ir-šu-da-da, etc.), Blažek also derives Ved. śravata "jackal" from an Ir. form *śṛavha (Pāli rāgala, Kashmiri rāl, Nīrāmani rāl, Nīrāmani rāl, - wolf", (Praun) st, rēl cf. Br. hal "fox"). Perhaps some Dravidian words belong here as well (Blažek, n.d.): ciyyyavanti DEER 2579 < ciyy(C)-u as in Telugu ciyy puli (puli "tiger"), Tulu ciyyapuli "leopard", Tamil ciyyapuli "panther".

However, one may have to consider Tibe. senge, W. Tib. senge, singe, Zhan Zhun sang-o, Lepcha sung-ge (Bahr, n.d. 15); Chin. swan-ni < Middle Chin. *swan-ndi < O.Chin.

25 Nostratic is the reconstructed source, at c. 10,000 BCE or earlier, of IE, Uralic, A Altaic, Dravidian, Kartvelian (SW Caucasian, Georgians, etc.), and Ado Aalatic (former Harroto Semitic), see Hich Snyder 1976: 38 sq.
26 Note, even beyond this area, in Polynesia, though the area had no bees or bee honey before European colonization: Samoa mele, Hawaiian mele, mele; mele; mele; mele; mele, mele, mele "honey", Mānuku mele "honey". (However, Tongan mele "sweetness, sweet, delicious" apparently stems from Proto-Melanesian *mele "sweet" -- pers. communication by B. Clark, 1/4/2002). Much of this could be old, assuming an older S.E. Asian/Melanesian origin of the underlying concept. A variety of the bee, Apis cerana (or Apis indica) is found in India and S. Asia up to Java and Borneo, and stingless bees, Meliponines, occur all over the southern hemisphere, including Australia, New Guinea, and Melanesia (Carpelan and Pipola 2001: 116), an area where the Proto Polynesians have passed through. Thus, the Pol. words must not necessarily be an introduction by missionaries from French meli "honey", though R. Clark tells me that there were early French speaking missionaries on the South Island of New Zealand. For, the word for mel is also seen in Hauw. mythology: mel mele "a star name"; Melemele ("yellow star"; MWand Polosaga, "the twin stars", the former male, the latter female. At any rate, this is already Proto-Nuclear Polynesian (Samoan, Fijian, etc.) "mele/mel. cf. also Hau. Melemele "a mystical lion". -- Finally, for the spread of the word for "honey", note the role of one mele (also typical for the S.E. Asia) with the inherent use of be's wax, see Andrew Sherratt, in V. Mair (forthc.).
27 Note again. A. Sherratt on the spread of bronze smelting and cire perdue casting along the taiga belt.
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*dsq[en]-r*-qe (Behr, n.d.: 10, *saṃ-gni, Karlgen, Henning). However, Starostin (1989: 402) reconstructs *Cwann-r-[ne] and S.E. Jakhontov (in Blažek n.d.): Old Chin. *stor-ge;46 for the Central Asian interchange of *-r-/*-r- see below §5.49 Another word contains variations of O.Chin. *stwlrn-ge (Behr, n.d.: 10 sqq). The common word, however, is mod. Chin. shi-zu, *sh°-Chin. *sti, (Karlgen, or < *s°ja), *strij, see Behr, 5, derived by Pulleyblank, via *sh°ra; from Toch. šekake. cf. also Ipn. *sti > sh°(-shi).

Further west, Toch. A šišak, B šešake *lion< *šeqa< *šeqe< *šeqe the common, borrowed Hit. suffix -ak, (Pinaulit 2002: 331); for other etymologies, see Behr n.d.: 17-201, and perhaps also Armen. inv. inv seem to go back to a S. and E. Central Asian variety of the word such as *šn(mj)šc°-; which is close to pre-Aved. *ṣnj/-ha, Behr (n.d.: 20), too, thinks of an unknown Central Asian language as the ultimate source of the Toch. B and Chin. words.

Such forms are indeed found in N. Caucasus: PEC *c.w-nq M lynx, panther (PNEC: *om[nq] q. C. Culanso, pers. comm.), Nakh *c.q[y] "snow leopard" > Chechen c.q[y], Avar-Andian *c.q[rq]-q V > Avar c.q[rq]-q, Akkhakh c.q[rq]-o "lynx", Godcberi c.q[rq]-q "snow leopard"; Dargwa: Akusha c.q[rq]-"panther", Lak c.q[rq]. Note again the interchange between forms with -r- and -n- that have not been explained previously (Blažek, n.d., also draws attention to Assyrian simkarru "a hunted mountain feline, gperad", and Elamite place names such as Šenkara > mod. Senkereh, as well as Akladian iršatšu "wild cat, lynx").

Similar to the case of "honey", the more western IE languages have taken their word for "lion" from a different source, which in this case is an entirely dissimilar Balkan or Mediterranean? one: Gr. lιον, and laetuli(w)ion(1) > Lat. leonis- (cf. Behr, n.d.: 16 on Toch. la, native le- as "beast").

It is imperitive that more such data be identified and collected to arrive at a closer picture of the northern parts of W. Central Asia.50

46 See now Pulleyblank 1995; Lubcke 1989: 379. For details of the Chinese attestations see Behr, n.d.: 5 sqq; note that there is no easy atestations of the lion in China, except for the recent finds of some small lion figures at Erlichon III-IV (late 3rd mill. BCE, Behr, n.d.: 3). — There existed a sub-rarity, the "Turkish maneless lion" (Mason 1992: 39; apparently different from the one seen in Parapetis sculptures for this panthera see perkasa see Behr n.d.: 3); another remnant population of the Asian lion is still found in India, in the hills of Gurn (W. Guatun, cf. Behr: 2).

47 For an inner Chinese explanation of the r change in this word see Behr n.d.: 15; the rare and early suan ni is glossed "šišak" in Guo Pu’s commentary on the Mo Tiants shuan (3rd c. BCE), < O.Chin. *sa[m]m, close to the Tibetan form. — The word was reconstructed by borrowing (see KEWA, s.v. simha) as *simypha; however, there must have been another form from another Central Asian dialect or language, based on *šer(χ) or now with Blažek (n.d.) 203: *sarmauq < *sormhau < šermuq, cf. below §5, on the interchange of r- and n-. Not related is Turk. (*at-) arlan "lion," as is, incidentally, the often quoted Suhili simu < Pahlavi *tšimcu "wild cat" (Behr, n.d: 14).


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5.2.2 The Eastern Border: Eastern Central Asia

It is much more difficult to specify the linguistic eastern border of Western Central Asia. For the early periods around 2000 BCE and for more than a thousand years onwards, the situation in Eastern Central Asia (East Turkistan, roughly present Xinjiang) is as lacunose as that in Western Central Asia. To some extent, place names that can fill in the gap in the evidence available so far. However, there exist only few studies of these names in western languages, the case of Tocharian excepted.

A first hint may be provided by the names from Sogdia, on the SE border of W. Central Asia. Apart from very scanty mentioning in O.F. inscriptions and Avestan texts, it is Herodotos and the Alexandrian historians who transmit their first notices: a few personal names and relatively more place names. However, most of them (such as *Masa-kanda*,51 *Zari-apā* are already of clear O. Iranian etymology and hardly go beyond the eastern boundary line that is of interest here.

They can be supplemented by modern place names such those of the sole descendent of Sogdian, Yaghnobi (Zerafshan valley),52 or by those from the *Yamirs*.53 Gryunberg (1980: 168) gives a long list of relevant place names from Afghan Badaxšān54 and specifies that these "substrate" names point to a widespread language, or at least to a certain toponymical area based on a Pamir language, probably Sogdian. Indeed, it must be noted that some of the names mentioned are clearly formed with typical later, E. Iranian suffixes (*-iw, -mand, etc.), often the same (see Khromov 1960) as found in the successor to Sogdian, modern Yaghnobi.55 It remains to be seen which real substrate names remain when the individual etyma used in the toponyms have been etymologized backwards to an early Iranian or otherwise, to an unknown local language.

Data56 from the surviving E. and N. Iranian (Saka) languages could be added, including the only eastern descendent of Saka, Saripolli, on present Chinese territory.57


52 Khromov 1960 specifies suffixes such as *-af, *-ay (< Sogd. *-ay), *-ic (< Sogd. *-yc), *-am (< *-mand) < *-rn "town", *-ir (*-ir) < *-sr "mountain", *-as < *-yeh "earth, land", *-at (< Sogd. *-aT-r) "river" - *-sīd (cf. Tajik *sīd) "meadow".


54 With "substrate toponyms" such as *Karnw*, *Marc*, *Malmun*, *Mazun*, *Reman*, *Raymān*, *Khwānt*, *Dawawng*, *Bīrn*, *Dend*; Adur, *Zo*, *Bakt*, *Sulh* etc. She specifies from the side valleys of the rivers Kadar (Dawawng) and Zardab (Sarpūyān): *Ragkād*, *Wīd*, *Rwinj*, *Geshg*, *Raj*, *Purzāt*, *Nail*, *Imj*, *Khār*, *Yazīc*, *Yamak*, *Situ*, *Yakhw*, *Erwan*, *Pīnugw*, *Balh*, *Wirm*, *Afq*, *Kerkha*, *Bahmān*, etc. Gryunberg concludes that in Yavāl, Rog, Durvar, and Sarāpūyān there was a common toponymy; however, she also regards it possible that there were several successive levels that built up to the present substrate.

55 For the same area, L. Dodykhomoea (2000) lists a number of interesting Turk "substratum words" that have been taken from East Iranian languages. Some of them seem to have no clear Ir. etymology. Note that the "suffixes" in West Iranian (Perian) toponymy differ to a large degree; see Savina 1964.

56 See also the discussion of many linguistic details of the Greater Pamir area in Edelman’s (1968) discussion of Indo-Iranian linguistic geography.

57 Still widespread in the bolts and mountainous south of Khotan. The western variety of N. Iranian is preserved in the north and south of the Caucasus range as Ossete, a descendant of Alan.
Further, the contribution of Burushaski and its earlier forms as well as an unknown substrate present in the Pamir area (Berger 1960, Jetmar 1975: 190, Tikkanen 1986, Blözer 1998: 449 sq.), and in the IA language Khowers as well as in the Hindukush (Edelman 1968: 58) should be compared.

A closer study of the local names in the (Gandhārī) Niya Prakrit in S. Xinjiang50 with personal names such as Śeṇkṛṣṇa, Bhimacā, Bugona, and of the substrates preserved in Tocharian,51 with place names such as Yursa, Kaci, Hippuca,52 would yield further information on the eastern neighbors of prehistoric Western Central Asia.

In fact, G. Pinault (2003) has recently pointed out that some words that have been identified as stemming from the general area of the BMAC (below, §3.2) are found in Tocharian. Such words appearing in both Tocharian languages (A, I) must go back to early Common Tocharian. Like the BMAC loans in O.Iran. and Vedic, they do not have IE word structure and etymologies and also cannot have entered Tocharian at the later stage of contact with Iranian and MIA as they follow the general sound shifts from PIE to Tocharian (*u > o > Toch. B u, v, A a, *a > A > Toch. B o, A a). They include words such as Hit(ā) "clay, mud brick", anc'u "rusty brown", c'arva "hunting, living in/from the forest", pani "wealthy", ḍi "hip", aṭhū "superior, overcoming force" (see §3.2, 3.4, 3.5, n. 146, 150, 150). Pinault sums up his new evidence as being very similar to the BMAC one: voiceless aspirate stops, syllabic liquids, several palatal stops and palatal clusters, even retroflexes (see, however, §5). This new evidence now provides the Eastern rim of influence of the BMAC language(s).

As can be expected, Tocharian, which seems to have split off from PIE at an early stage (Hamp 1998), and moved into Eastern Central Asia at perhaps c. 2000 BCE, also shows contacts with Uralic (Ivanov 1985) and Altaic languages (Röna-Tas 1974, 1988, Reinhardt 1990), especially early Turkic (Claussn 1975, Pinault 1988), and since Shang times with Sinitic (Pulleyblank 1966, Lin 1993)53 as well as with Tibetan-Burmese (Sapir 1951, Blake 1984).

All of this leads, however, much beyond the frame of the present study.64 Nevertheless, it should be pointed out that there are additional, very early loans that can indicate a network of languages connecting western and eastern Central Asia. These include the words for "lion" and "honey" that have already been discussed (above §2.1). The substrate word *sengha/singhā "lion" straddles the whole area, from Armenian and Iranian to Tibetan, Tocharian and Chinese, and so does *med(h)-/ melli- from Finno-Ugrian and PIE to Chinese and Japanese on the one hand and to Hitite and Latin on the other. In this connection it


60 See discussion by von Hinüber 1995: 663.


63 Candidates for late IE/Toch. loans into Chinese include such words as *taí "milk" (note the Himalayan NIA language Bangani with non-IA *baí "milk", and cf. below §7 for a possible arrival of the Proto Bangani speakers from C. Asia); *núi "honey"; *knon "dog" (cf. TB *knp "dog/puppy")

64 Early contacts of Sinitic with Tocharian and/or other IE, and those of Tocharian with Altaic are excluded here.
< 'nasir,72 Drav. 'gur-,73 Brahui (h)ullh, Khasi [u] kulai, Amni kurwa", Indones. kudje: note also Late Vedic loan word ghotaka, (modern Ngl. ghör-, etc.). The same word seems to have been introduced to S. and S.E. Asia along various routes (including those across the eastern Himalayas) after the domestication of the horse. As Berger (1959: 32) put it: "das weltweit verbreitete "ku/kul". It seems to be reflected ever in the relatively late German Gaul < Middle High German g"ul"worthless horse male animal, (eg.) boar which would derive from an isolated, hypothetical IE, or rather pre-Germanic "gôhl", taking into account also Yeneesian *k'us and Turkish *x(s)ar, may one posit an older Eurasian form "*kuC: *kaz/kul: "ku"/ "kâw. / "k'ot-ut-

Finally there are further, isolated isolates such as Munda sadom,74 Eastern Himalayan (Dhimal) Øyøh, Lepcha on; Drav. *(h)i<ruh,75 Tib. rtsa,76 Elam. iakpilam (Blazék 1999: 64). On the other hand, there exists also another very wide-spread, in fact, common Eurasian, word for the horse: *mar/ -mor-. To begin with the Central Asian nucleus of the term, we have Modern Mongolian morin, mörin < *mori, Tungus morin (borrowed into Ghilyak as mör, muren), Korean mar, mal < med, Japanese urno (muru) / Ryukyu urnma < *umon, *mYur, Chinese ma < *mraq (mar) < *mVra, (or *mwa, Benedict 1972: 189), Dun- Huang Tib. rmang, Burm. *mar-h > myin-h, Kachin gi-kra; Thai ma, note Drav. ma(v)77, Nahult mar, Janhunen (1998: 415) considers them to have been "introduced to East Asia from a single source,78 possibly by "a single wave of cultural impact" - perhaps as from a Proto-Altaiic *mYUr, which proposition is dismissed by Janhunen (1998: 424).

We also have, at the other end of Eurasia, the isolated W. IE *mar- - "horse" (Pokorny 1959: 700) as in Celtic: Irish mara, Cymr. mear, Gaulish mar-ko-, Germanic: O.Horse mar, O.Engl. meard, Engl. mare, O. High Germ. mar, fem. meritha, Mähe, cf. mar-shall. Due to their isolation, Janhunen (1998: 425 sq.) does not want to connect western IE *mar(ko)- with the Central Asian *mori, and regards any similarity as accidental (likewise, Lubotsky 1998: 385).

72 Berger 1959: 27 n. 36.
73 DEDR 1711(b): Tel. gazarva, Kolami garam, Nâxsti ghanam, kuramam, kurnam, Parij giral, Gondi garam, Konda pegam, Kusi garam, gurami "horse" (for Burrow on Tel. gazarva < K. ghazal < see IDL I, 23- 24).
74 Punnow 1979: 48 §70: "hardly to be connected with Kham ser, Bahlar yelh.
75 Tam. inva and Brahui (h)ulh "horse" (< hulh, hemione/ongare", Burrow 1972, McAlpin 1981: 147; DEDR 500), see now Blazék 1999: 64 for a possible connection with Semitic *nil/jl- "camel", - other Drav. words: include: DEDR 500 Tam. inva, irasa, (h)ulh, 1711 Tam. kuirna etc.; DEDR 3963 Tam. par "runner", 4780 Tam. ma "animal" (horse, elephant), Tel. mava "horse".
76 Tamang, Gurung sg. but cf. kara(s) (above).
77 DEDR 4780 Tam. ma "animal" (horse, elephant), Tel. mava "horse", (comprises mean "deer" etc. in other Drav. languages); if derived from * "horse", Drav. may have transferred the word to other large animals: cf. the (by now IA speaking) Nahali with mar "horse".
78 Similarly, Benedict (1972: 189) thinks of a Central Asian form ("moro") as seen in Mong. morin, which may also have resulted in Tib. Burm. *mar, *nax, from a bi-jllabic word *m[n]ai(.). - Note that Mong. -in in morin is unexplained from the point of view of Altaic.
However, this view may be too limited, as the Eurasian correspondences of "*gulakur horus*" would appear to indicate. If we think, somewhat along the lines of J. Nichols (1997-98), of a widespread pre-Proto-Germanic area that extended from N. Europe backwards to northern Russia, before others (Balt-Slav) moved in, 79 then the second Eurasian word for "horse", **amtar/mor**, may have come that way to W. Europe. It may have designated the non-domesticated horse, just as **karigul**, while IE *h₁ekwuo-* may have referred to the domesticated one, taken from the adjective **kuklu-** "quick" (EWA I 179). It is well known that the homeland of *Equis caballus* is in the steppe areas of Eurasia, while pockets of the habitat of the wild horse were also found in the forest zone (Raulwös 2002). Genetic analysis 80 seems to point to various centers of origin of the domesticated horse within the steppes belt, just as the various reconstructed words that designate him. From these areas, the horse has been secondarily introduced into the Near East, South and South-East Asia (see Meadow 1998).

Finally, an important, perhaps much older cultural loan word is that for the "hammer." There are a number of similarities between the words for "stone, hammer, axe" in various neighboring languages. That one and the same word could have these meanings should point to the stone age. Neolithic level at the latest. "Altaic" *paliqa" hammer* (Mayshofer, EWA II, 214 s.v. *parašu*); Bur. *baluqa* "big hammer", *buluq* "kleiner Hammer (zum Beschlagen der Pferde)", Yasin Bur. *baluqa* (Berger); IE *plekúr-" axe" > Greek *pelyx*, Ved. *parašu- (< IIr. *parašu", cf. CDIAL 7947 *pariu*), O.P. *paradu- (< OEfr. *parasu- (< IIr. *parašu*. However, there also is a variant Pfran. *parasu* > Osset. *farat*. 81

The overlap between "stone" and "hammer" is also seen in the pan-Eurasian children's game of "stone, scissors, paper" (or, whatever our "scissors" and "paper" might have been in Neolithic times). The Bur. children's game of "hammer, scissors, sword" has *baluqa* "hammer" which obviously is derived from "stone" (cf. Shina *buluq*). Such changes in meaning between "stone" and "hammer/weapon" can sometimes still be seen in older myths. For example, the Old Norse *Thor* still kills his enemies with a stone hammer, as does his mythological relative, the Vedic *Indra* (or the Slavic *Perun*).

All these sporadically available terms and names indicate close contacts between the regions east and west of the Fuman-Tien Shan-Altaï ranges, but do not allow us, at this stage, to draw up a history of their settlements.

79 This particular point is not invalidated by the critique given below of her original locus of IE in Ucrana/Sogd, or by the early criticism of this thesis by Mallory (1998).

80 The domesticated horse seems to have several (steppe) maternal DNA lines, see Sturtevant 291, 2003, 474-477; Sturtevant 291, 2001, 410; cf. Conservation Genetics 1, 2000, 341-355.

81 Loan word in Pplerm., Votryak etc. part. Tungus partes "knife", see Rédei 1986: 76. Note that the often compared Akkadian *pinag*; *piliša* does not mean "axe" but "spindle, dagger." (EWA, s.v. *parašu*). I. Colanaru (pers. comm.) points out that "paliqa" may form part of a complex with a root *bél-*"pel", as in Russian *bél* "pel", in Greek *peliaka, petelopei, petelois*, perhaps also *pelen*/*petelos*, Latn. *de/nita*, Keltic *belga*, Welsh *belga*, and which may also occur in the wanderwort *pelwan* "strong man, hero," all related in some way to "mighty, power, big."
§ 2.3. The Western Border: Caucasian and NW. Iran

While we do not have old texts from the western borders of C. Asia, the older languages at its western rim that have not succumbed to the successive spread of IE, Iranian and still later, Turkic,82 can supply some of the desired data.

First of all, IE or rather Ir. influence is seen in some of the Caucasian languages,83 some of which may have retreated from the plains into the mountains, just as the N. Iranian (Saka) language Ossete did more than a thousand years ago. Such influence can be seen in Udi čk.'horse' < PIE or, pre-PIR. (h.)ek'wo-. From PIIR. ac'wa (or inherited from Proto-N. Caucasian *h(n)č'y/ *č'y 'we' derive Avar-Anzian *ic'wa > Andi iça, Avar c'i, Lak č'wu, Akhvakh ic'wu, Chamalal ia 'mare', Lezgin iwa 'mare', and NW Caucasian: *č'm > Akhas a-č's, Kabardin ač, Ubykh č'a- > (Blazek 1998), and Dagi uči, Khinalug pli; as for PNC 'č'we cf. also Kartvelian: Georgian ač'a (aču, to urge on horses), ač'a 'horse' (nursery speech).84 A clearly late loan from Old Iranian is Khinalug spa 'calf' < N. lr. (Syczian, Proto-Osetic, or from NW. Ir./Median aspa, cf. also Avestan aspa). To an early level may belong Kabardin ač'wał 'bull' = PIE *g'wau 'cow'.85

However, the case is different when it comes to the designation of the old domesticated animal, the goat. Domestication has begun in the mountains of the fertile crescent (Zagros Mts.), from where it spread to the east of the Younger Dryas (c. 9,600 BCE). It is often assumed that lr. *g'wa was loaned into Circassian ač'a, or that l'/Iran., *g'wa > Kabardin ač'a 'goat for breeding'. However, the etymology of lr. *g'wa is not clear at all. Usually it is compared to Greek hūx'k.-s, hāg'- itself without clear etymology,86 but better to compare it to

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84 Cf. the materials in Harman 1995: 369. See now additional discussion above, n. 67 (J. Colarusso).85 J. Colarusso, pers. comm.: "The Kabardin ač'wał (W. Circass. 'č'wau' 'bull, ox') clearly is an IE borrowing, but not without its mystery to its vowels..." -- However, Chechen gwa, Ingush gwa, Nakh gaw 'horse' -- lr. gawra, Ved. gaura 'whitish-yellowish-reddish, wild ass, wild buffalo'; Iran. *gawra > N.Pers. for 'wild ass'; cf. also Pahchi gwa 'wild ass' (Morgenthaler 1927, no. 337), which must be kept separately. A similar development might have occurred with lr. Ved. *khaṇa 'donkey', Avest. Xara, Pahlavi xar 'donkey', NIA khar 'donkey', khār (etc.) 'onager, wild half-æ', for which note Morgenthaler 1927: 97 with Pahlavi xar 'muddy, turbid, dirty brown', etc. (cf. also Rau 1900/1).
86 See EWVA A.v. aie for correspondences. These forms are to be contrasted with cf. Nakh gwa 'goat' (loans from IE into Nakh have d > z), Lak and Dargi gada 'kid' (Nichols 1997: 129) and with dial. PIE *gwids (in German, Engl. goat, etc. below). -- Again, J. Colarusso (pers. comm.) adds: "The word for 'billygoat' in W. Circassian is ac'c'or. Kabard. adso, Akhas adso, Ubykh p'g'pi, The Circ word for 'goat' generically is p'c' (Emel', Kab. p'c'emo, Abaza b'c'ma, but Ubykh adso related to Circ. It is a 'two year old goat'), which suggests a link to Circ. *p'enem (actually, the /a/ is predictable) 'cattle', perhaps PNWC *t'ma > p'c'ma > p'c' and Ass > p'c'are (where /p/ is a grammatical class marker). I don't see the usual links between lr. and any of the Caucasian material, except for my clausus in my 'horse' paper..." -- The NEC words for 'goat' are again varied, but point to PNNE *c'č'μa, *c'č'μa, *c'č'μa > c'č'μa since I is facultatively palatalized in NEC. The word for 'kid' in NWC is varied, W. Circ. *h'č'μa, Kab. *h'č'μa, (PCirc. *h'č'μa, Us. *h'č'μa, Akhas *h'č'μa, *h'č'μa). In NEC the forms h'č'μa, *h'č'μa, h'č'μa occur (no metathesis, as is the case with some bivocalic roots), suggesting links to
the range of old agricultural and pastoral words extending east and west from the Caucasus, as found in Macro-Caucasian. This by now firmly established language family (Bengtson 2001) includes the former language isolates Basque, North Caucasian (NE Caucasian = North Daghestanian; NW Caucasian = Abkhaz-Adygian), and Burushaski in northermost Pakistan.

It is Macro-Caucasian that seems to have delivered to IE languages the word for the "goat." Apparently the word has been taken over several times, and in varying Macro-Caucasian dialect forms. Proto-North Caucasian has "*qizwe" (Adyge ac', Dargwa/Akushik 'cha,Chirag 'ac', etc., Bengtson 2001), and Burushaski has ac'as, both of which are closest to PIE "*Hag" (Indo-Iranian aj - Skt aj-, Avestan ahs-, Lithuanian ažu, Latvian dzis). However, there are other, divergent IE forms that must be reconstructed for PIE or for the stage of IE immediately preceding the forms actually attested in its daughter languages. These reconstructed forms indicate typical dialect divergences in the source language(s) of the intermediary (now lost) languages that have transmitted these words into IE. There is PIE (of late Common IE) "*Haig- in Gr. haí, haík; PIE *ghaid- in Germanic (Engl. goat) and in Italic (Lat. haedu); PIE *kag in Slov. koz; and finally PIE: *ak'ag in Indo-Iranian *ac'apac'aga-'agá- (Ved. chās-, Ossete sarg(a) 'goat', with a further loan into Uralic: Mordvinian āvá, ēne, etc., see E. W. S. 1, 556); this particular form is apparently related to Proto-North Caucasian *ziţ {}'ziţV (Karata c'iš'or 'kid', Lak c'aktu 'goat'), and is to be connected further with Burushaski c'igir, c'hir, Basque ziţ(h)ire 'castrated goat'.

To the same substrate may belong Engl. bick, attested in Celtic and Germanic, in Avestan (bhta 'male goat') and in Proto-N. Caucasian PEC *b([a])cV (Bengtson 2001): Lak buxka c'bux-ak' 'young he-goat', Rutul bari 'small sheep', Khinalug b'ačc' 'kid', etc.; cf. also Lak b'Nk' 'male goat' (Nichols 1997: 128) and Burushaski buč, which appears as a loans in the Sanskrit substrate word bōkka (Turner CDIAL 9312), Skt. būka (Nepali boka, etc.).

A similar pattern can be discerned for the spread of the word for "wheat", first developed in the western Fertile Crescent about 10,000 BCE, from where it quickly spread north and west by population expansion, for example as seen in Macro-Caucasian (Basqari qer 'wheat', Bur. qar). Its southward and eastward move was slower. It took 2,000 years to reach the Nile valley (O. Egypt. xnd). It is found in the Caucasian area at "gho-" and on the Iranian plāwag and with a later, suffixed form "ganu-um-", and it is first seen in S. Asia in E. Baluchistan.

the roots "c'c'o- " (<ac'ac), etc. No PNC form is recoverable. In Basque "ga" is /a/, so Basque ziţ(h)ir is /ak' ir/. Even so, this resembles the NEC form.


88. According to Bengtson (2001): Bur. (H,N,Y) par. parpin (ILN) "sowing wheat", Casca: Tindi q'ərəw, Archi qəkəl, etc. < PEC "qəl 'sowing wheat' (continuative form gal'). Here Boeung also L. Nichols (1997: 8) other words of culture such as "wino" 'wine', etc. (Georgian pek'i suggests that the culture word for "wine" started with a velar, I. Golovanov, pers. comm.),

89. For the beginnings of agriculture in Southern Turkmenistan (Kopet Dag, Jetun Culture, already with mud bricks, c. 6000 BCE), see Harris and Golen 1998. They assume import of domesticated wheat, barley(?), sheep and probably goats from further west. However, the dates of Ma-Kupruk (N. Afghanistan, of seasonal ptheragists) are very much under discussion (between 8000 and 4800 BCE), see Dani 1992: 124-126, Harris 1996: 344.
(Mehrgarh) at c. 6500 BCE. Its progress beyond the Indus valley was held up for some 3000 years (see n. 127; a detailed discussion of the word for "wheat" is given below, §4.3.3.5). It is likely that several of the river and place names in S. Central Asia once belonged to the Macro-Caucasian language family, such as the Sinde, attested north of the Caucasus (R. Kuba/Kupan: Sinda=Ba area; see n. 180; Sinda in Turkmenistan (R. Tedzheni), E Iran (Avest. hurvux) and in the Indus valley; Bus. Sindu / Skt. Sindha (see below, §4). 

Tuite (1998: 448) has indeed given some ethnological and linguistic reasons for a possible gradual movement of speakers of Proto-Burushaski eastwards towards the Pamirs.92 The NEC *i̯ur-, PEC *i̯ur-/*ur- "water" is reminiscent of (Gr.) Σιτά "Syr Darya", Bus. uur-dor "to melt" - *ur as a river name in the Murghab area of N. Afghanistan, and *ke̱em-b- "river" of (Gr.) Δήλος, Ηρ. *Sinu = Bus. Sundu. I leave the decision to speciality of Macro-Caucasian.

Whether this (expected) scenario of a widespread Macro-Caucasian presence between the Caucasus and Pamir mountains in pre-HI. times can be substantiated or not, the evidence

90 See Meadow in Harris 1996: 390-412. Note the import of domesticated wheat to Mehergarh, c. 4500 BCE, as opposed to a supposed/local domestication (see meadow 1996: 355), which fits the linguistic pattern (p. 127).

91 The following list of NE Caucasian designations should be crosschecked against C. Asian Iranian and NW-Indian place names. They follow Colarussi (in Mac 1998), who based them on the work of Khriz, A. A. and S.V. Kudravtsev 1990; cf. the E. Caucasian reconstructions of Bokharev (1981). I have compared them with Bengzon 1999 and with his PEC forms which, according to his private communication of March 2002 (henceforth B. in this list), in part follow Starostin’s PEC reconstructions of 1994. *Ke̱em-/*kam- "water" (with tense voiceless lateral fricative (l) secondary from *ke̱em-, PEC *gahh, B. 2002: *Tur- "water" - *PEC *gahh "river, lake", Bus. dur-ô "to melt", B.; cf. Syr Darya); *ke̱em-b- "river" (cf. Sinde, Sinda, Bus. Sundu); *xul- "river" (PEC *xulw, xwiri "river", Bus. hurd "water conduction", Yen. hurd "water" Bengzon 1999; cf. Norvainat, Pardeš gol, gdš gol in river names further (V. N. Nepál gadj, o't, or, ar lake), (PEC *lake, pond, B.); relle "sea" (cf. PEC *yâr/lešk/aš/lešk "sea, B."); yzmwar / muyyr- "mountain" (PEC *mušib, *muśib “mountain”. B.); cf. Latv. Vels, Clst. Skr. Meru "central, world mountains", NIA Dāvīc Trimul "central mountainous areas", *sują "mountains" (B.); CHAL DELAL 6331, Bus. marī "earth clifft", *xamwar / gə                                          āš "hill" (PEC *geuer "mountain, hill", B.); *xam-w- "land" (PEC *gânuw, *gânuw "earth", B.); napô "land" (PEC *nuq, *nuq "earth, dirt", B.); Colarussi (1998) mentions as criteria for substrate words: ethnonymy, non-native vocabulary, etymology, and hydronymy are the most conservative toponymy in surviving languages. He gives toponyms and hydronymy from three Caucasian families (with no apparent C. Asian connections except for NECportun) cf. also Murzov 1980.

He adds (pers. comm.): I would collapse the cognates down to one original stem *m- and take the forms as mid-Daghetsani (Lak-Dargwa, and Lergian) shifts, with some of the southern languages showing velar or even uvular reflexes of this original tense lateral fricative. A typologically driven shift of *m- to *n- would open the door to an *r- alternation (as in the BMAC language), and in some the *r- shifted to *l-l. The use of supercrats "T" (in the 1998 paper) to denote tenseless seems to have arisen from some font mismatch. The usual representation for "river" in PEC would be *m̥em-b- or *ke̱em-b-, with a ligature under the initial character. Starostin’s assumption that *x- is primary in NEC "water" is not supported by the development at velars or uvulars in these languages. I also find no evidence to support his term for "river". Apart from *Fem-b- there are two other roots *suk (from Arar and Dargwa evidence), and *sn̥n- from Khinalug and Udi forms. The match for "mountain" is very good. I see no reason to alter my original PEC form for "hill" *gə(u)nuw to -, except to see phonetically valid as secondary developments of the term, *x- under conditions of tone (an improbable, reality). But "Kotš" is clearly a southern Daghetsani (Macro-Caucasian) word for "hill (People)."

92 In fact, it has been suggested that the population of Gorgan and S. Turkmenistan (Kara Kame) "reflects the spread of Mesolithic people from the Zagros mountains to the northern foothills of the Hindu Kush via the Caspian coast." (Sarunshi 1992: 124).
presented so far (and that in §3) does not allow us to state how far the BMAC language(s) once spread into C. Asia.

This is in spite of, and converse to, the efforts of J. Nichols (1997, 1998) who assumed a Bactrian/Sogdian homeland ("locus") of PIE (1997: 135, 137, 1998: 233) and a still earlier one of pre-PEI south of the Caspian. These locations are not born out, and are in fact contradicted by the host of words discussed in this paper. Her locus of PIE is, indeed, located precisely in those areas that represent an older, non-IE layer of words; these appear as a substrate in ITL. In other words, they belong to the language of the BMAC area (e.g., place names such as *Ananta, *Bash/t/, *Sagsh/t/, or etyma such as *(e)st "camel," *(e)st "Sema-" etc.) Further, agriculture in this area is not as early as the she seems to assume: its arrival in the BMAC of Bactria only at c. 2400 BCE is much too late to have influenced PIE. That Bactria/Sogdia could be the locus of PIE therefore is at the least very doubtful, if not simply impossible. If the localization were indeed correct, all IE languages should have received the same "BMAC" substrate words that are typical for Old Iranian and Old Indo-Aryan. (The same argument destroys the revisionist and "autochthonous" Indian fantasy, the so-called "Out of India theory" of PIE, see Witzel 2001a).

As the non-ITL language groups of IE do not have the loans discussed here, the supposed locus of earliest (pre-) PIE must be at least to the north of the BMAC area, north of Sogdia, if not on the very boundary between steppe and woodland (siga) in N. Kazakhstan, where also the oldest correspondences between PU and PIE are located (PIE *wed-/r-/r- , PU *"write "water", etc. (ed. Nichols, 1997: 146). 96

93 "The locus of the IE spread was therefore somewhere in the vicinity of ancient Bactria-Sogdia:..." Nichols 1978: 137, and "a spread beginning at the frontier of ancient near Eastern civilization...in the vicinity of Bactria-Sogdia... included the... urbanized states of Southern Turkmenistan and Bactria-Sogdia" (Nichols 1998: 233).

94 Viz., north of the Black Sea. Certainly not in the clearly non-ITL, Mairdeiran, as her map seems to indicate.

95 Note also the early criticism, in part based on prepuplication materials, by Mallory 1998.

96 If not going back to common Indo-Aryan; see Witzel 1992.
§ 3. The Greater Bactria-Margiana Area

§ 3.1. Delineating the BMAC area

All of the data mentioned so far need to be studied in greater detail, especially the reconstruction of an early Ir. presence in Central Asia and on the Iranian plateau as seen in their linguistic, religious, social, and material culture-related data (Witzel 1999a,b). In contrast, for the BMAC area itself, we have no written sources at all, except for the loans quoted above (for further details see below).

First of all, it has to be established why one should think of Central Asian origins for the loans found both in Indo-Aryan and Iranian. In theory, such loans could also have originated in the Panjáb and have traveled to Iran (as the words for “rice” did, indeed); or, conversely, from an Iranian area to the Panjáb (as is the case with “wheat”).

However, some words that can be reasonably well plotted both in time and place, that is, “ṣētr” “camel”, “khar “donkey”, and “hit “brick”, point to the areas along the northern rims of Greater Iran (BMAC, for short; Witzel 1995a, 1999a,b,c). This is the first Central Asian area with a highly-developed agriculture and town civilization that the speakers of Indo-Iranian could have come into contact with, south of their original contact zone with the Urālīc and Yeneseian speaking peoples. We know that, in this civilization, the domesticated camel was used,97 that it continued the large scale use of unburned bricks, and that the donkey was introduced from the Near East at the time. These three leitfusils also provide a time frame: the speakers of Ir. will hardly have moved into this complex earlier than the introduction of donkeys.98 Pinault (2003) shows that the word for “brick”, hit(i), has also been taken over into early (Common) Tocharian; (cf. further below, passim, on anc. ćarnu, carwa, param, dān, ast).

However, as will be seen, some of the Ir. loan words have been taken over independently of each other, twice or thrice into various Ir. languages in different areas of Greater Iran (cf. Lubotsky 2001: 302 sq.), but they still look very similar to each other. This kind of difference is a clear indication of dialect variations in an underlying substratum language.

A selection of the most typical loans tends to center on the Bactria-Margiana area (cf. Witzel 1995a, 1999a,b, 2000a, Lubotsky 2001) — perhaps for some words, with the inclusion of Sistan/Arichania where the delineation of the boundary of the “BMAC” language is unclear so far. However, for other parts of Greater Iran (Iran proper, Baluchistan, Afghanistan), the southern boundary of the “BMAC” language(s) is fairly clear. We can easily exclude the southern belt of Iran as well as Baluchistan. East of Akkadian and Sumerian in Mesopotamia, the isolated99 language Elamite was spoken, not just in the Susiana (Khuzistan) and Aniān (Fars and surroundings), but also in Southern and Central Iran,100 in the areas of Tepe

97 By 2500 BCE there are camels (figurines) drawing vehicles in S. Turkmenistan.
98 They could, however, have learnt about camels from the Central Asian hunters, as represented by the Kelteminar culture.
99 A genetic link between Elamite and Dravidian has not been established, see the extensive discussion in Current Anthropology (McAlpin et al., 1975).
100 The inscription of Naram-Sin (text from the end of 3rd mill. BCE) mentions the rulers allied against Akkade: “the man of Meluḫḫa, the man of Aratta, the king of Mathli, ... (another country): gap in tablet), the
Yahya (Simalka), and Shahdad (Tukri), but apparently not farther east than Bampur (Marhali). The language changes, though Elamite cultural influence extends even to the borders of Sindh. However, eastern names are neither Elamite nor Dravidian. This indicates that there was a language boundary somewhere to the west of the present Iran-Pakistan border, probably in a southwards prolongation of the Iran-Afghanistan border. That the Meluhha language (sufficiently) different from Elamite or Sumerian is obvious: the Mesopotamians needed a "translator from Meluhha" (Possel 1996: no. 2), whose name was reported as Su-is-ia (Parpola 1994: 132).

Bulchistan is characterized by an overlap between the influences from the Elamite and Indo cultures. Baluchi sites such as Kulli are dated about 2000 BCE. The area which is later called (O.Pers.) Maka (Mesopotamia) or Makran, has its center at Marhali (Bampur), an important place of exchange between the Indus areas east of it, the Elamite areas west of it, the Arachosian site of Mundigak, and Shahri-Sokhta (Aratta, Sistan), Simalka, as well as Turkmens west of it. Only during the last period of Mehrpar (level VII) we find a cemetery with BMAC-derived items, and the rituals and metallurgy recall those of the BMAC as well. The spread of late BMAC influences into the Indus valley, Balchistan, Susiana, etc., is now well documented (see §7).

king of all Elam" (Vallat 1995: 53); note also the list by the Sargonic king Rimis who conquered Parabhum, Zuhar, Elam, (Bajini?), and Meluhha (see Gell 1997: 594).

101 Perhaps one of the Elamite capitals.

102 Later taken over by the Tukri - Steinke (1982: 265), however, locates Tukri in the Zabur mountains north of Tehran. The word Tukri has been compared with Tugt, Tugratus, Tugharu, etc. (Henning 1978), and with a possible Mitanni - IA name Tuga, see HWA 1.651 s.v. tugr. Some RV passages involving tugr. may provide a link with this Central Iran area as well. Cf. also Ganshof and Ivanov 1989 who suggest the Near Eastern Gutti and Tukri with the later "Tukharan" (Kuchehran).

103 For various Elamite sources see Vallat 1985, 1993. However, Steinke (1982: 255, map p. 265) tentatively locates it a little farther west, "in the perimeter of Kerman and Eastern Fars." The original name of Mahrad seems to have been "Marahali, represented in Akkadain as Parabhum (Steinke 1982: 237-8). Cf. the modern Maklaw and other rivers in Baluchistan beginning with Mah-

104 Steinke 1982, 1989 (cf. also Hiebert 1998: 147). Steinke connects the name of Marhali (Parabhum/Parabi) with the name of the Persians; for this, however, see the Paria reference in RV, BSS (Witte 1999a) and a possible connection with mod. Pashto, see below, n. 197. For further E. Iran/Vedic correspondences see Witte 1989, ch. 10, and for some Saka-like characteristics of O.F. see n. 261.

105 See Possel 1996.

106 Which speaks against Drav. as the language of the Indus Civilization, see further Witte 1999a,b, 2001b for other possibilities. - Note, however, Gurav and Vaid (1996) on a Drav. etymology of Aratta.

107 The loan word links between Sumerian and Drav. are in need of investigation (see Blom and Boessen 1992 and Blom 1992, 2002a). As for the connection between the two areas, a direct southern route, from Sumeria via Bampur to Meluhha (provided it was Dravidian speaking) is not likely as it is blocked by a large area of Elamite (from Susa up to Tepe Yahya) and by the separate linguistic area of Simalka (Bampur). Following the observations made in Witte 1999a,b I suggest that early Dravidian may have received its agricultural terminology via Aratta (Sistan) or even directly by maritime contacts.

108 Possel 1997, with a date of 2500-1900 BCE for the Kulli/Quetta phases.
While the southern belt of Greater Iran thus is excluded, the exact alignment of the "BMAC" language boundary in the more northern parts of Greater Iran, however, is not so clear. We have some notices about a series of peoples who entered Mesopotamia from the Zagros mountains starting around the end of the 3rd millennium. First came the Lullubi and Gutii, in the time of Naram-Sin of Akkade (c. 2250 BCE). On the Iranian highlands, the Simaiki state of the 3rd mill. was replaced by the Tukri state in the second millennium, which is connected, in some texts, with the Gutii. The Hurrites (with a Caucasian language related to the later Urartian) appeared in the same epoch but more to the north; the Kasites entered under the successor of Hammurabi, Sami-i-Iluma, at c. 1740 BCE and soon took over Babylon for centuries. Both the Kasite (Babylon 1594) and Hurrite languages (Mitanni, around 1400 BCE) contain some Old Iranian linguistic elements. However, we know much less about Media (the area around Tehran, Hamadan), Herat, Sistan and Arachosia.

While the language of the substrate studied below included the greater BMAC area, roughly from Azaa to Balikh, we cannot firmly exclude, at this stage, the Media/Aria/Arischen areas as belonging to that of the "BMAC" language. Some arguments, however, will be presented below (§3.5).

Indeed, "sum a 'Soma plant' (probably Ephedra, discussion below), which is pressed out to prepare the sacred drink of the Indo-Iranian peoples, points to the high mountains of Central Asia (incl. the Hindukush, Pamir, and the Himalayas, see Staeh 2001, Witzel 2003[2]), where according to both the Avesta and the Rigveda the best Soma grows (Ved. Maru-rant mountains, Avest. Maza, mod. Maz‘Tagh Ata in the Panjiks). There are, indeed, some indications of non-Ir. speakers in the high mountains of Afghanistan even at the time of the earliest Ir. texts. Such "foreigners" indeed still survive in the Pamirs, as the Burushaski speakers and are visible in the substrate in Khwar (Witzel 1999a, 2000a).

109 Hammurabi’s inscription, see Henning 1978, 220. Perhaps Gutii means "hel (people)", from N. Caucasian *xwuri (I. Colonial, pers. comm.).

110 Needle to say, this fragmentary information will have to be compared with the Central Asian materials presented here. At first sight, I have not detected correspondences beyond the words for 'jewel', Mit. masi-snu, Ved. man (see below), Soma (Mit. Sana, JWA II 749), and the Central Iranian name "Tabri", possibly retained by Mit. M. "Tagra", above n. 102.

111 For Margiana etc., cf. also Erdosy 1998.

112 Note that the central Afghan highlands have been occupied by Mongoloids (Haratsa) after the expansion of the Mongol empire -- wiping out possible traces of older populations; for some details on the Central Highlands, see Witzel 2000a: cf. the similar situation in the Tian Shan/Pamirs, where Mit. Mazh (Tagh Ata) of our maps is derived from the old, non-Ir. name Ved. Maru, Avest. Maza, but was re-interpreted as a Turkic name. The impressive, Kulish-like 24,76 R/B 200 m high Muzh Tagh (taa) means "ice mountain father" in Kyrgyz. Another Muzh Tagh is found northeast of Skardu in northernmost Kashmir.
§ 3.2. An older Central Asian level: The Oxus/BMAC language

At this stage, therefore, it is more profitable to take a close look at the actual linguistic evidence preserved by the loans into the Els languages. Such “Els words do not have Indo-European shape and etymologies (Witzel 1995a, 1999a, b, Lubotsky 2001).”

[Note: The text includes a map of language distributions, which is not transcribed here.]

113 I cannot enter here a detailed discussion of Lubotsky’s recent paper (2001). His new observations, based on the Indo-Iran. words listed in EWA, include: (1) unusual Els. suffixes, including *-a-, -pa-, -us which are directly attached to the roots *-riska (*pasa “sulf,” *papa “evil,” *wa-*sapa “torso,” *pharm-*isi “firm structure, house); (2) the unusual structure of triliteral words with long middle syllable (*CaSaCa), such as *-yapsa “irrigation canal,” *-lapisa “paved dish,” *-pírska “hairstyles (first yellowish milk of a cow after it has given birth),” “mainly *bl[l “solid boat” but note the early loan into El: E-Volg. *maisy, Fin. ovu, Russ. 541). --- He had originally assumed (as per var. Lübs 1999) that some of these words could have only been taken over inside the substratum and that the language north of the Hindukush and in the Panjsh was the same as that in the BMAC level, as he now formulates, “intimately related,” Lubotsky 2001: 306; however, see Witzel 1999a, b and fort. al. This close connection is, however, unlikely and does not account for loan words with the suffix *-a-. Yet -opa the also occur with short medial word of “Panj Marsh” type, Witzel 1999a, b). Proof for a CaSaCa type Panjsh language could only come from some words typical for that climate, flora, fauna or culture. Indeed, there are at least two such words which may be indicative, marũna “peacock” and šūraška “frog”. However, they have complicated etymologies (Witzel 1999a, b). Only a stack of Lubotsky’s new words from Els, as found in the various strata of Vedic and Iran. texts, would allow us to determine what is securely reconstructable for Indo-Iran. or just for the subsequent levels. The earlier attestation of a partly ‘foreign’ word, such as in the RV or the older
Shibboletha for time and place are, as mentioned, the local words *uśra* "camel," *khar* "donkey," *bīl* "brick".

The Bactrian camel was domesticated in Central Asia in the late 3rd millennium BCE and introduced in the BMAC area late in the 3rd millennium BCE (Meadow 1983, Masson 1992: 39 sq., 229, 233). It is also found on a few Indus copper plates. Its Mesopotamian designation, found in middle and new Akkad, *uṣur" Bactrian camel," is a loan from Iran (EWA I 238, KIA III 655, cf. Dikamonof in JAOS 105, 1985, 600). However, the llr. designation, of llr. *ultra, represented by the identical Ved. *uṣra, Avest. ultra "camel," has no plausible llr. or IE etymology.

The case of the donkey is of similar nature, though the source of the word seems to be a more southern one. llr. *khora > Ved. kara, Avest. xera "donkey" seem to go back to the earlier areas of its domestication. in this case Mesopotamia, where an Akkadian (Mari) source has *harum, ajarum* "male donkey" (EWA I, 447, 473; cf. perhaps also Kushtian *daqmar* Elamite *drakatu* Blazek 1995: 64). Various types of donkeys may be distinguished in Vedic India.114 in addition to the other wild equid, the hemione (onager). *Equus hemionus khar. Interessingly Vedic. Tocharian, and Dravidian have words that resemble the llr. and Akkadian form, Ved. gardha-bha "donkey" := *karca-hat > Toch.h.kercap*115 := PDrav. "gar- (?) > Tamil kajutai "donkey."116 They all may go back to a Near Eastern form *xar- that is also reflected by llr. *khora. When and how Dravidian took over the word remains unclear so far (cf., however, Blazek 2002a).

Finally, the word for 'brick' finds its likely source right in the center of these relationships, in the BMAC area. An llr. or IE etymology is unlikely (cf. EWA I 201, Lubotsky 2001: 311). Ved. *ṣit, sīkā, sīkā, Avest. šīna "brick," zāmā-štisuva "clay brick," O.Pers. šītu, M.P., N.Pers. x-šītu > Pashito šāqil (Morgenthaler 1927: 98), Baluchi šīt. One also may compare Toch. B tsekm (or tsecm) "a kind of clay," B tšı̄k(ə) "clay." Interestingly, this goes back, as in Indo-Iranian, to an i-stem *šiːt- > Toch. A *šits, A *šīːats, borrowed into Uighur as šiisi, "earthen cooking vessel" (Pinault 2003, cf. Pinault 2002: 326 sq.). Finally, we may add,

parts of Avestan is the only secure basis for analysis, since words from the unknown (complex) popular local Indian level constantly emerged in the sacred speech of Vedic and the educated speech of the Brahmins (cf. Kuiper 1991, Wittel 1989), even at much later periods (cf. the llr. *pèr después, yund in post-Vedic pārīndu "to put")... Such words could have accidentally have the Aramaic base, CGSC (such as Avest. Šartu, Aksaišu, Akhur, ayahāna, etc. see n. 158). Lubotsky so far neglects the typical substrate words found only in Iranian such as kahā "hump, mountain" or sansk. *clay* (see n. 158) which can serve as a corrective. - Lubotsky's new data, however, support my initial analysis of Central Asian loans (Wittel 1995a, 1999b,c), though he does not localize this substrate beyond pointing to the towns of the BMAC and to the Punjab (echoed by van Driem in MT, Special Issue, Oct. 1999, for a discussion and reflection see Wittel forthcoming a).

114 For instance kara, nīshhh, gurulhha, etc. see Pas 1980-81.

115 Both with the common Indian animal suffix *-hha (i)" in gardha *hha (= pān "peas"), gurulhha which is preserved in the northwestern NIA Daruc Kalasha language as štāra "markhor mountain goat," the hha, which would point to a slightly different source.

116 The overlap of Dravidian kaju- and Ved. gardha-bha "donkey" would be one of the few links of the Central Asian BMAC) language(s) with Dravidian (cf. McAlpin et al. 1975) and Indic-Kyrgyz. IA words for domesticated animals are entirely different from Drav. However, Ved. gardha-bha (EWA I 473, Drav. kaju in DDBR 1364) could, or rather should, be independent loans from a language of Greater Iran or Central Asia. Some want to make the BMAC a Dravidian speaking area (cf. Lamberg-Karlovsky 2002: 73), however, the close loan relationships between Drav. and Sumarian and Elamite point to a more western tradition this is confirmed by the lack of any Drav. words among the BMAC loan words found in OIA and Ohr.

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114 Central Asian Roots and Acculturation in South Asia
unnoticed so far, some words from south of the Hindu Kush and Pamir mountains: Bur. d-itiq, Shina d-i-tisk, Kalash k̲h̲ i-tisk patlai "brick", and, surprisingly, Marathi v-a"brick" (with "Dravidian" style v-vowel, instead of expected "t"). While all of these words lead back to a C. Asian source for "(clay) brick", "ditiq", the South Asian words have unclear pre-Indic "prefixes" d-, dhi-, v-. (M.P. v- is secondary).

Since there are no brick buildings in the northern rim of C. Asia\textsuperscript{17} and as both the Indus as well as the Mesopotamian areas are too asymmetrically located to be the source of all these words, the most likely Central Asian source for all these loans is the BMAC area. Instead of some hypothetical Caucasian source, the BMAC area is the first place where the steppe people, the speakers of Ir., coming from somewhere north close to Uralic and Yeneseian, would first encounter bricks and would need a term for them. As discussed above, the domesticated camel was used here, and the donkey had been introduced from the Near East at the time. These three leitfombi provide the time frame.\textsuperscript{118} This is confirmed by the forms of some words in still undivided Ir., which can be dated at c. 2000 BCE; the common Ir. designations for the newly invented horse-drawn chariot ("ratha, Ved. ratha, Ir. ratha, Mitanni Tu-ratha, Kassite Ah-hattu) and related words ("rathirm, rathirathim "chariot driver") and the archaic compound word rathamrattha/ratthagula "chariot warrior".\textsuperscript{119} All of this leads to a successful triangulation of material culture, time, and space in W. Central Asia at c. 2000 BCE or somewhat later.

\textbf{§ 3.3. Wheat agriculture}

To these, the plants cultivated in the area may be added. Wheat probably is the best case. It is a western import, as it originated west of the Zagros and south of the Caucasus\textsuperscript{120} in the western Fertile Crescent (between Jezirah and Jir al Ahmar). In S. Asia it is found as early as the 7th millennium BCE; it is first attested linguistically by Ved. gaumaha, Drav. (Kan.) gud, Bur. gurin, jaren (pl.), yuran; all words are derived from W. Asia.

\textsuperscript{117} For example, in Sintashtha there are only reinforced palisades with clay inside; however, the area just north of the Caucasus reportedly has clay bricks, see Witzel 269ga.

\textsuperscript{118} Note that the speakers of Ir. could not have entered or been in close contact with the BMAC area earlier than the introduction of donkeys (while they could have learned about camels from the Central Asian hunters, as represented by the Keltanian culture). For the passing through the BMAC area by Ir. speakers note also a few words transmitted in Mitanni IA: manu. Saumma, Tuklul as "Tupa" (above, n. 110, 102).

\textsuperscript{119} Such as "chariot warrior (how shottata), spoke, fellow" etc. (Radcliffe 2000). (pre-)chariting ("ratha, not "man weapon") are first found in the northern thopes at Sintashtha and also in Near East about 2000 BCE, see Witzel 2002a.

\textsuperscript{120} See the recent summary on Ofer Bar-Yosef’s work, at http://www.harvard-magazine.com/on-line.99016.html.
Ved. godhuma, Avest. gaŋtum, must go back, with folk etymology on the Indian side (see below) to a common Drv. < *gaŋtum, which in turn, echoes a Near Eastern source, Semit. ḫūtā (Arab. ḫūṭūm), Hitt. hurru, Egypt. µ (EWA II 499). On the other hand, a Caucasian/Bur/Basque (Macro-Caucasian) source is seen in: Burغu 'wheat'122, Basque gaıkua 'wheat', Proto-East Caucasian (Daghestani, etc.) *gōe(s), P.Kartvelian (Georgian yomus 'milllet', etc.) *gōmu (see Witzel 1999a,b,c). Obviously the ultimate Near Eastern source for all these words must have been something like *gō(m) / *g̣a(m) -d (⇒ uncertain vowel: for the variation of r/n see § 5).124 These relationships, along with those pointed out above for "goat" and "buck", and those discussed by J. Nichols (1997-8) establish an early, widespread network of cultural interactions between the populations of the Fertile Crescent, the Caucasus, the steppes, the Ural, Iran/India and the speakers of Macro-Caucasian (including Basque and Burushaski). Such relationships will be pursued elsewhere.

The Drv. source, *gaŋtum-a, differs from its Near Eastern source *gōm- by a suffix -a which is attested not only in Iranian (Avest.) gaŋtuma125 but also in Burushaski *gōm-um (and perhaps in P.Kartvelian (Georgian, etc.) *gōmus, cf. Proto-East Caucasian (Daghestani, etc.) *gōlo) (see Witzel 1999,a,b,c). One may assume a BMAC word *gaŋtum- that has entered India via the northern Iranian trade route (Media-Turkmenistan-Margiana/Bactria-Arattā/Sistan), while the forms with go- (PEGCauc.

121 The unfamiliar *gāntum-um > Iranian *gōnum, Indian *gudum (OIA and Dev.) was analyzed in IA po-dikuma "cow smoke" (cf. abu IX 40 2226 Konda etc. gois 'smoke', thus godhuma an original joke form!); similarly, though differently, in Davidian (see below, n. 128).

122 For the "suffix," cf. Neo-Elam. uwa > "to grind (grain)" and P.Drav. *aw "bush, chaff"; the compound "Pan-Iranian" gant + un (note Beger's Bur. "pandum") may therefore have originally meant "wheat grain." (Cf. also the link between P.Drav. *aw "soil, seed, grain." Elam, Bur *seal", Southworth, 1988: 639-660.)

123 Bur, gāri, kurū (pl. -yam) < *gāntum, *gāntum-; cf. also Bur gurī "barley, wheat colored", bur "wheat, grain." Beger 1998: 43. — J. Olavsson (pers. comm.) adds the following N. Caucasian forms: "for 'wheat' note the W. Circass. Akhmad, "rām," "fūl, "rū." The words for "wheat" in NER are: capital L. = velar lateral fricative; Avar rā-, Andi muGâ. Akhvakh q̣o̱w, Chamal q̣ow, cihal, q̣o̱c̣, cihâ-veli. Tindir q̣i̱ṛ, cihal, khivxovian aṛi̱, Ture, Hunkit aṛi̱, BerMâ q̣i̱b, tak buff, Arâ. g̣a̱q̣o̱q̣, sat, Tabazaran ḍaṛîn, ḍaṛîm. 81. 508, Ashyl "q̣i̱ṛ", "q̄i̱ri̱", "q̣i̱ṛi̱", "q̄i̱ri̱", "q̄i̱ri̱", "q̣i̱r̄i̱" (= ejective pharyngeal). Lenq̄ q̄i̱ṛ, m̄a̱ṛ (or bonomli, Burial q̣i̱ṛ, q̄i̱ṛ, q̄i̱ṛ, Tashkhar q̄o̱, Kyrq. q̄i̱ṛ, Radul q̣i̱ṛ, q̄i̱ṛ, q̄i̱ṛ). The mixed vowel stop proposed by Bengtson is the key. Budhishev development of *q̄i̱ṛ; the words are clearly borrowings (cf. perhaps a few native forms on earlier gramos, such as Tsezic "aci"), but from an unknown source. There are two originals: *q̄i̱ri̱, *q̄i̱ri̱; and *t̄ak̄-i, with assimilated variant *t̄ak̄i. Note how final */q̄i̱ṛ/ syllable can laterize, Russ. bikhka, Afrika Handbuch... ."

124 See below, §5, on the interchange of sin.

125 Avest. gaŋtuma, M.P., N.P. gandum, Shughni žudum, Pahlavi yanom < *gdunam, Khot. Sok gaunama < *gandum (Beger 1939: 406, EWA II 498); however, Brahui ańnov < IA *ganda (CDIHAL 4287).

126 As seen in Nur, gāmī, Hind gōmī, gudhā, etc. The northern form, based on Pre-Iranian *gandum would have resulted in Ved. *gāntumā or perhaps *ganda-dhuma "perfume smell," cf. CDIHAL 4620 (_simple) gandhâfrī "fragrant rice," Pahlavi gandar "a kind of grain." The actual Ved. form ga-ñhuma must be due to local influence by the Southern (Mehranian) *gālī (see above x. 121, on Konda gañī) on a northern *gandţumā; gandţumā it may be due to Dravidian influence on the Persian in the Middle/Late Vedic period as godhuma appears early in early post-493 texts.
"Gadri, PKartv. *ghamu), which are reflected in Dravidian, must have come via the Southern route (Elam/Anatap. - Simalki/Tepe Yahya - Marhali/Bamzur), resulting in Drav. *gadi (Kan. gad, Tam. *kdi, cf. DEDR 1969),127 The post-VR change from -an- > -a- is untypical for the Punjabi but found in Sindh (Witzel 1999a,b). It must have influenced, in some way (such as Drav. influence on the late RV, Witzel 1999a,b), the actual form of Ved. ga-dhāma as well. Note that the Drav. word, too, seems to be based on a popular etymology.128

Interestingly, irrigation channels, the only means allowing of sustainable cultivation in these dry lands, are indicated by a loan word as well, *sa(s)yā 'streamlet, channel'.129 Irrigation agriculture is said to have existed from 2200 BCE in W. Central Asia.130 The difference in sound between Vedu. and O.Perisan indicates a slightly different source of the loan, e.g., more eastern vs. a more western, or Gorgan origin: Ved. yārā 'stream, channel', but O.P. yavru > M.P. N.P. *yā, *yā 'stream, channel'. Parachii *yuvulaet' (EWA II 405). Both forms cannot go back to exactly the same source; this kind of telling difference often is indicative of loan words.131 In the sequel, a few more important words relating to material culture are listed briefly.

§ 3.4. Other agricultural terms

Items from agriculture and settled life include words for 'sheaf', 'seed, semen', 'piller', 'to heal, healer', 'lute', 'mark', 'lump', and even colors: 'blue', 'brown'. These items are indicative of the expanded agricultural base and the settlements of the BMAC. The words below are given here without the IIr. nominal stem suffix -a as we do not know the original (stem) form that they may have had in the BMAC area.

*para 'sheaf'; Ved. prasā 'sheaf (of corn)'; Y.Avest. pāsā 'sheaf', EWA II 101;

127 There is archaeological evidence now, while Renfre had maintained an introduction of wheat by the speakers of the (hypothetical) Blurno-Dranvidi, reaching India as early as 6000 BCE. Dorain Fuller (University College, London) now shows that wheat and barley arrived in southern India only c. 2200 BCE, after having stalled for 3000 years in northwest India before farmers developed a monsoon-tolerant variety set Science Magazine, Volume 294, 2 November 2001: 890, http://www.sciencemag.org/cgi/content/full/294/5549/898.

128 The unfamiliar (Iranian) *padam, adopted into India, has been reconstituted for Drav. by Southworth (1988: 638, 660) for c. 1000 BCE as *padum 'low red plant' (perhaps because of DEDR 3334 Tam. tumpli etc. 'settle, weed'). The developments from *tumpi > *tupi, however, is not clear. At the supposed date of 1000 BCE, *tumpai could even be based on RV padam! This late date (along with its speculative, glottochronological basis), anyhow, is now doubtful as when a found in S. India already at 2200 BCE (see previous note). The various Elamite, Sumarian, etc. loans into Drav. will have to be compared, and must be reconciled with Blakely 2002a.

129 See Damii 1992: 116, 222 etc.: note, later on, also the extensive network of underground channels in Afghanistan, karez, etc.


131 It is interesting that the C.P. word is as close as it is to Vedu.: this suggests, like several other (grammatical) items, a previous closer relationship in N.(E.) Iran/Central Asia. *yā may have been influenced by P.Ir. *nā, *nāvaNAV 'boatable' (from *mele 'boat'); > Avest. (dr) nāvitiwati 'water (channel)', Dr. naya 'navigable river' (cf. Adams 1998: 375). Adam thinks that Tocharian borrowed key words for irrigation from E. Iranian sources (which he dates much too early, Francfort 1999: 451), though the Tocharians knew items of primitive agriculture (plow, draft ox, harness, grain/heat, harvest, to plow) before; cf. Shishkin and Hiebert 1998: 231.
• "Hj "seed, semen"; Ved. bhja "seed, semen", OIran. *beta (in names), Buddh. Sogd. bzc’k, Parachi bga’grains’;
• *sthang "pillar"; Ved. sthūna, YAvest. stūnā, stūnā, O.P. stūnā "pillar"; unless ~ Ved. sthūra "tall, thick", Avest. stwra, Khot. stura (thus EWA II 748);
• *pind "lump"; Ved. pīnda "lump, ball (of food)" Khotan. pindaa, Armen. pind "compact, firm" c Iran.132
• *ting "mark"; Ved. tinga "mark, penis"; Avest. hāpt-i-tinga "the seven marks" = the seven stars of the Great Bear/Win (ursa mayor), s. EWA II 478 sq.;
• *sīna "lute": sīna "lute" (YV+RVKh); Khot. sīna "harp, lute", Sogd. wyn m. "lute", M.P. wyn "lute", Armen. Wyn. wyn "lute", ~ unless these are slants from India, cf. EWA II 568;
• *māni "jewel"; Mitanni IA mānni-nu, Ved. māni, Avest. -marni, ~ if not from IE, cf. Lat. monte, O.Eng. meen, etc., s. EWA II 293 sq.
• *ānti (ānti) "lynch pin"; Ved. ānti "lynch pin", part of leg above the knee" (Suhrata). Pinault 2003 connects Toch. B ortiye, Loc. Sg. ortiye ~ orti-ey "hip" (with a productive Toch. suffix).
The shift in meaning is explained by the common identification of vehicle parts and body parts (ratha-mukha, ratha-sirya "head of a chariot", nāthī "navel, nave"); both sides ("higs") of a vehicle ~ sides of the body; Pinault also analyses kalyst "kalysta" "beautiful" ~ kalysta "having beautiful hips = prith-i-teni"). For the retroflex -n. cf. Pani/Parna and see §5.
• *kapata "blue"; Ved. kapota "pigeon", O.P. kapauta "blue"; Khot. kavata "blue", M.P. kabōd "gray-blue", kabaṭar "pigeon", s. EWA I 103, Kuiper 1991
• kādrā "brown"; Ved. kādra "red-brown", Kādra "a snake derry", Avest. kadrawu apa "with brown horses", N.P. kāhar "light brown". Words for non-primary colors tend to be taken over as loan words (black, white, red, blue: orange, crimson, indigo, violet, etc.).
• Lobotsky 2001: 307 now adds: "aka "bad", ēkar "damaged (teeth)", ṣapā "bad" (actually, "evil")
• *bhī, bhī-aj "to heal, heal"; IR. *bhī-aj > Ved. bhī-aj, bhējaja ~ Avest. haatāz-ia; note the unusual noun formation, and the important combinations with *sanna (Soma/Haoma), see EWA II 264.
• sti the metal "lead"; EWA 734 from southwestern Iran, (O.P.) *sita "white" which would be too early153 for a loan into Old Persian as it is found already in A.V. Rather the word must be due to a local substrate, perhaps one found2 in the Kandahar area.135
• Lobotsky (201: 307) now adds a list of items of water/irrigation *kha "well, source", c’ti "pit, well", yavīya "canal" of agriculture: *magnā "yeast, bread", *(c)phata "ploughshare" of building technology: *ṭāṭiya "brick", ḥariya "firm structure, permanent house", *maṣayaκ

132 Note also kuhja, kuhara "crooked", and N.P. kūd, kād, Sogd. kawz "bump-backed", Khot. kāyja "bent", with uncertain etymology, cf. Skt. kurha "defective" CDIAL 3280, 3290 ~ Iran. N.P. kand, Bal. kant and the many words in Turner, CDIAL meaning "defective". ~ For Kuhha as a river name, see however, below n. 180.
133 The Persians moved into the Persis and Anshan from NW Iran only after c. 700 BCE, see summary in Schrivor 1995.
134 Lead is found in the Kandahar area, see maps in Kemoyer 1991.
135 Further, a large number of verbs can be added, such as *kha "to find pleasure, please", *kram "to strike", *krem "to shoot", *k’ti "to regard, look", *kla "to serve food", *k’im "to be patient", etc., the culturally important *khu "to apportion magically, to teach", *bhi "to heal" with its strange derivative *bhī-aj "healer" (see Lobotsky 2001); perhaps *mark/mar "to damage", or nouns such as *kṣayya "mountain, hampe (cf. a cestus)" etc., see further, below n. 158.
'wooden peg', "istikälë istakä "sand, gravel"; of artifacts: "kapatra "dish, bowl", "naif(s) "spit", "wac'ë axe, pointed knife" ('seems cognate with Circassian /wati/ "small axe for splitting rails,")' I. Colarusso, pers. comm.), "gaddi "club", and of clothing: "atfa "cloak", "däka "hem, thread", "tas"/"afrä "coarse garment", "pawasäs "cloth", "sätu cinsä "needle".

§ 3.6. Local Plants

Importantly, some Central Asian plants are included in this list as well.


The following two cases, however, indicate a much deeper layer and a wider spread, extending, via N. Iranian languages (such as Syriac), to the borders of Europe. These Wandererworte, words of culture such as "coffee" or "tea", have traveled the length and breadth of Eurasia.

**'kan / xan "hemp", cannabis", M.P. Jan "hemy", Khet. kanaka, Onset. goe, gams; note: Sumer. kumbi; Gr. kúmeroi, Kuss. Church Slav. konoplija, OHG wopen < Syriac *kanap, Kirgis, etc. kändir, Turkish kendi > Hung. kender, Moldw. katsa, kantsj. Cheremis kies; -- for the change between k/š in E. Afghanistan/Panjab, as in Karkshe/Sarkht, see Witzel 1999a, b.

**'sinap "mustard": Ved. sasapa "mustard" (Brahmanas) > IA A, NI, sasapa "mustard seed", Khud. sašapna, Parth. šiš-pla, Sogd. šapap-dān, N.P. šapan-dān, N.P. šipan-dān "mustard seed" (cf. Gr. sinapoi), < Pre-iran. *sinapa < **sinap (Henning's simap, ape, see KEWA s.v.).

§ 3.6. Local animals

Even more importantly, some names for local animals pinpoint the area of the "BMAC" substrate more clearly. One would imagine that the Indo-Iranians had a word for the common tortoise, however, this is a loan which has been given to a river as well.


Lubotsky (280; 307) has *[I]šitra "camel", *kara "donkey", *kac'ya "tortoise", *kapanta "pigeon", "ay/aaka "hedgehog", *matyä "fish", *merga "game", *wardj/aj "wild boar" (reflected in Ossetian Uryz/mag), Circassian (Iranian loan) Warza/meg). The Nart name must reflect what Johannes Kühbler thought "wild boar". He would be the sole ethnographic warrior relic in that tradition (I. Colarusso, pers. comm.).

The leopard was a common Central Asian animal that is often found in early C. Asian art (Dani 1992), in fact a prominent motif on the oldest pottery from W. Turkmenistan.

136 Also found in S.E. Asia Malay sawi, sawte, astro-as, 'sapi, 'viti-'sapi; cf. further the similar word, FWA 712, 727: simapa RV = "Baberga nation" N.P. Iśm, Javanese sawi = "simap". CJDAL 12424. Elam. šap ša ši ša ša ša = "setapp".
Later on, it was used for sport (see Th. Allen in V. Mair, forthc., van Binsbergen, forthc.). Its designation differs considerably in the various languages concerned.


The overlap between "panther" and ("spotted") snake is due to the fact that snakes are frequently named after a number of characteristics of other animals and plants, in case, the "head" of the panther (differently EWA II 163), Lubotsky (2nd Int. Ved. Workshop, Kyoto, 1998) has pointed out that the AV snake prākā is called after the leopard.137

The Iranian forms differ considerably: N.P. palang "leopard, felis pardus" < O.Iran. "parād, 138 kud, pānīk, Pasho prang, Parāci pārān, cf. further Lahinda purā, Gr. párathalos, pārous, le-pārous "leopard," all < "parād "spotted, wild animal?" (see EWA II 133), or following Henning, from an older "parā." However, the alternate Greek word, pārathē, must be taken into consideration as well. The original C. Asia word seems to have had the dialect variants "parād/parād."139

Even more intriguing is the case of the word for the rhinoceros. It seems to go back to a local word *bār/kār/kāh with a suffix -ka or -ga (see now Lubotsky, 2001: 304, on the common BMAC suffix -ka added directly to roots, cf. Wizel 1999b: § 15, on the word for "rhinoceros").


The rhinoceros is by definition a South Asian (Indian Civilization, etc.), not a Central Asian animal. However, its prehistoric spread needs to be investigated. The local climate and water table around the Siuan lakes and the reed thickets of the Helmand river [40°] would have allowed for its existence and survival in the area, while the comparative situation in the Central Asian ones and rivers, such as the Balr n river and the Amu Darya, must be studied more closely, and the question must be raised whether the word in question is a loan from S. Asia or a local word.140 At any rate, based on this word alone, the southern and southeastern limits of

137 Note that the use of "parād (prākā)" has been narrowed down in India to "spotted" snake, while the old word for "panther" has been substituted early on by depnī (the "one having islands [spots]"), AV., see KEWA II 87, IVA II 289; parādha prākā has been influenced in form (and meaning, "papal") by the local Indian prākā-puschl, rākā "snake," miyā "snake" (Wizel 1992b).

138 For the word changes involved cf. Avst. pāraṇatās (source for our "parasite") > N.P. pāta "garden."

139 Gond pārā < substrate loan word "pānā?" > C. If. § 5, on the interchange of "phā"/"rā" has been substituted in Indian away to be depnī, see above n. 137. Note that Hoffreiter 1962: 253 considers the "speculated "dog" of MāKHs" (as ga in a. "red stag" as often quoted?), a diplomatic gift from Marāhi, to be a leopard (Parāchā pārād). For wolves, however, why one would send such a common animal as the leopard to Visnun, the last king of the Third Dynasty (of Ur).

140 See Dobel 1970 on recent literature. The rhinoceros is mentioned in the Hanbha 96: 5889 A (compilation 520 CE) in the kingdom of Wy (Alexandria) in Afghanistan (see Behn, n.d. 85) note that rhinoceros was still hunted by the Moguls in the Peshawar valley, which had been heavily forested and hardly settled at least down to the sixteenth period.

The tiger (along with the rhinoceros), must have occurred in the swamps of Sistan. The last Central Asian tiger was reportedly shot on the Aral Lake in the Seventies (cf. Mauz: 1992: 39), and the last one in Afghanistan, on the Aru-Aru islands near Kunduz, in 1970 (Duchesne Dietrich 1986: 95). However, the tiger (behr. Hörn
the BMAC language cannot be decided. However, it offers a welcome possibility of checking the origin, track, and spread of such loans. - Lubotsky (2001: 307) now adds terms of cattle breeding "Afra" "milk," "pýsλ saliva "breatht"; "sλγας/λα "billy-goat" (see above § 2.3.) and a list of body parts: "καθα "mucus, phlegm," "καικατυρ "head hair" (cf. Vaijayantika "Badger Mt.", Witzel 1972). "κκκ li 'side of the body, flank'; "γγδα "penis; "κκλα 'belly, pulic a 'tail, stuka "tuff of hair," lwira "tail," wrrka "kidney".

§ 3.7. The religious sphere

Importantly, in addition to and beyond the items of material culture listed above, the religious sphere, is strongly involved in the C. Asian loans into O. Iranian and OIA.

The most prominent words are those of certain rituals, deities, and priests: "ανεκλ 'Soma plant; "ανα "black magic; "ασθαρατ "priest" (however see EWA I 60), "τλι "secret," "λαγι "sacrificing priest, "μαγα "gift, offering, sacrifice," "καρα "name of Rudra," "καρθα "demi-god or demon."  

All these words are at the center of much of Vedic and also (pre-) Zoroastrian religion but have not been considered as being non-litr. (non-IE) so far. The advances made in the study of the Central Asian substrate now allow us to place these items in perspective.

First of all, the older IE ritual stressed the ritual drink made from honey. Greek ambrosia (the drink of "immortality"< IE *γ-ματ-); it is called madhuv "mead, fermented honey" in India (see above, on "honey"). Reminisences of this drink remain in the poetry used for Vedic ritual, where mead has been substituted altogether by the new "pressed out" (iu-) drink, Soma, whose preparation and use developed into the most important Indo-

1981: 42, cf. Vai. vogaha, EWA II 509, with folk etymology < C. Asian. "boghrf is still found in Iran, in the Elburz and Kopet Dag Mountains. Its absence in the RV in contrast to its prominence in the seals of the Indus civilization along with the Vedic absence of the leopard (that has been found depicted from early Turkmenian pottery onwards), may be due to the fact that it did not belong to the traditional imagery of the Indo-Iranians who preferred the tig (yepas). A possible reason may be the preponderance of lion images in religion (and the absence of panther and tiger), a religious choice (Franz 1994) already made by the people of the SMC area through which the speakers of OIA must have passed. (cf. also W.J.M. van Bemmelen forthc, on the image of the leopard in Africa and Asia). A new study of early IR animal designations and their respective importance in religion (cf. W. Vogi 1937) is a desideratum. In view of these uncertainties with regard to the distribution of these animals, it remains of course entirely doubtful whether the languages of the BMAC and of Harappa were related as all LUBOTSKY (2001: 366) believes (see above n. 113).

1m: First collected and discussed, as far as represented in EWA, by Lubotsky 2001: 304; cf. now the overview of pre-Vedic religion in WITZEL, forthcoming.

113: The last three words may, however, be later loans into Vedic; from OIA, in the late 1st. till. B.C.E; but note PIANO, n. 112.
Iranian ritual. The Soma plant, whose botanical nature is still uncertain, originally seems to have been called "ānu" (Ved. amša, Avest. amša, from the root a- "to press", thus "amša the pressed drink"), note also the name of the Saka Ḥaumāsāra "the Saka twisting/preparing Saka" in Central Asia, attested in the O.P. inscriptions: discussion in Witzel (forthb. b). See also the image of a local (mountain) people for Vedic rituals. There are indications, so far largely neglected, of a C. Asian ritual involving smaller and larger (Somali) vessels, usually found turned upside down in archaeological sites.

144 Inde Iranian "soma", Ved. soma, O.P. hauma, Avest. haoma, from the root a- "to press", thus "soma the pressed drink", note also the name of the Saka Haumāsāra "the Saka twisting/preparing Saka" in Central Asia, attested in the O.P. inscriptions: discussion in Witzel (forthb. b).

145 See Pelsek 1995, Nyberg 1995 (= Ephedra), and the recent Leiden workshop on the problem; its results have partially been published in EJS 9 (May) 2003, ed. by J. Houben. For Ephedra in Afghanistan and in the Kafir valley of Charāj, see next note.

146 Presentation at the 3rd Harvard Round Table on the Ethnogenesis of South and Central Asia, May 2001 (http://www.fas.harvard.edu/~samkett/RoundTableSchedule0.html) and now in EJS 9 (2003). Note that the word for Asfodela (a plant producing roots) is similar in shape. In the older pre-Islamic form "an'ū' which is found in Toch. as an'ū, Chagh. an'ū, (a root of Asfodela simica, a low grade stimulant), see Pulleyn 1962; however, Lubitsch (1998: 379) simply subsumes it under Wanderwurzel of unknown etymology. Pinault (2003) further connects the Tocharian Toch. word for "moss" (mòcornā > Toch. A "avica (adj. avicāvāy "made of iron"), B avicāvāy (adj. avicāvāy) and cf. Khor. hoxcorrā > Iran. "antivān. The rendering "iron" derives from the rusty color of iron ore, just like the Soma plant or its juice are called "rasty brown", indeed the color of the powder of some Ephedra varieties cf. below. The Epigetic Soma is called bahābār, karī, amisa, amūsā (i.e. "brownish" through "reclining"). Interestingly, Aramaic, Arabi is, 28.8 is aware of it as aspātan, growing in the "Cacassia" (Hindustan); this has been identified as Asfodela, like by sheep, see Würth 1985: 887, n. 111. However, note that the same is said about Ephedra - Khasāl amūsā ("ramūsān, Czial. 13492): the plants grows in the higher mountain meadows, often as stones, with smaller, compactly arranged, leafless, articulate stems. It grows on stony, gravelly ground. The fruits are red and shiny and are eaten by children. The stems are used for drying yellow, and are used, as powder, for chewing (tobacco) and as snuff. The Khasāl tribes crush the stems and soak them in cold water. The extract derived from it is used as medicine against fever. The plant grows in all of Turkistan, north and middle Persia, in northern and eastern Afghanistan and in the northwestern Himalayas." (K. G. Geldner, Der Big-Vata, introduction to vol. iii, Cambridge: Harvard Oriental Series 35, 1951: 2, my translation). "The central portion of dried mature (Ephedra) twigs collected in autumn contains a powdery material of rusty red colour" (Pinault 2003, N.A. Qariibb. The Pharmaceutical Journal 30, 1960, 499).

147 See now Staal (2001, 2005) with an exact localization: the RV speak of the best variety, the mountain Mayawant (AV), cf. Avestan Maza, found even now as the mountain Mount Tagh Ata and the R. Muzh- kul (Jinjeng/Tajikistan border area in N. Kazakhstan), see Witzel 2000a, cf. above, n. 112.

148 Pinault (2003) draws attention to the combination of omia "Soma" and the "foreign" name Soma (Soma, Somag, RV, Koper 1991: 7, 70): another form of this name is RV Kīsta, with the frequent interchange of kīt (in non-I.A names and words (Witzel 1999b, c. =) See further Witzel 200a for a discussion of non I.A. Hindustan and Pamir mountain peoples.

149 Saraturli 1992: 36, this custom continued even down to the Greek period in Bactria (Al Khurasan). - For the alleged finds of Ephedra ("Soma") at Tongolok in Bactria see Kammer Karlskog 2002: 71 and now Houben EJS 9, 2003.
Not unexpectedly then, the names of some of the most important Ir. priests and composers of ritual poetry also belong to this substrate: *atiharvan* ("fire") priest, *tri-* "seer, poet," *acg-* "sacriﬁcing priest," *yatu* "black magic,"150 IE etymologies, however, not very convincing, once have been proposed for some of these designations, especially in the light of the analysis given below (*-awu suffix).

If these points are evaluated against a discussion of the names of deities, it becomes obvious that a major change in ritual and religion took place among the speakers of Indo-Iranian in C. Asia. A prominent feature of Ir. religion is the emergence, probably in the Ural area (Witzel forthc. b), of a group of "gods of law and order" (*sura, Aditya, with Ir. *nanesi*) that regulate the "truthful" behavior of people, from a single person to a tribe.152 Other important deities seem to be based on a substrate designation. They include *c-arwu* "name of Rudra," *in'dra, *g-h(i)andh-awu(b)(h)u a " demi-god or demon."153 These are, however, of uncertain attribution, as they are, outside Vedic India, found only in a late Avestan text in


151 The Vedic/Avestan lists have: 1. Ved. *Shvaro, Maitrani Uruma (substituted by Avest. Ahura Mazaatra, with a local(*)) *arwu sufﬁx otherwise rarely found in Ir. Ir. (but note: *Perk* in Lith. Perkines/Slav. Perun "thunder god") 2. Ir. *uru is seen in: Yasuma, *liru, *aruru, cf. Avest. *tawaruna, *wuru, etc.; note Blakée 2002:233 for Elamite Urum, at Hali Tepe, 3rd half of 2nd sull. BCE). 2. Ved. *Mitru, Mit. *idhra, Avest. Mitruh, "god Agreement", 3. *Ayu ma/magh-man ("Ayu hood," got of marriage exchange, an artificial formation from an adjective with the deverbal derivative sufﬁx -man, similarly Avest. *kat as "kati hood" = "belonging to a family"), 4. *Gatwa-awu (O.P. *ghangia) "god Share," 5. *Amī "god Lot," 6. sqq. *Dhavat-datar "god Apportioner/Creator," 7. *Dhavat-knevo, *Mātana Vivasvat/Avan mantanum, Vivasvauvan. These new deities are active in the social relationships, respectively: the world, tribe, clan (marriage), family, individual. Vivasvat is the successor of Manu and Tahm/Miya and thus, of human beings (or at least of all *maia lineages). These deities are not found in IE (Ved. *bheu, *bhi "a god from N. Iranian *bha "god"). Their Pilr. origin may be due to socio-religious developments to appease conditions (water rights, oral agreements, etc., see Witzel, forthc. b); this location is indicated by the several correspondences in these early Urals and Yeniseian, such as *Aur* > Mohammad *вози итог* "lord," Vogul *ээге" prince (Kovalevskii 2001:237). etc. — However, the BMAC population had an altogether different local religion, with a preoccupation of an (agricultural) fertility Goddess and her antipode, a polymorphous, male scaled skin Dragon deity (containing several animal and human forms and allied with snakes and lions), whose fought by an eagle headed hero (Freer 1994), see now Witzel, forthc. b; cf. below #7.

152 Details: *c-arwu name of a god," Ved. *Svaro "name of Rudra" (commonly seen as archer, hunter), Ion. *Svaruna "a demon," Pinault (2003) connects the Tch. word for "hunter," Common Tch. *svaru, B *sarat, A *tawu "hunter," and N. Iran. words: Iran. *senta, *senta > Avaru (Avest. Svaruna = aera > Ved. *ru) > Ouest Diger *sara, *rad, Iran. *sema, *sento "to hunt." Khuten. he *sara, he *sentu "the same quarry, hunted beasts" and deduces the meaning of *c-arwu as "hunting, hunter, living in the forest = "being of the wilds" > god of the wilds, destroyer." cf. also Ouest Syr(don), the name of a beaked Sart, J. Colakouso, pers. comm.), *intra "name of the king of the present generation of gods," Ved. *Indra, Maitrani Indara, Avest. Indra, *a demon*, *g-h(i)andh-awu(b)h*; Ved. Gañdheru "name of a semi-dioce spirit of hunt and protection," Avest. *gandh-awu "a demon, monster." — Blakée 2002: 232-3 compares Indra with the Old Elamite names *Ina(i)sh, Indra* from *dita "in pat, lot," J. Colakouso (pers. comm.) thinks that *Indra/Indara, Hitt. *Inara (Inara, Inara), all points to this name having been an epithet. Note Cicaussian *lo*a rul big be genid, Akhais la yin are the big (the) *gegeund (the name of the god of the forests), all meaning "the big, great one."
(Vidvēdva) and may represent loans from OIA, when Zoroastrian religion was confronted with Indian unbelievers.

Importantly, Lubotsky (2001: 304, 306) now draws attention to the common 'suffix' *-arwa-153 in *arsharwa, gr/handharv/h/ha, and perhaps also in *c-arwa.154 Interestingly, this 'suffix' is seen only in religious terms, which at a minimum points to intentional, if not artificial, formations involving these words.155

However that may be, the surprising cluster of words related to religion indicates that the Indo-Iranians were strongly influenced by a Central Asian population leaving its own peculiar religion; this whole problem is in need of a closer evaluation in comparison with Vedic and Avestan religion.156

The remaining group of words only attested in Indian sources157 and words only attested in Iranian sources158 will be evaluated in another paper.

§ 4. Place Names and Hydronomy

An extensive survey of the older place names of Turkmenistan, S. Uzbekistan, Afghanistan, etc. is still to be done. The oldest sources are found in the Avesta and in the Old Persian inscriptions. Both include only a few Central Asian names, usually of Iranian

153 Originally, Lubotsky had apparently thought that this group of words belonged to a still older layer of loans in BR.

154 Doubtful unless one assumes a root *-h- as can happen in Caspian languages; cf. NEC river names, n. 91. See, however, n. 152 for a Toch. reflex, B her(a)we, A haru "hunter": cf. n. 143.

155 For details see above n. 151: just like Arya-man. Is the IIr. suffix -man/ven replicating a BMAG suffix -arwa whose use would have resulted in the difficult form Ved. *arya-rvâryana? Cf. finally, the rare -râla suffixes in Vedic (BR a -râla-sula).

156 For an initial investigation, see Wittow, fortior, b.

157 One may also investigate, for example, the names of clearly non-IA gods and demons in the IV, only a few of which fit Lubotsky's triyalabic pattern with long inside syllable (see above, n. 113): Araru, Aruda, Ibita, Umru, Emusa, Kanaqa, K(1)isaitara, Khit(!), Camurt, Jaraha, Dephiska, Namkri, Parpi, Parmpa, Ppiru, Brusa, Ribi, Vrangda, Sambara, Sanda, Simuta, Xirunda, etc. Unfortunately these words do not have counterparts in Old Iranian (many or most) may come from South Asian substrates; for details see IEWA, s.v.

158 Such as O.P. kyausa "hump of a camel, mountain"; Avest. dhru "channel, rivulet", shta "land, property", amita "fire place", ahini "receptacle", alka "scissors", oishtana "an agricultural instrument", rujak "clay" (note the Toch.loan (1) tjak ni "clay", Pinault 2002: 334), huata "threwed", muitamata "weyed", etc., or the many names of illnesses and other words describing "evil" of all sorts (cf. the many local Iranian ones listed in CDIAL) such as akš rapper, atard, ašman, aflum, aflun, arpa (= Ved. ara), ama, ardka, angluma -uštīna, or those insects and others pests such as aškurta, arka, ašturta and finally personal and place names such as Axta, Axtarq, Anārta, Anāsā, Anāba, Amara, as well as those of demons such as Ahrara, Aštrīa, dua, Audana, etc. A detailed investigation will be presented elsewhere.
The Greeks, starting with Herodoto160 and the historians161 of Alexander's trek towards India, provide a number of interesting toponyms and personal names, again mostly of Iranian nature. Ptolemy's Geography162 adds a host of names, especially for the areas on and beyond the Yaxartes, in the Saka territories and in Eastern Central Asia.163

There is an increasing number of mythical and real names found in Middle Iranian Zoroastrian and Manichaean texts, and the old Sogdian letters or documents from Mt. Mug with more than 60 toponyms. A brief overview of such early, medieval, and most recent data up to the 19th century is provided in a survey article by Khromov (1960, 132-139). All of these later data cannot be dealt with in this paper.

Modern data for these areas as well as for other former Soviet Central Asian republics exist in a number of publications in Russian that can be compared with the older data. In a survey article Khasanov (1960; 156-160) discusses the multi-lingual names of rivers and towns. He underlines that the hydronymy is often taken from the names of local province or towns, a feature already seen (often vice versa) in the Avesta and O. Persian, such as Balu river/town < Badui, Merw river/town < Marga, etc. Taken from his map (1960: 159), the Str Darya also goes by these names (note Russian [i] often for [h], [i] in Saka): (Gr.) Tanais (< Ir. Darus), Turfan Daryasi; Orade/Orto Daryasi, Karalun Okar, Seizus, Nazalai Sax, Benarat Daryasi, Xojirat Sax, Kastar Aksu Swi, Fargana Daryasi, Ugan Swi (Gr. Sitis is missing); similarly, the Amu Darya: (Lat.) Oxus, Urgench Daryasi, Xorezm Daryasi, Oka, Okus, Arakai, Jeexun, Kelv Daryasi, Bal Daryasi; and the Zeravshan; Baxara Daryasi, Xorezm-Kam, Rudistar, Obe [= ab-i] Sogd, Obe Kuxak, Samarkand Daryasi, Zaravshan. Out of these, obviously only the parts of the old designations not stemming from Ir. (darya-, ab-) and Turkish (si-, su-) are of interest here.

A useful overview of the literature and of some major toponymic features of the area has been given by Murzayev (1964: 3-13), Fomolov (1980, 118-123), Khromov (1980, 132-139). Edelemann (1980, 21-32). Other areas included in these studies written in Russian are the Upper Alai, Kirgizstan, Kazakhstan, Tajikistan (Khromov 1959, Rozentel'd 1964), Tajik

159 See above §2.3: Chorasmia, Sogdia, Bactria, Margiana: all already Iranian names, or mythical rivers such as the Vaghri/Wehran: see Vahroni 1891, Witzel 2000a.

160 Historians: 1.705: the Saka tribe of the Massagetae, their queen Tomares, her son Sparapater: iii 92 the tribal names Kapnii, Paniskaia, Pamfrathanto (on the Oxus), Dareti, Baktrianai, Agtiri (on the Iaxartes): iii 117 the Khurami, Hurkani (in Gorgan); Parthii, Sarangii (< C.P. Zamenho), Thumanamii; vii 64 sg: Baktrii, Saka, Skhahii, Farasamni, Sogdii, Kapnii.

161 For example, from Arrali's Abalamai, iii 29 the town of Baktra, west of Mt. Araxes, the tribe of the Dafkii from other side of the R. Tanais (Gk. Iaxartes): the E. Oxus, the town of Yaxartes (Rondza), Mt. Araxes: in the towns Zaripata, Kargolii, Gatai (in Sogdia), R. Tamais, the town Marakanda, R. Falahmetas (Zarshart), R. Dzhab, in Maranda (near Merw); Marakand, Zaripata, Ga/ziibi (near Bukhara), Nokhara, Partrandkat, Khirnusa, Baktrii, also Carinae Radas, Historia Alexanderi Magi (Degsatis Alexanderi Magni).


163 Such as the names on the eastern bank of the Yaxartes: the Saka tribes of the Karatai, Kormtai, and east of them, the Grimm, Tsiarm, Bulul and Massagetai: further east, beyond the Aksatotkand and Imann Mts.: Kazn (< C. Avest. harsatai: [a]stara [Kopai] < *Kais, with the poss. Xduor asi), the Khattai, Aksu, the Khurami, and finally, in Eastern Central Asia (from north to south): the Palaiii, Armstia, the Ohkandaii, Issdomaii, Thornaii, Disgastii, Aupakarta, Dastat and Ottakartai (< ottakartai: beyond the Hovigayasi), AB 8:4:4: the rivers Ohkandr, Rousii, the place names Dama, Issna, Ptack, Armstia, Khanevi, Coqaxa, Ottakars, Selema, Thugana, Duxnatai, Sera (metropolis). Some of them clearly are Iranian (Apsakara), others are prima fave unclear.
the Indus, first met with in the RV Sindhuh, a river that begins in the Himalayas and receives the Kabul, Kurram, and Gomal as well as all the Panjāb rivers (RV 10.75). P. Thieme (1991) understood the Indus as the "border river" dividing IA and Iran, tribes and has derived it from IE with an etymology from the root *sinojdh *to divide.172 The word is also found in OIrman as Avest. hondhu "border river, ocean (at the western and eastern ends of the world)"173, O.Pers. hondhu (hara) "Indus". This points to an Ir. coinage with the meaning "border river, ocean."

The question remains why this reconstructable PIt. word is so similar to Macro- Caucasian words that reflect something like (t)sin(d)/ (t)sir(s);174 (see above, n. 91, on NEC *x	enc="river" and NEC *sI	f-IPA "river" and NEC *sI	f-IPA "water".)

In the case of IA one may also think of an adaptation of Bur. sinda,175 from Proco- Burushaski,176 to the well known IE and IE *sidh-sindh- "to divide". Pinnock, indeed, connected IE *sindh with Burushaski as he could not find a cogent IE etymology and as he rejected Near Eastern ones (Pinnock, 1953: 12-13).177 He also points to a number of river names in the northwestern subcontinent which have the same suffix -u, but are clearly IA (1954: 4 sq). It must also be noted that the word Indus is attested fairly early in the context of Mesopotamian trade.178

However, the wide spread of these words east of the Caucasus rather seems to indicate a Macro- Caucasian source *sind- "see (§5) that has been connected, already in IE times, with Ir. *sinojdh "to divide" and etymologized as "Sindhuh dideriver, river."179 This suggests a localization of the process near the BMAC Sindes river rather than the Syr Darya (Silus).

172 Some compare Iria Shanman, etc.; see KEWA, CHA II 729; these names are discussed in some detail by Mayrhofer (1979); he denies any connection with Skt. Sindhu.
173 Cf. us.hondawa "beyond the natural frontier" (Thieme), that is: the mountain) "rising from the ocean (Milky Way)" or "beyond the Milky Way", hondvusnuvakkha (Witzel 1984).
174 For details on the distribution of n in see §5. The word is attested in Mesopotamian sources as s.n in da, a, var. s.in.da, see 177.
175 Cf. Witzel 1999a,b,c.
176 Cf. "sikken 1987, 1988, 1998. Early loans include Ved. kiskha / Class. Skt. kāṭā "a milk product" (RV), Bur. kāṭā "curd", Ved. meṣa "sheep", Bur. met "skin bag" (but cf. Skt. mēsa), Lth. mašius "skin bag"); cf. also Bur. huluk "big horizon" (see above, §2.1), further: fan "blind", Ved. āpa with the same northwestern variation of k as seen in Kāقرā/Sar kara (Witzel 1999a,b); cf. also a cultural loan from the Indus: yopot "cotton", Ved. .Marker: all of this is in need of further invention. For pre Bur. substrates see the summary in Kuper 1962, 1991.
177 Cf. also Mayrhofer 1979; on the Sindes, a people on the Kūban R., North of the Caucasus mountains and the Sindes river (Teutsch, in Tātias, Annals 10; Witzel 1999c; and below §5. b.1.b.; cf. however, n. 171, 178.
178 Cf. Neo-Baluchian nokes for Indian products, as detailed by B. Landberger, Welt des Orient 3, 261 (cf. OIP 2:123:35); e.g., pātars of ivory, copper, cedar, aqīnsa, juniper and "Indian wood (a in da, a, var. si in da) apparently derived from a predecessor of Bur. sinda/UA sindhu. Note however, also the alternative explanation by Southworth (1988: 659): E.Dran. "Amna > *r̥ūnum (sindu, sindhu) "date palms, phoenix sylvestris" > Manda shah, shankad, kia etc. (Smt. kia, Mardia kia); Southworth sees here the origin of the name of Sindus, however without explaining "kina in Ved. Sindhu (s. EWA I 729, Witzel 1999a,b,c).
179 Note some early loans from Pre Vedic IA into Iranian when O. Iranian still had *h, as in Asyrian At as ra ma-as - Avar mi a, Akhmazad, see Huster 1998). In Sindus thus can be a loan from an older IA substrate. However, the "eastern and western" Indus "oceans" Y, 5:29, and the name of the mythical central mountain, us.hondawa "emerging from the river/ocean (Vourvules)" indicate hondu ("mythical) ocean" in
If the connections made above are correct we get a band of river names, from the Caucasus to the Pamirs, that reflect the language of a previous C. Asian population.

This impression is reinforced by a few other names. The people north of the Caucasus, the Sinder, live on a river now called Kuban that emerges from the Caucasian mountains of the Cherkess Republic. This name, attested at least since 7th cent. CE, is echo of the Khab river, RV Kibudh, Gr. Kopitês, Kopitêm. Another interesting river name is that of the Indra river in S. Tadjikistan, Indra-ab, 162 and the Indra lake (Russ. sverpo Indera) on the lower Ural river in W. Kazakhstan. In light of the proposed non-ltr. etymology 153 of the name of the god Indra (see above) these widespread names may reflect the C. Asian substrate language as well. 184 Much more research is needed, however, to turn these proposals into something closer to certainty.

As far as Greater Iran itself is concerned, the O.Iran. sources (O. Persian inscriptions and the Avestan texts) 152 add a number of interesting names. Beginning in the Northwest, the non-ltr. name of the Gorgan plains south of the Caspian Sea is found in the Avesti in Y.1.9 as Xuxanta = "Ahunanta which Humbach (1991) derives from < khr-(cf. Ptolemey, Geogr. 6.9.5 Khvanid, Lat. Chrodit). This, incidentally, is another case where we see a shift between r/rr in Central Asian etyma and names (see below, §5). The ltr. name of the area is Vakarkana > mod. Gorgan, "sea (country) of the wolf (men)." In the Northwest of Iran the O.Pers. inscriptions mention the districts Aagasya (Wittek 1980: 112 n. 76 with literature, Avastan (Wittek 1984), derived from an Ilı. (Iran) coinage "border river, ocean" which would fit P. Thévene’s etymology (1980: 9) from the IE root *wə(w)l to divide."

Note the area called Sindište south of its mouth into the Sea of Azov. L.G. Galieva, 1960, 140 quotes other names of the Kuban, such as Kum in the Armenian geography of Moses Xorenac’i. Kofna in the Brezian, the history written by the Constantinopolitan patriarch Nekhenoros (c. 750-829 CE, when describing the title of the emperor Maurikios, reigning until 602 CE). Kub in the 17th century Russian records. Bo’chak Charad. Galieva 1960: 135 includes other names: (G.) Hapani (she writes Gr. Gipanai, Gipanion). Antkinas, Barde, Bardepsu, Rizen, Kuba, Kopia, Sopa, Kopai, Ulmue, Priile. (Physic. I. Coleman, pers. comm. points out that this is Circassian Īṣā = "water" name of a tributary to the Kuban), Puruk, Bal-Kum.

181 It seems to come from a Circassian language. Galieva (1960: 133) points to the Kazakh-Balkar word kuban "(memorably) furious, racing (like a horse)," and she compares (incorrectly) the Greek "Gipanion" (Hapani), which she connects with bones as well. The word rather should be derived from an Iranian "wpa pari "having good drinking water," but note that this "to drink is little attended in Iranian (O.Avest. wap̄i, P.P., wap̄i, N.P. wahisth), and C'h'pa pari "water" is attested only after, in the Epic, however, wah has become the common word for "water" in NIA. Other forms are Kuma, Kubit (in Turic languages). Galieva (1960: 138) also compares the river name Kopa "lake." The Indian Kubhi (RV, Gr. Kopihs, Kopitês, "Kubal River") can only vaguely be connected with such words as Ved. kapa "best, crooked," sāmuha "humped bull" (RE 232; EWA I 368, CDHAL 3300, 3261; Finucane 1993: 130 §403, Khurā. kapeya "crooked") and may rather be explained, as the Kuban above, from a reked Cauca. word.

182 The N. Afghan river Ander is to be separated from this as it is attested in mid-first millennium Chinese sources with an , see Wittek 2000a, n. 7.

183 The IE etymology from PIE, "ind to swell" may be reflected by the French river name Indre in central France, c. however the next note.

184 Taking into account the Macro-Caucasian family, the French river name Indre (south of Tours) may reflect a Basque substrate.

185 There is need of a detailed study of the many names of mountains in §19; for some initial attempts see Wittek 2000a.
If the connections made above are correct we get a band of river names, from the Caucasus to the Pamirs, that reflect the language of a previous C. Asian population.

This impression is reinforced by a few other names. The people north of the Caucasus, the Sinaétes, live on a river now called Kuban that emerges from the Caucasus mountains of the Cherkess republic. This name, attested at least since 7th cent. CE,180 seems to echo181 that of the Kabul river, RV Kuhbê, Gr. Kóphê, Köphên. Another interesting river name is that of the Indra River in S. Tajikistan, Indar-dh,182 and the Indrâ lake (Russ. ozer Indrâ) on the lower Ural river in W. Kazakhstan. In light of the proposed non-Ind. etymology183 of the name of the god Indra (see above) these widespread names may reflect the C. Asian substrate language as well.184 Much more research is needed, however, to turn these proposals into something closer to certainty.

As far as Greater Iran itself is concerned, the O.Iran. sources (O. Persian inscriptions and the Avestan texts)185 add a number of interesting names. Beginning in the Northwest, the non-Ind. name of the Gorgân plains south of the Caspian Sea is found in the Avesta in V.1.9 as Xwantsa < *Xvananta which Humbach (1991) derives from < *khr- (cf. Ptolemy, Geogr. 6.0.5 Khrindo, Lat. Chirind). Thus, incidentally, is another case where we see a shift between r in Central Asian etyма and names (see below, §5). The Ir. name of the area is Vâlkâna > mod. Gorgân, "the (country) of the wolf (men)." In the northwest of Iran the O.Pers. inscriptions mention the districts Asagartiya (Wittek 1980: 112 n. 76 with literature.

Avestan (Nietzel 1984), derived from an Ir. (loan) coinage "border river, ocean" which would fill P. Thiemè’s etymology (1967:91) from the IE root *sri/arih "to divide."

180 Note the area called Sinâfâl south of its mouth in the Sea of Azov, L.G. Gulièva, 1960. 140 quotes other names of the Kuban, such as Kum in the Armenian geography of Mêne Xoremac: Kifina in the Breviserin, the history written by the Constantinopolitan patriarch Nicephorus (c. 750-829 CE; when describing the time of the emperor Maurice, reigned until 602 CE); Kubâ in the 7th cent. Russian records, Balšaši Chervtch. Gulièva 1960: 136 includes other names. (Gr.) Kupânis (she writes Gr. Gipânis, Gigânis). Antiochus, Bardan, Bardani, Sandarûn, Sandarûn, Padâm, Kubâ, Kopâ, Sopa, Kufo, Ukrup, Pishê. (Fisher) 1. Golyansky, pers. comm., points out that this is Caspian pənuš "water" name of a tributary to the Kuban, Balšaš, Bal. Kum.

181 It seems to come from a Caucasian language. Gulièva (1960: 136) points to the Kârâchev Balkar word kuban "(demons itself) furious, racing (like a hare)," and she compares (incorrectly) the Greek "Kupanis" (< Hepânis), which she connects with horses as well. The word rather should be derived from an Iranian "Hû-pân/ pânī having good drinking water(?)", but note that pa dét to drink is little attested in Iranian (O.Avest, vštap pât, N.P. vštap, and OIA pánas "water" is attested only later, in the Epic; however, pânī has become the common word for "water" in NIA. Other forms are Kuman, Kuban (in Turkic languages). Gulièva (1960: 139) also compares the river name Kopâ "lake." The Indian Kubh (RV, Gr. Kóphê, Köphên, "Kubel River") can only vaguely be connected with such words as Ved. kubhā "bent, crooked," As. kubhā "bumped butt" (KEDO I:22; EWA I:38a, CDFAU 3000, 3261; Pimmow 1999: 340 §433, Kharia: kubhā "crooked") and may rather be explained, as the Kuban above, from a related Casp. word.

182 The N. Afghan river Ander-dh has to be separated from this as it is attested in mid-first millennium Chinese sources. See Wittek 2000a, n. 7.

183 The IE etymology from PIE *sreh "to swell" may be reflected by the French river name Indre in central France, cf. however the next note.

184 Taking into account the Macro Caucasian family, the French river name Indre (south of Tours) may reflect a Basque substrate.

185 There is need of a detailed study of the many names of mountains in § 19; for some initial attempts see Wittek 2000a.
on place names), Kampanda and Nodya, and the fortress Sikaya(k)uwa(i) (cf. O.P. dhika "pravel", Ved. sikata), some of which have been explained by Eilers (1982,1987).

Further east, the name of Bactria may have a non-IE etymology as well. The E. Ir. name Baxt(l) (Witzel 1980), may be derived from O.Ir. *Baxt(l)r(s)- < Ir., *Baxt-r(s)- which may mean the "distributing (river);" 186 however, the loss of -r- remains enigmatic (but cf. O.P. Skud(r)a, below). Y.Avest. Baxt(s) corresponds to the AV loan bakhita and would indicate a Y.Avest. dialect form Baxt- already at the time of the AV, c. 1000 BCE (Witzel 1980, 1997b). If the local form of the name Baxt is original, and the Iranian forms in -is/iri- were to be regarded as popular etymologies, it may reflect a local name.

The name of a neighboring tribe and area, that of the Sogdians, is without clear etymology as well. Y.Avest. Sugīa, O.P. Sugada, which Szemerényi 1980, however, derives from O.P. Skud(ria) "archer", the older name of the Saka.

To the South of this area, in Arachosia, the O.Persian sources have the names of two fortresses, Arīdāta 187 and Kapiškānī and a Gandhāra district. Kapiškānī is close to Kapīsī, a town in the Kabul area (Gandāhara), see Panini 4.2.99. Patajali further specifies Kapiškānī as "the inhabitant of Kapiš". 188 In the same area may be found the Vedic Kamboja tribe, reflected by the O.Pers. royal name Kambōjia "Cambyses". 189 Finally, there are the S. Iranian provinces of Karmane and Maka (modern Makran, Gedrosia) whose inhabitants are called Makiya "person from Maka." 190 These may reflect the old names of the area (see above, on Marhalī/Bampur). 191 (The Southwest of Iran is proper Elamite territory and therefore left out here). 192

Section 55. Some Characteristics of the BMAC Language

In spite of the (so far) limited number of etyma, anthroponyms, and toponyms we can summarize a few characteristics of this language. In addition to the materials collected by Lubotsky (2001: 303 sqq.) we can discern, just as in the case of the rather limited dialect materials available for the northern and southern Indo languages (Witzel 1999a,b), for example a dialect difference involving an interchange of rh./nr.

186 Cf. also the Vasadhrā mountains in Yt 19.4, see Witzel 1980, 2000a.

187 One may try, however, the Ir. etymology, such as arīa(h)a- "placing/containing mm."


189 Cf. Witzel 1980, n. 81, also n. 16, 32, 47, 52, 82, 96, 105, 106. Note also the import of horses from Kamboja, Bactria, and Sauria (Sindhi) in Arthashastra 2.30.9.

190 Witzel 1980: 112 n. 76 and Eilers 1982: 30 with literature on place names.

191 Incidentally, the Greek name of the capital of this area, Pura, does not seem to be connected with IA pura "city", cf. modern Bampur; see Mayrhofer 1979.

192 In the SW, the towns Kugandaki, Tsant, Mēru, and Rāst and the mountains Ashkāli and Purpo; Parišānouni (Gr. Parniskhórin), a Persian tribe Eilers 1987: 49, "gegen die Sonne gerichtet" in Bartholomaei’s Wörterbuch.
down in time and place. Nevertheless, a few observations are added here in the hope of drawing attention to the facts.

(1) **v**. Assuiming the existence of the Macro-Caucasian language family, the terms for wheat have the structure **v**r / (Basqut, gari, PECauc, *G<il, Bur. day "wheat"); other languages of the Near East have **kam**, and in Iran/India the suffix -ums (lr. gomuma) or they have changed the initial cluster _au to _a- (lr. ghama, Ved. godhunama, Brav. khotamaza, geta; see Witzel 1999a,b). In sum, the more northern populations (Macro-Caucasian) which derived its word for wheat directly from the Fertile Crescent, has a predilection for _r.au while other, more southern languages from the area have _-ms.

The loan word for "leopard" has a similar distribution. The southern belt has _-ms forms while the west has _-m.: **pasc** "spotted wild animal!" > O.Iran. _parx- "leopard" (N.P. paling, etc.), Lahnda _parx taken into Gt. as _pards, _pardo, _pardo "leopard"; however another loan (from Anatolia?) is seen in Greek _parxthi.

Similarly, the word for "lion" has _-m. in the southern belt, represented by Iran. _er (_- *serg^h^), while a host of _non-southern_ languages from the intrusive IA (originally close to FU north of the steppes), Tibetan, Chinese etc., have a form with _-m.: **sungha, pre-O/IA sing'ha, etc. Note the possible western form in Arm. _t'cimij < *sun^h^.

The same distribution is reflected by the word for "water, river": Macro-Cauc. *ti<si, NEC *ti<sqir, PEC _sivv "water" which may be preserved in the name of the Yaxartes, _si. in _si. (lr. _cs.kli etc., (cf. Basqut _h_\_r Bur. _b_a, and also Yenezetian _h:xr). However, the case of southern _-ms (Sindes/Sindhu river, Bur. _sele) is more complex. NEC *ti<emcir- "river" can be compared with the rivers Sind- in the Caucasian Kuban, Turkmenian Tedzhen, and Indus areas, where it is fairly early, as Mesop. _sind "wood from Meluhha" (Baluchistan/Sind) attests. A Macro-Caucasian word *ti<emcir apparently was taken over early onto Indo-Iranian and given a popular etymology from IEItIr. *ti<emcir "to divide", which is what border rivers indeed do consequently IIr. *ti<emcir > designate (border) rivers and the rim of the world, the ocean surrounding the world (Avest. _hmanu "western and eastern ocean", us._handauwa "(mountain) rising from the ocean"). It was also applied, in S. Asia, to the Indus river (cf. Bur. _sele), whence Iran. _handau/Handu/Sindhu.

With some reservations one may add the name of the province of Gorgan (Hyrcania, Vakhtanta) in N. Iran, Avest. _Xmaya, found next to an original _Xmaya (Humblie 1984, 1992). The name certainly is non-Ir., and as the Avestan texts were reduced in Arachosia, this would represent a split between the Macro-Caucasian areas close to the Caucasus, in Turkmenian-Bactria and the Pamirs, versus a southeastern O. Iranian dialect close to the Vedic area, with _-m. (see above on _er/xing'ha).

The interchange between **xi<up-"mustard" > p<er-Iran. *xinap<, Khot. *xinap<, Parth. j<jfy-d<\_n, sogd. *xi<ap<, M.R. _span dan "mustard seed" vs. Vedic _sapa "mustard" may also belong here.

193 If indeed an old designation for the Indus, this would present an interesting aspect as far as the language of the Indus civilization is concerned. Cf. in general Witzel 1999a,b.
In sum, much of the old Macro-Caucasian belt, stretching from the Pamirs to the Caucasus (and further west), has a predilection for forms with *-r*, where others have *-n*. The actual distribution has been influenced and confounded by the immigration of lir-speakers, who probably too far to see in the interchange the two reconstructions of a prehistic retroflex *n* though Pinault (2003) thinks that the combined evidence of Pani and *n* points in that direction: BMAC *śni* (*qris*) / Ved. *śni* "lynch pin" / Toch. *śn-i-Lei* "hip", BMAC *PaHari/Parha (Gk. Parion) / Ved. *Pāli* / Toch. *paRhy* "that which belongs to wealthy people" where the Greek form Parnoi would be a local variant with "intrusive", cf. Kuper 1991:70-81.

If this were the case and the BMAC language indeed had forms like *śsi*, *parna/parni*, one must wonder why the regional Hindukush-Pamir feature of retroflexion (cf. Takanen 1968, 1999; Witzel 1999a,b) would have affected the BMAC area and Nuraniz/Vedic but not the neighboring Ox-Tanian. Avestan was spoken in the presently retroflexing Pashto territory, for example in Kundahar/Arachosia. One way out of this dilemma would be to assume an early retroflex Avesta, imported from Arachosia (K. Hoffmann 1975/6, 1992) into the Persis around 500 BCE where it was transmitted orally under Old Persian phonetic influences for the next thousand years or so. However, there are no materials, so far, to sustain the assumption of an older, retroflex Avesta.

Furthermore, the supposition is contradicted by inner-OIA and E. Iran. evidence: the word *wani* "jewel" turns up as wani in Vedic but without retroflex in the other OIA dialect, Mitram-IA, as mani-nya and also in Avestan -maniti.

At best, we can assume local variation in the Hindukush-Pamir belt itself and with all those who has migrated through this "retroflexion belt" (Nuristani, E. Iranians, Saka, Burusho, Vedic Indians, Dravidians, etc.); note however, that NVC also has retroflexion of its affricates and fricatives.

(2) ḳ-x Avestan may supply another feature, an interchange of ḳ : g̣ as in *kara > keta (- Caesar?) / Avest. keta; cf. above, western (Hitt., Semitic) kant/kant "wheat" : local "Iranian" gani-gana (= Kartv. ghomaft); and further the unexplainable difference in an old loan word: Caucaš, *kloš* "male goat" : pre Proto-Iran. *kloš* > *klot* > Avest. *kala* := Indo *bekka "he-goat" (CDIAJ. 93.) alsas *bekka in Pāli* (ni,) : Prakrt *bekkada "male goat", Panjabi *bakka, Nep. *baka, etc. (cf. Nichols 1997, 1998 referring to Ganskeldiz-Ivanov 1994: 501).

(3) Perhaps, kh : ḳ may be added; note Ved. kha, Avest. xam "source well" Ved. khan "to dig", khara "dig out mound" : Iran. *kan* "to dig" (Avest. aukán, mi-kánti, ovna-kánta, O.P. mi-kántin, kaftanaya etc.), cf. EWA 446.

(4) ṭ-ḍh is seen early on in IE meh(d)- (Skt. madhu, Eng. mead, etc.) : western IE **melit, Gr. melit-, Hitt. mek, Lat. mel, melit:, Gothic mielfi.)

(5) ḳ-j-? may perhaps be deduced from Armen. inc. ing "lion" (Ved. sīn) pre-Ved. sīnyḥ < sīnyḥ : Toch. shīkā: B urdu "lion".

194 Note also the more widely spread IEophony of r/s (and r/wh, named after W. Caland) in Indo-European of the type nom. *ward-r, gen. *wed-n-es (innovative from the point of view of Neustrian, Witzel 1992).
(6) syllable structure CoC\text{C}\_, 

as discovered for the Central Asian substrate by A. Lebotsky (2001: 303, 305, see above, n. 113).

In sum, the still expandable list of the names, etyma, phonetic and grammatical details, discussed so far,\textsuperscript{195} allows us to posit a pervasive substrate in Old Indo-Iranian that has certain phonetic peculiarities and that does not go back to the Sumerian, Akkadian, Hurrian, Elamite, Dravidian, Indus or Tocharian languages. It is to be located in northernmost Iran/Afghanistan and in Western Central Asia, in other words, in the Greater BMAC area and its surroundings.

In order to reach a still greater understanding of the BMAC civilization, it will be necessary to carry out further linguistic investigations -- such as a detailed study of (Old) Iranian and Tocharian words-- and then comparisons with the archaeological record. Cooperation with geneticists, physical anthropologists, and other specialists will also yield valuable clues to the identity of the peoples who inhabited the area of the BMAC. By all the evidence available to us, it is very clear that they interacted with their neighbors (and indeed, more distant communities) in all four directions. The strong influence they exerted on the late Indus Civilization is becoming increasingly obvious now.

On the other hand, the Bactria-Margiana area is the immediate contact zone for steppe populations coming from the north.\textsuperscript{196}

On the other side of the Hindukush, the oldest texts available are those of the Rigveda, a collection of 1028 hymns addressed to the Vedic gods.

§6. Central Asian origins of the Rigvedic Religious System

§6.0 Introduction

Our knowledge of Rigvedic religion is limited by the circumstances of the production, early collection, rendition and transmission of the texts. They were composed by and for (male) poets/priests (brāhmaṇa) and their aśīnāna pandurate and divine audience. Conversely, the RV rarely treats the wishes and aspirations, the problems and trials of 'common' Vedic man in straightforward fashion. We therefore rely on the fragmentary direct information provided by, and on obscure hints culled from, the poetic texts. It always remains difficult to ascertain how much of this later materials can be projected back into the Rigvedic period.

Because of the fragmented and sketchy nature of our information, what is generally missing in modern interpretation is a view of the Vedic religion as a system that includes mythology, ritual, customs and beliefs which permeate the life of a Vedic Indian (Oberlies 2001: 7). Other religions, whether those of the great early civilizations or of modern tribal communities, are built on such inherent conceptual systems (and rituals). It would be very

\textsuperscript{195} A comprehensive survey, especially of non-Persian place names, has not yet been carried out, and a list of Iranian substrate words in Old (not to speak of Middle) Iran can not be drawn up either. As undeniably above, this kind of research has simply been neglected so far; see now above, n. 158.

\textsuperscript{196} It should be noted that the no BMAC role an intrusion of steppe pottery (Hiebert, 1998, Shihbin and "Hiebert 1998, Lamberg-Karlovsky 2002).
surprising if only the Rigveda would prove to be an exception from this general trend (Kuiper 1983; 1979: 45 ss; Oberlies 2001: 8). Still, both due to increasing specialization and the fragmentary nature of our materials, it is not unusual to find statements indicating that there was no major overarching Rigvedic world view yet.

Instead of the many important detailed but atomistic studies of the past century a new, fuller description would proceed in a concerted, systematic way (using metalinguistic terminology), and would indicate in how far and in which way the various deities, demi-gods, demonic powers and other forces make up a fairly coherent conceptual system.

Close comparison with Iranias, Indo-European, Nonstratic, Eurasian mythologies will greatly assist in establishing some of the seemingly obscure but ultimately widespread common parameters and motifs that underlie Rigvedic mythology and ritual. If we try to build up a scheme based on the Indo-Iranias and Indo-European relations of Rigvedic religion, we can succeed to a certain degree, but what to do, e.g., with the Adityas/Asuras? Simple back-projecting cannot be allowed. The same is true for ritual: The horse sacrifice is IE, but the discrepancy between the Irish king's and the Indian queen's participation is obvious (Puhvel 1987: 67-76). The following paragraphs contain a sketch of some of the diachronic developments, their likely locations, the several subsequent synchronic systems built on them, and finally, the stage codified in the Rigveda, i.e., a look at Rigvedic religion as a system.

§ 6.1. Diachronic developments

As we can observe even within the c. thousand years of development of Vedic religion — not to speak of later Hinduism — a religion is never static but is constantly evolving due to a number of influences, some internal, some external. Internal pressures include those of changes in habitat, economy and society, such as the constant upward influence or upscale movement of sections of the lower classes; they also include some system-immanent, built in internal contradictions of a given Weltanschauung (Heesterman's 'inner conflict of tradition', 1985), and the gradual realization, by whatever processes or (vested) interests, of such contradictions.

The mechanics of such developments have recently been analyzed in a paper that covers much of the early cultures of China, India and Europe (Farmer et al. 2000). It is important to realize that local intellectuals, thinkers, priests and philosophers constantly discover certain contradictions (which may not bother most people most of the time) and seek for a solution, in other words, try to establish a new system. This often involves thinking 'outside the box', as was already well described for African religion by Gluckman (1944), by now more than half a century ago. We can observe such discussions even in the Rigveda (Is there an Indra? RV 2.125, 8.100, 3: cf. 10.82, 7, Raben 1961: 20 sq.). Frequently, contradictions are resolved by syncretistic amalgamation of various competing deities, or by positing 'higher' levels of truth or insight (Farmer et al. 2000).

External influences can obviously be due to trade, immigration or invasion of outside peoples, or by the movement of the bearers of the religion in question into a new area of settlement and subsequent developments of amalgamation, syncretism and priestly justification conditioned by the new surroundings.

Like any other facet of human culture after the African Eve, Rigvedic religion neither was static nor without history. It has a prehistory that dates back all the way to IE formations (and beyond). It also includes some of the local (Indus) beliefs as well as several layers of those picked up 'along the way' — from a hypothetical It. steppe homeland (wherever exactly situated), via the general area of the Bactria-Margiana Archaeological Complex (BMAC) and the Afghan mountains to the Greater Panjab. So far, these various layers of influences have
hardly been listed and they certainly have not been discussed in historical fashion, at least not in detail. This will be attempted in the following sections.

6.2. Indo-European background

By necessity, we must begin with reconstructed Indo-European (IE) religion. It is well known that only a few IE deities can be firmly reconstructed by linguistic means. Some, such as 'Mother Earth' (Dunkel 1988/90, 1991/3, Oberlies 2000: 373 n. 32) are based more on typology than on linguistic reconstruction of common IE words (but see n. 202). Nevertheless, a number of deities, and what is perhaps even more important, a series of generations of the gods or of successive ages, an opposition between two sets of deities and even some common rituals can be reconstructed. It is perhaps best to sum all of this up briefly in the form of a table. This is partly informed by Kuiper 1975, 1979, 1980, Dunkel 1988/90 and Oberlies 2000; it also includes, for the sake of some Eurasian comparison, traditional Japanese myth, as codified by c. 700 CE.\(^{198}\)

<table>
<thead>
<tr>
<th>'ages'</th>
<th>Greek</th>
<th>Vedic</th>
<th>Eurasia: Japanese</th>
</tr>
</thead>
<tbody>
<tr>
<td>'non-being'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHAOS / waters, m. salty: f. sweet</td>
<td>CHAOS</td>
<td>CHAOS</td>
<td>CHAOS</td>
</tr>
<tr>
<td>DARKNESS</td>
<td>chaos</td>
<td>CHAOS</td>
<td>CHAOS</td>
</tr>
<tr>
<td>[GIANT/EGG/DIVING for earth]</td>
<td>CHAOS</td>
<td>CHAOS</td>
<td>CHAOS</td>
</tr>
</tbody>
</table>

Kamurogi/romi?

ASEXUAL

*Thus, 'water- (neuter) elements' hudor salila: udan- seven entities, asexual > sexual

\(^{197}\) One can go back beyond that, though not really by linguistic means. It would be very difficult, for the moment, to reconstruct the religion belonging with the Proto-Indic language except for some vague notions such as 'spirit', etc. However, there now is another track available, that of comparative mythology (Weitzel 1990a, 2001b: 53-57). This is based on comparison of complete systems of myths, not just of random individual myths, and allows to construct a well-structured pan-Eurasian, indeed Pan-Asian mythology (i.e., one that includes the Americas). These comparisons will be mentioned, when appropriate.

\(^{198}\) The Kojiki was composed in Old Japanese, collected from 682 onward and written down in 712 CE, in a mixed kambun style (with some Chinese characters expressing not 1st. words but just 5th. syllables); it is based on oral tradition transmitted by bards (kami-bi) that goes back several centuries, as indicated by the mentioning of Semihima/Himiko ('paimaru' the august child of the sun), of 2389 CE in the history, written in the Wei period (220-265 CE). Wei-chih/Gokugawaras. The Nihongi, or more correctly Nihon Shoki, of (697/720 CE) is written in Chinese. I am aware of Yoshio Azabukawa's Damatsui-inspired theory (1962, and later) that Mps. myths are related to IE ones and ultimately derive from Systhian models (cf. new also S. Littleton, in Mair 1998). However, the early mentioning of Himiko and the description of contemporary Japan in the Wei history (often based on the still earlier records of the Later Han, from 37 CE onwards) argues against such late (4th cent. CE) extrusions of 'foreign' myths, - Japanese myth, situated at the other end of the Eurasian land mass, is quoted in the sequel as just one representative of Eurasian myth.
### 'being' sat pairs

<table>
<thead>
<tr>
<th>SENSATION</th>
<th>Person</th>
<th>Attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>'HEAVEN': D.P.</td>
<td>Zeus Pater</td>
<td>Dyaus Pitar</td>
</tr>
<tr>
<td>GIANTS: <em>wurn(n)os</em></td>
<td>Titan: Asura,(^199) Purve Devah,(^200) Kuni.no Kami</td>
<td>Varupa</td>
</tr>
<tr>
<td>&lt; &gt;</td>
<td>&lt; &gt;</td>
<td>&lt; &gt;</td>
</tr>
<tr>
<td>'GODS': <em>deiwos</em></td>
<td>Dio,</td>
<td>Deva:</td>
</tr>
<tr>
<td>dwo, thēon</td>
<td>Zeus, Eos</td>
<td>Indra, Ušas</td>
</tr>
<tr>
<td>nōpōth, duḥu jē</td>
<td>Zeus, Eos</td>
<td>/ Hērakles</td>
</tr>
<tr>
<td>etc.</td>
<td>/ Triā</td>
<td>Amaterasu (Sen)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tsukuyomi (Moon)</td>
</tr>
</tbody>
</table>

\(^{199}\) Cf. the name of Eos, the highest god of the Krt. Vanessians, in Sibeta and his destructive wife Xosadam, cf. the Asi, lords of the forest, mountains of the Buzay Matoomans: Tunuga bugas; note also Ikr. rta > Kott (Yemenian) "the great".

\(^{200}\) On, Siḍh vap, for them and the Purva Devah 'the earlier gods', see Keiper 1979, appendix.

\(^{201}\) In Inds this is a boar (PS 6.1, KS 8.1, cf. also 75 7.1.5.1, 78 1.6.1, 10.8, SB 14.1.2.11), while the standard animal in North Asia and North America is the musk rat or a diver bird. The substitution by a boar seems to go back to pre-Vedic ideas (as seen in Andaman mythology, see Radcliffe-Brown 1922, and Andaman archaelogy, Campbell 1988: 122 sq., cf. 4.16); Finnish mythology (Kalevala) unites several of these themes in its introductory section (primordial ocean, diver bird, split primordial-egg).
sexually, and in terms of family relationship. The primordial deities (Father Heaven/Mother Earth) have two sets of children, the 'demonic' Titans (Kronos etc., the Germanic Giants, jpn. 'mikado deities') and the Olympian gods (Zeus, Valhalla 'sister gods', jpn. 'heavenly deities'). The latter are the offspring of this theme and Vanuheim: Asiyu/Lnur, or the Asura/Deva, two moieties in constant competition who nevertheless also cooperate.

Both groups do not only act in similar fashion, they also intermarry. Importantly, they act, just as human brothers and cousins would behave (Ved. bhavaya, cf. the Kaurava/Pandava cousins) when it comes to dominance and inheritance (e.g. Manu's sons and Nabhanediṣṭha). Thus, the gods of the 'Titan' and 'Olympian' ages are not really from different generations, but the Olympians take over and either kill or disperse the 'Titans', which is perhaps clearest in Vedic India, where the Devas and the Asuras are in constant competition. This primordial deed is re-enacted at winter solstice by collapse of time and society (Mahāvarta, 'carnival', etc.) where the two moieties of society clash, after which order is re-established (Witzel 1997a, 1997c; below, 6.5.5).

The gods, notably the San deity, are the ancestors of humans, who are in many respects the opposite of the deities: they are mortal (matravatva: amṛta, manuṣya: deva), eat and drink different food (just: soma, mead, androsta, sake) and have a somewhat different language (Günter 1921, Ezezareková 1995, Watkins 1995) that is in part used by IE poets.

Superficially, one could perceive many of these deities as 'gods and goddesses of nature': heaven, sun, dawn, sons of heaven, lightning, wind, earth, ocean, rivers, etc. However, even these 'gods of nature' are not simple natural forces as imagined about a hundred years ago. The deities had acquired, in PIE and even in pre-PIE times, their own 'personal' biographies, as seen in a number of more or less inter-connected, common IE myths.

For the present purpose it is important to note that there is a heroic demigod deity, a son of Father Heaven, who pushed up the sky, brought the (female) sun light from a cave and killed the dragon to make life possible on earth (a deity variously represented by Indra, Zeus/Herakles, Thor, and Susa no Wo205). There are myths of primordial incest between twins (Yama/Yammi, Izanagi/Izanami) or siblings (Indra and Uṣas Amaterasu and Susa no Wo), and by 202: a variation of his death and gods of heaven and Vanuheim: Asiyu/Lnur killed his father and, as Indra/Triti, Heracles, Susa no Wo, killed various Titanic monsters such as the Dragon, Primordial incest of deities leads directly to the emergence of humans, Yama/Yammi: Time>'Yammi > Jamryi in Iran, cf. Deskalion and Pyrrha in Greece, Izanagi/Izanami in Japan.

202 Oberlies (2000: 373, n. 32) denies the IE age of 'Mother Earth' as the wife of Heaven, but see below on RV Kh 5.6.5 and cf. the Polynesian myth quoted in Witzel 2004: n. 85.

203 These concepts seem perhaps best seen in RV 3.38 (a hymn later assigned to Indra): the androgynous 'elder bull' (vyahha) Asura (cf. Iranian myth, the 'great bovine' bull, gives birth to the woman; the bovine is in part identified with Heaven and Earth (Rodet), who were later separated: the (*younger) bull, Heaven/Sun, is also called Asura Viśvarāpi (cf. 5.1.2. on the dragon Viśvarāpi). Manu and Varuṇa (5), the grandchildren of Heaven, reign, served by the wind-haired Gandharvas.

204 There also is the old opposition between a male fire and a feminine water deity (Witzel 1992, appendix); it is also echoed in Japan (though minus grammatical gender).

205 Iranian deities, in this case, include Susa no Wo (Japan): Tōko 'the pole' (Polynesia), etc. His 'opponent', the cave, is called Vāja and Jpn. Desso, where theRYOGENBEAM and JPN. Sun Goddess Amaterasu reside; cf. n. 25.

206 The Jpn counterpart, Izanami, just dies and is supposed to be buried in Awa.
or due to incest prohibition, indirectly via Yama's brother Manu (cf. Germ. Mannus), or by the symbolically enacted incest of Amaterasu and Susa.no Wo (Kojiki 1.15).

Humans must worship their direct ancestors—always three (tristapaatares)—and their indirect ones, the three generations of gods (Titans included as third generation), and they must offer food and drink to them. Such rituals include the use of sacred fire (Rome, Greece, India, Japan),207 and the use of a heavenly drink (*meadnut, mead*ambrosia, soma, seka, kava). Animal sacrifice is typical for much of Eurasia, not just of sheep, goats, cattle but also of the new prestige animal, the horse (Pulver 1987, 267-76). This is offered in a ritual which was found in Ireland, Rome, India, and still recently, with the Altai Turks.208 Ritual is accompanied by elaborate verse and prose texts (mantra, lpa. norito), composed and carried out by members of a special class, the traditional poets/priests (kavi, O.Irish filí) and by bards (the later stta, lpa. katari-he), both of whom make use of traditional poetic devices (Schmitt 1968; lpa. kake katoba 'Sīlena', makura katoba 'ornamental epithet', etc.). Other classes include the nobility and 'the people' (vi, cf. Dumézil).

All of this is testimony to a PIE (if not Eurasian) complex of religion, myth and ritual, partly reflected in society (clans, moieties, classes), that must be localized in the original homeland of the tribes speaking PIE. They lived, as their vocabulary indicates, in a temperate zone with 'cool climate' animals and plants (Mallory 1989), somewhere along the bee-supporting interface of the Eurasian steppe and forest (Taiga) belts, perhaps in the Volga-Dan area. This ancient PIE religious complex is reflected by those of the various individual IE peoples, including the Indo-Iranians of Iran, Nuristan and India. Against the background briefly sketched here, various innovations and reworkings of the PIE system, often due to local influences, can be detected, analyzed and described.

§6.2. Central Asian steppe innovations

There are a number of items in Vedic as well as in Avestan/Old Persian209 and Nuristani religion that cannot be found in the reconstructed PIE one. This is not always due to lack of materials. One would expect that a group of deities like the Indo-Iranian *Astar (Ved. Asura, Ādīya) and the god and drink *soma (Soma, Hauma) would appear somewhere in one of the many other IE religions, but they do not.

The geographical and ecological background is this: the temperate homeland area of PIE speakers is divided by a broad stretch of steppes and deserts of the Ural-Kazakhstan-Uzbek area from the settlement areas of Vedic speakers in the Greater Panjabs and that of the W and E. Iranians in Greater Iran. The Asura concept appears both in the Indo-Aryan and the

207 Often identified with the fire in the Sun (see RVKh 5.5.8), that must first be brought to humans (Prometheus, Kaga-Tuvich.no Kami etc., Kojiki 1.8) — the opposite takes place in India where fire (just like the cows of the Pampa) is stolen (pea māra) by Mātaruyen for the gods (RV 3.3.5) and for Manu, see Kugler 1983 (1971).

208 As late as c. 1900 CE, by suffocation (Witzel 1999a: 395, n. 15): as residue in Japan note the *oma 'horse picture' tablets offered at Shinto shrines. Horse sacrifice replaced old Tibetan *uru sacrifices (e.g. with the Aims) and dog sacrifices (for which see D. Anthony, excavations in the Sinai Valley, west of the S. Urals; http://users.harwick.edu/~sars/Russia.htm), or the more 'southern', common goat/sheep sacrifices (e.g. at Mehrghan), or the Mediterranean/Indian bull sacrifice (cf. §1.6, Pulver 1987: 275).

209 Many traits can also be discovered with the North Iranian people, the *Ugrian, on the impact IE religion had on the Caucasus, see the work by Demeter, summarized by Chazakhidze (1947), and that of Toitze (2000), which helps to distinguish such data from the traditional ones of the mountain regions of the Pyrenees, Alps, Parnes
Iranian religions (and at least some of its deities also in Nuristan); we must assume that this is an innovation that took place somewhere between the Taiga and Greater Iran.

The Itr. Asuras (Ved. asura; Avest. ahravra) are, for the most part, different from the gods of the third generation of gods, the demonic Titans, who appear in the Vedas as Tvanr and his son, the tree-headed dragon Visvarupa, etc. Instead, they are a particular group of deities that (in part) overlap with other gods ('of nature'), both those of the second and especially of the fourth generations. Both in the Veda and in Iranian, they constitute a narrower group of 7 or 8 (later 12) deities; note the 7/8 Kalash Devalog (devalak).

The terminus ad quem for the group is the Itr. unit around c. 200 BCE and the date ante quem is that of the attestation of Varuna, Mitra, Indra in the Mitanni documents of Syria/Iraq at c. 1380 BCE. The development of the Asura group of deities can have taken place anywhere in the northern steppes, such as in the Ural (Sintiiastah/Arkahaim) complex of southern, close to or even in the BMAC area. The Ural area is a priori more likely as all of the Iranians have Asuras; for example, the Scythians must have transmitted their god *baga to their northwestern neighbors, the Proto-Slav (*boga). It would be very difficult to let Bhaga be invented in the greater BMAC area and then let him be transported back, all the way to the Ukraine (cf. n. 214).

The group of Asura (or Aditya, in India) deities has been studied repeatedly during the past century (Breerton 1981). However, it is necessary to take a brief look at them in the present context. To begin with, it is obvious that they form, other than the old IE 'gods of nature', a group of social deities, a feature that has been stressed for long (Meillet 1907). Some words belonging to this complex, notably Arya-man, clearly areartificial formations. Indeed, their Indo-Iranian line-up immediately confirms this:

210 A few Asuras of the IE are ambiguous, such as Varuna (Kulper 1979), and note some 'gods of nature' among the Asuras: Divya, Savar, Agni, Pushan, Soma, Rudra, vrsr = drukt parish by B 3.53.7, and even the Asura Papru and his forts 10.133.8, ... Devas from among the Adityar: Mitranvaris 7.3.62, Mitranvaris devas 8.25.6; Varuna, Mitra, Bhaga 5.42.1, cf. 8.27.20, even Indra 1.174.1; note: aditya Asartha 8.96.9, but Asura + deva 10.82.3. See also n. 220.

211 Approximately, the time of the invention of the chariot: note rikha, rathin, rathypha and their stiltanai, off-counterparts (Witzel 1999a: 34, 200a).
<table>
<thead>
<tr>
<th>Veda</th>
<th>Mitrasni</th>
<th>Izan.</th>
<th>Nur/Kalash</th>
<th>Meaning/Acting in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varuna</td>
<td>Uruna</td>
<td>(ṣa)</td>
<td>---</td>
<td>(active truth: ṛṣa; oath) cosmic order UNIVERSE</td>
</tr>
<tr>
<td>Mitra</td>
<td>Mitre</td>
<td>Miṭra</td>
<td>(a-mind dis- 'obedient')</td>
<td>agreement, contract mitra, n. 'contract' TRIBAL LEVEL</td>
</tr>
<tr>
<td>(Dhārty)</td>
<td>---</td>
<td>(data 'ordainer')</td>
<td>(ordainer, creator', as Ṛđīyā only in MS 1:6.12, Hoffmann 1975/6: 424)</td>
<td></td>
</tr>
<tr>
<td>Aryaman</td>
<td>---</td>
<td>Airīsman</td>
<td>(Wusum? Shemde? Sujger?)</td>
<td>'Arya hood', guest friendship, marriage aryā 'hospitable' CLAN LEVEL</td>
</tr>
<tr>
<td>Bhaga</td>
<td>---</td>
<td>baga</td>
<td>Bagish'? &lt; bhīgya'?</td>
<td>bhaga; n. 'share' wealth, luck FAMILY LEVEL</td>
</tr>
<tr>
<td>Amśa</td>
<td>---</td>
<td>(ām 'party') onshät 'leit'</td>
<td>amśa 'lot' FAMILY (?) LEVEL</td>
<td></td>
</tr>
<tr>
<td>Daśa</td>
<td>---</td>
<td>(dasā)</td>
<td>'cleverness' PERSONAL LEVEL</td>
<td></td>
</tr>
<tr>
<td>Vivasvant</td>
<td>---</td>
<td>Vusuvant</td>
<td>gali marstan (Gāybeart)</td>
<td>SUN DEITY. ANCESTOR of all āya lineages</td>
</tr>
<tr>
<td>Mārtinda born from a 'dead egg'</td>
<td>---</td>
<td>Indra</td>
<td>Indra/Indr, Vrēṇa(dr); 'the strong one'</td>
<td></td>
</tr>
<tr>
<td>Yama</td>
<td>---</td>
<td>Indra</td>
<td>Yima (Indr, Yerēni, Indr); Son of Viṣvavat, King of Sīsa; Son of Viṣvavat, ancestor of humans, first mortal being, first human</td>
<td></td>
</tr>
</tbody>
</table>

Indra figures only marginally in this list (Hoffmann 1975-6: 424 sq.), but he marks the bifurcation of the present gods (Yama, Indra) and humans (Mānu). The human ancestor is either Māna (India) or Yama (Iran), and this is reflected in the one found with the Germanic
tribes, Mannus (NW Germany) vs. Ymir (Iceland). However, the names and position in the pantheon of figures as Indra, or his Greek representation Hera-kles (< *k'leu woes) / Zeus are not universal in IE or Eurasian --- even if their function is (Thor, Sasa:no Wg). The list of personifications given above seems to reflect human society very closely. A 'universal' chief (if existing at all at that time) may reflect the (preeminent) lord(s) of the large settlements of the Ural 'land of towns', with aspirations of general fame (*k'leu woes, Irena) and respect. This position is followed by the tribal leader, aided by Mira, who is not only in charge of agreements but also of the large pastures (Asv. *su,ge,ta< = Ved. agyati) --- the very wording points to flat steppe lands and rather not the narrow pastoral strips along river banks (BMAC) or the mountain meadows (Tien Shan/ Afghan highlands). Notably Mira, guarding the pastures and herdsmen, is also a war god in the Avesta.

Further, Aryaman, who is needs not only to be received a guest, but more importantly as guarantor of another important exchange, that of bride: one had to marry outside one's clan (Ved. gotra). Significantly, both Mira and Ariaiman have been kept in (or reintroduced into) the Post-Zarathushrian pantheon. Aryaman functions at the level of the fireya swastm, or clan leader (Zimmer 1985).

Important still is Bhaga who has become a god of personal fortune in post-Rgvedic culture (K爱人 A 2.2.22: 86.15 andhō hi bhágah 'luck is blind'; cf. also MS 1.6.12 about jana and bhaga). In Iran, the term has developed in various ways: while it is rare in Avestan (Y 10.10, 70.1. Yt 7.5; V 19.23 bago Data) where the designation for 'deity' is the theological one (yazata), it appears in Old Persian in the meaning 'god', apparently in a quote from Mede (anyt hanga, but note also DNa 21 baha varvana Auranazda); it is kept in MP as ban 'god'. In Sogdian, however, bāg has become the general designation for 'lord' (like Eng. 'Lord' god, noblemen'), and even for 'Mr.' The word must also have been present in Northern Iran as it has been taken over, fairly early into Proto-Slavic from Scythian, and, to be sure, in the general meaning of 'god', as found in Sogdian and Mede. It also has been taken over, fairly early (note the nom. in ->) into Uralic: Mordvinian paka 'good luck' is probably directly derived from IIr, or OIA (Réde 1986: 56).

The rest of the list is not so easily attributable to levels of society. Aśva seems to reflect family wealth and Daka personal cleverness, while Vivasvант represents the descent of anya human lineages from the Sun deity, via Yama or Manu.

While these names and functions can be reconstructed for IIr., their rather old age is also attested to by the appearance of Aśura in Uralic, both east and west of the Ural, where the word aśura is reflected in old loans both in the meanings 'lord' and 'rich'. This is further supported by the fact that the old IIr. dichotomy is seen as EIr. Xosadam with the Ket (W.

212 Cf. also the dichotomy between Renu (<Yemen) and Romulus (Palv 1987: 289) and the killing of Renu, cf. that of the primordial giant Purush/Tvitre and later Indian derivatives (§1.7).
213 Note also the interaction between Sintash/Ashaim and the BMAC, according to recent archaeology, see Hiebert and Shihabina (in Mair 1998). Finnfort 1999, Tosi & Cattani 2002.
214 The sounds changes are regular: ProtoSlav. a > o. There must have been the old IE meaning in Slav as well. OSlav. bogatı 'rich', Russian bogatyı 'rich'; cf. Réde 1986: 56; however, note Katz 1981 (see next note).
215 Complicated by the fact that Fenno-Perminian (in the old loan, Mordvinian awi, aro' awa 'god') also has pogatı 'god' (Réde 1986: 55); note Katz 1981: 28 who thinks of an already PIE *bheges 'god'.
216 Mordvinian wera(na) 'lord', Wotyak wira, xir 'rich', Selinavian xor 'rich', Wegul xir. xor 'chieftain', see Réde 1986: 44.
Siberia, an old remnant language family perhaps related to Macro-Caucasian and Sino-Tibetan, *Mother Tongue* IV (1998). Both the word and the concept must have been taken over from the neighboring Indo-Iranians, long before the area came to be dominated by Persian speakers. In short, the whole Indo-Iranian sphere and its neighboring areas have several old reflections of the word Asura and the Asura group of deities: the whole belt from the Ukraine to the Uralis and W. Siberia contains hints or direct attestations of the old Asura. Necessarily, the "Asura" distinction must also be old. It was developed with Ilir. speakers in the Northern Steppes, from where it spread, early on and in various forms, to their southern neighbors, the Uralic. Ket and then to the Slavic peoples.

What exactly was the old dichotomy that could be taken over so early on into Uralic/Ket? Or, to be more specific: what is the background of the dichotomy (Kuiper 1979: 6 sqq., 46 sqq., 1983) of the Asura and the Deva groups? Such moieties are already seen in PIE and even in Eurasian religion (Olympian gods: *Titans*; *Aeoloi*, *Vedras*: *Amano Kami*; *Kunono Kami*). They presuppose an altogether different background than the (supposed) Rigvedic dichotomy and the obvious Brahmana one, seen by scholars about a hundred years ago: a split between the Iranian and Indian schemes of things:

*Ahura 'god(s)' : Daiva 'demons' = Asura 'demons' ; Deva 'gods'.

Rather, we should think in terms of a dynamic, non-static scheme:


that is, with a partial overlap of the new *Asura* deities and some of the older *Daiva* deities (as is still clear from the Rigveda, see n. 210). Both groups separate and line up on opposite sides during the breakdown of order at winter solstice, as Devas and Asuras. It is at this moment that Varuna makes his crossing-over from the Asura group to the Deva group (Kuiper 1979: 46 sqq. for the RV; 1979: 92 for the Epic; cf Kuiper 1983, Oberlees 2001: 8-9: note the overlaps visible here, note the 'shift of alliance' by Varuna (Kuiper), cf. n. 210.

217 Cf also the Buryat Mongolian female *asi* gods of the forest/mountains, the *ge* of the Gilyak: note the prominence competition, between two figures, with the Uralic, Altaiic and other (east) Siberian peoples.

218 Note the character of Indra as 'visitator' god from the outside, especially at New Year; see §1.5.1.6 of the Kalash rod Baluram.

219 Do the other two 'chiefs' (rajan): Soma Rajan and Yama Rajan, represent the (mythological and cosmographical) locations 'up on the mountain and below' in the net/verse? Cf. however Witzel 1984: 228 sqq. for a non-static view of such locations, and their movement from the daytime situation to the night time one and back to the daytime one; see RV 1.356, and the reflexes of this concept in Nuristani (Jettmar 1975: 52-54) or the myth (Kojiki 2.50-8.11).

220 The exact membership of both groups at this point in time must be determined, if not as possible, by further research. To make a start, according to some Rigvedic classifications and sub-groups:

[Deva: (Yiive Yati: Savitri; Aditii: ivate: Varuna, Mitra, Aryaman+); (Rudras: Rudra, ...).] = Adityas; Mistresvara, Bhaga, Indra, ...].


Varuna, Mitra, etc. >].

For the overlaps visible here, note the 'shift of alliance' by Varuna (Kuiper), cf. n. 210.
Kalir is god Balarama (Skt. 5, 3, 5), to allow the re-establishment of an ordered universe and society (in Obrist's terms, the change from yage to kyema).

This entails abandoning, in certain cases, a static view of the universe, the gods, and of mythology; instead, a different view is more appropriate, one that is informed by the cyclical view of the nature of the year and of ritual.

[Devas: New Gods, [Varuna <----> Asura: Mitra, Aryaman, Deities of fertility etc.]

In this scenario, Zaratustra's stress on the opposition between *ahura* (ahura (maat) is not as surprising as it generally is made out to be and the reason for the lack of Varuna in his scheme is obvious: Varuna has been included, unnamed, among the *dasa*, leaving the field to the *ahura* (especially his alter ego, Aha Matra). Further, the merry division at the time of Solstice echoes Zaratustra's stress on liminal time, the 'final turning point'. Y 43.5 urusaat apmee Y 31.6 apmee apmee urusaat, cf. Y 30.9, 44.19, note *dasa* *urnaseta* (of stars, Wittel 1964: 258, n. 90, 272) Y 46.3-4, of winter Y, 51.12 (and of the year N, 44; cf. also Y 46.1-3); other terms are taken from horse races (at year's end): Y 33.5a uvaahana 'unharnessing, rest' (Narten 1982: 51 sqq.). All of the terms have been used in his scheme of individual decision making (reflecting that of Varuna's surprising move over to the 'good guy', Kuiper 1972: 31 sqq.); in post-Spasitic times, the emphasis on choice at the time of solstice was destressed and the two groups of divine equals (and relatives) are simply represented as being in perpetual conflict ... just as are the *dya*:: *dyu*, *dya*:: *dasa*222 ... with the Devas pushing the Asuras back to the fringe of the civilized Vedic world ... for the time being.

The ancient scenario is still vividly reflected in the present day Kalir (Hindukush) rituals of the Chaumous (Ammi) < *vyataraubai* festival of winter solstice: the visitor god Bajravain (bajravain < *balaanahendra*) is received by the Dedisal (Devaluk) of the western Chitral valleys, and an intermingling of the two moieties (male/female) in divine and human society follows,222 (discussion, 5.5.5).

To sum, the new lir. *Asura concept of gods of universal and social 'law and order' (with the sun and the stars as all-seeing spies, cf. Dunkel 2001: 330 sqq.) and the underlying rule of the active force of truth (Ved, Rta/Aust, Ayja 'Wahrheitsverwirklichung') was developed in the Northern Steppes, close to the Uralic and Ket peoples; it was built on the older IE (and Eurasian) dichotomy of two groups of deities. Time and location thus are clear: c. 2000 BCE, in the wide steppe belt comprising, among others, the 'land of cities' (Arhalma, Shitash) in which we do not have to look for a BMAC origin of the concept. We can only speculate about the internal reasons among the tribes speaking lir. that led them to adopt the Asura group of personalized, abstract deities. The strong stress on social aspects (agreement, guest friendship, share, lot and a common ancestry) points to the necessities of a tribal, semi-

221 Note that this set-up of society perfectly reflects the divine one: the Sdras are part of society, but outside of it at the same time, just as the Srgedic Asras are part of the Deva group, but also outside of it. Both divine as well as both human groups (patriarch) join and intermingle at New Year (see 4.5.5) and in Vedic rituals during the Mahaavati (context of Brahton and Sdras, see APS 31.9-12).

222 A good impression of this festival, described by Lemagr 1973, 1987, can be gained at http://www.sie- star.net/photos/uumahawon/hindu/sanai.html. For other related rituals in Nepal see Sterl 1997: 285-50; note that the Vedic winter solstice *Indrahausa ritual (Kauli 1404) on prashyapada (aka 8) has been transferred to the New Year in Spring (Nepal) and Fall (Newari) details in Kuiper 1979: 152 sqq.
pastoral society, in the process of quick expansion eastwards across the stepppe belt (see several discussions in Marr 1998).

By a careful comparisions inside and outside IIr., further items that have entered the IIr. and therefore Vedic religion can be pinpointed as well, both in time and space.

56.3. Soma's origins

The sacred drink of the Indo-Iranian, *Sāuṇa (Ved. Soma, Avest. Haoma, OPr. Hauna) must have been acquired in the same general surroundings, or to be more precise, in the territories close to the high mountains of Central Asia, somewhere between the Altai and the Himalaya, between the Elburz and the Pamirs. The area can be narrowed down further.

A connection with high mountains is made in all the IIr. myths connected with *Sāuṇa. For example, Amsū/Soma/Haoma is brought (stolen) by an eagle/falcon (Jyena) from 'the mountain'. This is not just mythology,222 rather, it is supported by the remark that the best Soma grows on the (high) mountains (Hom Yajû = Y 9: 10.3-4, BV 1.176.5, 5.36.2, etc.), especially so on Mt. Mājvant (RV maitavi 10.34.1, AV mājvant Mājvant people; (Witzel 1988: 87 sq., 1999: 3, 2000a: n. 23). In the Indian and Iranian context, that would mean somewhere in the high Himalaya, Pamir, and Hindukush mountains. The Vedic designation Mājvant 'having Māj' is reflected by Avestan Māda, a country that was apparently close to Indo-Aryan territory; note the Muža man Dalāyāin Y 13.125, with -genetically unusual in Iran. The name is retained, even today, in the Turkic designation of one of the highest mountains in the area, Muzh Tagh Ata (24,767 ft/8,420 m), and in the nearby river Muzh Kol, found just east of the border of Tajikistan, in the Kirghiz and Sariqol (Saka) lands of westernmost China (Witzel 1999, 2001, Staal 2001, Thompson 2001); another Muzhagha is found some 50 km northeast of Skardu (N. Kashmir).

The post-Vedic Soma ritual contains a strange episode (e.g. Āpis 10.27.6-8) where the new Soma has been bought from outsiders; the sellers then are 'rewarded' by a heavy beating. Soma, stemming from the high mountains,224 had to be imported and bought by bartering. Such data are supported by the reports in Vedic texts about the physiological effects of Soma juice (Nyberg 1995, see now Houben and Thompson in EJSV 9) - if the plant indeed is some form of Ephedra. Though this plant grows all over the steppes, from Kazakhstan and Xinjiang to the Panjāb, its most potent form is found not in the plains but in the high mountains (necessarily, the difficulty of access giving rise to many substitutes, Kuiper 1984; see now Houben in EJSV 9).

The very name of the plant further supports the 'foreign' origin of Soma: *Sāuṇa is obviously derived from zu 'to press out', but its original name seems to be 'anku'. Ved. amsū, Avest. amsu, Tochar. an kwus, Chin. yingkui (Witzel 1999, 2001, Thompson 2001, cf. Lubotsky 2001, Thompson in EJSV 9, 2003); note also the variety Ephedra Sinica, ma huang). In

222 On the motif of the mountain/primordial hill see Kuiper 1985, 1979: 19, cf. p. 107 for Moundara (as inverted huts, myths about the origin of plants and doves on the high mountains/Himalaya can be added from the AV. As for huts, note Greek Parapamosis > Parapamis < Iran *par apam ama (Akkad. paraparamauna) = O.P. Gaidarati; Avest. Y 10.11, Y 19.3 apam ama: apapama ama svara lika J 3.66. EWArus I 221, II 662); 'even birds cannot fly to the abode of Visvā' BV 1.155.3; see §1.4, for the Bastman eagle hero.
224 Some details about the high snow mountains (RV Homavant), which can be seen from the near Indian plains, are known to the plains people, note e.g. (then as now) herb collecting Kirata girls in AV 10.14.
addition, there is a cluster of Central Asian words connected with myth and ritual (Lubitsch 2001: 935-3) such as those in *rwa-Atv-arva(n), Gandh-arva, S-arva (cf. also Path-arvan, k-arva 'melodized'), or in *ig-'wu-ig arva. Ugr, RV Uj, cf. rovij, von-ö, and *bhi, *bhui-aj, *bhas-aj, *bhuija/bhuesa, *betaza. All of these represent a cluster of words with a clearly non-IE origin that has entered both the Vedic and Avestan corpus at an early, probably (Common) III. date. They belong to the large group of Central Asian words that have recently been identified in both early Iranian as well as earliest Vedic (Witzel 1995a: 101-3, 1999a: 58-60, Lubetsky 2001:225). We must assume, thus, a sacred drink, a ritual and a group of specialized priests that were imported into Ir. ritual and myth somewhere in Western Central Asia, possibly close to the Tien Shii/Parim mountain chains.

Given the foreign, high mountain origin of *Sauma, it should not surprise that there are clear traces that *Sauma has replaced an older IE ritual and mythical drink (Oberlies 2000: 377 sq.). This is the one made of fermented honey, i.e. mead (*međhu, Skt. mādhu, Gr. ambrosia, Thieme 1952: 5-15). Indeed, just as the Greek ambrosia was brought by an eagle from 'the mountain', so was its substitute, the Rgvedic Soma (Oldenberg; Houben in EVS 9). Otherwise, Soma has fairly little mythology, though in the RV a lot is made of its heroic and warlike characteristics (Oberlies 1999).

Clearly, the Ir. *Sauma legend is another adjustment of older IE patterns, in the present case a substitution for the original PIE drink of immortality, mead. As so often, the older IE pattern still is very visible in the Rgveda (like Thot's and Indra's stone weapon), where the bitter Soma juice is called međhu 'sweet, mead' (note the use of pījāsā and kālita 'bistersing' cf. niz. kiyay, Kalash kire; Khowar kijay, Shina kini; Witzel 1999: 3). In order to locate the Ir. speaking tribes that took over this Central Asian mountain drink, we have to look at a location in the steppes, from Kazakhstan (Sintashta etc.) southwards. The cluster of newly acquired foreign words in Ir. is centered around agriculture and settled life (Witzel 1995a: 103, 1999a: 58-60). Lubetsky 2001: 307), but it also includes some of the foreign words that are more or less connected with the Soma ritual: víkhalā, vijñān, karotara, amṛti, musula, indu, cambo, pījāsā (Küpper 1955). This makes it perhaps more likely that the take-over of *Sauma took place in the southern regions of Central Asia. Note also that the Saka are divided by the Persians into the general Saka ligarexordu 'Saka with the pointed (Phrygian) cap' and the Saka banavarga 'the Soma twistings, collecting (?)' Saka 226.

Archaeologists have tried to find evidence of *Sauma as Ephedra in Central Asia (Sarianidi in EVS 9) but this has met with little substantiation so far. We will know with certainty only when all purported remnants have been finally analyzed (cf. Nyberg 1995, but see now Houben et al. in EVS 9). We have to take a look at the few steppe, cattle herders' standing places in N. Bactria/S. Tajikistan that have been found and excavated so far (Dan & Mason 1992) in order to get a better idea of the Indo-Iranians of the period. Early interaction with the BMAC (2500-1600 BCE) is now archaeologically attested, for example at Merv (Tosi 2001; Cattani 2003); this is best visible at c. 2000-1800 BCE (Franfort 1999: 453). A Soma-like ritual may be represented by the remnants of libation rites (see now Sarianidi in EVS 9) and in finds of inverted ritual vessels discovered in the BMAC (Sarianidi 1992: 34) and even in much later periods, such as at Al Khanum.


226 If 'aj means 'turn around, twist, tear out from the ground'; differently, Hoffmann 1976: 642, n. 6, who suggests *ホーム Pflanze um das Feuer legend; cf. further BWaha II 517.
According to linguistic and literary data, therefore, and to some extent also according to archaeological data, it is clear that a Bronze Age Central Asian *Sauma cult was taken over by the Indo-Iranians and integrated into their religion and rituals. It was integrated so well, and to such an extent, that neither the Avesta nor the Rigveda allow, at first sight, to assume 'foreign' origin --- were it not for the fact that all other, western IE peoples did not have a *Sauma ritual (for Ephedra finds in Xinjiang see Mair 1998:70, 127). For all the subsequent early Ir. cultures the *Sauma ritual was central to their religion, even in the newly converted! (Zoroastrian Perseians,227

In sum, we can observe Soma as an ingredient to Rigvedic religion whose intrusion can be pinpointed in time (c. 2000 BCE) and space (southern part of Western Central Asia, close to Mugh Tagh Aza). It has added considerably to the richness and texture of Rigvedic religion and poetry (Oberlies 1999). Other possible influences of this period and area cannot be discussed here for want of space; attention has to be drawn, for example, to the complex of fire rituals, altars and bricks (lIr. *Ir.; Staal 2001), to which some more strange, prefixed words for 'brick' can now be added: Kalash kh-iqt-pokid, cf. Shina d-iš̄ik, Surushaki d-iš̄-čiš̄ (Witzel 1995a: 103, 1999: 58, Lubotsky 2001: 311).

§6.4. BMAC or Para-Bactria?

The localization and time frame of further Ir./OIA religious developments depend on how the Proto-Indo-Aryan/Proto-Iranians are related to, or interacted with the Bactria-Margiana Archaeological Complex (BMAC). Did contact take place only by 'passag through', by vague acquaintance, or by personal, intensive contact and interaction; for example as horse-camel traders, as soldiers, and subsequently as local lords of BMAC cultures (pur, vara)? (Note Mallory's Kul'turdgel model, in Mair 1998).

We have already seen that the Ir. invention of the Asura deities, the social gods of Law and Order and of the universal force of Rta/Aša was a steppe development. Was this 'intermediate' stage of Ir. religion also influenced by a reaction to the BMAC culture, with its agricultural villages and fortresses, aligned along desert streams?

Luckily, there are a few items that lend themselves to comparison and provide some insight into the extent both populations and religions were in contact. These are the three motifs of the primordial dragon guarding and inhibiting the waters, the dragon-slaying hero, and the divine eagle. As briefly indicated above, all these motifs were already of IE origin: the dragon as primordial guardian of productive force or of riches, the divine hero as his slayer, and the eagle as the general messenger bird that also brings the sacred drink (mead). Many of the similarities between the IE and BMAC motifs, however, are due to the general, underlying paradigms of Eurasian myth, found from Ireland to Japan and beyond; they may differ in details as they represent local variations.

Aspects of the myth are met in Greek myths of Thracian who slays various monsters (and finds the cows); for Slavic cf. the fight with Velis (cf. Avest. Var-a, Ved. Vela, and for Nurganu, 'the house near heaven', §6.5.4); for Germanic, Sigurd's killing of the 'worm' (cf.

227 Actual Haoma mortars have been found at Persepolis. Other intoxicants in the Hindskush include notably wine, some rhubarb, mead, and even the Afghan/Atr håum bush (<*Haoma) which is used as snuff and against fever (Gellner 1974; introduction to book 9.2); similarly in the Kalash area, where the aemani (<*tsamamu) bush, growing in the high valleys, is used in making chewing tobacco.
Thor's and Tyr's killing of the giants), and for Japanese, Susa no Wo's killing the 'eight-forked' dragon, ya-mata-no orock (cf. n. 9, 39).

In the BMAC area, these motifs have evolved into a typical, local variety, such as the scaled, anthropomorphic dragon. It may be useful to begin with a schematic depiction of Francfort's reconstruction of BMAC religion (Francfort 1994). Various Old Indic-Aryan and Old Iranian items have been added (in italics) for the sake of comparison.

**Oxus religion :: Hr. religions**

<table>
<thead>
<tr>
<th>Goddess</th>
<th>anthropomorphic DRAGON</th>
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<tr>
<td>fertility</td>
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<td>Anahithi/ Saravatt/Rast</td>
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</tr>
<tr>
<td>Adii, Dcattli</td>
<td>Apaala (Forsman 1968)</td>
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<tr>
<td>children</td>
<td>3-headed (Hr.) : abri-kamaras/</td>
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<tr>
<td></td>
<td>tritrisan Vilvartipa</td>
</tr>
<tr>
<td></td>
<td>Vrtra &gt; cobRA snake in India : Vrauns</td>
</tr>
<tr>
<td></td>
<td>combined forms, anthropomorphic</td>
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<tr>
<td></td>
<td>lion/snake = Sivamurvi (Schmidt 1980)</td>
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</tbody>
</table>

**FIGHTS WITH**

**THE HERO:** eagle faced\(^{228}\)

(Ciractetus Gallicus 'snake eagle', saena?),

eagle flies in Winter over the Hindu Kush (upari mahu, upari syema);

catches and eats stukes;

Hero in human form: Vrastrapan/Virahana

Indra/Indra

The dragon is found in Hr. as abhi/ahi 'dragon', a three-headed (tritrisan, abri-kamaras) reptile monster, however, in Vedic also as the three-headed Vismartipa, the son of a primordial deity. Vstra,\(^{229}\) the adoptive father of Indra. When Indra kills the dragon Vismartipa, then he kills his 'cousin' (or due to 'adoption' by Vstra, even his step-brother, and in the YV, a Brahmin, to bet), a feature of rivalry seen as bhadrtrivya all over the post-regular texts. In view of the various representations of the dragon in the BMAC, the designation Vismartipa as 'having all forms' is of some significance. He mainly appears as a scaled, human-headed, ugly, standing man carrying a water vessel.

In most Hr. descriptions the dragon is seen not in human form but as a giant reptile, killed by the Avestan heroes Thraetaona (Yt 5.33-35; Y 9.7-8) or Karastasp (Yt 19.38-40, Y

\(^{228}\) For a detailed example, see the reproduction in Afghanistan 2000: 204, of the eagle-faced hero found on a bronze axe, from Yusufzai near Balkh, of c. 2000 BCE.

9.11), who was resting and cooking on it (cf. Oberlies 2000: 371 sq.). The reptile also appears, with local Indian adaptation, as a giant cobra (vyāmsa, Schmidt 1963, also in the IA Hindukush, see §4.5.1). Such slight differences between the Vedic, Iranian and Nuristani strands of Hr. myth have to be seen within the context of the Avesta as local successor culture of the BMAC. We would then have, in Hr., these epithets of an old Dragon Slayer god:

Hr.
‘Indra varagahan-
'strong, slayer of resistance'

Ved./OIA
Indra

Avest.
(Indra), Varašfraga
(Karâsâspa,230)
cooking meal in metal pot
at noon, Yt 19.38-41

(Atar, son of A.M. Yt 19.47):
(Tîtiridî Yt 8.13-23:
in human, cattle, horse form)

*as/hî (*yas) vṛtra;
‘dragon, the ‘resistance’

Vṛtra, abî, (*tristān Višvarûpa 10.8.9; 2.11.19, =
tristān trikkâkârâ kimî AV 5.23.9 )
Sûpa, Cumurî (local)

aši, (Y 9.8 alm dahtakâm atri-kamarašàm xalalatn)
yellowish monster, exuding yellow poison;
Gandarázà with yellow heel

aši Dahaka, atri-kamarašà
datussa Apaola, ku-marašà
(a black, bald horse

Interaction between the BMAC and steppe peoples is now clearly visible; the BMAC had certain steppe influences, in pottery etc., and the opposite direction of influence is sometimes assumed for the Arhaïm/Sintashita culture (Hiebert, Shishlína in Mair 1998). By a comparison of IE and BMAC mythological systems, it appears that the old IE myth of dragon slaying has been adjusted in the Avesta under the influence of the BMAC or its successor cultures. Several Avestan texts were composed precisely in the BMAC area. Not only do we find the killing of the dragon but also Tîrîtrîa’s fight with the demon of drought, Apaola, and the generation of clouds and rain, reflecting what Frantz has reconstructed for the BMAC belief system.

Some of these influences are still visible in the RV. Indra is not just the dragon slayer but is also closely connected with releasing the waters. The Vedic giant cobra, vyāmsa, surrounds the waters and must be killed (at least temporarily) to let them flow. This is more of an Afghanistán and Indus myth (Falk 1997) than a monsoon myth (Vajrayachya 1997). In Central Asia, Afghanistan and the Panjâb, the penned up waters, encapsulated by (the *Nagôs of) snow and ice, are released by the snow melt, resulting in the late spring/summer floods so prominent in the Avestan and Vedic texts (Falk 1997).

230 Note that his name ‘having emaciated horses’ (Ved. Krśtrî, cf. krśnov, krśapasa) reflects the situation before the release of the waters; the name would fit Tîtrîrî better. – Not also the stress in Zoroastrian tradition on the miserable situation (cf. Y 31.12) of Zarathustra (‘having old camels?’) before he succeeded in gaining some followers.
One may therefore revisit the old etymology of Indra from *ndr ‘to swell’. He is, in fact, the one who releases the waters and lets the river swell in late spring.232 so vividly described for the Afghan Highlands, the Aryan Yaištš of the Avesta (Witzel 2000a). Incidentally, as Indra is also attested in the Mitanni documents, this branch of OIA should have come there via (southern) Central Asia.233

Importantly Indro-Aryan has innovated in turning the dragon into a giant snake, and stressing its role in encapsulating the waters. The Avestan concepts, on the other hand, are perhaps closest to the one Françoit (1994) has reconstructed for the BMAC234... as can be expected for the location of Avestan in Bactria–Margiana-Sistan. However, differently from the BMAC scheme, a mother goddess-like deity does not play a major role in either the Avestan or the Vedic myths and, indeed also beyond the Indr area. Where she occurs, it is at other points in the mythological scheme (Aditi, Yam, Nur, Dizane, Kal. Ještak, Jpn. Izanami, Amaterasu, which cannot be detailed here).

In other words, the PIE and indeed Pan-Eurasian (Laurasian) myth of killing the dragon has been transformed into a Western Central Asian (Bactrian) myth of releasing the waters of the late spring snow melt by the rivers of Afghanistan, and this concept was transferred with the IA speakers to the Indus. In order to be sure, we can triangulate between the reconstructed IE scheme of things, the reconstructed BMAC one, and the local IE variants, the Avestan, the lāgvedic and the Hindukush ones (§6.5.1, 5).

The IE concept of slaying of the dragon seems to have incorporated some general ideas of fertility,235 as is also seen in Japan: the dragon’s blood makes the earth fertile. In the Indr (and BMAC) version, the dragon guards the waters, and the stress is on their fertilizing aspect, not on a fertilization by blood (which is regarded as polluting, at least in India).

As mentioned above, in the Avestan version, a three-headed monster is slain by Thraetaona or Karasāspa, and the late spring time waters are released (Falk 1997); but this is complemented by the BMAC-related Apoaša myth: the demon of drought is slain by Tštirna (VI 8, 13-33) in form of a white horse, and rain sets in (Forsén 1968). In the RV, the three-headed monster/Viśvāvasu (guarding the Soma) is slain by Indra; but it is also seen as giant cubra (yuvasa), an innovation (Schmidt 1963); when slain and cut by Indra, this releases the waters.

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231 EWAIa, however, connects indra with the meaning ‘strong’: indra or *indra ‘strong, strength’ – Gr. en diá ‘to swell’ and perhaps indra ‘drop’; if this goes back to *(h)í- de-ro – B. *jedh ‘strong, heavy, dense’. Contrast: *hier ‘strong’, Olub. iud ‘quick’, note also Ved. Indra – indrāya; in the case of the quick rivers of the mountains (of Arianian Yaištā) there is an obvious overlap cf. also PIVs 5.5.3 and 11: Indra (‘jāmum vagam ainayat).

232. Note the Indar-ab in N. Afghanistan (next to another river, Andar-ab < *antara), and the Indar lake in W. Kazakhstan, even the French river Indét (7); cf. Witzel 2001a.

233. Mitanni in de-ra = in ter. Avest. indra ‘name of a Dātavo’. V 19 43 Indra, but also Gandharvā = Gandharva, Sarasvā = Saras, probably also due to local Vedic (substrate) influence (see now Swenson 2000a); cf. however the human name Gandhrvā YI 13 25.

234. While his reconstruction seems solid, I cannot to compare, as he does, the BMAC situation with early China. While situations of drought/wet season are fairly universal, the N. Chinese situation is different from that of Bactria. Also, note that the dragon appears as beneficial in China only in sources that do not reflect the oldest situation (where he is killed).

235. Watkins 1995a. for Russia, cf. the tale of Ivan, the young butt, for Slavic *hero/Voles (- Voles), etc.; cf. n. 205.
In both the Iranian and Vedic versions there is a clear opposition between the dry (winter) season and the moist (late spring/summer snow melt) season, personified by the fight between Indra: dragon (Kuiper 1979: 11; Schmidt 1968), or in III. times by ‘Vritrahan: ‘Aja’). This was to change again, later on, in subcontinental India (Vaitarchya 1997), where Indra became simply a general rain god (cf. Ps 6.15), who must be stopped from raining too much (Mayembrandath of Nepal, Krtyo myth of Govardhana). It is less known that he is still important at New Year in Nepal, and that even today villages in Northern India worship him.236 In the Hindu Kush, however, he is still one of the major deities (§6.5.1).

A few further important myths and wide-spread motifs can only be dealt with here in form of a sketch: first that of the eagle or falcon as a messenger bird or as the bird that brings the soma or mead from the mountain (India, Greece; see Ossleri 2000: 371; n. 8, 377 sq., cf. para-upari-saima, n. 223), and the related Avestan topic of the central tree ‘of the falcon’ (Yt 12.17; cf. Yt 14.41), i.e. the tree vāpa-bī, situated like the mountain uṣāndauia (Yt 8.32, Witold 1984: 257, 2000a: n. 70, cf. for Nārisan, Buddha 2002: 131), in the middle of the ‘lake’ Vourukala. Note also Odin’s raven, and the vulture as Indra’s messenger (Yb 2.440.2, Witold 1997a: 337); further Noah’s and Jimnaw’s (Kojiki 2.51) messenger bird, etc. This bird is shot at (Oberlies 2000: 371 n. 8, Kojiki 51.2, for the Hindu Kush version see §6.5.2).

Second, there also is the myth of the ‘great archer’ who gains important advantages for the people in question. It is found from Central Asia to the Indus, China and the Maya. The Avestan hraesk ‘the best bow-shooter of the Arzās’, shot from the interestingly named mountain Airiška,šaθa to the mountain X’ewvanta (Yt 8.6.37); the III. *Tr(ī)štria shot at the demon of dryness, (Avest.) Apaša, viz. as Rudra at Dvayā/Prājapati = Sirius at Orion: Forsman 1968). In a local Indus variant Indra shot his bunda arrow at the boar enemy Emusa (RV 8.7.7-11, 8.69.14, 8.78.1, Kuiper 1950, 1991: 16, Witold 1999a: 24, cf. n. 253). A striking archer is also seen on an Indus copper plate (Parpola 1994: 112, 244). In China, the archer Yi shot down 9 of the 10 (too hot) suns; similarly, in Siberian and Mexican myths in Maya myth the proud impersonator of the sun (Yucub Caqwitl, ‘Seven Macaw’) was shot down from a tree by Hunahpu with a bow and arrow (Popol Vuh II, beginning).

Third, the Gandharva and Taksu (Oberlies 1998: 228-9, 539-40) should be compared with the lists of local Afghan deities (Gnoth 1980) and of Yaksas (Levy 1915, cf. Fuessman 1977; 35 sqq.) as well as local Nāgās (Witold 1990b). Fourth, importantly, BMAC iconography has some indications of shamanic ritual: one seal shows a procession with standards (like Avestan, V 1 6. about Bābō) and shamanic drums. Such reminiscences are indeed seen in some of Zarathustra’s wording, as has long been recognized (atruiur ‘bone-having’ life, Y 3.11.1, 34. 14, 43.16), and it is reflected in many myths, such as the life-containing bones of Thor’s ram. Or, note the shamanic ladder ‘leading to heaven’ in the post-Rgvedic Vajapeya ritual, still similarly enacted by the shamans of the Nepalese Kham Magars (Oppitz 1991), cf. the ladder motif in Job, etc. (Witold 1984: 253, n. 71, 83) and note the approach to the Avestan, cnidn-parsa ‘bridge’, for which see the book of Arda Vīra (Gignoux 1984, ch. 3 sqq.); cf. finally, the Upānisadic tales of reaching Brahma’s palace (KU, Theirme 1951/2, Bodewis 2002), for ascent to the sky, see also the shaman-like Muni and his intoxicating drink in RV 10.136 (cf. 5.56.8 Marut, 8.17.14 Indra as sakti of the Muni).

236 survival of Indra (cf. Kuiper 1979) in the Nepalese Indrajatra, and the little known Indra festival at the Thaikor Indra temple in Sumner; further on Indra Bōb (= davāk, Witold 1997: §7.3 and n. 249) in Kashmir, and his still continuing status in N. Indian villages; further more recent adaptations such as Krtya’s killing the many-headed river snake.

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The lists could be prolonged, covering all of the IIr. topics already mentioned; however, I add just one rather unexpected example. Because of the IIr. phrase indicating the priest's gesture of worship, uṣāma-rātaa/ustāma-hasta 'with (upwardly) spread out (arms and) hands', one might regard this 'Near Eastern' gesture as typical for IIr. ritual. But there is a unique find from EMAC levels of the 'Indian' aṣājī gesture of greeting with the raised, open hands put together. This is accompanied by the IE gesture of kneeling down on just one knee (RV 10,15,6 dya aśu daksiniyā niṣṭavya, MS 1.10,9:49,18 ardha-vyujita daksiniyā vyajita; Ognibene 1997). This combination is performed by three persons sitting in front of a tree in a cire perdre copper piece of c. 2000 BCE (Afghanistan 2002: 98-9).

All of this indicates close interaction between the Southern Central Asian peoples and the speakers of IIr. or even of earliest OIA. Yet there is a neighboring, almost neglected region that the Indo-Aryans must have passed through: the high mountain pastures and the fertile valleys of the Hindukush and Pamir, giri = ājra as the RV calls them. The religion of the Nuristani speaking former Kafirs and of the neighboring, NIA speaking, but religiously closely allied Kalash (in Chitral, N.W. Pakistan) will be treated here at some length as this 'third branch' of IIr. speakers (Morgenstierne) offers important insights for the formation of Rgvedic religion (in addition to the few selected items in Fussman 1977 that lack comprehensive treatment of the Vedic data and rely too heavily on later Indian features).

§6.5. The Hindukush area: Nuristanis and Dards

The eastern Hindukush is a wide stretch of land that one cannot transgress in a few days if one is intent on moving from Bactria to the Indian (Gandhāra) plains. The Central Afghan highlands offer extensive green pastures and water: Arīvālam Vātāgh (Witzel 2000a) was an ideal land for the cattle herding Indo-Iranians. There are similar highlands in Central Asia, visible in the settlement pattern of the pastoral Kurgiz, in the Pamirs and in Wakhan. Their economy may have closely matched that of part of the IIr. speaking tribes (cf. Staal 2001), which would explain the relative closeness of the Muzh Mountains at the time of the takeover of *Saume.

However, sources for Greater Afghanistan are few and far between: the Avestan texts, esp. the Vidēvdād, some Greek notes, Bactrian inscriptions and letters, some medieval Persian and Arab texts, and recent ethnographic materials, especially Robertson's report about Kathoonan before forced Islamization in 1895. One can only extrapolate from this report based on a year spent in the Hindukush in 1890/1 and compare its data with reminiscences recorded by the anthropologists of the past century (Jetmar 1975, 1986, Buddruss 1960, 2002, Fussman 1977, Bashir & Israr-ud-Din 1996). However, we now know how much and how quickly a local religion can change even in these remote mountains (Jetmar 1975: 394 sqq., whose summary is, by and large, followed in the sequel).

As for the influences pre-Vedic religion might have received in the mountains of the Hindukush and the Pamirs, we must extrapolate from such modern sources (but cf. Jetmar 1975: 179 sqq., Buddruss 2002). Just as in the other areas discussed so far (or as in Nepal, Maskarinec 1998, Witzel 1997c: 520-32), we must assume many layers of developments and external influences. Nevertheless, the older Hindukush religions, their pantheon and their rituals can be reconstructed to some extent even from our recent sources, but this would lead too far here. There are, however, a number of typical features that allow to sketch the outlines.

To begin with, the valleys of Nuristan in E. Afghanistan inhabited by the Nuristani (Kafiri) speaking tribes that form a third branch of IIr., while the neighboring valleys of northern Pakistan are inhabited (apart from a few recent Nuristani immigrants that have arrived in Chitral over the past hundred years), by various Dardic (NIA) speaking Muslim
populations such as the Kalash, Kho, Shina etc. Only the larger part of the Kalash, living in three of the western valleys of Chitral, have retained their old, pre-Islamic religion and rituals, while the rest of the Nuristani and Dardic speaking peoples have retained, as Muslims, only vestiges of their former beliefs. However, though the languages of the Nuristanis and Kalash belong to two different, not mutually understandable subfamilies of modern Idr., they share many common concepts, beliefs and often even figures of the pantheon, though normally under different names. The isolated Kalash have received strong religious influences from pre-Islamic Nuristan. For that reason, most of the religious traits of both areas can be treated together.

Both groups (and to a large degree also the other Dardas, including the Kashmiris), also share some features that are general 'Himalaya-Pamir-Hindukush' and in all probability represent an ancient, common substrate (Tsuie 2000, cf. Bengston 1999, 2001, 2002). These must be separated from what may appear to be Vedic. In the sequel, Hindukush religion is described according to its traditional Nuristani (N.) features, but Kalash (K.) peculiarities are always indicated.

Common traits of these 'mountain religions' --- often extending along all the Himalayas --- include the following. There is the prominent role of shamanas (pahas, wares, deal N., dehar K., Littre & Loude 1900) and related items: the use of flat circular drums, of various types of psychopharmacata (wine, fly agaric, rubarb, mead, Pashto hum - Kalash sámani; cf. also Nyberg 1993), and a general pattern of goat sacrifice (already seen at Mehrgarh, near Quetta, 6500 BCE), with sprinkling of the blood of the victim. There also is a general pattern of belief in mountain fairies, now often called by their Persian name, Peri, but still called Apsaras in the Rajatarangini (3.465, 468-471 for King Ranikatra's entering and disappearing in a mountain cave into the company of Danyu women). The Kalash distinguish between Suchi (so), who are helpers in the hunt and in the killing of enemies,237 and the Varoti who are the more violent and angry male partners of the Suchi, reflecting the later Vedic (and typical medieval Kashmiri) distinction between Apsarases and Gandharvas. Certain mountains are the favored seats of the fairies, especially the impressive, 7708 m high pyramid of the Kalasa-like Tirich Mir in the North of Chitral (= Men-Tsuch, Mer-Tsuch, Anakhasi 1 &c. Sumtir, Pili-Sirneru, cf. *dravavasu, Shina dlamer = Nanga Parbat, CDIAL 6533). In late autumn, the Peri descend to the high mountain meadows.238

A few key features that highlight the position of Hindukush religion in between the Idr., BMAG and Vedic religions will be summarized and discussed in some detail, as they by and large even now remain unknown to Vedic specialists, in spite of Sudruss 1960 and the selective summary "du domaine mal connu des indiastes" by Fussman (1977: 21-35), who, even with an "esprit hypercritique comme le nôtre" (1977: 27), overs stresses (post-Vedic) Indian influences (1977: 69; for a balanced evaluation of the linguistic features, see now Degener 2002). However, both Hindukush and Vedic mythology, ritual, and festivals, in

237 Note the role of the Apsaras as leading warriors vs. heaven: in the epic (Hara 2001), in the Rajatarangini, for which cf. the Germanic Walkyrnes (Witzel 1997d, n. 48); for the Kalash Varoti < vakāpasr, cf. gandharva wakṣāla B3 3.86.6, and the Avestan mountain range 1850/323 pātva "whow hairs (trees) are tossed up by the wind" (modem ladija), Witzel 1972: 184 sq.

238 Reflected in the Niamara Purana and the Rajatarangini: both Pādmas and Nāgagas stay for half a year each in the Kashmir Valley, see Witzel 1994: 220 and n. 82; cf. Nuristani-lang < Nāga; cf. Fussman 1977: 36 sqq.; and the Punjab river (1.) Lu-nung (lu = dava, Sudruss 2002: 129); now also the mountain Nanga Parbat and (?) Nandā Destr, popular etymology < "nang"? Cf. the many Kashmir mountains in -ag.
spite of many layers of developments and mutual influences, tend to explain each other very effectively; cf. the similar case of Nepal (Witzel 1997c: 520-32).

§6.5.1. Mythology

Nuristani deities were praised in songs called hem (= Ved. brahmanam). Buddhiss (2002: 123), There is a creator god, appearing under various names, no longer as Father Heaven, but as lord of the nether world and of heaven: Imra (*Yama Rājan), Mara ‘death’ (N.), Dezza (*āgh, CDIA 14621, from N.) or Paidagarau (paydagārav, K.). Sometimes he has taken over, like Zeus, some characteristics of Indra (he kills a snake, like the RV Indra). He also is the ancestor of humans or their creator (uncharacteristically, out of mud). However, just as Yama has a twin sister Yamī, so has Dezza (dīzwā, K.): Deźalik (dīzwāliz, K.), the goddess of birth, similar to the Kafri Nirmalī (N. < nirmañkā).

Heaven consists of seven round disks, clearly an influence of the South Asian (probably, originally Near Eastern) preponderance of this number, as compared to Northern Eurasian nine (also seen in the RV and in Nepalese śhaman songs, Maskarinec 1998, where 7 appears next to 9).

More importantly, there is an Indra-like figure, often actually called Indr (N., K.) or Varendr (K., warhn, warhn, *aparendra). As in the Veda, the rainbow is called after him: Ved. indra-dhanas, N.: Kati indra-, i-ādr-, K. indre-, etc. (CDIAL 1577); when it thunders, Indra is playing polo (cf. when Munjem moves, Buddhiss 2002: 125); Kal. inderik ‘lightning’ (CDIA 1576); and the earthquake is called ‘inderiś’ impulse from Indra’. Kati indriś, indriś (CDIAL 1582).

Indra appears, however, in various forms and modern disguises; we have to assume many local developments and cross-wise influences from one local tradition on the other during the past 3000 years, as clearly seen in the god Balumain (6.5.1.5). The Kafri Giwh/Giwh’s/Grýs (< *gavira wishing for cows>) is a daring, always successful killer and hero and reflects Indra’s Aryan character well (RV gavii, cf. gavisi); some other of his ‘incarnations’ stress fertility that he brought about or personalities, and also Indra’s connection with rain when he appears as as Woshum, Shomde (N.) and as Seijer (Seijir, K.), who is indeed called Shura Verin (šira warhn < šira *aparendra ‘the hero, the unrivaled Indra’). Warhn(dr-) or In Warte (K.) is the mightiest and most dangerous god; the location of his shrine was assigned by bow shot, which recalls Indra’s Bundla bow (see §6.4, above). Another god, Munjem ‘malik’ (muṇjem < madhyama ‘middle’; malik < Arab. malik ‘king’) is the Lord of Middle Earth and killed, like Indra, his father, a demon. He pressed him down, took his head to the upper valley, his feet to the lower valley and covered him with earth,239 all of which is reminiscent of the Purusā/Ymir and Chīn. (< Austric) Pangu myths. Most interestingly, Mahandeu (mahandaś, K.) and Mon/Mandi (Mandi, N., < *mahan deva), too, is a war god, a negotiator with the highest deity, and he is everywhere and accessible like Indra. Mon/Mandi has a golden body, appears as Zebu bull and collects clouds (cf. the bull/hoarse form of Tittīra, opponent of the demon of drought, Apaṣa).

239 The same story is found among the Nuristani Prasa: Munjem kills his father and buries him, his head up in the valley and his feet down (Buddhiss 2002: 125); cf. further §1.7, on the founding legend of Sringar: son (in Jemer 1975) compares some Sherpa and Panjhar myths (lower Panjhar Valley = ‘the feet of Panjhar’s Jetnav’ (1975: 78), however, deifies the cutting up of Munjem’s father.
Even the recently popular Balumain (balumain, K.) has taken over some of Indra's features: he comes from the outside, riding on a horse. Mahandeu had 'cheated' him, like other Indra figures, from superiority. Balumain is a culture hero who, among others things, taught how to celebrate the Kalash winter festival (Chaunos). Like the lir. *Indra *Vitraghan, the Hindukush Indra has a demon-like counterpart, Jeshan (K., *jeshāna), seen on earth as a dog; the gods (Devalog, cf. N. dītā) are his enemies and throw stories at him, seen as the shooting stars.

There are many other deities, which cannot be treated here.241 however, the goddess Jesṭak (jestak, K., *jeshāna, or *deṣṭā), the Dī']* (ṃṭa) of the Kafirs, is important: she is the goddess of the hearth and of life force; she protects children and birth giving women, as are the jach (jā, < pokṣāṇ/ṃṭa, K.), a whole category of female spirits of the soil or of special places, fields and mountain pastures.

§6.5.2. Ritual

Hindukush ritual has many 1Ir. and 1A features, too (pace Fussman 1977: 34). Kafiri religion had priests (N. wutō, utō < hotēka? CDIAL 14176; note K. ōkikvan 'priest', from ōkikkhē 'to praise a god', still found by Morgenstierne in 1929),242 bards and shamans. However, in Kalash religion the priests are missing now (only some shamans, dehā, remain). Instead, there is a special role for half-grown boys, who are treated with special awe, and who combine, like Brahmacārins, pre-sexual behavior and the purity of the high mountains, where they tend goats for the summer months. The same degree of purity cannot be attained by men who interact with women and other impure entities in the villages.

Purity is very much stressed, just as in the Veda or in Hinduism. In Kalash religion it is centered around altars, goat stables, the space between the hearth and the back wall of houses (as modern Himalayan/Newar practice), and also in periods of festivals; the higher up in the valley, the more pure the location. By contrast, women (especially during menstruation and birth), as well as death and decomposition, and the outside (Muslim) world are impure, and, just as in the Veda (and Avesta), many cleansing ceremonies are required, even for the average householder, if purity was infringed upon.

In Kalash ritual, the deities are seen, as in Vedic ritual (and in Hindu Pējā), as temporary visitors. Other than Nuristani shrines, Kalash ones (dār 'house' < Ved, dār, malast) are located, with the exception of the women's house (Jesṭak Han), under the open sky at trees (jumiper, oak, cedars), and they are characterized by a wooden board or a stone altar. There always is an opening, apparently to the other world of the gods (as in shrines for the Newar

240 In the Kafiri south, Indra remained the patriarch of a divine family: Gish is his brother (cf. the Epic Upendrā), Disani his daughter, Panu his son, Bagish (a water deity) his nephew, whose myth, recorded by G. Morgenstierne, is found at http://www.ib.ni/9000/nnmait/nmmait/im/a/Kareh/Bagish.at.mov.
241 For example, Probā(c)in < RV prāvabhāk, another form of Indra, is generally feared and no woman is allowed near his shrine; his prav (pl. -) festival is connected with the grape harvest and the making of new wine, which is poured, like soma, into the fire and only then is allowed to be drunk. Note that wine is ritually pure, and more so even than snow or spring water (Trull & Cooper 1999: 96, sv. āa, 330 s.v. uki), for which compare the Kashmirian ritual (Nilamata 465: new wine (mara maayā) is drunk on the snow after the first snow fall; cf. Witzel 1994: 243, n. 233. — Or, some spirits take form of small children: the upper part of their body is black, the lower one white, for which cf. the Vedic Rudra.
242 Incidentally, if water is *hotēka, this would be an indication of the lir. age of this important ritual term: it is also found in Avestan zanar, the title of Zara/Atu in the Gāthās.
deity Nārāyaṇa. In 1929 Morgenstern still saw the effigy of a human head inside such holes; cf. the (lost) head of the sacrifice, so important in Vedic ritual (Heesterman 1967; Witteveen 1987); cf. further Old Celtic practices.

Fire is generally used at rituals, but not at the altars, and not inside an altar as in Vedic religion; blood is sprinkled there, unlike in India where it is regarded as polluting, except for Tantric or tribal rituals. Horses, cows, goats and sheep are sacrificed.

Hindu rituals make use of several forms of sacred drinks, especially wine (vines grow locally, and are attested already by Alexander’s Greeks, who thought of Dionysos). Indr. & similar gods, have a vineyard; he defends it against invaders, and an eagle appears. When the invaders shoot at him with arrows, he creates a rock slide, killing them. This may reflect a faint Kaśīni echo of the old IE and ltr. myth of the eagle bringing the sacred drink. Cows, however, represent the ancestors, and are frequently fed, also at toasts (with the left hand), just as in the Veda and in parts of modern India and Nepal (Witteveen 1986: 163).

In general, solemn Kalāsh rituals seem to be of pādrīja type (namās < ṣavrā), as Kuiper has proposed for the Ṛgvedic one. By organizing rituals and festivals (up to 12 are mentioned), the highest form being bīramaṇa with many offerings of goats and also cattle, one gains fame and a greater voice in the local assemblies. It seems that just as in the RV, the offered cattle join the herd of the offertory after death, and perhaps his rank is preserved as well, --- Importantly, the former local artisan class was excluded (K., N.) from public religious functions (cf. Fussman 1977: 68), just like the Vedic Śādras.

6.5.3. Festivals

Finally, in order to better understand Hindu religious and to compare it with ltr. and BMAC religion, it is important to take a brief look at the division of the year and the major rituals/festivals (khwaśagaw, K.) associated with it. A common division seems to be that into two moieties, Spring/Summer and Autumn/Winter. For example, Maṇa (Tama Rājana) is welcomed in Spring, and Munje (India) in the Fall. Among the Kalāsh, the pastoral god Šenjan protects the herds in Fall and Winter and is thanked at the winter festival, while Goshdai does so generally until the Pul festival (pu. = < pūrṇa, full moon in Sept.) and is thanked at the Josbi (jōj, jōli) festival in Spring. This reminds of the two (ritual) halves of the year (uttarāyana, daktiṇāyana in the gavān ayana).243 of various similar instances in the Himalayas,244 and the division of the year into a dry and a moist part in the BMAC, Avesta and RV (as discussed above).

243 Note that this may be the origin of the term am varga na ‘year’: when all calves, cows have been brought together, at the end of the yugalya pasture period in the hills, followed by the end of the cycle of seasons (śawam = cows/oxen). Cf. EVRD 5.5.6: savyavarta vyagya yojayam bhagam ayam. Note, however, also the other terms of the Vedic five year cycle: part. śawam - śvarna and samvata. Ved ind. t 412, EWAia 1-3, Falk 2002: 78. Falk 1982.

244 Just as in Kashmir, the dates also change in Kalāsh land: in late Autumn, the Peridescends to the mountain meadows and they are asked to return to the peaks in spring (Feltmarr 1975: 390). Bahmani visit in December. Feltmarr (1975: 78) compares the male part of the year in Fall/Winter and female one in Spring/Summer with Taiki beliefs, and notes that the water, stored in cow’s milk, is released in Spring to fertilize the female earth. Cf. above, on BMAC iconography. Note also the role of India at year’s end, and thus of other visitor gods, such as the mārbatis of lupia.
The most important Kāl̤ah festival is the Chaumos (caumós, Khwar chihrimas, importantly < aturumdyə, CDI Am 4742), which is celebrated for two weeks at winter solstice (c. Dec. 7-22). It has significant repercussions in the foundational myth of the Kāl̤ah (and Nūratūs), which will follow. At this festival the visitation god Balūmain appears. Impure and uninitiated persons are not admitted. Purification is achieved by waving a fiery fire brand over women and children and by a special fire ritual for men, involving a shaman waving juniper brands over the men. The 'old roles' of the gods (Devalog, dewadi) are no longer in force, as is typical for year-end and carnival-like rituals. Differently from other festivals, drum and flute are now forbidden, and only the human voice is allowed. The ritual takes place at a Tōk tree, a place called Indrantuc, or indrēyam, clearly indicating the older concept of Indra as focus of this festival; in fact, Indruntuc is sometimes believed to belong to Balūmain’s brother, Ind(ṛ), lord of cattle. Balūmain is offered specially baked bread, often in the form of sacred animals, such as the ibex. This is later taken up to his mountain seat by ‘shepherd king’ (budāl) and offered along with goat milk.

In the ritual, a fire is constructed out of superimposed, crossing twigs (a fortress) much like a Vedic one, and a goat, especially its heart, is offered into the fire. Ancestors, impersonated by the young boys (nimēiza ‘pure’) are worshipped and offered bread (cf. Dolfius 1989:69 sq.) The children hold on to each other and form a chain (Ved. avastārambhāya) and snake through the village. (This chain should represent the Vedic tāuntu string of the ancestors, Wittet 1906b.) A fox chase is included as the fox is Balūmain’s dog. (In the Altai the bear is the ‘dog’ of the mountain god).

The men must be divided into two parties: the pure ones have to sing the well-honored songs of the past, but the impure sing wild, passionate, and obscene songs, with an altogether different rhythm. This is accompanied by a ‘sex change’: men dress as women, women as men (Balūmain also is partly seen as female and can change between both forms at will). Modern dress, such as of tourists, is included now.

At the central point of the ritual, Balūmain gives his blessings to seven boys (certainly representing the seven of the eight Devalog who actually received him), and these pass the blessings on to all pure men. At this point, the impure men resist and fight. When the nagayō song with the response har varis (< samṛtyate ‘flows together’, CDI Am 1995) is voiced, Balūmain showers all his blessings and disappears. At this critical moment — it seems that of solstice, i.e. change of the year — the pure get weaker, and the impure try to take hold of the (very pure) boys, pretend to mount them "like a horned ram", and proceed in snake procession (see above). This action creates a mixture and fusion (like Balūmain’s change between male and a female form), so important for the fertility and life of the year beginning now. Things then return to normal. Much of this reminds of the solstice festival in neighboring Tibetan Ladakh (Dolfius 1987) as well as in the Veda, of the Mahāvīt, and the form it has taken in the second

245 The etymology is important as it could indicate Vedic ritual influence. But, by contrast, harat/santar/Nar. word is already lit. (see §15.2.); note also: Joshi (jeji, Khwar chihrjas) festival in spring < ajāpya, CDI Am 14728.

246 But note also the sexual connotations (Jetmar 1975: 386): — It may also echo that of the bāhūn river, connecting heaven and earth, symbolized by the Sarassatari in the Amrātāmrapana, Jpt, Wittet 1984: 222, n. 71. The winter dance are echoed by the same type of dance — but this time by women — during the Joshi festival in spring.

247 Note that the shaman, too, often has a female double that accompanies him throughout life: cf. the alternating male/female lineages of the Kham Magar shamans (Oppey 1991).
pressing of the Soma ritual (Witzel 1997a: 398-400, 404), and also of reflections in myth. The one that corresponds to 'Indra's opening of the Vala', a typical New Year myth, is found among the Nuristanis in two main versions, summarized here.

6.5.4. Creation myths

First, the recovery of the lost Sun and Moon by the gods (Robertson 1896: 385, 28; further Prasun and Urtsun versions, following Jettmar 1975/1986 (who used Buddha's unpublished materials; however, see now Budruss 2002).

There was no sun, no moon. It was very dark. A demon (Espereg-era) brought sun and moon into his house, right and left of a waterfall.248 The god Mandi changes into a boy, and goes to the mother of Espereg-era. Mandi is not allowed to open a certain door. He tries to do so, pushes in his finger, this turns golden; finally, he breaks the door and sees the waterfall, the sun, the moon and a horse. He puts the Sun on his right shoulder, the Moon on his left, and rides out of the house. The dark world becomes bright. Espereg-era follows them, Mandi cuts off all his seven heads, drags him to the right side of the valley and covers him up.

The god Mara tells him to share sun and moon with the rest of the world; he carries them up to heaven, where they are ordered to go about in circles. Mara then creates humans, gives them cattle, teaches them, goes up to heaven and disappears.

The other version is more concerned with the actual conquest of the 'house' of the sun (Kati in Bumboret, Urtsun and Lutdeh; Prasun version following Budruss, as reported by Jettmar 1975).

The gods assemble. In the upper part of the Valley there is a house, near heaven, where a demon lives. He has much wealth. If he is killed the world will become well. The gods decide to fight him. They call God Mandi who gathers other gods as he marches up the valley, finally including also the female deity Distini. Halfway up, they sit and deliberate. They discover the house. Mandi goes there, sees an old woman and asks her about the house. 'It is a house, between up and down; inside there are seven brothers (called Dizano, cf. Dzalik cf the Kalash) who have many things: the sun and moon, gold, silver, water, fields where they sow'. The Old Woman explains how to make the rope visible by which the house hangs between heaven and earth.

Manddi goes back to the gods but forgets, three times, what he had been told; finally, another god follows him (cf. the vulture and Saram, JB 2.240-2) and reports back to the gods, who tease Mandi. The gods shoot arrows at the house, but as it is of iron, the arrows are reflected (cf. the ayas forts in the Veda). They ask Distini to sow seeds, which ripen quickly, and are threshed. The stuff attaches itself to the thread and it is visible in white.

Mara makes two-pointed arrows which cut though the copper, silver-, gold and iron thread. The 'flour castle' crashes down to earth. The gods jump against its door, but it does not open. Distini tells Mandi to look at her thigh,249 which are white and full. Mandi gets

248 Cf. Mihrahc and Iranian-related Armenian myths about David of Sassoun; further Budruss 2002; ultimately, the descent of waters as Sarasvatī/Ganga may be intended (Witzel 1984: 217 sq., Budruss 2002: 128, 130); see next note.

249 Cf. the l. p. Indian myth, with Utstane dancing, exposed, and stamping loudly on an upturned bucket (cf. Witzel 1995b); cf. in the Mahāvratī: young women carrying water vessels go around three times, stomping their right feet, shouting 'mudhi', then pour out the water.
excited, jumps against the door and breaks it. He enters with a dagger and kills all seven demons. The gods draw their outside and bury them.

§6.5.5 Kalash myths of winter solstice

The act of reviving the Sun is repeated by the Kalash in the Chaumos (cañmò) festival at Winter solstice; this is now dominated by the god Balumain (balmain). He is the typical "visitor god" from far away, and is rarely seen. Such visiting deities are also found in Kafiristan (noted by Masson in 1844), and are also common, as marebino, in old Japan. Apparently, Mahandeu had cheated Balumain from superiority, when all the gods had slept together (a euphemism, K.) in the Shawalul250 meadows; therefore, he went to the mythical home of the Kalash in Tsyam (tsiam), to come back next year like Indra at year's end (RV 10.86; Wittel 1997a: 394; cf. 1997c: 520 sqq.). If this had not happened, Balumain would have taught humans how to have sex as a sacred act. Instead, he could only teach them fertility songs used in the Chaumos ritual, exemplified by the explicit, chorus-supported malefemale exchanges of dialogue such as RV 10.86.

He arrives in Kalash land in early December, before solstice, and leaves the day after. A myth tells how he was at first shunned by some people, who chased him with their dogs, and therefore were annihilated. He comes from the west, the (Kati Kafir) Bashqal valley. But, in spite of this, the mythical country of the Kalash, in the east or south, is also connected with him. Clearly there are several layers of mythology, the later one being the introduction from Kafiristan. He always comes riding on a horse, as also said in the secret songs addressed to him.

He was awaited by seven Dvalal of the Kalash land (cf. the seven Adityas?) and they all went to several villages, e.g. Kamadeo, where he was received only by dogs and therefore destroys the village. The people of Patrik village, however, received him with seven pure, young boys whom he took with him (therefore one only sends men and older boys to receive him nowadays). Several texts mentioned in his ritual reception allow to identify him, at least in part, with Indra.

Sometimes Balumain is seen as female. When he turns right, he is male, when he turns left, he is female. The shaman, in trance at the sacred Tok tree, identifies and addresses Balumain with Kushumai (kushumdy), the goddess of fertility, and the festival 'king' honors her. There is a myth about Kushumai's staying away from Balumain's reception, back on her own mountain. Balumain turned towards her, and in fact became Kushumai, and is now addressed as such.

Balumain is the typical culture hero. He told the people (of Patrik) about the sacred fire made from junipers, about the sowing ceremony for wheat that involved using the blood of a small goat he had brought with him, and he asked for wheat tribute (hurshak) for his horse. Finally, Balumain taught how to celebrate the winter festival (see above). He was visible only during his first visit, now he is just felt to be present.

250 Which in Kalash means 'spotted' (kwsala), like a make: not possible < Skt. tabala, rather, from N. Kati sawali 'pregnant': the place is situated on the western boundary of the Kalash valleys with the Kati Kafir, on a high pass.
§6.5.6 Hindukush influences: a summary

In sum, the Hindukush area shares many of the traits of ltr., myths, ritual, society, and echoes many aspects of Indic, but hardly of post-Indic religion (pace Fussman 1977). They may be summarized as follows.

In myth it is notably the role of Indra, his rainbow and his eagle who is shot at, the killing of his father, the killing of the snake or of a demon with many heads, and the central myth of releasing the Sun from an enclosure (by Mandi < Mahān Dewa). There are echoes of the Purusa myth, and there is the cyclical elevation of Yama Rajan (Imra) to sky god (Witzel 1984: 288 sqq., pace Fussman 1977: 70). Importantly, the division between two groups of deities (Devalog) and their intermarriage (Imra's mother is a 'giant') has been preserved, and this dichotomy is still re- enacted in rituals and festivals, especially the Chaumos.

Ritual still is of ltr. type: Among the Kalash it is basically, though not always, templeless, involving fire, sacred wood, three circumambulations, and the "hoh (I. N. wuz ‘high priest’). Animal sacrifice, at square fire places, is very prominent; it is carried out by decapitation (as in RV, Schmidt 1973) and by offering part of it into the fire or into holes (cf. Avest, mapar, and perhaps even with the 'lost head of ka-rilhce', still seen by Morgenstern). Sacred drink (wine < *Sauna < mead), is prominent: consumption is allowed only after Indra (as Praba) has been offered to. Ritual often is a potlatch-like merit festival (Kuiper) meant to gain status and to confirm rank. There are year-end rituals (cawmós < aturnarta), involving the two monstrosities of the gods (Devalog and others) and of society with a Mahārātra-like carnival, and there are other seasonal festivals within the two halves of the year.

Society stresses the aspect of purity (as in India, Iran); this affects the position of women, and results in the exclusion of artisans from ritual (like the Sūdras). There is exogamy of clans, and intermarriage is allowed again, as in the Veda, only after 7 or 8 generations. As in ltr., there is a great importance of oaths, sworn at special ritual places.

Some features already have their Vedic, and no longer their Central Asian form (e.g. dragon > snake), and there is clear South Asian influence as well, such as the prominence of the number 7 (7 heavens, 7 gods, 7 boys in ritual).

One may wonder, however, about the exact nature of the Yaśkins (Shukri) as local Hindukush or S. Asian female spirits. The stress on the purity of the mountain regions, as habitat of fairies (Varūṇa < yatapuruṣ), and the black/ red demons (like Rudra) seems to be local. Many of the Hindukush features further elucidate what we observe in the RV (Gandharva, Rudra, Apsaras, Yakṣa RV+) and especially in the AV, as features of the deities, demons and spirits living on the (high) mountains. Some items clearly belong to the ancient mountain cultures of the Hindukush-Pamir-Himalayas (pace Fussman 1977), and have not been taken over, or only fragmentarily so, into Vedic religion. Examples include the shamans (except for the RV Muni) and their rituals (except for a trace in the Viṣṇ vapya, and maybe some healing ceremonies in the AV); the role of boys and adolescents as semi-priests (note the description of the Brahmacarin in the AV); the centrality of goat sacrifice and blood, of sacred twigs (juneip), and of magicalistic monuments.

In sum, all of these features of Hindukush religion are in need of further, much more detailed study, not just by anthropologists but certainly by Vedic specialists. While the Iranian side of ltr. religion is not followed up further in this context, a brief closer look is taken at the Indian side, as seen in the RVeda.
§6.6. Acculturation in the Greater Panjab

We have to assume a certain degree of interaction, as the RV clearly tells us, with local people in northwestern South Asia. The question is still: who exactly were these inhabitants of the Gandhara area, the Salt Range and the Panjab proper? One may think of hill or mountain people belonging, like those of Kashmir, to the so-called Northern Neo-Hittites. (Posehli 2002). It survived beyond the Harappan period on the Derajat Plateau, west of the middle Indus, and on the Gandhara/Salt Range Plateau. At least in part of the region, however, this culture was rather abruptly followed by the Gandhara Grave Culture, with early evidence of horses, in Swat, c. 1400 BCE.

The northern substratic language spoken there, as attested by loan words in the RV, cannot have been one of the Proto-Burushaski or Proto-Tibeto-Burmese speakers, as both do not have the full prefix system seen in Indic Austro-Asiatic (Paras-Munda) loan words (Witzel 1990). Instead, Tib.-Burm. had only a few isolated one-consonant remnant prefixes. Much future work will have to be done to subdivide the substrate material in the RV securely into several layers, such as BMAC-related (cit., khar, ubir), the Ganganic language X (Masica 1979), Dravidian, and local such as Para-Munda (for a beginning, see Witzel 2002c).

Furthermore, as local rock engravings tell us, the northern cultures were characterized by the important role of the mountain capitals, the markhor and ibex (still seen in Hindukush religion); but these are not typical for the RV.

Instead, a different kind of local religion emerges from a study of the substrate words of the RV (Kuiper 1955). Apart from terms of village life, music and dance, only the more popular level of religion (the ‘small tradition’) was accepted, notably the demons pitācī, kiranī, nirāupsanai names such as Arhuda and Sambara (see n. 260); the words purya, mātya, barī, the alavitha, pippala, udambala trees. However, there also are some words that are more or less closely connected with the prestigious Soma (thus at least partly, from C. Asia?), in Kuiper’s list: ukkhada, etc. (see §6.3); to be added are those discussed above as Central Asian (Atharvaim., etc. see §6.3). Finally there is the local Indus motif of the boar Eṁaṣa, and such denigrating words as śitishtava, mṛtrīṇa.

Other South Asian influence seems to include, e.g., that of tree worship (Indus cív., Pali texts, Drav., Munda, Tharu, etc.), the role of the peacock (Cemetery H urns, Kandian in Čevessai, etc.), perhaps that of menhir-like memorial stones (Gandhātān and Ś. Indiān megaliths, Drav., Khāsi etc.).

The local Gandhāra/Panjab influences are perhaps best exemplified by a clear, regionally based example that is the use of numbers that are prominently used in religion and classifications: the typical North Asian (shamatic) number is the number 9 (or 8 in Japan, Polynesia). As pointed out above, in the Near East it is the sacred 7, which is also found in the Indus Civilization, e.g., with seven dancing women appearing in front of a deity in a tree (Parpola 1994: 260), and in the RV. It has also spread (where?) into the Hindukush and into the Nepalese Himalayas.

251 Such u·, r·, b·, g·, s·, m·, n· (Benedict 1972: 103-123), Other language families are excluded as well, such as Dravidian (no system of prefixes), or some (other) form of IE in the Ved. loan words are decidedly non-IE.

252 Perhaps with the exception of RV 8.200.6 Sāraba > Kāšā ātra ‘markhor, male mountain goat with upward spiraling horns’ (cf. CDAZ. 12331), which confirms the traditional etymology: ‘animal with horns, EWA:u· liti. Interestingly RV Sāraba is a name of a person related to ḫaṭi (ṛṣhiaha), and connected with the mountain tribe of the Paravata.
Many more items from West Asia could be added, such as the prominent role of the lion, as found in the Indus Civilization and in the RV. However, the RV expressly excludes, probably due to inherited poetic conventions, the use of the Panjâb and Central Asian panther (already prominent in pre-BMAC pottery), as well as of the Central Asian and Indian tiger, though the tiger is prominent in the iconography of the Indus Civilization.

In sum, by the time the speakers of OIA dialects set foot into the Greater Panjâb, all of the foundational themes and incidental influences (IE, Steppe, BMAC, Hindukush) had already been amalgamated into a new system that was set to clash with the local beliefs of the Indo area. Evidence for this amalgam is abundant in the non-IA words in the RV (Kuiper 1955, 1991), or in the Vedâ Vârtamâsâ as influenced by Indus rituals. In Vedic ritual, the queen (mahîst) interacts with a slaughtered male horse, but the Irish king bathes in the broth of a mare (c. 1185 CE, Pulver 1987: 273); in Rome a horse (October equus) is killed with a spear, head and tail are raced from the Campus Martius to the Regia (Pulver 1987: 272) while the blood that dripped from the tail is kept by the Vestal virgins and used in the Palilia festival in April. Conversely, on a seal from Chanhù Dare, a willing Indus woman is seen as lying under a sexually stimulated bull (note Ved. mahîst 'female buffalo, queen', even today still a title of queens; cf. Pulver 1987: 275 on the Near Eastern ritual copulation of queen and bull). Apparently, the IE horse sacrifice has been acculturated in India before it was codified in the Veda (Possehl & Witzel 2003).

The Emusa boar myth, discussed by Kuiper in 1950 (partially withdrawn in 1991) is another case in point. This myth only occurs in the 'suspicious' Kanya book of the RV, (Hoffmann 1975: 15:28 = 1940/1). Here, we find a local substitution for the hr. myth, i.e. the Yala myth of the RV, the Nûrsati one of Mendi opening the House of the Sun, etc., and its earlier versions (IE: Herakles/Cacus and the cows, Eurysaces, e.g. län, Amaresau/lwato myth), by one of a great archer shooting at the boar Emusa.253 The boar, incidentally, figures also in AV (PS 6/7) and TV myth (KS 8/2), substituting for the diver bird and, as such, is rather old in South Asia, which archaeological and modern remnants of a boar cult indicate in the linguistically and culturally isolated Andaman islands (Campbell 1988: 122 sqq. and elsewhere, for example among the Mushahars of U.P.).

Whether the Emusa myth is of Munda origin is not very important here (cf. Witzel 1999: 23 for some suggestions), rather, it is important to recognize, as Kuiper has prophetically done also in this case, half a century ago, that this myth does not fit the Vedic (and IE) pattern.

The historical section of this sketch has to terminate here. In the future, it must be expanded by a close investigation of what we can reconstruct for the religion of the Indus civilization and for Dravidian and Munda/Australo-Asiatic myths and religion; ... that is, as far as the Sangam (Cankam) and medieval South Indian texts as well as modern anthropology and the interpretation of archaeological remains will actually allow. These reconstructions are to be followed by a comparison of the new data with linguistic religion. Even now, a few topics stand out. The bow shooter is also seen on an Indus copper plate (Parpola 1994: 112) and it is also typical for the Dravidian god Murugan. The worship or ritual setting up of megalithic stones among the Hindukush peoples, Khatis, Mundas, and Dravidians, and the role of the peacock and its myths among the Mundas compared with Ceratotherium images of hunchback cows (Witzel 1999a: 16 sqq., 41) supply further interesting hints.

253 Who is biding milk rice(!) adana is the mountains. This interpretation depends on the lyyedic meaning of adana. — Cf. our cornisopaca, Schürfendland, and the AV idea of food that cannot be eaten up, Lepot 1997.
$6.7$. **Summary of diachronic developments**

An amalgam of all the various historical influences, delineated above, is clearly evident in evidence in the RV, with some of the expected, system-inherent contradictions resolved, and some not. Much has already been made of the various creation myths in the RV as one of the elements for emerging Indian philosophical thought. This is, however, rather proppic — as if mythical thought about nature and the universe was developing only at that late stage in Homo Sapiens’ history.254 When we compare Eurasion or Eurasian mythology, we can clearly see that

- Creation of the world out of a primordial giant is a very old item, probably a shamanic myth (of dismemberment) of stone age hunters’ societies (cf. Macdonald 1952); it is found among the IE (Ymir in Iceland, Remus in Rome, Porusa in RV 3.1.90, cf. AV 10.2.28, Ps 9.5), Ooge.tsu Hine (Koikii 1.18), in the Chinese Pangu myth (derived from the Man/African peoples), etc. Variants of it have found various positions in local mythologies, for example close to primordial creation in Iceland (Vatljorðnisnl ad, Grjótmál 40), i.e. stages 1 or with Oberlies (2006: 378) at stage 2: the giant as a son of Heaven. The myth re-appears frequently in “late” myths, e.g. in Nuristani valleys or in Kashmir: Srinagar city is built on the right bank of the Vitasta, where king Pravarasena II crosses across a giant Rakasa, whom he kills and then builds an embankment (seta, the modern Seth) from his leg, with a sharp turn: the demon’s kine (see Steen, Bajāratīnga) 3.330-358, ad loc., 1.159, Yukṣa dikṣe): cf. also the initial section of the Finnish Kalevala.

- Very frequent, too, is creation from primordial waters (sādha, RV 10.129.3; cf. also 7.49.1, 10.72.6, 10.109.1, 1.184.41), perhaps best seen in Mesopotamian myth, with the male salty ocean and female sweet waters; or creation arising from darkness/chaos, which is again found from Iceland (gopp dar ginnungag, Voluspa 3) to Polynesia (Po, darkness) and to the Maya (only emptiness and water under the sky, Popol Vuh).

- Creation from an egg, or rather from a golden embryo (RV 10.121.3, IB 3.360, Hoffmann 1975-6: 519-22), is again found from Finland (Kalevala, introduction) eastwards, for example in Munda (Sindhu): the first hum-ans developed from two eggs, laid by a gow-se made of grass (Ocran 1965: 5.125).

- The Indian boar diver myth (first seen at PS 6.7, KS 8.1), tells how mud brought up from the bottom of the ocean by a boar (the later Varaha asvatra of Visnu) forms the new, still shaky (sīkhi) earth, floating on the ocean. This is a variation of the older diver bird/diver muskūt myths of Northern Eurasia and North America. Its South Asian shape is due to the influence of local Indian ideas: boar worship is old in the (post-glacially) isolated Andamans and in the subcontinent proper.

- The more ’abstract’ creation from’nothing’ (ant, unordered chaos) to order (sat) is seen at RV 10.72.3.3 (for which see Kuiper 1983).

In sum, even in the RV we find representations of the development of the world in 4 stages (in part, even called yuga): 1. (salty) waters/darkness, 2. Heaven and Earth, 3. the eay gods (Pūrve Devah, Sādha, Aṣura), 4. the (Viṣve) Devah (Indra, etc.). This is a progression that is seen in many other cultures as well (such as in Japan, Koikii), from an


255 Or created by the primordial deities (One Borim and Sing Tonga, put in a cave, and made drunk on rice beer, to have sex and produce children (Hastings 1928: s.s. Mungin §4, Indivadans (North India): §9).
sexual/undifferentiated state, to bisexual procreation, and to several generations of (competing) gods, frequently followed by a final destruction of the world (summary in Witzel 2001b).

Such comparisons indicate that the Rigvedic evidence (10.90, 10.129, 10.82, 3.38, cf. 10.72.2-3, AV 10.7.25, etc.) is not new, but recapitulated, recycled shamanic/priestly speculation, based on much older models found in Palaeo-Hittite Eurasian/Luwianian mythology, that has been poured into concrete, very elaborate poetic form by the Rigvedic Bhasa.

In sum: (a) The Rigvedic religious system (Kuiper 1983, Oberlies 1998, 1999, 2001) was one that was still digesting recent influences from the Hindu Kush and the Greater Panjab and whose exact conceptual boundaries need to be defined by further research. (b) Such more recent additions are distinguished from older (Central Asian) ones: this amalgamation process is not visible in the commonly found 'Het', archaic picture of Rigvedic religion, which is at best tempered by some (Indo-)Iranian IE ideas. (c) Instead, we must begin to study Rigvedic attempts at changing and 'up-dating' (Farmer et al. 2000) an older pre-Vedic system in accordance with local religious, social and political developments that eventually led to the post-Rigvedic continuation of speculation (AV 8-12/PS 16-17), and even more significantly, to the classification in the post-BV period of the Srauta system with its stress on a rather restricted 'access to heaven'. In this way, I think, we can do justice to Vedic religion and can avoid the confusion of Rigvedic and post-Rigvedic materials on the one hand, and on the other, the lumping together of all post-Rigvedic data, from the AV down to the Upanishads, over a period of at least half a millennium.

I hope to have begun to indicate how very complex (cf. Witzel 2004: 64) Rigvedic religion is: it has taken in and reworked elements from the Uralic to the Panjab: notably, the local influences of the Greater BMAC area, of the Hindu Kush, and those related indirectly to the Near East that came via Elam (Blážek 2002), Baluchistan, S. Afghanistan (Aratta/Arachosia). Finally, it included the local repercussions of the Indus Civilization, already distant in time. All of this makes for fascinating study, involving comparisons with Eurasian myth, from Icelad to Japan, and beyond.

57. Transhumance, Trickling in, Immigration of Steppie Peoples

There is no need to underline that the establishment of a BMAC substrate belt has grave implications for the theory of the immigration of speakers of Indo-Iranian languages into Greater Iran and then into the Panjab. By and large, the body of words taken over into the Indo-Iranian languages in the BMAC area, necessarily by bilingualism, closes the linguistic gap between the Uralic and the languages of Greater Iran and India. Uralic and Yeniseian were situated, as many Ir. loan words indicate, to the north of the steppe/taiga boundary of the (Proto-)Ir. speaking territories (§2.1.1). The individual Ir. languages are firmly attested in Greater Iran (Avestan, O.Persian, Median) as well as in the northwestern Indian subcontinent (Rigvedic, Middle Vedic).

256 Mythological origin is to be distinguished from the mere poetic description and interpretation of the qualities of the gods (father of, mother of, son of...). For example, Agni = son of waters or Vayu, father of Maruts. Thus, Agni can be the father of the Aghriya (1.96.1-2) and the gods can be those of Atri, the Kapaya (6.139.9). The ancestry of Varuna, a newcomer, was apologetically corrected: Mitra Varuna and Vrushali as his parents, 7.33.10.14. Note also expression such as: Dawn generates the sun, Indra is lord of strength, etc.
These materials, mentioned above (§2.1.) and some more materials relating to religion (Witzel forthc. b) indicate an early habitat of Proto-Ir. in the steppes south of the Russian/Siberian taiga belt. The most obvious linguistic proofs of this location are the FI words corresponding to Ir. Ærya "self-designation of the Ir. tribes"; Pre-Saami *örja > urji "southwest" (Kofulehto 2001: 248), Årdel "Southern", and Finnish orja, Mordvin иртык. Votyak var, Syry. vel "slave" (Riede 1986: 54). In other words, the Ir. speaking area may have included the Σ Ural "country of towns" (Petrovka, Sintashta, Arkaim) dated at c. 2100/2000 BCE (see the archaeological and linguistic summary in Witzel 2000a, Lamberg-Kalvovský 2002). This, however, is not the place to engage in a detailed discussion of all of the relevant archaeological materials.

It is a truism that "Linguists too often assign languages to archaeological cultures, while archaeologists are often too quick to assign their sherds a language" (Lamberg-Kalvovský 2002: 74), but Mallory (in Lamberg-Kalvovský 2002: 79) is equally right in asserting that "there are still degrees of geo-linguistic plausibility".

Indeed, we cannot be sure that (Proto-)Ir. was actually spoken at Sintashta-Arkaim around 2100/2000 BCE (Witzel 2000a), but it must be pointed out that the archaeological assemblage and the geographical position of these sites close to the taiga makes this quite likely; the Sintashta-Arkaim complex has the newly developed spoke (proto-)chariot and many other items (horse sacrifice, grave structure, Dadyshat style replaced horse head in a grave at Fataporka, par-style forts, etc.) overlapping with the early IA and Old Iranian cultures and texts (Witzel 2000a, Anthony in Lamberg-Kalvovský 2002: 75). The discussion of all such relevant Ir. words and concepts is unfortunately missing in Lamberg-Kalvovský (2002) and with most of his interlocutors in that issue of Current Anthropology (with the partial exception of Anthony and Mallory); instead they operate with rather vague, bloodless notions of Ir., hardly progressing beyond Benveniste’s 1921 linguistic reconstructions of the social sphere (Benveniste 1973).

That the oldest Ir. texts (Rgveda, Avesta) are about 1050 years later than the date of the Sintashta-Arkaim complex (Lamberg-Kalvovský 2002) is not of as great relevance as thought. First, the relevant words from the two very closely related languages can easily be reconstructed from the extant texts for the P-Ir. period. In addition, both texts are notoriously archaic in their language, culture, and religion, and actually contain some reminiscences of Central Asia (Ge, Rha "Volga"—N. Iran, Ṛaha, Ved, Raṣṭa, Pañca—Ved, Pani; N. Iran. Daha, Dand-Ka, Ved. Daṇa, Dasyu Sarayu = Haršiṇi-m/Mard = Herat R., Ved Sarayu; "Sindhr—Sindśī River (Těkšhen) — Iran, Ḫorəš, Ved, Sindhū, etc., (see above, Witzel 1984, 1995, 1999c).

The older forms of Ir. words have been taken over into Uralic and Proto-Yenesian, as has been discussed above (see Kott arra §2.1.2; see e.g., 151 for azura > Mordvin азро not, e.g., from the later, Iran. āhara). This again underlines the early age of contact, before and around 2000 BCE. In this light, the geographical location and spread of the eastern Catacomb, Sintashta-Arkaim, Alafansievo and finally the early (northern) Andronovo cultures make for a more or less widespread overlap with speakers of (P)Ir., though occupation by some other languages (also lost ones) cannot be ruled out altogether, at least for part of the area; i.e., Uralic and Yenesian at the northern borders, while Altaic is excluded (perhaps except for some Proto-Turkic in the extreme east, Rūn-Tas in Lamberg-Kalvovský 2002: 82 sq.).
It is likely that, like in Turkic and Mongolian times, there was use of a *lingua franca* in the wide steppe (and desert) belt. This cannot have been Uralic, Yeniseian, Altai or another unknown language as we do not have any indication of any respective influence on the southern languages (SMAC, Elamite, or later, on attested OIA, OIR.) This *lingua franca* most likely was an IIR. *kaine* (cf. Kohl in Lambreg-Karlovsky 2002: 77-78), a form of *p-IIR.* (and later on, of pre-OIA, then of pre-IIR.), as is witnessed in the various levels of IIR. loans into Uralic and Yeniseian.

The clearly defined situation described above contradicts Mallory's assertion, in spite of his principle of "degrees of geo-linguistic plausibility", that "there are clear instances, the Indo-

Iranians being a case in point, in which there is no hint of the distribution of any archeological assemblage that might correlate with the target language group" (loc.cit., p. 80). The use of an IIR. *kaine* also does not contradict, as Kohl seems to think, the model of a tree-

like linguistic divergence model the IIR. "mythical homeland" is indicated by the correlation of linguistic and zoological-botanical evidence, and as the various stages and branches of the IIR/ IIR. tree model are visible in the "quasi-archeological layers of loans/words taken over from the IIR. languages into the Uralic and Yeniseian languages. A *kaine* (Hellenic Greek, Latin, French, Russian, English) simply does not imply "fusion" of languages à la Trubetskoy (Kohl in Lambreg-Karlovsky 2002: 77, cf. Mikkay p. 78). Such fusion is rarely if at all visible even in the developments of Pidgin and Creole languages. They always have a strong basis in one extant language but have taken over some grammatical traits and words from others (not unlike medieval English!).

In sum, the agnosticism of Lambreg-Karlovsky and other archaeologists with regard to a correlation between IIR. languages and the steppe archaeological cultures is repudiated by the increasing wealth of "archeologically" stratified linguistic data, generally neglected, that locate PIR. in the steppe belt just south of the Uralic/Yeniseian taiga. In other words, in the very archeological areas discussed above (eastern Catacomb to northern Andronovo).

Finally, as outlined elsewhere (Wittel forthc. b), there is an additional number of words from the religious sphere (ans'w ~ Soma, etc., Ljubotsky 2001) that again indicate a gradual spread of IIR. speaking tribes southwards from the "quickly filling steppe" (Kohl) of the Catacomb - S. Ural - Afanasievo areas, all of which is not unlike the attested eastwards and southwards spread of the Andronovo culture that has created well documented overlaps with the BMAC in the Merw delta, on the Zeravshan River and at Kangurutut in S. Tajikistan (see Lambreg-Karlovsky 2002: 71, 73).
Against this background of a (partial) overlap of the steppe archaeological cultures and the location of tribes speaking various forms of Hr., a scenario of cultural and linguistic interactions and actual movements can be drawn up. In the form of a brief summary, this would include the following steps.

- Gradual immigration of the cattle herdsmen speaking of common Proto-Indo-Iranian (or of pre-Old Indo-Iranian) from the steppe belt into the general BMAC area (cf. Mallory in Lamberg-Karlovsky 2002: 80). This period, as is also the case in Afghanistan Pushkamatsche, well into our time. (Meridional migrations of Kazakhs took place down to 1939 CE, Olen in Lamberg-Karlovsky 2002: 81). Again, the Hr. languages must have come from the northern steppe area as the early (Proto-Hr.) loans into Proto-Uralic (auru, Kõivulehto 2001: 247) and Yeneseian (ar'ua) clearly indicate. This contact persisted for several millennia as the virtually "archaeological" layers of loans indicate.

- Amalgamation of BMAC/Central Asian words into the (late) common Hr., pre-Vedic and pre-OIr. languages then took place, along with their underlying concepts ("bhisa, "kapuna, etc.), religion (the "atrua dhína, *-nua beings), animals ("nitra, "khara) and plants ("bhinga, "unc'au). The ton-IE BMAC religion, as depicted in its seals and other art (Francfort..."
1994, 2001, Anthony in Lambreg-Karlovsky), seems to have directly influenced the Avestan and Vedic form on certain Hr. beliefs, such as the Avestan version of the hero fighting the dragon of drought (Azh/Ahîh = Varzda/ = Vrit -a), transforming the IE (and Eurasian, Wittei 2000a) myth of the killing of the dragon into one of releasing the waters by the hero, e.g., late snow melt in Afghanistan (Avesta) and in the Northwestern Indian subcontinent (RV). The prominence of the BMAC Goddess of waters and fertility has influenced, to some extent, the character of the Avestan river Goddess Ahā, and of the Vedic Sarasvati.

While such interaction can be deduced from linguistic analysis and comparative religion, it is very difficult to indicate, by archaeological means alone, the actual "form of symbiosis" of the two archeological and dissimilar cultures, the agro-pastoral Andronovo and the settled BMAC culture with its irrigation agriculture (Lambreg-Karlovsky 2002: 74). However, there are many steppe type sites near the BMAC settlements (Lambreg-Karlovsky: 71, 73).257 While there is some indication of steppe materials in actual BMAC sites, the opposite is not true. Some degree of avoidance (Lambreg-Karlovsky 2002: 73) between the bearers of both distinctly different cultures seems likely. However, some details of the BMAC culture must have been taken over, at some time in the second mill. BCE, by the speakers of Hr. (note the list of BMAC words of agriculture, settlement religion, above § 3.3.4, and see below).

The incoming steppe people with Andronovo cultural traits must have shed many of these characteristics in the Greater BMAC area (Malhoy 1998, cf. Lambreg-Karlovsky 2002: 80, cf. Kohl, p. 78) before moving on, as "not a single artifact of Andronovo type has been identified in Iran or in northern India" (Lambreg-Karlovsky 2002: 74), all while keeping their Hr. language - and, somewhat differently from Mallory, also much of their spiritual culture. Mallory thus is right (in Lambreg-Karlovsky 2002: 80) in pointing out that "this would require far more intimate relationships between the Andronovo and the Bactrian Margiana complex than the existing distribution of "mutually exclusive" material culture would permit." However, the question that has not been put yet is exactly when should the extensive exchange as seen in the BMAC loan words in Vedic and Oman. have taken place? The steppe pottery found in the BMAC (see n. 196, 257) may just reflect the forerunners (no horses) of a more massive IA influx at the end of the BMAC, around 1600 BCE. While Lambreg-Karlovsky (2002) is still looking for a model of such cultural change, the actual state of affairs may be still have been remembered in and is reflected by the conservative poetry of the RV: the Pandi (wealthy, "stingy"), rich in cattle are depicted as holed up in their forts (pur) while the Rgyedik Aryan are depicted as being outside and desiring to get in and acquire the cattle (Ellizarenkova 1995). As has been pointed out above (cf. §1.1) this topic may very well be a reminiscence of the situation in the BMAC area where the steppe tribes opposed the Parma (Parnoi, Parno) on the Sindes/Sindhu river.

Incidentally, a tradition of avoidance similar to the one in the BMAC area is still seen, much later, in the Sistan/Arachosian area (Falk 1997) and in the Rgyedik Panjaban (Witte 1995, 1997a); while, conveniently, many agricultural, musical, and a few religious terms of the small tradition were taken over (Kuiper 1955, Witte 1999a,b,c), the local settled Daya populations as such were avoided and were despised (note, e.g., RV 5.3.14 about the Kikata and the 'misuse' of their cows). What else may one expect of proud, semi-nomadic cattle herders with their habitual disdain for farmers?

257 For early steppe-Rakia/ Margiana contacts see Franzoi 2001: 153 about Keltiunnar pottery and a Afanas'ev funary stone circle found at Satzam II, i.e. before 2500 BCE. For late steppe pottery see the preceding note.
The obvious solution to look for, out of Lambreg-Karlovsky's and Mallory's dilemma of contact/avoidance of the steppe and BMAC cultures, is the one indicated just now: some trade and exchange, but also occasional friction and warfare (fortresses of the BMAC), perhaps even including some steppe mercenaries(?), existed between the impoverished pastoralists at the fringes of BMAC settlements (cf. Kohl in Lambreg-Karlovsky 2002: 78) and the occupant(s) of the BMAC, perhaps not unlike the relationship arising between the nomads and the occupants of fixed settlements in later history.

Some sort of contact is clearly in evidence in the borrowed vocabulary found in the Ir. language, and just as in the RV later on, it is restricted to agriculture, village life, small traditional religion, but it also included a few more prominent terms for priests (gitiwar, uc'ii), ritual (orc'u, yitn) and deities (c'arwa, gchandharw/b'h/ia). Even then, the IE and Ir. pattern (Father Heaven, drunk of immortality, the hero killing the dragon, the Ir. eura, deciles, etc.) is clearly maintained in the early Iranian and Vedic texts (Witzel forthc. b), and little influence seen of the promience of the BMAC goddess on the anthropomorphic dragon and eagle (Frankfort 1994, 2001: 154). Equally so, the Dumézilian three-level IE social structure (poet/priest, nobility, commoners) was maintained but it was enlarged, both in Iran and in the Panjâb (cf. e.g., in Greece, the par-s-kelones), by a fourth class (Sûders) that made room for persons from the local populations that had joined the aryāvarśa.

Such adjustments will be difficult to detect by archaeology. If they have indeed been looked for, then in the wrong direction: we cannot expect Zo correcting rituals in the BMAC in 2000 BCE but only around 1000 BCE, not every hearth is an Ir. "fire altar", and the findings of Ephedra ("Soma") in the BMAC have not been substantiated (see the discussion in EJV§ 9). The occurrence of certain steppe vessels in BMAC contexts could point in that direction — if they had indeed been found with Soma presses and filters. Most notable is the absence thereof, of horses remains, horse furniture, chariots (invented around 2000 BCE) and clear depictions of horses in stratified BMAC layers. One can hardly imagine the Ir. without their favorite prestige animal, the horse. The archaeological picture of avoidance/contact by the forerunners of the massive IA move onto the Iranian plateau so far remains sketchy. Perhaps it can be explained if the main period of major contacts was as late as c. 1500 BCE.

Once the successor settlements of the BMAC were abandoned around 1500 BCE, a partially changed Ir. speaking, entirely pastoral culture (Anthony, op. cit. p. 76), probably swelled by some of the Bactria-Margiana populations, spread all over Greater Iran. This is accompanied by a clear cultural change, with the appearance of painted handmade pottery in the former BMAC area (Frankfort 2001: 154) at 1500 BCE and the accompanying disappearance of tomb and grave structures in Central Asia (reflecting some Vedic and Zoroastrian customs). The proposed comparatively late date of the onward migration towards Mesopotamia and the Panjâb c. 1500/1200 BCE fits this scenario better than an early influx into, and cohabitation with, the late Indus civilization, as some have assumed (e.g., Altchin 1995: 47, at 2200-2000 BCE sqq.).

This new, amalgamated, late Ir./pre-OIA speaking entity moved — Kulturnikügel fashion (Mallory 1998, 2001: 360 sq.) — into Iran and towards the Panjâb. By this term, Mallory means a culture that has kept its Ir. language but has taken over (much of) BMAC cultural and societal structure. Conversely to the situation during the BMAC period, this
expansion can only sparsely be substantiated, so far, by linguistic data as the relevant spade work in (Old) Iranian has not yet been done.258

It is probable that this move was preceded by successive spearheading forays of (non-lit. speaking) mountain peoples into Mesopotamia, such as the Gutti, Lullubi, and Kassites259 (c. 2250-1750 BCE), who were as yet only marginally influenced by Ilir. languages and customs. Some of them are perhaps represented by the sudden expansion of BMAC materials into Susa, Shahdad, Teppe Yahya, Hissar, the Gulf, Baluchistan, the S. Indur area (Lambberg-Karlovsky 2002: 72, 74, 84) and Harappa (R. Meadow, pers. comm.),260 Lambberg-Karlovsky (2002: 84), however, thinks of this spread as “the prime candidate for Indc-Iranian arrival on the Iranian plateau,” which in the light of the above discussion is too early, but he (correctly) suggests that “the indigenous people, although in the majority, adopted their language,”... later on, that is (cf. below, § 7, end). A similar move may have brought speakers of FDrav. to Bolan and Sindh.

Later, apparently after the abandonment of the BMAC and successor settlements around 1650/1500 BCE and the spread of pastoralism all over Iran (Anthony, in Lambberg-Karlovsky 2002: 76), the actual spread of speakers of pre-Vedic IA took place, that is of Mitanni-OIA, into N. Iraq/Syria (c. 1400 BCE), an area settled by the Caucasian-speaking Hurrites. The speakers of the linguistically slightly later, though still pre-Iron Age Rigvedic then moved into Arachosia (*Sarasvatī > Avest. Haratanā), Swat (*Swadta) and Panjāb (*Saptā Sūndhu), before c.1200/1000 BCE -- depending on the local date of the introduction of iron (Possehl and Gullapalli 1999), which still is missing in the Rigveda but found in the next level of Vedic texts.

The intermediate Hindukush area has been largely neglected in scenarios of this kind. However, the Rigveda does not only take note of some of its geographical features (Kushā = Kabul River, Sωδατ = Swat, the opposition giβa-giβa "mountainous: flat valley pastures"), it also is influenced by certain religious ideas of the Hindukush area, such as the concept of Yaks(i)k(i)h/Apsaras (*"Suck "pure" > Kalash nārī) and Rudra/Gandharvha as inhabitants of the pure snow mountains, snowcree dragons engulfing the flowing waters (the later Kashmiri Nagas), and the like (Witzel, fortc. b: §1.5.6. The RV also contains a number of words that are purely Latin.261

258 Only some initial guesses are possible, for example about the ethnic nature of the Taxkhr (see above n. 102) which might be connected with Ved. negra, negra (both personal names), Irān, negr. If true, we would have continuing RV (and later Vedic, RKS) links with Bolan, Aratta, and Shahdad -- recalling the more northern trail that lead the Minni Indi Aryans westward into N. Mesopotamia. However, note the pre-OIA words in Kasse (c. 1700 BCE), and cf. now Bládek (1999, 2002a) on early Elamite connections with Vedic.

259 Only a few Kassite words seem to come from iT., e.g. Šurītī "sun god", Marutāl "divine Marut comrades of Indra", Be-bal "pod Bhagâ?"; see Balkan 1954, for horse names such as akriyā = agriya s ("running") in front", rimru (= "black"), etc.; note the direct loan from Ilir. with Nominative -i, as seen in some old FO loans as well (above, or cf. below), for.e.g. Finnish kiusinge "king" < P.Germanic kiusinge, as seen in Dutch "king".

260 In this context, a remarkable overlap between BMAC and Indus shamanistic concepts has not been noticed, as far as I see a cylinder seal (Saranidi 1992: 25, fig. 33) and a terracotta tablet from Mohenjo-daro (Kenoyer 1998: 83, fig. 3.6) show remarkably similar scenes of processions of flag and standard bearers (cf. Avetian šnššdštta-dnsšt-s V. 1.6), the latter involving carrying animals on a pole and being accompanied by a figure bearing a typical shamanic circular drum (still found in in Kalasha ritual, in the eastern Hindukush). Saranidi (1992: 24, 26) takes the scene as one depicting jumping athletes or acrobats. There is, however, comparatively little shamanism in the Veda, and the use of the circular drum is not attested so far.
can be linked with the local Pamir language, Burushaski (Witzel 1999:ab), such as Bur, kilay, RV kilār- "hijjatting, a sweet drink". Indeed, the Hindukush/Pamir area is one of transhumance that was well suited for the Indo-Aryan pastoralists (Witzel 2000a). Movements between the mountain pastures of the Hindukush highlands and the Panjāb/Sindī lowlands and the continue to this day, including that of cattle (Meadow, oral comm. based on personal observation).

Furthermore, it is precisely in this area that the phonetic feature of retroflexion, so typical of Vedic (and of South Asian languages in general), must have set in (Witzel 1999:ab). This feature is missing in Mitanni-IA and Old Iranian but typical for all languages of the Hindukush/Pamir areas, whether they be Burushaski, E. Iranian, N. Iranian (Saka), Nuristani, or IA (from RV to modern Dardic); retroflexion even has affected the eastern (i.e. S. Asian) dialects of the newcomer, Baluchi, a West Iranian language.

- The move toward the Panjāb may have been independent of and may actually have been preceded by that of the speakers of the third group of Ifr. languages, now called Nuristani, whose speakers, originally called Kafirs by their Muslim neighbors, live in the Hindukush mountains of NE Afghanistan. They have preserved some archaic features until today (Nur. z is older than RV ʒ or Avestan s, all from Ifr. *s*). Such movements may also have included that of the speakers of the non-Ifr. western-IE group now represented in the substrate of šangani, a NIA language in the high Himalayas of Uttar Pradesh, on the border to Himachal Pradesh. However, the people who spoke that substrate language may just as well have come, as potential IE neighbors of the "western-IE" Tocharians, across the mountains from the general area of modern Xinjiang. People often establish their alpine grazing grounds (and settlements) across the mountain range they border on: German speakers in Wallis/Valais and S. Tyrol, Slovenian in Carinthia, Ossete north and south of the Caucasus range, Iranian Yidgha in the NIA speaking Chitral, Kafirs in westernmost Chitral, Tibetans (Sherpa, Bhutanese, etc.) on the southern side of the Himalayas.

It might be added that the general path of immigration of the speakers of Indo-Aryan from the north into the Panjāb, via the general BMAC/Hindukush area, is also indicated by an early loan from Nuristani. This is Nur. *ka'ā* > Ved., Saka "shining piece of jewelry" (K. Hoffmann 1976, EWA 1:33),261 also taken over into O.P. as kāśa- "semi-precious stone."

- All of this is followed by the spread into Greater Iran of the earliest Iranians (c. 1000 BCE, Hintze 1998, cf. K. Hoffmann 1976-92 [= 1941], for some pre-IE names in the RV), with the introduction of E. Iranian (Avestan) into E. Iran (1200/1000 BCE -- note the overlap with AV Balšika 'Bactria', Witzel 1980). The movement of the West Iranian tribes, Median and Persian, into W. Iran, is later still, c. 900-700 BCE,262 Lambregt-Karlovsy (2002: 74)

261 However, this may also be a post-Bryonic loan from these isolated mountain languages, the archaic third branch of the Indo-Iranians (Morgenstierne 1973) that has survived in the mountains of northeast Afghanistan and in neighboring Chitral (Pakistan). Note O.P. kāśa "semi-precious stone", kāśa kāpustā "lapis lazuli", and mākāratā "carnelian" described as brought from Sogdiana, and kāśa avarṣa "from Chorsinma" (DSF 57-80). One would expect kāša/kāša as kāśa/kāśa.

262 It remains to be investigated when the Persians (Parīsca < *pərīːsca*) are related to the Parsis (< *pərīːsca*) of the Vedic texts (RV, BHS), where they are located next to the Aryanī (āryanī, āryanī), thus in Afghanistan. These are likely to be the ancestors of the Pādris (pādrī<s>e<s> <pādrī<s>e<s> <pādrī<s>e<s> pādrī<s>e<s> [im]probably <pādī<s>or c. Avest, parta <"back""> thus: "the hill people"  as Morgenthaler 1927: 6). Pādrī<s>e<s> has often been compared with Herodotus' Pāfruk <pāfruk>s which however cannot reflect expected <etc. > only <s>s, at the time>. Notably, whether
stresses the fact that the spread of BMAC materials cannot be linked to the later archaeological developments on the Iranian plateau in the later 2nd and 1st millennium as would be required by the spread of the Iranian speaking groups.263

In sum, as far as South Asia is concerned, it can now be stated more securely that speakers of an IE language, early OIA (pre-Indic) entered the Greater Panjab from Afghanistan, acquired local words from the northern Indus dialect (such as jana, langula, vrhi, gothama, kangu, Gandhara, Witzel 1999a,b). About the same time(t) speakers of Proto-Dravidian entered Sindh, acquired related words from the southern Indus dialect (gnrri, nstic. varri, godc, kaktu/kampa), and perhaps it was they who brought the first horses to South Asia (Pirak, Eastern Baluchistan near the Bolan Pass, c. 1800 BCE, see Alchin 1995: 31, Kenoyer 1998: 78, Witzel 1999a,b), rather than the IA(1) Balanias (RV 7.1), whose name seems to be reflected by the modern Iranian place name.

A similar scenario for Greater Iran cannot yet be written as the relevant linguistic investigations have not yet been carried out; we do not have a comprehensive study of loan words in early Iranian (and Hurrite/Urartian, Elamite, etc.). Instead, it has often been alleged that Old Iranian has fewer loan words from the local substrates than Indic, in all of the well attested pre-Ir. archaeological cultures of Greater Iran, from Tepe Hisar to Mundigak. The assumption is a fallacy, as a closer look at the Avestan vocabulary will indicate (see n. 158 for the direction to be taken.) Scholars apparently have been misled by the glaring archaisms of Zoroaster's IE poetic language (cf. Kuiper 1979) as to assume a "pure" Ir. language.

The whole process of "Iranization" in Iran and India progressing with a large degree of intervening bilingualism, may be summed up in the words of Polomé (1990: 337). He discusses the introduction of Indo-European into Northern Europe, supplanting the local language, but not without leaving many substrate words (and ideas) with the emerging Proto-Germanic speaking peoples:

whichever way .... [the area] was indo-europeanized, the new population initially constituted a mere adstratum or superstratum to the long-established set of peoples. When and why the language shift took place remains a widely open question, but one

263 Parv/ was connected with Parthia in wea. Old Persian > (as in c. cow "horse") > *Vh > < pr > < c, the development c. 100 with Saka 40. While the rest of the Iranian has *sp > (as-Parthian) and Vedic has *sp (as-Vedic). This feature and others (cf: further grammatical features in Witzel 1989, ch. 10) may point to an ultimately northeast Iranian (Bactrian?) rather than a northwest Iranian (Bactrian/Median) origin of O.E., and thus to a track of immigration from the NE via Media to the Persus, somewhat like Nichol (1997:98) "southern conquest". A northeastern origin would be close to the location of the Ved. Parth.

265 The question of the location and spread of early Aryan is not discussed here. It is likely (see above) that this form of Ir. developed further north in the steppes and spread both westwards (Scythians) and eastwards (Saka) as well as southwards (E. Iranian), and still later, also south-eastwards (W. Iranian: Median, Persian). This took place only after an early southward move of the pre-FOXM from the northern steppes, as suggested by Burrow in 1975; cf. Lubotsky 2001: 508 sq. and Chlenova (1986) who "shows a correspondence between Iranian place names and the distribution of the Timber Grave, Andronovo, and related cultural groups. Place names of Indo-Aryan character are scattered or absent in that area." (Makkay in Lamberk Karlovsky 2002: 79).
thing is certain: it did not take place without leaving clear traces of the prior language(s) in the lexicon.
To which we may add: and, of customs, beliefs, rituals, religion, and material culture.

§ 8. Acculturation: Gandhāra and the greater Punjab

Finally, we will take a closer look at the developments after the immigration of the first speakers of Old Indo-Aryan into the subcontinent.

The exact fashion of their arrival still is unsolved. It will have included, just as in similar cases in the Mesopotamian area, a combination of trickling in, migration into marginally used or unused land (especially after the collapse of the Indus Civilization), and outright invasion of lands settled by remnant Harappan populations and their non-Harappan neighbors in the Indus area (Northern Neolithic, etc.).

Passages for the Rigveda can be invoked for all these scenarios. The ongoing acculturation of the remnant pre-Aryan populations finally resulted in the Aryanization of most of Northern India. Even the immigration of a single IA speaking tribe out of the Afghan highlands into Gandhāra and the Panjab would have been enough to set off an increasing wave of acculturation, using the newly imported elite kit (Ehret) of Vedic language, ritual, poetry, horse breeding and pastoralism, as opposed to they settled agricultural habits of the (post)Indus people. Note that a similar developments took place in the BMAC area around 1500 BCE, when most of Iran took to pastoralism.

Whatever be the case, the Rgedic evidence points to a number of IA speaking tribes, acting independently from each other and only vaguely relating to each other as Aryan speaking and following Aryan rituals.

Their impact will be briefly studied in the last sections of this paper.

§8.1. The Northwest of the subcontinent in Rgedic times

This is the area of the first Indo-Aryan influx into the subcontinent, as reflected by the hymns of the RV. It includes the mountainous regions of Afghanistan and Northern Pakistan as well as the plains of Gandhāra, the area between Kabul and Islamabad in Pakistan, and the Panjab proper. In the Veda we find few place names: river names, as ancient tribal boundaries, are much better attested. However, the Rgedic area is characterized by an almost total substitution of local river names by those of IA type, such as Gomati ‘the one having cows’ (mod. Gomāli), Mehaira ‘the one full of fluid’, Anākta ‘the black one’ (now Chenab).

We find some of the Rgedic river names also in the more eastern regions of N. India: especially the Sarasvati, Gomati (in U.P.). It is interesting to note, however, that some of these names are also found, with Iranian forms, closer to the oldest, (pre-)Rvedic home of the Vedic tribes: The Rudr as Rākha, the mythical river of the Avesta, Sarasvati as Haravātī ‘the one with [many] ponds’ in Sistan / Helmand < ‘Setumani, ‘the one with [natural] dams’ (a feature typical of rivers in their lower courses).

264 For an initial discussion see Witzel (forthc. b); to be added is the comparison of a shamanistic BMAC seal and its Hindu Vedic and Vedic relationships, see n. 258.
Gomait as Gomai 'the one with cows' in eastern Afghanistan, *Hindu/Hāndu < Sindhu 'the border [river]', etc. It seems that the Iranians simply changed the old Indio-Iranian names into their respective Iranian forms (see now Hintze 1998) when they moved into the area, while the Vedic Indo-Aryans took some of these names with them eastwards, up to Bihar, in the typical fashion of people on the move.265

The question is complicated by the fact of the early loans from Pre-Vedic IA in Iranian, for which see now Almut Hintze (1998). She argues that certain Iranian words have been taken over from IA when Iranian still had *s (later > h); note the Assyrian loan word *As-sa-ra ma-ta-al = Assira Mazal, Ahuramazda. If this was the case, Ir. *Hindu- could indeed be a loan from an older IA substrate. While this may be true for several other names, the usage of *hindu- in Iranian point in another direction. The mentioning of the eastern and western *handu 'oceans' Y. 57.29, and the name of the mythical central mountain, *ushandauwa 'emerging from the river/ocean [Vourukha]' indicate that *handu is understood as 'ocean' also in Avestan (Witzel 1984). This points to Ir coinage with the meaning 'border river, ocean' and fits P. Thieme's etymology (1967-91) from the IE root *sidi 'to divide'. (Based on this, we may again connect the N. Caucasian Sindu [see above § 2.3].)

In view of the contested etymology of Sindhu and a number of river names in the area which have the same suffix *-su, but are clearly IA, Pinnow's theory (1954), 14 sqq) of a NW area of non-IA names in -su must be re-investigated. Pinnow (1953-4) has tried to establish an area of river names ending in -su in the northwest that should go back to a local, in part proto-Burushaski substrate. Pinnow's list includes

*Sindu (cf. Burushaski *sinda, dial. *sende, Shina sin)

*Khuršu (Vijjuna, Bāhpur = *Kabul Kūhora, Greek Kopēthos, cf. *Kohī)

Svasti (Svat, Svatavastu)

Vaskh (Vashti, OXos)

Of these, Vaskh is a late adaptation of Iran. *Vaxšī (= mod. Vaxš = Amu Darya, Greek OXos) > Skt. Vākṣu vṛśamh, Vākṣu Mbn., Caksu by paleographical mistake266, or ḫāka 'the sugar cane [river]' by popular etymology, cf. KEWA II 123; Pinnow 1953: 233. However, Iran. *Vaxšī = Ved. vākṣi 'to grow', Avest. uksītīs 'grow' (EWA II 485 sqq), means 'river' in other Iran. languages: Khot. haus 'river', Yidga bāhlīya 'stream'; the IE root is *₇h₁, iteg-ā.

265 Cf. in North America: New York, New London; however, unexpectedly hardly any British river names.

266 Cf. also Mayrhofer 1979, on the Kaban (north of the Caucasus) *Sindes.
All the other river names in -wA of the NW area, however, are of IA origin (Sarasw > Avest. Haratiu-), Sindhu > Avest. Handu, Mehsana, Kramu, Susatu, Swastu,269 with the possible exception of the Krumu and Sindhu only (see discussion above).

This means that one of the starting points of Finno-Thracian thesis for an IA area with non-IA names is invalid, the tribal and clan names show a predilection for u-stems as well. We find: Anu, Aju, Ukayu, Kuru, Gau, Ytis, Drayh, Paru, Prthu, Bhrgu, Yadu, Vindh, Giru, Sru, Simyu.

Again only a few have none or no good IA, Ifr or IE etymology, namely: Gau, Gaungau, Gaung, Tris, Yadu, Ydava, Simyu. It seems, thus, that the Indo-Aryans added the common u-suffix to some local names.270 The river name Kramu, and less likely, Sindhu, must be regarded as remnant of the pre-IA substrate, which is not necessarily identical with proto-Burushaski or with the language of the Indus area.271

In sum, the Northwest shows the strongest concentration of IA (or Ifr, even IE) names, and this is a situation entirely expected in a scenario which sees the Indo-Aryans trickling in from the Bactria-Margiana-Arachosia area (Parpola 1987, Hiebert 1995, Witzel 1995, Falk 1997).

Their tribal names, much more difficult to locate, are typical IA ones (Drayhuy 'the bearers', Bharata (i.e. 'to carry, bring'). But there are also many that have no plausible IA etymologies, such as: the Gandhārī tribe of Gandhāra; Sambhara, a mountain chieftain; Vasyu and Prayyus (chieftains on the Swat, modern Swat; Maaja-vanti, a Himalayan peak. This is the typical picture of an intrusive element, the IA, overlaying a previous population.

North of this area, at the northern bend of the Indus (Balistan/Hunza), Burushaski is spoken. However, the language and the tribal name are indirectly attested in this general area ever since the RV if *mbrada (mod. burao) > Ved. Mjja-vanti, Avestan Mada (see below). Indeed, the RV contains a few words which are still preserved in Bur., such as Bur. klāy, Ved. stīla 'bistings, a sweet drink' that cannot have a IA etymology (EWA 1 358 'unclear'); continuants are found in Dardic (Khowar kūl), Nuristani (kūl etc.), in later Skt. kūtā 'cheese', cf. DEDR 1500 Tam. kūtā 'card', For details see Kuiper 1955: 150ff., Turner, CDIAL 3181, Tikkanen 1988. Further, the following Burushaski words can be aduced as having Vedic connections (discussion in Witzel 1999a,b): mesi 'skinbag' < Ved. *matiṣya 'ovine', meṣa 'ram' RV: gur 'wheat' pl. guruṣ/guren < *yorum, gurādin 'winter wheat', cf. Ved. goḍhāma: bras 'rice', cf. Ved. vrthi: buv 'sheaf', cf. Ved. bhu, brat 'chaff', ku(h)idi (Berger yūd) 'new moon', cf. Ved kuha 'delly of new moon'; papās (Berger gupās) 'cotton', cf. Ved. karpāsas; ba[h]a 'stone', cf. Ved. parāv(stone) aṣ, Greek pelēkas, cf. PEC *belewi 'hammer'; baṅ 'resin of trees' > Ifr bhanga 'hemp, cannabis', rather, ultimately, PEC *bhinē 'pine tree' [see above § 3.5.]; Bur. jen 'blind one-eyed' cf. Ved. kāna; Bur. yora (Berger yūrō) 'stone, pebbles', cf. Ved. sar-kara; Bsr. yopar, Berger pūrāc 'raven', Ved. kaka; Bur. yāśi 'onion', cf. Ved. laṭuna. In Proto-Burushaski (or in its early loans from the lowlands) and in

269 Add the name of the Great Indian desert, Mar TrA — Lat. maris, EWA II 331.

270 This would hold even for the Sindhu if it indeed, with Ponnnow, should go back to a local, Proto-Burushaski substrate, however, see above.

271 Note the opinions about the language of the Indus seals: Emeneau (Drauvidian), contra Thieme (non-Drauvid), etc.
the pre-Vedic Indus language there is interchange of k/i, and retention of -an- (not > -ō-, as discussed above § 3.3.).

While it is questionable how far south Burushaski territory extended at this early time, some of the loan words mentioned above indicate that there was early contact. It may be that the name of the Burusho is reflected by the RV mountain name Mauja-varii "having Mauja (people)". cf. Avestan Mruza (see discussion above). The forms look like adaptations of the local self-designation, *Mjuɾuza, attested since the middle of the first millennium in early Tib. bru-sa, Sanskritized purua (von Hinüber 1989, 1980), in local 10th cent. inscriptions pruwa (lettrar 1989: xxxvi), and in mod. Bur. Burula.

Phonetic reflexes of Pur. have been seen (Tikkanen 1988) in the Vedic (and Dravidian) retroflex consonants. The occurrence of these sounds is an areal feature that is strongest in the Northwest, but extends all the way to Tamil in the South, and has also influenced Munda to some extent. It is an ancient feature of the Indus language as well, that cannot be traced back to Bur. influence alone.

Some early syntactic influence by Burushaski on Vedic in the formation of the Absolutive has been assumed by Tikkanen (1988): it is found already in earliest RV but only as past verbal adverb/conjunctive participle. This is an areal feature, unknown in Old Iranian, is also found in various degrees in Drav. and Munda, and may have been an early regional feature whose ultimate origin remains unclear (cf. Witzel 1999a,b).

At any rate, IA, as soon as it made contact with the local population(s) of the northwest, started to change, both in its phonetical appearance (K. Hoffmann 1941, Emeenau 1956, Kuiper 1967, 1991) as well as in formantia (Kuiper 1967, 1991), and in vocabulary (Kuiper 1948, 1955, 1991). The tracing of these developments must be left aside here. It important, however, to remember the result of Kuiper's early investigation into the South Asian linguistic area: 'between the arrival of the Aryans ... and the formation of the oldest hymns of the RV a much longer period must have elapsed than normally thought.' (Kuiper 1967, 1991: XXIV).

In the following sections, the impact of the languages spoken in the northwestern subcontinent on Vedic will be detailed as far as on-IA loan words are concerned.

§3.2. The Rigvedic Greater Pañjab

The RV reflects Gandhāra, the Panjab and its immediate surroundings of c. 1500-1000 BCE, most clearly visible in its river names, extending from the Kabul River to the Yamuna (mod. Jamma) and even the Ganges (Gangā, mentioned only twice).

In order to use the linguistic evidence contained in this text properly, it is important to realize that it has been composed not just in two layers ('main' and 'late', as found in the handbooks), but in three clearly distinguishable, and very roughly datable layers (Witzel 1995, 1999, I. R. Gardner 1998, Th. Proferes 1999).

I. the early Rigvedic period: especially the hymns in books 4, 5, 6 (and maybe book 2);

II. an important middle Rigvedic period: RV 3, 7, parts of 8.1-66 and 1.31-191;

III. the late Rigvedic period: RV 8.67-103: 1.1-50: 10, 8.49-59.

It is important to note that level I has no Dravidian loan words at all (details, below); they begin to appear only in level II and III. Instead, we find some three hundred words from one or more unknown languages, especially one working with prefixes. Prefixes are typical neither for Drav. nor for Burushaski (cf. Kuiper 1991: 39 sqq., 53). Note that the "prefixes" of Tibeto-
Burm. (Benedict 1972) do not agree with those of the RV substrate either. Their presence apparently excludes also another unknown language which occasionally appears in the RV and more frequently later on with typical gemination of certain consonant groups (perhaps identical with Musca's "Language X" (1979); cf. Zide and Zide 1973: 15, see Wittes 1996)). The prefixes of the RV substrate are, however, close to, or even identical with those of Proto-Munda; taking my clue from Kuiper (1962: 51,102; but see now Zide MT II, 1996, 96), I will therefore, provisionally, call this substrate language Para-Munda.

§8.2. The Para-Munda substrate in the RVeda

§8.2.1. Para-Munda loan words

The convenient list of Kuiper (1991) has 383 entries (same 4% of the hieratic RV vocabulary). Oberlies (1994) retains "only" 344-358 words, and minus those that are personal names, 211-250 foreign words.72 Even Oberlies' lowered number would be significant enough in a hieratic text composed in the traditional poetic speech of the Indo-Iranian tradition. It is more difficult to discern Munda/Austro-Asiatic words and to distinguish them from those of an unknown local substrate (remnants of the Gangetic "Language X"), of the still unknown language(s) of the Indus than to establish IA or Dravidian etymologies, as an etymological dictionary of Munda is still outstanding (in preparation by David Stamepe et al.). One can also sympathize with Kuiper (1991: 53): "Borrow and Emeenou understandably and rightly ignore the Pan-Indic aspects, but ... their dictionary [DEDIR], by omitting all references to Munda, sometimes inevitably creates a false perspective from a Pan-Indic point of view." Nevertheless, one can, for the time being, make use of Pinnow's reconstructions of Proto-Munda in his investigation of Kharia (1959), Bhattacharyya's short list (1966: 28-40), Zide & Zide's discussion of agricultural plants (1973, 1976), and Kuiper's relevant studies (especially 1955, 1991; his 1948 book is still useful as a collection of relevant materials). It must be stressed that neither the commonly found Drav. nor Munda etymologies are up to the present standard of linguistic analysis, where both the root and all affixes are explained. This is why most of the subsequent etymologies have to be regarded as preliminary.

Among the c. 380 'foreign' words of the RV, those with certain prefixes are especially apt to be expatiate from Munda (viz. directly from Austro-Asiatic). However, "owing to the typological change that has taken place in these languages, only some petrified relics remain" (Kuiper 1991: 36). Typical prefixes in modern Munda ase such as p, k, m, r, re, ma, a, e, u, ka. (Pinnow 1959;10 sqq.; cf. also the plural suffix -ki in Kharia, p. 165 §341a. 211

72 Oberlies' criticism is written from an IE-centered point of view similar to that of Mannhofer (WFA). This is fine from the point of view of someone who has to write an etymological dictionary of OIA; however, due to the clear attestation of cultural, ethical and religious amalgamation of IA and local elements visible already in the oldest IA text, the RV, the existence of such a large number of 'foreign' words must not be minimized in its importance. Not does Oberlies offer an explanation or analysis of the remaining 250 words; they are simply "non-IA". In a similar vein, R.P. Das has written a much more "engaged", nit-picking review of Kuiper's book, tellingly entitled 'The hunt for foreign words in the Rigveda' (IJII, 1945, 207-234), which induced Kuiper to write a well-deserved, if rather scathing reply in the same volume. "On a Hunt for Possible (Objections)". III34. 1995. 239-247). It is difficult to understand, in view of the well-known evidence (added to in this paper), how one can regard the language (and religion, culture) of the RVedic Arya as 'relatively free from foreign influences' (Oberlie 1994: 347). "Pristine" languages and cultures do not exist, nor did they at c. 1500 BCE.
§145.4, and the Khali article); some of them are indeed attested in the c. 300 'foreign words' of the RV. (The clearest cases in Vedic are:

- *tila*; *jatila*;
- *vimidha*: *Vi-bhindu, Vi-bhindu-ka, Vi-bhindu-lya, and*

Of interest if the RV substrate are especially the prefixes *ka*, *ki*, *ki*, *ku*, *ke*, which relate to persons and animals (Pinnov 1959: 11) cf. p. 265 §341a) and which can be compared, in the rest of Austro-Asiatic, to the 'article' of Khasi (masc. -u, -rem, -ka, -pl. ki: cf. Pinnov 1959: 14). The following words in the RV are important, even if we cannot yet find etymologies. They have been discussed in some detail in Witzel 1997 and are merely listed here. (Sanskrit suffixes and prefixes are separated from the substrate word in question).

- *ka*: *kakardhu ’wooden stick’; kappard-in ’with hair knot’, kabanadha-in ’basket’; kavasal ’straddle-legged’; kamlambha ’a certain tree’; *ki*: kintadd ’in ’a demon’; *su-kintsu-ka ’a tree’, Butea frondosa’; kymbhu ’a water plant'; kiksa ’spotted, leprous’; kisbhisa ’evil action’; kkara ’a tribe’; kkadsa (dual) ’vertebra, rib bone’; kkds ’implement, spur’; kintadd dual, ’two ploughmen’; kkds ’plough man’; kiksa ’bietings, a sweet drink’. cf. above: Bur, kikd; kis ‘praise, poet’ cf. Sla 85.4, A Sanskritization of *kisbhasa’; *ku-kadhastraße ’lame in the arm’; kupaya ’shimmering’; kumara ’boy, young man’; kurtwa ’women’s hair dressed’; kurnanga name of a chiefman of the Turvasa; kulaya ’nest’; kulisa ’ax’; kiksa name of a poet’s clan; kusumbahaka ’poison gland of an insect’.


The clearest Vedic case is, perhaps, karn-tila ’wild sesame’ AV: *tila ’sesame’ AV cf. (tilila ’fertile’ RV, Kuiper 1955: 157, tilipita ‘-s ‘inertile sesame’ AV, tilvaka ’a tree’). Double prefixes, however, are typical for the Vedic loans, especially formations with consonant-vowel-r = Car., and due to the common Vedic interchange of r, also Car., that were adapted in Vedic with various vowels (r, ur, etc., cf. Kuiper 1991: 42 sqq.). The cases with Car. (note also Car., Co), include: karunjia name of a demon: karashma’ gruel’; karashdu later, a tree name *Zizyphus jujuba*, but personal name in RV; korkari ’buter’; karosana ’sieve, filter’; khargala ’owl’; k-arshas ’mullinated’; kalmahr-in ’shining’. Further: kr- (kar-) see Kuiper 1991: 40 sqq., 23: krdaras, unclear meaning, personal name; krptta ’bush, brush’; krtana ‘pearl’; khargala ‘stall, crutch, amulet, armor, brush’? Due to the frequent interchange *k*/k, the prefix sar-/tal- -belongings here as well (cf. kar-kota-ka RVKhi = sar-kota AV): satyata name

In the same way, the prefixes jar, tar, nar, par, bar, ian, sr = [jar, tar, etc.] jārya, jārātha (cf. also Ved. jar-tila: tila); sarantia, tarukia, trksi, trtus, nar-mīt, epihent of s forp: nar-mara; parnaya, parphart-ka, parīhāna: parakānta (next to: kānta); prakāla, parpharvi, parmanadga, prā-śivaya, pārva-śa, pārhitva, pṛhit, pṛdākṣ [par-dal-va-]: barjaha; (cf. also Nar-ta-RV, Nar-vad-ta, Nār-kvinda PS and ku-bind in: Ved. ku-tv(u)-binda, bainda, vi-bhindu, vi-bhindu-xt-ya). Furthermore, the formations with other vowels that are adaptations of [a-r] u above in [kar]: tirindta-ra, turpia, turphari, turvai/turvašia, turviti, tirinda, tirnt.

Instead of Ca, the much more common double prefix of Munda, Cau-, Caam-, is found as well: kāntaša, sambha, sambara (cf. sabala1), sambara, simśasa, simśumatra, śrīśatra, simbala, simbata, śmyu. Compare also the prefixes in Cas-: puṣkara, puṣya, rāspina, rāspira. Kuiper (1991: 39 sqq.) also discusses other prefixes, such as a-, i-, k-, o-, mhi-, bh-, ma-, sa-, sa-., hi-. Among them, the old prefix a-(o-) would be of special interest; however, is found in the RV only in some 5 or 6 cases.

A very clear case, next to tila: jār-tila, is la-kunṭita-la ‘bird’ RV, la-kunta ‘bird’ AV, Ved. sa-kunta-ka ‘bird’, Sa-kunta-la ‘name of a nymph’, Ved. Kunto ‘a tribal name’, next to the Mātya (la. ‘the fishes’). The Ved. words belong to Kharia kon-thd, Sora on-tidm, etc.; Korku ti-tid ‘a certain bird’, Ved. tit-tir-a ‘partridge’, Pinnov 1959: 160 §336; cf. however RV la-kunta ‘a (larger) bird’, la-kunta ‘bird (of men)’ (Kuiper 1997: 44); (cf. Khasi sim). Munda- or Austro-Asiatic-like prefixes are thus very common in the RV. One has to agree with Kuiper 1991: 39f: ‘According to some scholars Munda was never spoken west of Orissa, Bōar, Madhya Pradesh and eastern Maharashtra... The obvious occurrence of Old Munda names in the Rigveda points to the conclusion that this statement should be revised.’ If (some of) these words should not go back directly to Proto-Munda, one may think, especially in the case of the undistinctive formation Ca-v of an unknown western Austro-Asiatic language, ‘Para-Munda’ (cf. Kuiper 1962: 51, 102).

If this initial interpretation is correct, several far-reaching conclusions can be drawn. The very frequency itself of non-Drav. loan words in the early (as well as in the later) RV is remarkable; it indicates a much stronger non-Drav. substrate in the Panjaban than usually admitted. Because of the great similarity with Austro-Asiatic formations and because it is already established (Para-Munda etymologies (such as la-kunta = Kharia kon-thd, etc., Pinnov 1959 160 : 336), this substrate is likely to be an early form of western Austro-Asiatic (cf. below, at the end of §4.3.).

Is the Indus language therefore a kind of Proto-Munda? Against this may speak first of all, as Kuiper states (1991), that the RV substrate does not have infixes like Munda. However, -n-infixes can perhaps be added in ka-bandha/ka-vandha ‘headless rump’, kar-kandhu ‘name of a tree’, Zirzphus yujuba, ganadhra ‘name of a tribe in N. Pakistan’, pra-magadanga ‘name of a chettian of the Kikata non-Aryan’, sa-kunta ‘bird’ < PShinda ‘sa-kunti, srbinda, and in post-RV, e.g., ku-tv(u)-binda Bainda, vi-bhindu, vi-bhindu-xt-ya ‘name of a tribe’. Yet, the substrate may be a very early form of Munda (or another variety of Austro-Asiatic) which still used prefixes actively, just like the eastern Austro-Asi. languages, e.g. Mon. Khmer. Do even today. Further, the infixes may have developed from prefixes which had
found their way into the root (Pinnow 1959: 15). Among these, one can include 'double' prefixes such as ka-r-, la-r-, po-r- etc. (Pinnow 1959: 11). If this is correct, then the prefix Proto-Munda represents a very old stage of Austro-Asiatic indeed.

§8.2.2. Munda and Para-Munda names

However, direct contact of the non-Indo-Aryan words in the RV with predecessors of present day Munda languages is more problematic. Some of the substrate words may lies at least in part. We have entered the RV through the intervention of the Indus language(s) (Sangala etc. see below). Yet, there also are a few direct correspondences with reconstructed Proto-Munda (sa-kunta < *kon-riid) which indicate the archaic character of the para-Mundic Indus language. For example, the name of Pramaganda, the chieftain of the Kikaro (RV 3.53.14) who lived south of Kuruksetra (cf., Witzel 1972). Both words are non-Indo Aryan and they show clear indications of Mundic character: maganda can be explained as ma·gand with the old, now unproductive Munda prefix ma- that indicates possession. The word gan·d may belong to Munda *gadgad, ga-nd·gand (Pinnow 1959: 351 §498) that is also seen in Gand·ki, Gangi (Witzel 1999, if not modeled after the tribal names Ange, Vanga, see below). W. Nepali gad (as 'suffix of river names, Witzel 1993) and apparently also in Ma-gadha (with Sanskritization > dga-), Kuiper 1991: 43f. (6. 21, 96, also 1955) has explained the prefix pra[r] (cf. prefixes such as kar-r) from Munda, which looks perfectly Indo-Aryan but in this case certainly is foreign. The tribe of chief Pra-maganda (par son of Ku) Kuiper 1991: 43), the Kikaro, has either the typical 'tribal' suffix -ta (see below) or the old Austro-As, plural prefix ki-, or maybe both. Cf. furthermore the prefix ki·-Ai in, kikara/kikara 'plough man', kikanting 'a class of demons', kikasa 'vertebra, breast bone', kikala 'bietings', kikambu 'a water plant', all of which may be compared with the Munda prefix k- for designation of persons (and the plural prefix ki- of Khati; note that in RV, k- also applies to items merely connected with humans and animals).

Further RV substrate names of persons, tribes and rivers include some exactly from the areas where Indus people are to be expected: in their Avestan, close settlement area (J. Shaffer 1995: 139) in the eastern Panjab, in Harana (Kuruksetra), and especially west of them, well into the Ganganic plains. Even during the middle/late Vedic period, the local rivers of E. Panjab are still designated by non-Indo-Aryan names: the famous Bhaxata chieftain Suatura crosses (RV 3.33) the Suturii and Viṣṇa and settles on the Sarasvati. They are not explainable from IA: *sudhr (Süley) > *-ra-tu-d (? from Munda *tu 'cattle, rudder?, kharia shu·la < *tu·da 'waier?; Khast pa·tu 'outflow', (note the later popular etymology Sarda 'running with a hundred streams'); for the Ved. substitution of *k by *k, *kuli·do 'tiger' > kullar·a and *genda > gandhar·i. Viṣṇu > viṣṇapāta (cf. Vīḍāli RV 4.30.1-12), and note that the Sarasvati saṅga has a similar name, Varāmanabha (with many variants, always a sign of foreign origin: TI 2.5.8, -khalja, -palya, -halya Aṣī Śī 4.14, -bhalya Bhāradvaja (cf. also RV viśpatala) < *viśambara, *viśambār, probably with the prefix saṁ/k'sam (as in saṁ-bura, Kam-baţ) from *vi·sam-baţ (note the popular etymology from vi·sam-baţ 'having widespread blankets').

The land of Tarmena (TA), north of this region, has no Indo-Aryan etymology either (see EWA), and Khatāvā (TA) with its suspicious cluster -nd (K. Hoffmann 1941), south of Kuruksetra, is inhabited by the Kikaro under their chieftain Pra-maganda. Note also, in the same area (Kuruksetra), the appearance of Pinnow's u-suffixes in 'foreign words', e.g. Khatāvā, Karapacarā, Nathandhāva (Pinnow 1953-4).
The Greater Panjāb names of Gandhāra, Kuhbha, Krumu, Kamboja may be added. -- Gandhāri RV, Gandhāra Br., OP Gandāra, Herodotos Gandārīoi, EWA I 422. cf. Munda "ga(n)īd 'river', the river names of the Gangetic plains. Gandākt and Gandā, the Gandhitā people on its upper course, and Nep. -gad in river names. Gandhāra is formed with the common suffix -āra, -āla (Witzel 1993, 1999); -- Kuhbha, cf. Skt. kuhī 'best', Kuiper 1948: 42f., Sant. kuhjā which belongs to Munda dūjī, kā-dūjī etc. (Pinnnow 1959: 21, 91: §108, 249 §286 Kharia dūjī 'bend', Santali kā-bhūjī 'ugly', kābhūjī 'crooked', p. 415 Santali kāb̥nāj 'best', etc.) -- Krumu from Munda *ka-ram 'luke warm'? cf. Kharia kāram 'to burn', Sant. ur- gum 'luke warm', Mon wj-rum 'humid. warm'. --The Kamboja (AV, FS = ka-mbojī) settled in S.E. Afghanistan (Kandahar); cf. OP Kaumbhīya (or Kambojīya) 'Cambyses'; however, their name is transmitted as Ambātai by Ptolemy (Geography 6.18.3.), without the typical prefix; cf. also Bultai. This change in the first syllable is typical for Munda names (see below Anga: Vanga, Kalinga: Telinga, Kulīta: Ulīra, etc.) - Mudas that far west cannot be excluded (Kuiper 1991: 39).

It may be asked, therefore, how far Austro-Asiatic speakers extended westwards during and before the RV period. Until now, the present distribution of the Munda languages has led to rather far-going conclusions, for example by Burrow (1958, cf. Southworth 1979: 200). Starting from the modern settlement areas of the Mudas in Eastern Indıa (Bihar, Orissa, W. Bengal) and on the River Tapti (in northwestern Mahrarastra and Madhya Pradesh) he regarded it as impossible that the Munda could ever have settled in the Panjāb. Kuiper, however, has been of a different opinion (1955: 140, 1991: 39; see also 1948: 8, cf. Witzel 1980, 1993 on the substrate in Nepal, and 1999 for the Panjāb area). The cases discussed above indicate a strong Austro-Asiatic substrate in the Panjāb, and there are some hints which point to Munda influence in the Himalayas (Konow 1905, Witzel 1993, see below) and even in E. Afghanistan (Sambhar, Kamboja).

An important result therefore is, that the language of the Indus people, at least those in the Panjāb, must have been Pāra-Munda or a western form of Austro-Asiatic.

If a relationship with Munda could not be confirmed by obvious etymologies, a minimal position would be to define the c. 200 non-Dravidian loan words as coming from an unknown, prefixing language of the Greater Panjāb, which might be called, for lack of a self-designation, after its prominent geographical feature, the Gandhāra-Khānḍava or perhaps better, Kuhbha-Vipāli, or simply the Harappan language.

Finally, in reviewing the evidence of the Rgvedic Pāra-Munda, it should be taken into account that Northern and Southern Munda differ from each other in many respects, the southern version usually being more archaic (Zide 1969: 414 sq., 423), though much less known, and that both this difference as well as the shift of Munda from a prefixing language with mono-syllabic roots to one working, in typical South Asian fashion, with suffixes, may have been influenced or even may have been due to a north Indian substrate such as Maiputar "Language X".
§8.3. Dravidian

§8.3.1. Dravidian in the Middle and Late Rgveda

As has been repeatedly mentioned, there are no traces of Dravidian language in the Panjish until c. 1500/1000 BCE, not even of the supposedly Dravidian speaking trader and rulers of the Indus civilization; however, Drav. loan words suddenly appear in the RV texts of level II (books 3, 7, 8.1.66 and 1.51-191) and of level III (books RV 1.1.50, 6.67-103, 10.1-854; 10.85-191). These include personal and tribal names, as well as cultural terms.

For comparisons, we are limited to Burrow-Emeneau’s DEDR, and a few from old Tamil texts, but scholars usually work directly with Tamil, Kannada, Telugu (etc.) comparisons; a reconstruction of Proto-Drav. forms is but rarely given.

To begin with, many words that have been regarded as Drav., are now explained as coming from Munda or another substrate language, for example, mayura ‘peacock’ whose correspondence in Munda ‘ma-ra’ still has an appellative meaning, ‘crier’; (PMtunda ‘ra-kl’ ‘to cry’ Pinnow 1959: 76 §57) see now above, §5 on the syllable structure C(c)C(a)C(a) in the BMAC language). However, this is not so for its Drav. designation, where ‘peacock feather’ is reconstructed at a level earlier than ‘peacock’ itself. Indeed, many of the 26 words attested in the RV that Burrow (1945, 1946, 1947-48, 1955, cf. Southworth 2979 sqq.) originally listed as Drav., as well as those Southworth (1979) and Zvelebil (1990) cannot be regarded as early Dravidian loans in Vedic.

Even if one would regard all of them, for argument’s sake, as Dravidian, only kulaya ‘nest’ 6.15.16, karambha ‘griewel’ 6.56.1, 6.57.2, ukhaa-cchid ‘lame in the hip’ 4.19.9 occur in early Rgveda. These words can, however, no longer be explained as Dravidian.

- ukha ‘pan, hip’ in ukhaa-chid ‘breaking the hip, lame’ 4.19.9, cf. MS 4, p. 4.9 ukhh (dual) ‘hips’; DEDR 564 particular part of upper leg : ukkam ‘waist Tułu ekka ‘hip’; for sound change Drav. > Ved. *-s, S. Kuiper 1991: 36, cf. 1995: 243; EWA I 210 compares Latin auxillia ‘small pot, Lat. auila ‘pot’ (Pokorny 88), but declares ‘not sufficiently explained’. As RV 4.19 is not seen as a late hymn, this might be the oldest Drav. loan in Vedic (RV 1).

Only cases in the middle and late RV remain. In the early RV (4.5a) possible Drav. words are found only in some additional, late hymns (insertion after the initial collection of the RV, c. 1200 BCE, cf. Wittel 1995): -paha 4.3.7.6 ‘fruit’; phala ‘plough share’ 5.7.8, -pinda 6.47.23 ‘ball, dumpling’; in the middle RV (5.7.8) we find: kardru 3.30.8 ‘lame in the arm’, maytra 3.45.1 ‘peacock’, phala 3.45.4 ‘see above: kaśa 7.50.1 ‘one-eyed’; kusita 7.50.2 ‘ankle’, danda 7.53.6 (late) ‘stick’; kanda- ‘vessel’ 8.17.13; maytra 8.1.25, see above; nala 8.1.33 ‘reed’; nāska 8.77.4; and in the late RV (1.10): ukhaha 1.28 ‘mortar’; viri 1.144.5 ‘finger’; bila 1.1.5, 1.32.11 ‘hole, cave’; kaśa 10.10.24 ‘hammer’; kaśa (ka) 10.85.34 ‘pin gent’. There is repeated occurrence of some words already found in middle RV: a- phala 10.71.5
'without fruit'; phal-10 97.15 'having fruits'; mayatra 1.191.14; pindha 1.162.19; phala 10.117.7; phala 10.146.5; katha 10.155.1; finally bala(?) RV 1.3.5,6,7,9,10 'strength, force'. The same is the case with some words that have later on been added and discussed (Sanatkirdi Index of the DEDR; p. 759-763) and elsewhere. Most of them are too late to be of interest here. In DEDR we find, from the early RV: phalu 'minute, weak' 4.5.14, kalasa 'vessel' 4.275, 6.69.2, 3.32.15, 7.69.6; and later: tadri 'flash' 2.23.9 (late), 1.94.7 phala 'plough share' 4.57.8 (late); -- from the middle RV: ukha 3.53 'pan, hip' (late), kavasa 'straddle legged', a personal name 7.18.12, kala 'slope, bank' 8.47.11; -- from the late RV: ukha 'pan, hip' 1.162.13,15; khala 'threshing floor' 10.48.7. Of these, only phalu 'minute, weak' (RV 4) remains as a possible early loan into IA, if it indeed belongs to DEDR 4562, Tam. polu 'empty husk of grain'; EWA II 203 has an IE etymology. Again, all other words regarded as Dravidian appear only in the middle and especially in the in later RV.

Southworth (1999, 1995) adds the following examples of early contact between Drav. and Indo-Ar., however, without ordering the texts historically: car-; carati RV; maya 'confusion, wonderment, awe' RV, and Southworth 1979: 203, 228 f., 1990: 222-3, 1995 reconstructs as further indication of early contact between Drav. and Indo-Ar. in Iran, a word 'tana 'self', Tamil idar 'tana 'oneself', tana RV 'body, self/oneself'. The variation in vowel length in the Drav. pronoun ('Tama, idar 'tana 'oneself') is old (Krishnamurti 1968). However, next to the RV instances, there is Avest. tana 'body, self, OP tana 'body'; they all have no clear IE etymology. The comparison of the Drav. and RV words would presuppose a very close relationship between Drav. and (pre-)Indo-Ar. tribes, as pronouns are not taken over easily. Such early Drav.-IA relationships are not found otherwise: there are no early loans in designations of material culture, e.g. pastoralist terms in Vedic/Drav.; horse: aiva: truvi, kura, cow; gau: aiva, sheep: aiva: (y)aiva, kazi, goat: aiva: (y)aiva, kazi, dog: sivan: nay, niti. This would rather point against a neighborhood relationship of both languages in any pre-South. The words added by Southworth are post-IE languages (java, pathani, nagara), or they are attested in relatively late RV sections (gardabha, paticci), or they are of dubious nature (car, maya, tana). Therefore, it is not possible to suppose an early contact, even in Iran, and on all levels of society, of Dravidas and Indo-Aryans.

However, Zvelebil's summary is: 'as Eminau (1971) writes, 'We end, then with a small, but precious handful of Vedic forms for which Dr. etymologies are certain and acceptable as may be expected in this field of areal linguistics, adding, though that no chronology of the borrowings is possible' (Zvelebil 1990: 81; similarly Farpola 1994: 168). According to what has been said above, this has to be modified drastically: egrocid loans from Drav. are visible, but they also are now datable only to middle and late Vedic (in the Greater Panjab), and they can both be localized and dated for the Post-Vedic texts (Wittek 1987, 1989).

Of all the words mentioned so far that have been regarded as Drav., only the following few are possible, though not uncontroversial, for the early RV: ukhāl-chid 'hip-breakings' 4.19.9; phalu 'minute' 4.5.14, āni 'lynch pin' 5.43.8 (whose ultimate source is unclear, and, very tentatively, bala 'force' 5.57.6, 5.30.9, probably from IE, cf. Latin de-bilis),
had it been speaking Dravidian. From the middle RV, however, come kavastra 'straddle legged', (a personal name) 7.18.12, kala 'slope, bank' 8.47.11 and perhaps also kunga 'vessel' 8.17.13.

If the middle and late RV words mentioned above are accepted as Drav. and even if some of the words excluded above for the early RV should be accepted, this would not change the general picture: There is very little Dravidian, but there are about 300 words of the Indus substrate. For it cannot be said, conversely, that there were, during the older and middle RV, clear indications (or: "a precious handful", Zvelebil) of a strong Drav. substrate in the Panjab. At best, one can speak of a few very isolated cases which have been taken over into the RV; clearly this indicates an adstrate rather than a substrate.

This result is important for the time of the immigration of speakers of Dravidian into the Panjab and it specifically underlines that the Indo-Aryans did not at once get into contact with speakers of Drav. but only much later, when the tribes speaking IA were already living in the Panjab and on the Sarasvati and Yamuna. Apparently, Dravidian speakers began influencing the Panjab only at this moment in time (cf. Allich 1995: 31 sqq., see above). Consequently, all linguistic and cultural deliberations based on the early presence of the Drav. in the area of speakers of IA, are void or they have to be re-investigated.

It cannot be argued that the immigration of the Dravidians into the Panjab should have taken place earlier than discussed above, for the simple reason that Drav. words do not exist in that early period; the same is the case if only the upper class such as traders (cf. vanij 'trader' RV 1.112.11, 5.45.6, AV, (pra-)kavastra 'trader' 4.24.9, see Kuiper 1955: 168) and administrators of the Indus Civilization was composed of Dravidian speakers (Parpola 1994, Fairservis in: Southworth, 1979: 208, 228; contra, Hock 1975: 87f., cf. Southworth 1992: 663), and that in consequence, the Indus inscriptions should be read as Dravidian. In this case, one would expect, after some 700 years of the flourishing of the Indus civilization, cases of bilingualism. Consequently, much more Drav. influence should have been retained than visible in the few (late) words found in the c. 380 'foreign' words. One would expect at least a few important loan words from the fields of trade, handicraft or state organization -- at least, from the post-Indus, village level type cultures. This, again, is not the case. Pani 'rich' foreigner, demon cannot be connected with 'trader' inside the RV [see now discussion above, §1.1.] and pan 'to barter' appears first only in post-Igvedic. Even if Drav. had been the traders' language, one would be at loss to answer the question why Drav. influence is only seen in the middle and late RV as well as later on. [It must be added that the body of loan words from the Dilmun (Bharain) and Meluhha (Sind) area that are attested in early Mesopotamian sources (see Witzel 2000b), likewise, is not Dravidian but has some of the prefixes of Para-Munda, discussed above, such as in sambhara/salmal 'Sum. Šim-šimmer'. There even is testimony of a translator for the Meluhha language, named Šu-ililiu.]

Summing up, early Dravidian influence in Gandhara and in the Panjab can be excluded, but must be explained for the following middle and later RV periods (cf. also Kuiper 1997: 7 sqq). This is best done by the scenario mentioned in §8.2: middle and later RV immigration of Drav. speakers from Sindh. Incidentally, it must be noted that in all of the RV, there are no typical Drav. words for agriculture which should be expected if the Indus people of the Panjab had been speakers of Dravidian. This agrees with the reconstruction of Fairservis (1995), Southworth (1979, 1988, 1990: 663 'an 'Indus' or 'Harappan' language or group of languages'), and McAlpin (1979) of early Dravidian: an originally pastoral society that acquired agriculture only in South Asia. All of this indicates that we have to take a closer look at the regions bordering the Panjab in the South, especially Sindh.
§8.3.2. Dravidian immigration

The observations about the early linguistic evidence from Sindh (Vitale 1999) indicate that Dravidians were not a primary factor in the population of the Indus civilization, even of Sindh, and that they were immigrating into the Punjab only in middle 4th/5th centuries. But when could they have entered South Asia?

Earlier scholars (Heine-Geldern 1964, Pinnow 1954: 15) thought that they entered S. Asia (sometime as late as the 1st millennium BCE) and proceeded via Baluchistan, Sindh and Gujarat to S. India (Zvelebil 1970: 48, 123). Indeed, their tracks are still visible in certain place names in Sindh, Gujarat and Maharashtra. According to Southworth and McAlpin, however, the semi-nomadic speakers of Dravidian who even had contacts in Iran with the pre-immigration Indo-Aryans (Southworth 1979: 203, 228 f., 1990: 222-3, 1995), came to S. Asia relatively late, but early enough to participate in the Indus civilization, from which they acquired agriculture and the accompanying vocabulary. This scenario, if apprised just to Sindh, explains why the 300 foreign words of the RV (in the Punjab) with their (agricultural) vocabulary are relatively free of Drav. influence.

According to the indications given above, the Dravidians apparently were just as foreign to Sindh and its agriculture as the Indo-Aryans to the Punjab. As the Northern Indus language (Para-Munda/Harappan) differs considerably from the Southern one (Meluhhan), it seems likely that the speakers of Indo-Aryan entered the Punjab and acquired local words from the Northern dialect (śaṅga, ūṅgala, sr̥ithi, goḍhaṁa, kango, Gauḍhāra), and that the Dravidians entered Sindh at or about the same time and acquired such words from the Southern dialect (gōṁa, rāṭili, varini, goḍi, ḍaṅku/kampa). It may even be the case that the first who made horses statues at Pirah (1700 BCE) were Dravidians, not the IA Bhalanas. For the first time horses must not necessarily be linked to speakers of an IA language.

The Drav. words for 'horse' underline this: DEDR 500 Tam. āvē, Brah. ḍauḍūh, 1711 Tam. kuriṇa, Kan. kudīre, Tel. kuḍīra, etc., 1963 Tam. pari 'runner', 4780 Tam. ma 'animal' (horse, elephant), Tel. māvė 'horse' (cognates mean 'deer' etc. in other Drav. languages), cf. Nahali māv 'horse'. These words are quite different and independent of IA āvīva 'horse' and various words for 'runner' (avant, vājin, etc.), etc.

On the other hand, the technical terminology for chariots is IA and IE. It has been taken over into Drav.: aksa 'axle' RV > Parji-Kolami accus 'axle'; ātē RV (of unknown origin) > ātē 'lynch pin', āra RV > dr 'spoke' (cf. Southworth 1979: 230 n. 14). Note that the earliest Ir 'ratha' chariot (with two spoked wheels) (Geming 1977, Figgott 1992, Anthony u. Vinogradov 1995, cf. Littauer u. Crouwel 1979, 1996) is found about 2000 BCE, near the Volga (North Iran. 'Rāha' > Greek Ῥά = Avest. Rāpta, Ved. Rāṣṭ). The Ir word for 'chariot', however, is old enough to have resulted in the archaic compounds Ved. rāṭhe-rāḍha, Avest. rāzait/īa-chariot fighter', cf. Old Avestan rātha, RV rāṭi 'chariot driver'. Dravidian has nothing of this, but words for 'wagon' or 'bullcart'.

An early wave of Dravidian speakers might very well have preceded the IA's into Iran and S. Asia (just like those of the Guti. Lullubi, Kassites did with regard to western Iran/Mesopotamia). (Note the strange absence of Maka in the list of 'Aryan countries' in the Avestan records, such as V, 1, cf. Herodotus 5.94). A few IA loans in Proto-Drav. would settle the case, but culturally decisive words, such as for the newly introduced horse, the chariot, or other pastoral terminology do not exist. The Dravidians hardly had any previous contact with the Indo-Aryans while still in Iran. Conna Southworth (1979: 1966), there is little secure evidence for early loans from IA into Drav.; such words can have been taken over any time
between the RV (1200 BCE) and the earliest attestation of Tamil at the begin of our era (see above, on Drav. evidence in Vedic).

There are only a few questionable loans that might have come from the pre-immigration period, that is from hypothetical contact when still in Iran; these remain speculative; cf. perhaps, Ved. garad-bha EWA I 473, Drav. kahi-lai DEDR 1364 'donkey'. --

On the other hand, several agricultural terms in Dravidian are in a close loan word relationship with Sumerian and sometimes beyond, with Afro-Asiatic (Bladek and Boissone 1992). These include words for plough-tail, -handle, plough share, to plough, mortar, threshing floor, and to grind; this close link may point to a more western path of immigration of Proto-Drav. speakers than that of those of pre-Vedic IA.

§ 8.4. Indo-Aryan acculturation in the eastern Panjab and upper Gangetic plains

We return now to the epicenter of post-Indus developments, the area of Eastern Panjab-Haryana-Uttar Pradesh, in other words, the lands from the Pakistani border up to Allahabad. In the early post-RV texts, the hub is the Kurukṣetra area, north-west of Delhi. This is the realm of the middle I�gvedic Bharata and the late I�gvedic Kuru (Witzel 1997). The Bharata tribe and its successor, the new tribal union of the Kuru, represent a new wave of IA immigrants from the other side of the Indus (Vasiṣtha RV 7, JI 3.238-9 § 204), which brought new linguistic traits with them (kuru for older kru, svar for visva, etc., Witzel 1989). The Kuru dialect is remarkably more modern than the language of the bulk of the RV. However, RV book 10 often reads already like the next level, that of the AV and other Mantra texts of the Kuru period.

The Kuru confederation, supplanting the 50-odd I�gvedic clans and tribes, became the center of linguistic (Witzel 1989), religious and social (Witzel 1997b) development. They formed, together with partly IA acculturated Indus people (I�rā-tribes such as the Asu-Druhyu, Yadu-Turvata) and with the new addition of Dravidian speakers, a new society with a new elite kit (Ehret 1988). This included pastoralism (cattle, horse, sheep, goat), IA ritual and acculturated customs, IA religion and ritual, but also post-Indus type agriculture (barley, wheat, rice, millet) and local artisans (potters, etc.). The new culture, Vedic orthoepy and social system (with four classes) then spread eastwards into the Gangetic plains, and ultimately to Bihar.

Because of the amalgamation of the three groups (IA, Para-Munda, Drav.) we have to suppose a large degree of bilingualism and even trilingualism, and the forming of pidgins. A Vedic pidgin must have been used at home, and proper Vedic Sanskrit was learnt in 'school', at the time of initiation of boys (cf. Kuiper, A bilingual Rṣi, 2000). While the lingua franca was a form of late/post-I�gvedic IA, pockets of the Para-Munda Indus language, of the newly arrived Dravidian as well as some remnants of the Gangetic Language 'X' must have survived as well.

Among the post-I�gvedic texts, especially the AV is full of non-IA, 'popular' words of plants, animals, demons, local deities, and the like. Their character still is, by and large, Para-Munda, with some words from the 'local' language ('X'), and with some Drav. words included; all of which is clearly visible in the increase of words with retroflexes.

The linguistic situation is reflected, among other items, in the mixture of IA and other river names in the area. The famous Sarasvatī is also called Vaiṣampāṇya / Vaiṣampāṇya / Vībali; these names and that of the nearby Vipāc < *vipāc/vipāc all seem to go back to a local word, *vi-pan-aa. (Witzel 1999). However, and typically, there are no Dravidian river names in the whot of the Kuru area.
A hint of how Drav. influence on Vedic was exerted is contained in the name of the Sadra. From the late RV (10.90) onwards, this designates the fourth, non-Arya class; it was added to the three Arya classes of Brahmins, Ksatriya (nobility) and Vaiśya (the people) only in this period. Anarchic sources of Alexandrian time still place Indo-Aryan people at the confluence of the Panjab rivers with the Indus; this may still indicate their origin in Sindhu/Baluchistan.

As has been pointed out, Drav. words first appear in Middle and Late Rigvedic, in RV 3. 7, and 8, especially in the Kāvyā section. Interestingly, it is Tura Kāvyā, the great-grandson of the Drav.-named Kavāja 'straddle-legged', a priest on the 'wrong side' in the great Bharata battle (RV 7.18) who becomes an influential priest in the Kuru realm and who developed the new, post-Rigvedic (brahuta) rituals (Proferes 1999), just three generations later.

It has been stressed by Burrow (1973: 386) that the post-Vedic texts have more Dravidian words; indeed, the evidence of Parā-Munda words, too, is not diminishing but increasing during the Vedic period. This is the case right from the Mantra texts, and includes the Yajurveda Samhitas whose territory can be easily established (Witzel 1987, 1989, 1997) as that of the area between E. Panjab (Lahore), Allahabad and the Chambal River area (Ujjain).

§8.5. The Post-Rigvedic period

The new tribal union of the Kuru (and their more eastern allies, the Pañcāla), with their new social set-up and solemn rituals expanded, incorporating the surrounding tribes, eastwards into the Gangetic plains, in a partly military, partly peaceful fashion until it reached northern Bihār (Witzel 1995, 1997). The eastern tribes were at first regarded as half-barbarian (IB 1.337 §115) or 'asurya' (demonic).

The same is seen in archaeology; late Harappan people emigrated upstream along the eastern Panjab rivers and towards the Upper Gangetic plain (the only movement of people the archaeologists allow for the whole period under discussion here, Shaffer 1995: 139, cf. Allchin 1995: 33-35), a fact reflected in the Vedic texts as well. The emigration was possible due to a new type of agriculture, permitting cultivation of rice during the monsoon (Kenoyer 1998: 163) as well as wheat and barley at winter, resulting in a food surplus. The settlement at first occurred along the river banks, (Witzel 1987, 1995), in half-nomadic treks (gṛdha, Rau 1997). This is reflected by the Painted Gray Ware culture, with their clear elite pottery whose regional motifs indicate the split into western Kurus and more eastern Pañcāla, something that is also seen in the Vedic dialects they use (Witzel 1989).

Not everybody is included: The non-IA Khāta (3.53) or the Pani are clearly described as foreigners (late hymn 6.45.31), and even later, in the Mantra and YV Samhitā period, the Nāgā in the Chambal area (MŚ 2.95 etc.) and other dasyu 'enemies' (IB, Witzel 1997b: n.161, 163, 278); in RV 10.61.8 as well the South (i.e. the area south of Kurukṣetra) still is the land to banish someone.

As has already been indicated, the features of the Rigvedic substrate language are also found in post-Rigvedic texts that were composed further east in the Kurukṣetra and in western Gangetic plains, as well as in the Chambal area. These words are not just the same as found in the RV, but there are many new ones.

In the Mantra period, starting with YV (MŚ, KS, TS) and AV/PS, we can clearly distinguish all three linguistic elements:

- Indo-Aryan with some already incorporated north-western elements such as Nūristani kāra 'shining piece of jewelry' or Burushaski kāla - RV kālā, Ion - RV kāna, bus - RV busa, etc.
[To be added now are the elements picked up in Central Asia, such as the words for brick, donkey, and came. See above § 3.1. Wittzel 2001:]

- The Indus substrate (Pura-Munda), that also is found in the Ganges area (next to some elements of language 'X'), such as RV kuiska, karatja, kankata, ti=mi=a=pa, sii=mi=s=ma, pukar, puusa, especially: the words with prefix Cas (par/kar/sar), kar-kota-ka RV Kh = sar-kota AV, tala AV; sar-tala KS, ka=ma=sa MS, KS, ka=ma=sa PS, kai=ma=sa Up = mia=sa AV, with the -ta,-ia=s suffixes, and with -nd- ka-mandala : mandla-la, etc.

- The Middle and Late Igvedic Drav. element also is found in the Ganges area: godhama AV (Hindi gehta etc., Kasunda gahun), kunapa AV, kurkura AV, cusa SB, coda TS, edaka JB, arka SB, bolva AV 20 (Kuiper 1991:66), -ntra- SB, etc.

In short, the upper class IA language of (the Vedic priests) used in the upper Garogetic plains contains the same substrate elements as seen in the late Igvedic period of the Panjib. However, due to the increasing stratification of society and increasing specialization among occupations, many words from the sphere of the artisans and from technology were added; furthermore many names of persons, localities and rivers.

Their affiliation can still be ascertained to some extent. With regards to agriculture, Kuiper's RV list (Kuiper 1991: 8, 21, 96, see already Kuiper 1955) contains quite a number of KS terms (karna, langa, bta, etc.). Especially among the artisans there is an increasing number of non-IA designations; many of them first appear in the Horse sacrifice, the Asvamedha ritual (MS kevarta, kaiavarta TB).273 Some of these are, in line with the increasing specialization, new Indi-Aryan formations (anuacara 'servant', gra=ma=ni 'leader of a trek, wagon train' etc.), but especially those of fishermen (kevarta/kaiavarta, daita, dhivan, daivarta, pu=ju=sha, pu=ju=shi=ta, bainda, mainala) are non-IA (often until today). Furthermore, non-IA specialists are: musicians (sala=av 'musician', adabara-agnata 'drum beater', dundubh-agnata 'drum beater' (cf. dundubhi RV), vi=na=ga/thin 'lute player', vi=na=ga=da 'lute player', cf. vi=na 'lute' KS (EWA II 568), artisans (harat-kart 'worker in thorns', bidala-kart 'female splitter of bamboo'), also kaila 'potter', and the patgala ('message') (cf. patgala 'fourth wife of a chief',) gana = 'astronomer' (cf. gana 'troop, number', RV) and 'money lender' (kustdin, kusda KS).

Such words come up not only in the eastern parts of North India (Bihar, area of VS/56) but also everywhere from the Panjab (RV) and the Delhi area (MS, KS) eastwards, e.g. khatra ‘plough man’ RV, gana ‘toop’ RV, sundhobhi ‘drum’ RV, vina ‘lute’ KS, kuṣṭa ‘money lending’ KS. The newly attested words have the same foreign grammatical formations as seen in the RV; prefixes (ke-.kai-, dun-dabhi), retroflexes (adambara, kar(f)a-), initial b-(bīdala), suffix -āla (pal-āla, main-āla, ā. ēberlies 1994: 341).

Similar data could be supplied for the spheres of material culture and the surrounding nature: agriculture and domesticated plants, local animals and plants, many items of food, illnesses and poisons, implements and utensils, and ornaments; this would lead to far richer field in present context (see the lists in MacDonell-Keith, Vedic Index, Delhi 1967 [1912] 517-92).

§8.5. Conclusion

In short, the early linguistic picture of South Asia in the second and first millennium BCE is as complex as (or even more so) than its modern counterpart. Some of the examples adduced above indeed indicate that we are in for surprises, once more information is received. The RV hapax akkhadhi kṛ ‘to speak haltingly, to blurt’ would have remained out -- if not for A. Mündel’s list in MT II, 17 with Nahali akkāi-(kāmī) ‘(to cry) loudly in anguish’. This excludes other etymologies recorded in EWA, ingenious as they may be. This example also indicates that even the oldest literary traditions has retained important information on the (lost) substrates. What may we still find in the Tamil Sangam texts? Yet, as expressed above: nobody is looking!

The few etymological dictionaries available so far do not provide geographical and historical information, though Mayrhofer’s EWA now gives a general idea, for the specialist, of the historical levels, but hardly of the geographical spread. DEDR does not have any such information yet, and we need to check the on-line dictionary at Cologne (http://www.uni-koeln.de/phil-fak/indologie/tamil/otl_search.html); and the KWIC Concordance of Classical Tamil texts (http://www.uni-koeln.de/cgi-bioi/tgat). A Munda etymological dictionary is still under preparation.

We need much more philological and linguistic study in a number of areas for further comparisons inside and outside South Asia. In this undertaking, the ancient Vedic and Tamil texts still hold out a lot of important and interesting data, but they have not yet been tapped properly. Even in the well-studied IA sector we do not yet have enough reliable information on the geographical spread of time frame of the texts (except for the Veda, see Witzel 1987, 1989, 1997). The various levels und the geography of the Vai and Epic texts still need much more sorting out. In the Dravidian field, we need, especially, a detailed historical grammar and dictionary of Tamil that covers the past two millennia or so in a comprehensive fashion. In Munda, a new reconstruction that pays more attention to S. Munda is eagerly awaited. Not to speak of a comparative or etymological dictionary of the various languages and dialects involved. For the remnant languages such as Burushaski, Nahali, Kusunda, and the various substrata the lesser said the better. Even the extensive new Burushaski dictionary of Berger (1998) contains few etymological notes, and they are restricted to the northwestern languages and to Urdu. Almost all major Indian languages, north or south, lack historical and etymological dictionaries. Even in the well researched field of Indo-Aryan, ‘Turner’s CIDAL and Mayrhofer’s EWA are only of limited help for our purpose, restricted as they are, to words derived from OIA or reconstructable as OIA. Mayrhofer’s unexplained, difficult, unclear words and Turner’s ‘starred’ words may be a help, at least, to highlight possible loan
and substrate words; even then, Mayrhofer’s marked tendency to explain virtually everything as IE needs constant attention. Unfortunately, in similar vein, Burrow-Emeneau’s DDGR only compares only inside Drav., and outside the family refers only IA and not to Munda or to other S. Asian languages, so that “their dictionary, by omitting all references to Munda, sometimes inevitably creates a false perspective from a Pan-Indic point of view” (Kuiper 1991: 53).

In sum, not only is the linguistic situation of northern South Asia in the second millennium BCE much more complex than usually admitted, the materials adduced above also indicate that, even with the addition of the modern descendants of Proto-Burushaski, -Nahali and -Kusunda, we have to reckon with, and make use of, a number of other substrate languages such as Tharu, Masica’s “Language X”, the substrate of the Kathmandu Valley, and the Panjab and the Sindb varieties of the Indus language.

All of this, provides a multitude of data for the many waves of immigration and amalgamation that have swept over the Indian subcontinent. Ultimately, these substrates will hint at the first wave of immigrant groups of Homo Sapiens sapiens (now visible in genetic data), which may have left us some remnants in the deep substratum of language such as Nashali, Vedd and Kusunda.

What does the linguistic evidence tell? During the Vedic period, there has been an almost complete Indo-Aryanization of the North India, including its hydronymy. The result of Aryanization is steadily increasing in the early texts of northern India: the Vedas, the early Pali texts and the Epics. Sanskritization has progressed much less in many parts of South India and in the often inaccessible areas of Central India. However, in the northwestern section of the subcontinent, the starting point of IA infiltration, there are but a few exceptions from this trend, such as the names of the rivers Sutudri, Kramu, and maybe the Kubha. In the eastern part of northern India, the situation is similar: apart from the Garha, a folk etymology for Munda *gand, and (for transient Vedic innovation) Sadanita, Sanskritic names or adaptations have overlaid the medieval and modern continuants of local names, e.g., the Gajendri and the Kasikrti (Kori).

Indo-Aryan influence, whether due to actual settlement, cultural expansion, or, in still more neutral terms, through the substitution of indigenous names by Sanskritic ones, was from early on powerful enough to replace the local names, in spite of the well-known conservatism of river names. The development is especially surprising in the area of the Indus civilization. One would expect, just as in the Near East or in Europe, a survival of older river names and adaptation of them by the IA newcomers upon entering the territories of the people(s) of the Indus civilization and its successor cultures.

However, in the northern part of the subcontinent the few surviving local names have been Sanskritized superficially, if the local population had been socially important or politically powerful enough, it would have insured the survival of their old nomenclature (as is found in the eastern Himalayas and in the south). Their failure to do so must have been due to social and political factors that became visible in the Rigvedic process of acculturation and take-over of IA material culture, religion and ritual by some local chieftains, possible adoption of local shamans and priests (Kuiper),274 all of which resulted in the establishment of the four classes (varna) by the time of the Purusa hymn (RV 10.90).

274 Whether these also became IA poets - such as, according to Kuiper, Agaya - remains to be investigated; note, however the handsomely adoption scheme found in the RV, Witzel 1995a, Deshpande 1995.
It is useful to remember Kuiper’s definition (1991: 6 sq.) of the Aryan: “[In the RV] ‘Aryans’ were in general those who maintained the world order by means of sacrifices and gifts…” They were not isolated form the rest of the population: “those who believed that a definite ethnic barrier separated the ‘Aryans’ from the surrounding non-Aryan peoples disregarded some well known facts….”

In light of the present discussion about the arrival of the Aryans in India and in some circles of Anglophone archaeology, it is, the growing denial of any immigration or even trickle in of people speaking Indo-Iranian or Indo-Aryan dialects, is important to note that not only the Vedic language but their whole complex material and spiritual culture has somehow been taken over and absorbed in the northwest of the subcontinent. This includes chariot making technology and horse training as well as Indo-Iranian poetry and its complicated conventions that are still visible and functioning in the Rigveda. It also includes the old Indo-Iranian religion centering around the opposition of Devas and Asuras, ancestor worship which is carried out along old Indo-European lines, and of course, the naming or renaming of places and rivers treated in this contribution.

In any scenario, we must distinguish between the initial import and the process of (gradually) taking over, by the indigenous populations, of Indo-Aryan language (including poetry, etc.), of Indo-Aryan technology (horse drawn chariots, etc.), and thirdly, that of the whole complex of Indo-Iranian culture including language, customs, beliefs, religion, ritual, family structure, pastoralist economy, material culture and technology. All of these features may have progressed at a different rate and with varying impact in the various areas of the northwest and beyond.

We should regard the ‘importation’ of Indo-Aryan into the subcontinent as the outcome of an influx of a group of clans, tribes, or a people who spoke early Vedic and had an Indo-Iranian or rather, an early Indo-Aryan civilization, with exogamous groups of patrilineal descent, pastoralism, horse-drawn chariots, etc. Emerging from the Turkmenian-Bactrian area, the Bactria-Margiana Archaeological Complex after a complete acculturation in the area, they probably had mainly West/Central Asian somatic characteristics. Their genetic impact may have been fairly negligible due to acculturation and the quick adaptation of their culture by the Parthian populations.

275 It is useful to heed the warning of S. Embleton (1990) expressed in a quite a different context: “... when non-academics also get involved, progress is often slowed down and the field as a whole suffers, sometimes with all work in the field being unjustly ignored... constant difficulty is occasioned by the ‘arrogance can do it’ attitude, which leads scholars who have no philological expertise to propose impossible etymologies.”

276 Three ancestors only out of the many generations are remembered as worshipped; three pindas are offered. Cf. the Greek triuneos, the Russian custom of offering three kyichki to the ancestors, etc.

277 Note that Bactra has always been a staging place for immigration to and invasions of India; it also has been an area where a relatively quick acculturation has taken place e.g. of the Central Asian Yue-Ju, the Kiepna, the Turks of the Turks Sahi dynasty, the Turks and Mongols of Bahad and Akbar, etc.

278 A few European strains might have been included, such as the ‘koldhared’ (hiranyaksetra) person that is not a god, the author of HSS. See now L. Cavalli-Sforza 1994.

279 A model such as that of Rensch 1987 based on economical exchange certainly does not explain this kind of complete take-over. His dominance model, however, might have applied in some strictly localized cases. But both neglect the increasing evidence for a voluntary adaptation of IA culture by some of the leading classes of the indigenous population in certain areas of the northwest. See below.
The reasons for the initial trickling in and immigration of the Indo-Aryans may include the breakdown of the city-centered Indus civilization and its reverting to rural settlements, and the explosive spread of the resulting localized culture eastwards into Haryana and Western U.P. (as well as into Gujarat), accompanied by a large scale abandonment of the earlier settlements in the Indus and Sarasvati (Ghaggar-Hakra) areas.280 This expansion was probably due to the possibility to grow the new summer grains rice and millet there.

On the other hand, this movement left large sections of the Punjab open to the (mainly) pastoral IA tribes who could now exploit not only the area formerly marginal for agriculture but also the newly abandoned lands. Since they had practised only limited agriculture281 (yava 'barley') in an area not affected by this change, i.e. their older home in Afghanistan, they did neither take over, at first, rice or millet, and they also did not do so at first in the Punjab. The RV does not mention either (vṛth AV, anus VS 18,12, pṛṣṣṭa MS, KS, TS, VS), and also not the staple of the Indus civilization, wheat (gaḍāṭa MS, VS). Only when the Indo-Aryans definitely expanded into U.P., that is in the Maṇḍala period (AV, PS, YV Maṇḍala), rice, millet and wheat make their appearance.

In other words, the RV period may have seen increasing pastrociation in the Punjab, with substitution of IA river names, but with some post-Indus villagers hanging on to agriculture in those areas that had periodic flooding or could have artificial irrigation. These people are clearly distinct: most of the agricultural terminology is non-IA (Kuiper 1991).282 Note that even in the later RV, Vīdūṣā and his sons can speak of the autochthonous people, the Kikāṭa, as being inept with cattle: 'what is the use of cows with the Kikāṭa?' (RV 3.53).

According to this scenario, we can expect linguistic interaction between the newly arrived Indo-Aryans and the indigenous population since the end of the Indus civilization at c. 1900 B.C., even if IA infiltration had already started somewhat earlier (or, conversely, later) than that. In all scenarios, there were several hundred years (c. 1900-1200 B.C.) when interaction (such as changes in hydronyms) and convergence could take place. Indeed, the language, the names as well as the data for civilization and religion in the RV indicate a long period of acculturation. As Kuiper has shown (1967, 1991) even the hiestric and highly poetical language of the Rigveda has been influenced by acculturation and, therefore, by substrates, in the form of loan words, calques or in syntax. The emergence of the South Asian linguistic area (Sprachbund) can be witnessed in the Rigveda itself.

Kuiper (1991:20) has recently stressed that [grammatical innovations] ... were only gradually gaining access among the poets of the Rigveda. This would allow but one conclusion, viz. that they had arisen among lower social circles of bilinguals, who were in a steady contact with speakers of Dravidian and other non-Aryan languages (Kuiper 1967, 96)." On the other hand, Southworth (1979:204) has recently defined that "the nature of borrowings

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280 One should note, however, that the TB 2.4.6.6 as indication of this (yamya iti parve yamya pum / yami (text: yamya) idamadu twitch paras / svāmānara yamya ir murya / pṛṣṣṭa yamya ahī another Janhavā). The mentioning of a yamya dwellings rather seems to refer to the IA penā and offering grounds. ... But cf. ABS 3.45 with long wildernesses in the west and more populous settlements in the east: this describes the post-Indus, post RV situation perfectly.

281 Some Indo-European words relating to agriculture have survived in Vedic, such as rto 'sow', star 'furrow', kṣra (probably of bhālgī 'cannabis'). But cf. EWA on st.

282 See Kuiper 1991:8, 96.
[between IA and Drav.] shows no dominance pattern” and that it works both ways as it includes general vocabulary such as body parts and social structure (kula, but cf. EWA 1973, where a Drav. etymology is rejected). While is is true with regard to agriculture (influence of an unknown language in the RV, Kuiper 1991, Southworth 1979, 1995),283 on the other hand, IA influence on Dravidian is evident with regard to the innovative chariot technology (ākṣa RV > Ta. acu ‘axle’, āṇi RV > Ta. āṇi ‘nail’, Southworth 1979).284

In sum, mutual influence exerted on each other in Northern South Asia must have included, according to the discussion above, Munda, Dravidian, Indo-Iranian, Tibet-Burman, and some unknown languages (Proto-Burushaski, the language ‘X’, and others such as Proto-Nahali). All of which indicates that the linguistic (and ethnic) situation in S. Asia of the Vedic period was much more complicated and varied than usually admitted.

S. Asia, thus, was not isolated at all from developments in other parts of Asia but took part in the transmission of languages and cultures as well as new techniques and economies along with the words designating them. We have noted connections with the east and the west – and even with Africa (introduction of millet during the Indus period).

In fact, why should South Asia, differently from any other region of the world be isolated from an influx of other populations? Such gradual trickling in, or even larger scale immigration, has been attested from times immemorial: The Vedoid and Australian/Andaman type inhabitants largely gave way to those who spoke the N. Indian language “X”, Burushaski, Proto-Nahali, -Vedda, and -Kusunda. If the linguistic Central Asian connection of Dravidian (relationship with Uralic and perhaps beyond, or a proposed one with Elamian) bear out, the original speakers of Proto-Dravidian must have entered the subcontinent, just like so many tribes and armies later on, via the same (northwestern) passes. The Astan, Khyber, etc. always have been the easiest and therefore typical routes of immigration and invasion (differently from the seasonally difficult Baltistan-Gilgit crossing north of Kashmir). The connections of IA with Iranian, Slavic, Greek, etc., and archaeological ones with the Ural (chariot) area make the IA language and culture the next candidate, after Dravidian, for immigration from across the Hindu Kush and Suleiman ranges.

Not were they the last ones to enter. We know, from historical records, of a never ending slew of peaceful and not so peaceful immigrants: Mede and Persian generals, Alexander’s and the Bactrian Greeks, the Sakas, Tukhhar/Kusana, Huns, Gutjaras, etc. Among the peoples from the north and east, we know of the central Asian Saka (via Baltistan), Tibetans, Ahom-Thais from S.E. Asia, Turks from Sinkiang, Sherpas from Tibet, the close linguistic links of the Khaz with Mon-Khmer as well as those of the Mundas with them and with the rest of the Austro-Asiatic languages indicate some immigration of speakers of these languages from the East. Needless to say, introduction of a language does not mean mass-immigration of a population. A whole set of models of transfer are possible (Wijesek 1995). In short, Northern South Asia always has been part of a web of interrelations both inside the

283 The words for ‘plow’ and ‘threshing’ are of uncertain origin: language “X”? They have no certain etymologies in either Drav. or Munda *kudha* ‘threshing floor’, *S. Khaya:* Ta. kum, kudh ‘place, open space’, threshing floor, battlefield; DEl 1160; “aṅgal “plow” Dravidian: DEl 2368 Ta. ondul, ondul “plow”, Kus. ondul, Ta. ongul (“aṅgul-kiridul” earth stone?) in Dravidian lang.; (note Kuiper, 1997: 307ff; “aṅgal “nail” Munda; “aṅgal “plough” (N. Munda, Koru); Kh. aṅkara “kukur” “(rub); c. also continuants in Austroasiatic. Another word, aṅkā “part of plow, share”, DEl 1785 Ta. aṅkā “bar of metal, plowshare” “C IA lang.”; but of Munda Poinow 1959; finally Southworth also points to Drav. and ‘plow’ from IA.

subcontinent and with the outside world; it was not so isolated as often imagined. And
certainly, it was not altogether self-sufficient as imagined now by some revisionist historians
and, increasingly, by the general public in India.

It is therefore necessary to underline, in the present social and academic climate, that at
least the IA immigration cannot simply have been a language take-over such as that of Swahili
in East Africa. A whole pattern of civilization from poetry to chariot building was taken over as
well. Of course, the whole scenario is open to debate: the individual patterns are subject for
ongoing and future research, best carried out by a collaboration of linguists, philologists,
palaeo-zoologists and -botanists and archaeologists, and with some healthy input of some
anthropologists, geneticists, sociologists and broad-ranging historians. Their combined
evidence must agree in any scenario still under development (cf. Erdosy 1995) or still to be
discovered. The time for individual linguistic or archaeological research, carried out in
splendid isolation, has long passed.

The multitude of non-IA animal and plant names, as well as terms of agriculture point
to the importance of the speakers of these languages in the social structure and in the
economy of early India. These groups, however, must have had a fairly low social position as
they were not even able to maintain their local place and river names, almost all of which were
supplanted by new Sanskrit ones. Their elite or their upper classes, however, joined, especially
in the Panjab and in Kuruksetra, the new 'Aryan' elite early on, as their personal and tribal
names and those of places and rivers clearly indicate. The pattern then established is visible in
the late RV (Puruṣa hymn with its four varṇa system).

The increasing influence of IA language and culture, albeit in a new acculturated form,
culminates in the evolution of the template of all later Indian civilization, during the Kuru
realm (Witzel 1995, 1997), with its particular reformed but archaizing style of IA ritual,
religion, social set-up and political style, that is a decentralized early state with a Great
Chieftain or 'king', surrounded by allied chieftains. This cultural pattern served as template
for the spread of Vedic and 'Hindu' culture all over South Asia and, to some degree -- note
the case of Bali-- even over S.E. Asia.
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<thead>
<tr>
<th>Abbreviation</th>
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Map 6. Language Situation in North India and Surroundings