

The Nāsatyas, the Chariot and Proto–Aryan Religion *

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Swing low, sweet chariot, coming for to carry me home...

Abstract

In “classical” Vedic religion, the Nāsatyas or Ásvins are deities of secondary importance, mainly associated with healing. Their cult had largely been absorbed into the cult of Indra and his sacred drink Soma. Thus they were worshipped in such minor components of the Soma ritual as the offering of hot milk called *gharma* or *pravargya*, and morning litanies called *prātaranuvāka* and *āśvinaśastra*. That these horse-related gods were formerly more important deities is suggested by the prominence of the horse and chariot in such “pre-classical” rites as the *aśvamedha* and *vājapeya*.

*Revised version of the paper read at the Kansai session of the 50th International Conference of Eastern Studies on Saturday 28 May 2005 at Kyoto International Community House. The abstract will appear also in the *Transactions of the International Conference of Eastern Studies*, vol. 50 (2005). — An earlier draft of this paper, entitled “On the cult of the twin gods associated with the horse-drawn chariot”, was presented at a mini-seminar on “Vedic religion from the perspective of Eurasian archaeology and linguistics”, organized by Jan Houben and Arlo Griffiths on the occasion of the 65th birthday of Professor H. W. Bodewitz at the University of Leiden on 12 November 2004. I thank the Tōhō Gakkai and my Leiden colleagues for their invitations and hospitality.

I am grateful to Werner Knobl for his copious critical comments. Jorma Koivulehto’s constructive criticism helped me to improve some of my proposals for new Proto-Aryan loanwords in Finno-Ugrian languages and to delete some others. Yasuke Ikari’s comment likewise helped me to eliminate an irrelevant argument. Petri Kallio has given me some bibliographical references and an advance copy of his (and Ante Aikio’s) review of Katz 2003. Stanley Insler has with great generosity summarized his not fully published explanation of the divine name Mātariśvan and allowed me to communicate it. The following recent (August 8, 2005) comment from Stanley Insler, which has given me cause to elaborate on the Ásvins’ connection with the chariot, deserves to be quoted here in full: “As to the Ásvins, if they stem from very ancient times, I see no difficulty in assessing them as horsemen (from pre-chariot days). For the RV there is no doubt that they possess a chariot, but please note that their chariot is often drawn by animals other than horses, attesting to the fact that we are in the midst of an ever shifting mythology. In general, this is the great problem of Rigvedic mythological interpretation. Ancient names of gods survive, in part with some (often dim) memory of their original functions. But to a large degree, the gods are reworked into an ever changing framework of shifting ritual and political conditions. As Agni and Indra rise to prominence in the pantheon, the other gods fall into the shadows of memory and myth, and the whole business becomes a hodge-podge of mythic references and new attributions, which are for the most part vexingly difficult to sort out. I struggle with this problem all the time.” — I thank Masaaki Hattori, Muneeo Tokunaga and Akihiko Akamatsu for their kind invitation to publish this paper in the *Journal of Indological Studies*.

In the Ṛgveda, the Nāsatyas are worshipped especially by the Kāṇva and Atri poets resident in Gandhāra, the Kāṇvas associated with the earlier immigration wave of Indo-Aryan speakers. The gharma vessel seems to be connected with the ‘face urn’ of the Gandhāra Grave culture (c. 1600–900 BCE). This suggests that the Nāsatyas may have had a funerary function. Vedic texts indeed contain previously unnoticed evidence associating the Nāsatyas with a funerary chariot race. Such a funerary race is attested in the Greek and Baltic traditions.

Archaeology and Proto-Aryan loan words in Finno-Ugrian languages spoken in north-eastern Europe have enabled locating the emergence of the Aryan branch of the Indo-European language family in southeastern Europe (the Poltavka, Abashevo and Sintashta-Arkaim cultures). Its diffusion can be followed in the Eurasiatic steppes and through Central Asia (Bactria and Margiana Archaeological Complex) to Syria (Mitanni kingdom) and to South Asia (Gandhāra Graves).

The horse-drawn chariot was centrally involved in this emergence and diffusion of Proto-Aryan speakers. The two-man team of warrior and charioteer was deified, and the mythology of these divine twins spread together with the chariot from the Proto-Aryans to Proto-Greeks and Proto-Balts. Loanwords in Finno-Ugrian languages, too, suggest that the Nāsatyas were important divinities for Proto-Aryan speakers.

Proper names associate Mitanni kings with the chariot. It is argued that Mitra and Varuṇa are “abstract” deities created by Proto-Indo-Aryans under Assyrian influence c.1900 BCE and that they replaced the Nāsatyas in the royal function. Earlier the Nāsatyas, like the Dioskouroi in Sparta, were models of dual kingship. The twins represented dualistic cosmic forces, day and night, birth and death. As *mārya*, they were warring youths and wooing bridegrooms, and thus also functioned as gods of fertility and birth.

Archaeology and the prehistory of the Aryan languages

Several terms related to wheeled vehicles can be reconstructed for the Indo-European protolanguage. Therefore, its speakers knew this technical innovation datable to c. 3500 BCE. With the chronological and geographical starting point supplied by the earliest finds of heavy carts and waggons pulled by oxen — not horses —, one can attempt a systematic and holistic correlation between archaeological cultures and linguistic groups in order to trace movements of peoples and contacts between them that can explain the historical distribution of the Indo-European languages and their contacts revealed by loanwords and other indications of interaction. On such a basis, the Proto-Indo-European language can

be located in the Pontic steppes north of the Black Sea, where it started disintegrating around 3500 BCE.¹

The Pit Grave culture (c. 3500-2800 BCE) extending from the Danube to the Urals probably had Proto-Graeco-Aryan as its language. In the west, it was succeeded by the Catacomb Grave culture, where an early form of Proto-Graeco-Armenian may have been spoken. The Catacomb Grave culture was flanked in the east, between the lower Volga and the Urals, by the Poltavka and Abashevo cultures where Proto-Aryan seems to have developed, split into two dialects.

There is one very important support for the Aryan affinity of the language mainly spoken in the Poltavka and Abashevo cultures and their successors. These cultures partly extended to the forest zone of central Russia, occupied by the Volosovo culture where, in all likelihood, a late form of Proto-Finno-Ugrian was spoken. Several Finno-Ugrian languages are still spoken in this area as minority languages, alongside Turkic and Russian which arrived here in medieval times. Eventually, the Volosovo culture prevailed linguistically, absorbing the Aryan-speaking upper class minority. About one hundred early Aryan loanwords have been identified in Proto-Finno-Ugrian; I will take up some of them later on.

Late Proto-Aryan was probably the language of the succeeding Sintashta-Arkaim culture, dated to c. 2200-1800 BCE. This culture controlled tremendously rich copper mines in the southern Urals — at Kargaly, shafts sometimes 90 metres deep yielded two million tons of copper ore during the Bronze Age. Bones of hundreds of animals slaughtered for sacrifice indicate that the people were very rich also as pastoralists. Their numerous fortified ceremonial centres have the shape of a wheel, while aristocratic graves contain the earliest known evidence of horse-drawn chariots. Some of these Sintashta-Arkaim graves are radio-carbon dated to c. 2000 BCE, using samples taken from the skulls of buried horses.² The chariots had both plank-wheels and spoked wheels.³

Origin and dispersal of the horse-drawn chariot

Whether the horse-drawn chariot originated in the steppes (in the Sintashta-Arkaim cul-

¹On the central thesis of this section, see especially Anthony 1995 and its critical review by Raulwing (2000: 79-85). On the correlation of archaeology with the prehistory of the Indo-European languages, see Mallory 1989 and Carpelan & Parpola 2001; and with the Aryan languages in particular, also Parpola 2002a, 2002b. These publications contain detailed documentation for this section.

²Anthony 1998: 106; cf. Raulwing 2000: 90; Littauer & Crouwel 2002: 45.

³Cf. Gening et al. 1992; Anthony & Vinogradov 1995; Raulwing 2000: 86-95 and 123-126; Epimakhov 2002.

ture) or in the Near East is a debated issue,⁴ but Stuart Piggott has suggested a reasonable compromise that may settle the dispute:

*“[T]he natural habitat of the wild horse and its early domestication was on the South Russian steppe... Here the first experiments were made in light spoke-wheeled vehicles, a technological reservoir on which Mesopotamia could draw, and then create the chariot, and its later development of organized chariotry and chariot-warfare, which a sophisticated political setting alone could make possible.”*⁵

There is important new evidence for the steppe origin of the proto-chariot. The Mycenaean cheek-pieces for chariot-horses can be traced back through eastern Europe to prototypes in the south Russian steppes. The numerous new finds of related cheek-pieces concentrate in Rumania, southern Ukraine, the upper course of the river Don, mid-Volga, and the southern Urals.⁶

Cheek-pieces for chariot horses have been introduced from the south Russian steppes also to southern Central Asia. A disturbed aristocratic grave that recently came to light in Tajikistan contained two horse-bits and two pairs of cheek-pieces of the Sintashta-Arkaim type, along with a horse-topped bronze rod or sceptre, and pottery typical of the Bactria and Margiana Archaeological Complex (BMAC), more exactly its Dzharkutan phase dated between 2034 and 1684 BCE.⁷ The BMAC pottery is the source of the ceramics of the Gandhāra Grave culture of Swat,⁸ which is the first culture of northern Pakistan to have the domesticated horse. This suggests that Proto-Indo-Aryan speakers had become the elite layer of the BMAC culture in southern Central Asia before spreading to the Indian subcontinent.⁹

Steppe ceramics are rare at the BMAC sites in the Togolok period (c. 2000 BCE) or Late Bronze Age (c. 1800-1550 BCE), yet are found in room fill within BMAC architectural contexts.¹⁰ During the Final Bronze Age (c. 1550-1350 BCE), steppe pottery called

⁴See Piggott 1992: 37-68; Littauer & Crouwel 2002: 45-52, and especially Raulwing 2000.

⁵Piggott 1992: 48. Cf. Piggott (1983: 103f.), Moorey (1986: 211ff.), Mallory (1989: 41f.), and Anthony & Vinogradov (1995) summarized in Raulwing 2000: 120-123. The criticism of Littauer and Crouwel (1996) tabulated by Raulwing (2000: 124-126) amounts to pointing out that much information on the Sintashta-Arkaim vehicles is missing and that the available data suggest they “cannot yet be true chariots” but admittedly are “proto-chariots or spoked wheeled carts”.

⁶See Penner 1998; 2004; and Kuznetsov 2004.

⁷See Bobomullov 1997; cf. Carpelan & Parpola 2001: 138; Penner 2004: 63f.

⁸Cf. Sarianidi 2001: 432: “*apart from the common funeral ceremonies, the graves at the Gonur necropolis [in Margiana] and the Swat graveyard manifested similar ceramic complexes which represent the late variation of the BMAC.*”

⁹The characteristic “face urn” of the Gandhāra Grave culture seems to be related to the gharma or pravargya vessel of the Vedic ritual and with the Aśvin cult; see Parpola 2004 [2005].

¹⁰Cf. Hiebert 2004 [2005]: 298; Cattani 2004 [2005]: 312.

“Incised Coarse Ware” (ICW) has been recognized on the surface of most of the main BMAC sites (including Auchi, Taip, Togolok-1, Togolok-21 and Gonur), and so far 340 steppe people camp sites have been identified in Margiana, surrounding practically all known BMAC sites. The ICW closely resembles the ceramics of the Tazabag’yab culture of Choresmia, the southwestern Late (Alakul Phase) variant of the Andronovo complex.¹¹ In metallurgy, too, there is clear evidence of the parallel presence of both the BMAC and Andronovo traditions and of their mutual influence in southern Central Asia during the Late Bronze Age.¹² The Andronovo complex continues the Sintashta-Arkaim culture and is distributed widely over the Central Asian and South Siberian steppes, from the Urals to the Altai, Tienshan and the Kopet Dag mountains.¹³ *“Few, if any, archaeologists would deny a general Indo-Iranian identity for most of the bearers of the Andronovo culture, nor would they deny its fundamental genetic association with its western neighbours in the Pontic-Caspian.”*¹⁴

Another extension of the BMAC¹⁵ is in the Gorgan plain of northern Iran, where Tepe Hissar has yielded a cylinder seal depicting a horse-drawn chariot.¹⁶ This seal, and the BMAC type trumpets¹⁷ of Tepe Hissar III C were the principal reasons why Roman Ghirshman suggested that the Proto-Indo-Aryan-speaking elite which ruled the Mitanni kingdom of northern Syria 1500-1300 BCE came from northeastern Iran.¹⁸ Ghirshman connects the trumpets with the Near Eastern evidence, according to which chariot horses were trained to the accompaniment of trumpet signals.¹⁹

As shown by the appearance of Egyptian and Syrian motifs on BMAC seals and the appearance of the Bactrian camel on Syrian seals, the BMAC had trade relations with Syria around 1900-1750 BCE. The horse and the camel are known from a number of BMAC seals and other objects as well.²⁰ Seals depicting a horse-drawn chariot dated to the beginning of the second millennium have also been found in Syria and Anatolia,²¹ from where Assyrian merchants operated a lucrative tin trade with Central Asia — the realm of

¹¹Cf. Gubaev et al. 1998; Cattani 2004 [2005].

¹²Cf. Lombardo 2004 [2005].

¹³Cf. Kuz'mina 1994; Mallory 1989: 227-231.

¹⁴Mallory 1989: 227. Cf. also Carpelan & Parpola 2001: 96ff., 131ff.

¹⁵Cf. Hiebert 1994: fig. 10.8.

¹⁶Cf. Littauer & Crouwel 2002: 279 & pl. 129. The seal is attributed to stratum III B, now dated to c. the 20th century BCE, and the III C stratum (c. 1900-1750 BCE) is considered to represent the BMAC.

¹⁷See now Lawergren 2003.

¹⁸Cf. Ghirshman 1977: 10-19.

¹⁹Cf. Ghirshman 1977: 30-31 with fig. 8 showing a bas relief of Ramses III from Medinet Habu in Egypt.

²⁰Cf. Parpola 2002a: 87f. with further references.

²¹Cf. Littauer & Crouwel 2002: 15-21; 28-29.

the BMAC — in 1920-1850 BCE. There is indeed every reason to believe that it was the Proto-Indo-Aryan speakers who introduced the horse-drawn chariot to the Near East, and developed it to chariotry after they had taken over the rule of the Hurrian kingdom of Mitanni and made the Assyrians their vassals. After c. 1500 BCE, Akkadian documents of archives in Hattuša (Boğazköy) in Anatolia, Alalakh, Ugarit and Nuzi in Syria and Amarna in Egypt use for ‘chariot warrior’ the term *mariannu*, which is widely agreed to go back to Proto-Indo-Aryan **marya-* ‘young man’ + the Hurrian nominal suffix *-nnu*.²² Similarly, many of the hippological terms in the handbook for training chariot-horses written in Hittite by a Mitannian called Kikkuli have a sound Proto-Indo-Aryan etymology.²³

The Aśvins as the deified chariot team

The cult of the Nāsatyas alias Aśvins is not of Proto-Indo-European origin, as is sometimes maintained, but goes back to the times when the horse-drawn chariot evolved, that is, the last quarter or the end of the third millennium BCE. The chariot was a prestigious and effective new instrument of war and sport, which was quickly adopted by the elites of neighbouring peoples. Together with the chariot, the mythology and cult of the deified chariot team also spread. Placing the origin in the steppes of southeastern Europe best explains the distribution of the early chariot lore among the Aryans, Greeks and Balts.

In the R̥gveda, the Aśvins are called several times ‘sons of heaven’, *divó nāpātā* or *dīvo napātā*.²⁴ It relates them historically to the horse-riding divine twins of early Greece who are called the *Dioskouroi*, ‘youths of Zeus’ (i.e. sons of the Sky God), and to the horse-riding ‘sons of the God’ (Latvian *Dieva dēli*, Lithuanian *Dievo sūneliai*) in the pre-Christian religion of the Balts. Moreover, all these three sets of equestrian twins have a sister or wife or bride associated with the dawn or called the daughter of the sun (*Uṣas* or *Sūryā* in India, *Helénē* ‘torch’ in Greece, and in the Baltics, Latvian *saules meita* ‘maiden or daughter of the sun’ and Lithuanian *saules dukrytė* ‘daughter of the sun’).²⁵ There are other common features, too, some generally recognized, some not.²⁶

²²Cf. Mayrhofer 1996: II, 329f.; Raulwing 2000: 117f.

²³Cf. Mayrhofer 1966: 15ff.; 1974: 14ff.; Raulwing 2000: 113-116 with up-to-date bibliography.

²⁴I would like to maintain that this phrase refers exclusively to the Aśvins — the one contested case will be discussed below.

²⁵Cf., e.g., Ward 1968: 10ff.

²⁶For the Aryan Nāsatyas alias Aśvins, see Muir 1874: V, 234-257; Myriantheus 1876; Bergaigne 1883: II, 431-510; III, 5-20; Baunack 1896; 1899; Macdonell 1897: 49-54; Oldenberg 1917: 207-215; Güntert 1923: 253-276; Hillebrandt 1927: I, 54-70; Geldner 1928: 21-23; Lüders 1959: II, 339-374; Renou 1967; Gonda 1974: 34-58; Zeller 1990; Oberlies 1992; 1993; Pirart 1995-2001. For the Greek Dioskouroi, see Eitrem 1902; Bethe 1905; Harris 1906; Farnell 1921: 175-228; Nilsson 1955: I, 406-411; Burkert 1985: 212-213. For the Baltic

The Aśvins of the Ṛgveda move in a chariot, but the Greek Dioskouroi and the Baltic ‘sons of the God’ are horse-riders. The difference is understandable. In much of the ancient world, throughout the second millennium BCE, the chariot drawn by a pair of horses was “*the vehicle of prestige — the only approved conveyance for the chieftain and his noble entourage in ceremony and ritual, hunting and its counterpart, warfare*”²⁷. But the situation changed in the early first millennium BCE, when the Dioskouroi first make their appearance:²⁸

“The beginnings of regal horse-riding were tentative. In the ancient Near Eastern tradition the king, if he did not appear in a chariot, might on occasion ride on a mule or a donkey... In the early second millennium a well-known letter to Zimri-Lin, King of Mari, gives him advice on this matter — ‘Let my lord not ride horses. Let him mount only chariots or mules and honour his kingly head.’ ...

But ... cavalry was taking over chariotry in Assyria by the ninth century BC and the king Shalmaneser III (858-823 BC) is depicted as riding on horseback. Thenceforward the monarch as a warrior on horseback became the accepted convention in the ancient Orient. By the seventh century BC momentous re-alignments of power were taking place, and new people with a tradition of mobile horsemanship from the west Asiatic steppe were establishing themselves in the ancient centres of authority; Niniveh was destroyed by the Medes in 606 BC, Babylon conquered by Cyrus, founder of the Persian Achaemenid dynasty, in 539 BC. The tribes known to the Assyrians as the Ishkuzai and Gimirrai (the Scythians and Cimmerians) were raiding the Caucasian kingdom of Urartu from the time of Sargon II (721-705) ... These peoples all shared economy and military structure based on the mastery of the ridden horse and the use of the bow, barbarian and at least partly

‘God’s sons’, see Mannhardt 1875; Biezais 1975. In addition, there are useful comparative studies: Wagner 1960; Michalski 1961; Ward 1968; O’Brien 1997. Excepting Michalski, however, these and some other authors (as well as Güntert 1923: 262-3) also compare the divine twins of several other Indo-European peoples (Celtic, Germanic, Slavic), but these twins are either not associated with both horses and the dawn, or one may suspect an influence of the Graeco-Roman Dioskouroi/Dioscuri.

²⁷Piggott 1992: 48; cf. also *ibid.* 41: “...we come to the beginning of one of the great chapters of ancient history; the development of the light two-wheeled chariot drawn by paired horses as a piece of technology and as an institution within the social order as an emblem of power and prestige. Chariotry was to play its part, in some form or another, not only in the ancient Near Eastern Akkadian world from soon after 2000 BC, but soon in Egypt, in the Hittite world and the Caucasus; Mycenaean Greece follows, then India, China and the Levant; barbarian northwest Europe and the Mediterranean and North Africa westwards to Spain by the seventh century BC, in Britain finally by the second century BC. As a widespread symbol of élite transport for monarch and nobles the chariot, and the mystique of chariotry, was to lose its prestige in favour of the ridden steed by the first millennium BC, but throughout the previous thousand years it had embodied for much of the known world monarchy in motion.”

²⁸According to Bethé (1905: 1088), the earliest mention of the Dioskouroi is in the 8th or 7th century BCE inscription of the sacred rock of the city of Thera.

nomadic in origin... The use of the chariot in ceremony and war dwindled...

*The Iliad's horsemanship and chariot warfare is therefore that of late Mycenaean Greece as imagined by the poets of five centuries later... riding as well as chariot-driving took place in the Olympic Games from 648 BC... By the seventh century cavalry was becoming a component in Greek armies and soon riding was accepted as part of the necessary education of a young gentleman..."*²⁹

M. A. Littauer has shown that P. A. L. Greenhalgh (1973) is wrong in his thesis that "the 'Homeric Hippêes', consistently represented by Homer as chariot warrior and driver, actually consisted in the Dark Age of mounted pairs, a warrior (who dismounted to fight) and a squire. G. presents abundant pictorial evidence for such pairs from the late seventh century on, but this evidence does not extend to the Geometric period. To support his thesis, he cites the appearance of horseback riders ... in the Bronze Age. But these are casual and sporadic riders, such as one would expect to find wherever horses were used for any purpose... The weaponry is clear in the case of the of Assyrian mounted warriors of the ninth century — though these are not in fact a 'very important arm alongside chariotry' (44), but still greatly inferior in numbers. These warriors always go in pairs, translated directly from the chariot: the bowman and the driver, who still holds the reins of both horses, both riders with cramped and unhorsemanlike seats. These Assyrians use the weapon they used in the chariot and, no matter how awkwardly at first, they persist in fighting mounted, thus continuing their chariot-fighting tradition. The Greek warriors shown on seventh-century vases carry light spears and do not attempt to fight from horseback, any more than did their chariot-borne ancestors of the Bronze or Iron Age who are illustrated in art and literature. And a warrior with as much armor as the Greek warrior carries was more apt to have come out of a chariot than to have started mounted..."³⁰

Vedic *aśvín-* 'possessed of horses'³¹ seems to correspond to Homeric *hippeús* and *hip-pótēs* (in Homer always in Epic nominative *hippóta*). In the *Iliad* *hippeús* denotes 'one who fights from a chariot' (opposed to *pezós* 'fighter on foot')³² (2,810); used either of

²⁹Piggott 1992: 69-71.

³⁰Littauer [1970] in Littauer & Crouwel 2002: 63f.

³¹Debrunner (1954: 332-335) notes that the suffix *-ín-* competes with *-vant-* and *-mant-* and is preferred in characterizations of living beings, including proper names like *Aśvín-*. Cf. also Güntert (1923: 259): "Das Wort *aśvín-* ist völlig klar: 'der Rosse besitzt', das Wort geht also auf die tüchtigen Wagenlenker, die im Wettfahren die schöne Sountochter errangen."

³²Cf. *Iliad* 8,59 *pezoí th' hippêés te*; 11,150-151 *pezoí mèn pezoüs ólekon pheúgontas anágkēi, hippêís d' hippêas...* (translated by Plath 1994: 113 as follows: 'Fusssoldaten vernichteten zwangsläufig fliehende Fusssoldaten, Wagenkämpfer die Wagenkämpfer'). A similar contrast prevails in Vedic India: "In the earliest Vedic texts the fighters appear grouped by clans (*viś*), with the men on foot and their leaders on chariots; the

‘the driver’ or of ‘the hero who fights’ (12,66; 15, 270); also of ‘one who drives in a chariot-race’ (23,262); the meanings ‘horseman, rider, cavalryman’ and ‘groom’ are attested from later texts.³³ In Homer, *hippeús* and *hippóta* are honorifics of several heroes (Peleus, Nestor, Tydeus, Oineus, Patroclus) and as such may go back to the companions (*equeta* > *hepétēs*) of the Mycenaean king (*wanaks*), noblemen who according to Linear B texts (PY Sa 787, 790) had chariots.³⁴

In the Ṛgveda, there are many references to chariot racing, but never to riding contests.³⁵ Similarly, the chariot is used in battles, but cavalry or riding in a battle is never mentioned in the Ṛgveda.³⁶ This does not mean that riding was unknown to the Ṛgvedic people, but references to riding are very few.³⁷ Even the sacrificial horse of the Vedic *asvamedha* is yoked to a chariot immediately before its immolation.³⁸ The chariot maintains its prestige and importance over cavalry even later in India: *“In the Epic age we have, indeed, cavalry, but unorganized... Horse-back riding is so common, in peace as well as war, that we are rather surprised at the indifferent riding displayed; for the cavalry-men are mainly conspicuous through falling off their horses, quite often from fear alone. They are generally grouped with the ... elephant-riders, as a force antithetical to the main strength of the army, the car-men.”*³⁹

This textual evidence agrees with the archaeological testimony for the arrival of mounted nomadism to the Indo-Iranian borderlands. Terracotta figurines of horse-riders are known from the first two strata of Pirak near the Bolan Pass in Pakistani Baluchistan.⁴⁰ They are relatable to the Yaz I culture of southern Central Asia, which succeeded the BMAC around 1350 BCE. The Yaz I culture in turn seems to have come from the steppes of Ukraine and southern Russia and appears to signal the arrival of Proto-Iranian speakers to Central Asia. Proto-Iranian speakers seem to have invented the stirrup — made of rope

chariot fighter is regarded as superior [Atharvaveda 7,62,1]” (Scharfe 1989: 197).

³³Cf. Liddell & Scott 1940: 833b s.v. *hippeús*.

³⁴Cf. T. B. L. Webster in Wace & Stubbings 1962: 457.

³⁵Cf. Zimmer 1879: 291-292.

³⁶Cf. Zimmer 1879: 294-295. Zimmer points out that in the context of battle and racing, *ārvatā* ‘with horse’ (in ṚV 1,8,2 and elsewhere) refers to a chariot, not to horseback riding as interpreted by Grassmann, just like in Homer *aph’ hippōn* ‘from the horses’ always means ‘from the chariot’.

³⁷Cf. Zimmer 1879: 295-296, where ṚV 1,162,17; 1,163,9; and Atharvaveda 11,10,24 are quoted. Falk (1994: 93-94) has found only two passages (ṚV 1,162,17 and 5,61,2-3) which unambiguously refer to riding; he mentions five further places in the Ṛgveda which have been suspected to refer to riding, but finds other interpretations for them possible or even probable. Cf. also Scharfe 1989: 193: *“Riding was known even in the time of the Ṛgveda but was still uncommon, and the image of riding men inspired ridicule: ‘The men have spread their thighs like women in childbirth.’ [ṚV 5,61,3]”*

³⁸Cf. Baudhāyana-Śrautasūtra 15,24; Āpastamba-Śrautasūtra 20,16,1ff.

³⁹Hopkins 1889: 206-207.

⁴⁰Cf. Jarrige and Santoni 1979: I, 361; 365-366.

or thong and/or wood and not preserved archaeologically⁴¹ — and therewith mounted warfare. They spread to Siberia as well, which c. 1000 BCE led to the formation of the long-lasting Scythian/Saka culture of the Eurasian steppes.⁴²

The Ásvins and the Dioskouroi are twins. Their dual number seems to be largely due to their being the divinized chariot team.⁴³ The chariot team normally consisted of two men, the chariot warrior, who concentrated on fighting or hunting,⁴⁴ and the charioteer, who drove the horses and took care of them and assisted in other ways as well: *“the driving of the chariot with its trained and mettlesome pair of horses demanded a skilled charioteer, whether for solemn parade and festive or ritual display, or for the more risky exploits of hunting or war. Here the close team-work necessary between high-ranking warrior and passenger meant that the two were often of equal social status...”*⁴⁵

The existence of a two-man team associated with the chariot⁴⁶ in the Sintashta-Arkaim culture of the southern Urals (c. 2200-1800 BCE) is suggested by a burial at Sintashta (see fig. 1). Here the warrior was buried together with his weapons and his car at the

⁴¹Cf. Littauer 1981 (reprinted in Littauer & Crouwel 2002: 439-451).

⁴²Cf. Pärpola 2002a: 68; 81-83; 2002b: 246-248. In the meanwhile, new radiocarbon dates have put the beginning of the Yaz I culture down from c. 1500 to c. 1350 BCE (cf. Cattani 2004 [2005]: 312-313).

⁴³Explaining the Ásvins as the divinized chariot team is one of the leading themes of the present paper. Although I had come to this idea independently, it is not a new one, but has already been proposed by Friedrich Cornelius (1942: 64-65 and 243) — of course, his conclusion about the Proto-Indo-European origin of the Ásvins and the chariot needs adjustment: *“Neben dem Himmelsgott tritt am klarsten das Götterpaar der beiden ‘Himmelssöhne’ hervor. Sie sind die himmlischen Nothelfer. Den Indern erschienen sie als die beiden Kämpfer auf einem Streitwagen. Die Besatzung eines Streitwagens bestand nämlich regelmässig aus zwei Männern, dem Wagenlenker und dem Fechter. Daher wurden auch die Nothelfer, die rasch wie die Wagenlenker zur Stelle waren, stets als ein Paar geschaut... Der Wagenlenker war gewöhnlich auf Erden von geringerem Rang als der Streiter. Das hat zu der Sage geführt, dass die Himmelssöhne Zwillinge von verschiedenen Vätern seien: nur der eine ist Sohn des Himmelsgottes, der andere stammt von einem sterblichen Manne. Da diese Genealogie bei Griechen und Indern übereinstimmt, so wird sie und mit ihr ihre Voraussetzung, der Stand des Götterpaares auf dem Streitwagen, gemeinindogermanisch sein... [p. 243] Die Ásvin auf dem Streitwagen RV VIII 5, 28... Ganz sekundär scheint mir die Deutung auf Morgenstern und Abendstern, die aus lettischen Liedern erschlossen wird. Eher könnte der Morgenstern als der Wagen gedacht gewesen sein, auf welchem beide Göttersöhne standen. — Wenn auf manchen alten Abbildungen des Streitwagens der Wagenlenker weggelassen ist, so ist das zeichnerische Abkürzung: gerade der Bogenschütze auf diesen Bildern braucht ja beide Hände für die Waffe und kann sich nicht mit den Zügeln abgeben...”*

Yet Cornelius has been completely ignored in subsequent studies of the Ásvins, except by Stig Wikander (1957: 78), who summarizes and gently rejects the proposal: *“Cornelius voyait dans les Ásvins le cocher et le guerrier noble sur le char de guerre hypostasiés en divinités — l’équipage d’un char consiste de deux personnes, mais de rang différent. Ceci expliquerait et l’équivalence des Ásvins et leur différence (voir plus bas). — Mais, sans parler des passages qui semblent indiquer qu’il y avait à l’origine deux chars des Ásvins [fn.: Bergaigne, La religion védique II, p. 509], les différences qu’on peut déceler entre les deux divinités ne rentrent pas dans le cadre de cette explication, qui pourtant est la moins artificielle qu’on ait proposée jusqu’à présent.”*

⁴⁴In India, the chariot warrior mostly shot arrows from the car, while in Greece the warrior fought on foot and used the chariot for transport.

⁴⁵Piggott 1992: 47.

⁴⁶Initially, the team may have consisted of the aristocratic owner of a one-man proto-chariot and his groom.

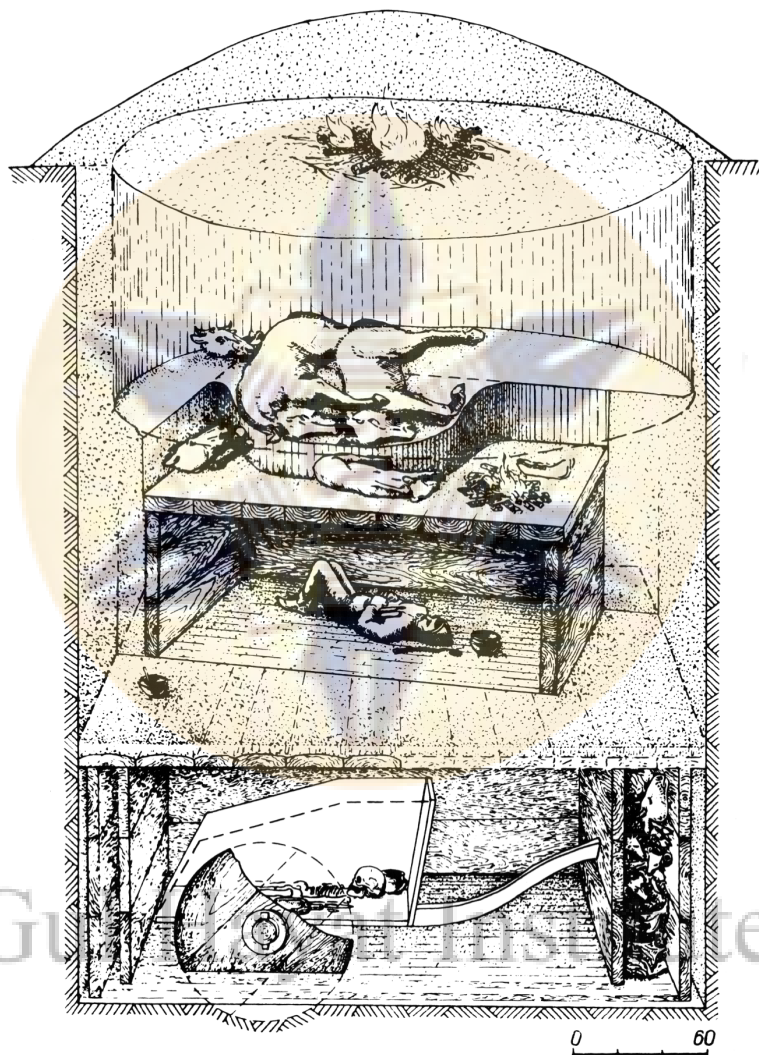


Figure 1: Reconstruction of the burials 10 and 16 in the area SM south of the Great Kurgan at Sintashta. After Gening et al. 1992: I, 154 fig. 72.

bottom of the grave, while another man was buried together with a pair of horses and a burning fireplace in an upper chamber.⁴⁷

In the Vedic religion, the charioteer and the chariot fighter are expressly equated with the Aśvins. When, in the royal consecration, the king goes to the house of his charioteer (*samgrahītār-*), he “*prepares a cake on two potsherds for the Aśvins; for the two Aśvins are of the same womb; and so are the chariot fighter [savyaṣṭhār-] and the driver [sārathi-] of the same womb (standing-place), since they stand on one and the same chariot: hence it is for the Aśvins*”.⁴⁸

Of the Greek Dioskouroi, too, one was a fighter and the other took care of horses: according to their standing Homeric attributes (e.g., Iliad 3,237), Poludeukes was good at fistfighting (*pūks agathós*), while Kastor was good at taming horses (*hippódamos*). The Ṛgveda, too, differentiates between the two Aśvins: “*one of you is respected as the victorious lord of Sumakha, and the other as the fortunate son of heaven*”.⁴⁹ This passage suggests that *divó nāpātā* is an elliptic dual, based on the name of just one member of the pair,⁵⁰ just like *nāsatyā*, derived as it seems to be from the charioteer member of the team. *Nāsatyā-* is a derivative of **nasati-* ‘safe return home’⁵¹ and belongs to the same Proto-Indo-European root **nes-*⁵² as the Greek agent noun *Néstōr* — known from Homer as a *hippóta* and a masterly charioteer⁵³ — and refers to the charioteer’s task of bringing the hero safely back from the battle.⁵⁴ In the Ṛgvedic verse just quoted the “victorious lord of Sumakha” appears to be the chariot-warrior. The meaning of the words *sú-makha-* and *makhá-*, *-makhas-* is debated, but this context suits the old etymology that connects them with Greek *mákhē* ‘battle, combat’ and *makhésasthai* ‘to fight’.⁵⁵

⁴⁷Detailed description in Gening et al. 1992: I, 144-155.

⁴⁸Śatapatha-Brahmaṇa 5,3,1,8, transl. Eggeling 1894: III, 62. The Mādhyandina redaction of the Śatapatha-Brahmaṇa has the compound *savyaṣṭhāsārathī* in 5,2,4,9; 5,3,1,8 and 5,4,3,17. The corresponding passages of the Kāṇva redaction (7,1,2,9; 7,1,4,8 and 7,3,3,16) has *savyasthasārathī*. Cf. further Taittirīya-Brahmaṇa 1,7,9,1 *savyeṣṭhasārathī*, and Atharvaveda 8,8,23 *īndrah savyaṣṭhās candrāmāḥ sārathīḥ*.

⁴⁹RV 1,181,4 *jiṣṇūr vām anyāḥ sūmakhasya sūrīr divó anyāḥ subhāgaḥ putrá ūhe*, transl. Insler 1996: 183.

⁵⁰A similar case is the elliptic plural *Castores* ‘Castor and Pollux’ of Latin (which lacks the dual) for the Greek dual *tō Kástore* (cf. Eitrem 1902: 6, n. 3).

⁵¹Cf. Güntert 1923: 259; Gotō 1991: 980; 2005; Mayrhofer 1996: II, 39; Oberlies 1993: 172 n. 6.

⁵²Cf. LIV 1998: 409-410; LIV Add. 2001: 114; Mayrhofer 1996: II, 30; 39.

⁵³Cf. Iliad 23,301-350 and 638-642.

⁵⁴Cf. Frame 1978: 96-99, 125ff. In the Indian epics, “[t]he rule of protecting the knight is formal. ‘In battle the knight, if confused, must be guarded by the charioteer’; or, ‘ever must the man of the war-car be guarded’; and when the charioteer risks his life in saving his master, he does so because he ‘bears in mind the rule’” (Hopkins 1889: 196, with references).

⁵⁵Cf. Mayrhofer 1996: II, 288 (the other principal meaning suggested by some contexts is ‘bountiful, munificent’ — a characteristic expected in a victorious warlord). Cf. Güntert (1923: 258): ‘kampftüchtig?’.

The Ásvins and dual kingship

From the beginning chariot was one of the foremost symbols of royalty.

The Amarna archive of Egypt has preserved 44 letters of the fourteenth century BCE where the rulers of Egypt, Babylonia, Assyria, Mitanni, Arzawa (to the west of Cilicia), Alašia (Cyprus) and Hatti (the Hittite country) correspond with each other more or less on the basis of equality, addressing each other “brothers”. The great importance attached to the chariot by the kings is evident from the fact that it is, along with horses, regularly included in the stereotyped salutation formula.⁵⁶ For example, in a letter from Tušratta, the king of Mitanni, to Nimmureya the king of Egypt, this formula has the following wording: “*For me all goes well. For you may all go well. For your household, for my sister, for the rest of your wives, for your sons, for your chariots, for your horses, for your warriors, for your country, and for whatever else belongs to you, may all go very, very well*”.⁵⁷

In the great epics of India, the situation is very similar:

“The knight of the war car: A few words in regard to the personal position of the knight of the chariot... The well-born knight, cūra, sometimes vīra (though this may not imply nobility), is separated by various grades from those around him.... In nearest proximity is the charioteer, his friend it may be, but socially beneath him. Around him are certain followers and retainers. Of these, supposing him to be a prince or high noble, we must make three divisions. First and nearest stand his ‘wheel-guard’, usually one knight each at the sides of the car. These are no humble followers, but his equals in rank, although... often his inferiors in age. It is an honorable office for young knights so to ‘guard the wheels’ of a great champion... The knight is the head of his clan. He is the captain of a large family body. But in the vast hosts depicted in the Epic, we find knights or kings standing at the head of whole hosts, comprising not only the family or clan but hired troops. These bhr̥ta or mercenaries form the third group behind the knight. They are of no importance except as a mass. The knights pay little attention to them, and stand to them in a merely formal relation. But between these two — the family friends or near relations guarding the wheel, and the foot-herd behind, padānugāḥ — stand the nearer ‘followers’ of the knight... anugāḥ or anucarāḥ ... those immediate followers representing what remains of the clannish corps of an older age... There seems to be a certain personal familiarity between these ‘followers’ and their knight, explainable only on such an assumption... The

⁵⁶Cf. Moran 1992: xvi, xxxix, xxiii.

⁵⁷EA 19 = BM 29791, transl. Moran 1992: 43.

knight in his chariot is equal to an army. Frequently we find thousands running from one mounted hero...”⁵⁸

The importance of the chariot as a symbol of nobility is clear from the above quotations. The vehicle of a defeated adversary went to the king, while the victorious soldier could take all other booty.⁵⁹

We have also seen that “*the chariot crew was normally two*”⁶⁰ and that “*the two were often of equal [aristocratic] status*”⁶¹. Mycenaean paintings show two men in a chariot.⁶² A Syrian seal from the early half of the second millennium BCE shows a chariot pulled by two horses and driven by a charioteer behind whom stands another man, while “*the motif of ‘vanquished enemy beneath the team’s hooves’ ... signifying ‘victory’*” suggests military use.⁶³

In most texts describing the Vedic horse sacrifice, the sacrificial horse is escorted during its year-long roaming abroad by an army 4 x 100 men of different social classes.⁶⁴ The most detailed description of this army is given in Vādhūla-Śrautasūtra 11,10, though here the army is only protecting the horse during the night preceding the first day of the actual horse sacrifice. According to the Vādhūla-Śrautasūtra, there are 4 x 300 chariot teams and 4 x 300 footmen; each group of 300 is divided into four batches, 75 on each of the four sides of the horse. The four different kinds of chariot teams are the following: (1) 300 royal princes armed for battle who are clad in bronze mail on both sides, with charioteers armed for battle, driving chariots covered with overshields and yoked with four horses;⁶⁵ (2) 300 non-royal warriors⁶⁶ armed for battle, with charioteers not armed for battle, driving chariots covered with overshields and yoked with three horses;⁶⁷ 300 heralds and headmen not armed for battle, driving chariots not covered with overshields and yoked with two horses;⁶⁸ 300 meat carvers and charioteers, who drive on off-track

⁵⁸Hopkins 1889: 203-205.

⁵⁹Cf. Gautama-Dharmasūtra 10,20-21 *jetā labhate sāmgrāmikaṃ vittam / vāhanaṃ tu rājñah*. Cf. Falk 1994: 96.

⁶⁰Piggott 1992: 57; Piggott here quotes Akkadian and Egyptian evidence of the second millennium BCE, for which cf. also the illustrations in Littauer & Crouwel 2002: 55; 69; 78-81.

⁶¹Piggott 1992: 47.

⁶²Cf. Littauer & Crouwel 2002: 59; 73; 76; 95.

⁶³Littauer & Crouwel 2002: 28-29.

⁶⁴Cf. Śatapatha-Brāhmaṇa 13,4,2,5; Taittirīya-Brāhmaṇa 3,8,5,2-4; Baudhāyana-Śrautasūtra 15,1; Śāṅkhāyana-Śrautasūtra 16,1,16; Āpastamba-Śrautasūtra 20,5,13-14.

⁶⁵Vādhūla-Śrautasūtra 11,10,1 *trīṇi śatāni rājaputrāṇām ubhayālohakavacānām saṃnaddhānām saṃnaddhasārathīnām vitatavarūthānām caturyujām*.

⁶⁶These are called *ugra*- ‘powerful, noble’ in Āpastamba-Śrautasūtra 20,5,14.

⁶⁷Vādhūla-Śrautasūtra 11,10,1 *trīṇi śatāni arājñām saṃnaddhānām asaṃnaddhasārathīnām vitatavarūthānām triyogānām*.

⁶⁸Vādhūla-Śrautasūtra 11,10,1 *trīṇi śatāni sūtagrāmaṇīnām asaṃnaddhānām asaṃnaddhasārathīnām*

carts [yoked with one horse].⁶⁹

The Indian epics Mahābhārata and Rāmāyaṇa contain exaggerations describing “all the cars” as chariots drawn by four horses and driven by three charioteers, though this ideal “probably ... accurately describes the largest chariot used”: “for each car were two pole-horses, directed by one driver (dhuryayor hayayor ekaḥ ... rathī), and two outside horses fastened to the axle-end (pārṣṇi), and driven by one driver apiece (pārṣṇisārathi). The battle-cars were ‘like guarded cities’, and the horses had gilded trappings, hemabhāṇḍa. Each car was accompanied by ten or by fifty elephants.” (Hopkins 1889: 195)

According to the Sanskrit epics, in particular the Mahābhārata, “Often... the knight is his own driver. One kingly knight sometimes drives for another, as Krishna for Arjuna and Çalya for Karṇa. But the social position of the charioteer is, as seen from Çalya’s indignation ..., one inferior to the knight’s in the war-car. He only served for political purposes. ... the dialogue shows the position of the ordinary charioteer to be properly that of a high servant. Of kings the charioteers were not thought unequal to high station, and princes in distress adopt this mode of life by preference. Thus Nala becomes chief hostler, and passes his time in the stable, aṣṭaṣālā; and Nakula takes service as a horse-trainer. Sanjaya, however, the old charioteer, shares his old king’s hermitage.”⁷⁰

Having thus argued for the connection of the chariot and kingship and for the normally two-man occupation of the chariot, I think that among the features that the Aśvins share with their Greek counterparts we should even include the dual kingship, a suggestion not made before, as far as I can see. Among the Dorians of Sparta and Peloponnesos in general, the Dioskouroi were counted among the greatest gods,⁷¹ and they were widely worshipped in Greece as “the two kings” (ánake)⁷². According to Herodotus (5,75), their images accompanied the two kings of Sparta on war expeditions.⁷³

In India, the Buddhist tradition parallels the universal emperor wielding supreme polit-

[a]vitatavarūthānām dvi-yogānām.

⁶⁹Vādhūla-Śrautasūtra 11,10,1 *trīṇi śatāni kṣatīṣaṃgrahītṛīṇām vipathapatīṇām* [read: *vipathīṇām*]. On *vipathá-*, cf. Sparreboom 1983: 151f. The reading *vipṛthu* in Śāṅkhāyana-Śrautasūtra 14,72,3, if not a corruption of *vipathá-* ‘off-track cart’, suggests the meaning ‘not broad’ = ‘narrow’ = one-man chariot, cf. the *vipathá-* cart of *eka-vrātya* in Atharvaveda 15,2,1.

⁷⁰Hopkins 1889: 195.

⁷¹Cf. Bethe 1905: 1098ff.

⁷²Cf. Bethe 1905: 1088; Farnell 1921: 186, 188, 203-205, 217-218; Nilsson 1955: I, 407. Benveniste (1993: 310-312) considers (w)ánaks (Mycenaean *wa-na-ka*) as the most important royal title of the early Greeks. Unlike *basileús* (originally *g^w asileús*), which appears to have denoted a local chief or a respected man rather than a king, (w)ánaks is applied even to gods, especially the Dioskouroi (cf. also Odyssey 16,233 *Zeû ána...* in an address to Zeus Dodonaioi).

⁷³On the dual kingship of Sparta, cf. Wagner 1960: 235f.; Burkert 1985: 212. For dual kingship among early Germanic tribes, see Wagner 1960 and Ward 1968: 50ff.

ical power with the *buddha*- wielding supreme spiritual power.⁷⁴ The idea of such a dual kingship manifests itself above all in the integral connection of *kṣatrá*- ‘political power’ and *brāhmaṇa*- ‘sacred power’, the two concepts being represented by the king and the royal chief priest, the *purohita*.⁷⁵

This dual kingship is associated with the chariot⁷⁶ and therewith the Aśvins for, according to the Jaiminiya-Brāhmaṇa (3,94), “*formerly the kings’ chief priests used to be their charioteers so that they could oversee that the king did not commit any sin*”.⁷⁷ The Āśvalāyana-Gr̥hyasūtra (3,12) details the royal purohita’s duties in the battle. Standing behind the chariot, he makes the king put on the coat of mail, hands over the bow and the quiver to the king, blesses the weapons and the chariot with its horses. Then the purohita mounts the chariot and makes the king repeat the hymn R̥gveda 10,174, in which the king asks Bṛhaspati to help him roll over his rivals. In the battle hymn called *āpratiratha*-, which the purohita recites next, Bṛhaspati, the charioteer and purohita of Indra, the king of gods, is asked to “fly around” in his chariot, warding off enemies and helping our chariots.⁷⁸

In R̥gveda 2,24, Bṛhaspati is often mentioned as an excellent charioteer and winner of races. In the chariot race of the *vājapeya* sacrifice, the sacrificer announces that he will win the race with the help of Bṛhaspati. Indeed, the Śatapatha-Brāhmaṇa states that “*this (vājapeya) is a sacrifice of the Brāhmaṇa, inasmuch as Bṛhaspati sacrificed with it; for Bṛhaspati is brahman, the priesthood, and the Brāhmaṇa is brahman, the priesthood*”.⁷⁹ It seems that the *vājapeya* sacrifice was prescribed for the royal purohita,⁸⁰ both before and after the *vājapeya*, the sacrificer was supposed to perform the *savá*- rite of Bṛhaspati,⁸¹

⁷⁴ Thus 64 brahmins tell Gotama’s father King Suddhodana: “*You will have a son. And he, if he continues to live the household life, will become a Universal Monarch; but if he leaves the household life and retires from the world, he will become a Buddha, and roll back the clouds of sin and folly of this world.*” (Introduction to the Jātaka, vol. I, p. 47ff., slightly modified transl. of Warren 1896: 43). Harvey (1990: 16) notes: “*This paralleling of a Cakkavatti and a Buddha is also made in relation to other elements of Gotama’s life, and indicates the idea of a Buddha having universal spiritual ‘sovereignty’ ... over humans and gods. It also indicates that Gotama renounced the option of political power in becoming a Buddha.*”

⁷⁵ Cf. Hopkins 1889: 95-106; Rau 1957: 117ff.; Gonda 1966: 62ff.; Scharfe 1989: 112ff.

⁷⁶ Cf. also Piggott 1992: 56: “*As for its use and social status, the Vedic ratha was certainly the prerogative of chieftains (‘kings’) and their entourage of archer-warriors.*”

⁷⁷ Jaiminiya-Brāhmaṇa 3,94 *purā rājabhyah purohitā eva rathān saṃgrhṇanty aupadraṣṭyāya: ned ayaṃ pāpaṃ karavad iti.*

⁷⁸ RV 10,103,4 *bṛhaspate pāri diyā rāthena rakṣohāmītrāṃ apabādhamānaḥ / prabhañjān sēnāḥ pramṛṇo yudhā jāyann asmākam edhy avitā rāthānām.*

⁷⁹ Śatapatha-Brāhmaṇa 5,1,1,11 *sá vá eśá brāhmaṇasyaiva yajñāḥ / yád enena bṛhaspátir áyajata brāhma hi bṛhaspátir brāhma hi brāhmaṇo...*

⁸⁰ Cf. Lāṭyāyana-Śrautasūtra 8,11,1 *yaṃ brāhmaṇā rājānaś ca puraskurvīran sa vājapeyena yajeta.*

⁸¹ Cf. Lāṭyāyana-Śrautasūtra 8,11,12. *bṛhaspatisavenaiva purastād upariṣṭāc ca pariyajeteti dhānājayaḥ;* Śāṇḍilyāyana and Gautama prescribe different rituals in 8,11,13-14.

and it was by performing the *br̥haspatisavá-* sacrifice that Br̥haspati became the purohita of the gods.⁸²

The charioteer⁸³ and the royal priest were expected to be wise and crafty.⁸⁴ *Dasrá-* ‘having marvellous skill’ is one of the most distinctive epithets of the Aśvins, and in the epic times, it became the proper name of one of them. In the Ṛgveda, “*this attribute often refers to their skill in chariot driving*”.⁸⁵ The Aśvins are also called *purudām̐sa(s)-* ‘having many skills’⁸⁶ which is etymologically related to the Greek epithet *poludēnēs* ‘having many counsels, plans or arts; very wise’.⁸⁷

There is a problem with the dual kingship of the Aśvins proposed here. In his book, *Das Königtum im Rig- und Atharvaveda* (1960), Bernfried Schlerath finds no evidence for the Aśvins being themselves kings,⁸⁸ although they are mentioned as bestowers of royal power⁸⁹ — especially because they make the king’s chariot victorious.⁹⁰ However, once “the two sons of heaven” are addressed as kings (*rājānā*).⁹¹

In his discussion of this verse, Geldner notes that while the *dīvo napātā* elsewhere are the two Aśvins, they do not seem to fit the context here, and he suggests that Mitra and Varuṇa are meant instead.⁹² *Rājānau* ‘O two kings’, is the address in the first half of verse 11 in the Aśvin hymn Ṛgveda 10,39, and *aśvinā* in the second half of this verse.⁹³ As

⁸²Cf. Pañcaviṃśa-Brāhmaṇa 17,11,5-6; Weber 1893: 768-770.

⁸³In Iliad 23,301ff. King Nestor, himself a wise and experienced charioteer, gives counsel to his son Antilochus who takes part in the chariot race at Patroclus’ funeral games: “*The horses of the others are swifter, but the men know not how to devise more cunning counsel than thine own self. Wherefore come, dear son, lay thou up in thy mind cunning of every sort, to the end that the prizes escape thee not... by cunning doth charioteer prove better than charioteer...*” (transl. Murray 1934: II, 517).

⁸⁴The king and his brahmin purohita are equated with “will” (*krātu-*) and “intelligence” (*dākṣa-*): “and the priesthood is the conceiver, and the noble is the doer” (Śatapatha-Brāhmaṇa 4,1,4,1 *krātūdākṣau ha vā asya mitrāvāruṇau ... śaśākaiva brāhmā kartā kṣatṛīyaḥ*; transl. Eggeling 1885: II, 270).

⁸⁵Gonda 1959: 115 with copious references. Hopkins (1889: 197) notes on the basis of the epics: “*The art of the driver consisted not alone in driving well and fast, and keeping the car straight, for this indeed was but the foundation of his science. His true art consisted in wheeling and turning, in bringing the car rapidly about, so as to attack the antagonist with such speed from all quarters that the chariot seemed to advance from all sides at once...*”

⁸⁶Cf. RV 1,3,2; 6,63,10; 7,73,1; 8,9,5; 8,87,6; Maitrāyaṇī Saṃhitā 4,12,6; Taittirīya-Brāhmaṇa 2,5,4,5; cf. Zeller 1990: 78, 172, 178.

⁸⁷See Schmitt 1967: 159-161; Mayrhofer 1992: I, 688-9, 712.

⁸⁸In the view of ancient experts of old legends, the Aśvins had been kings, cf. Yāska, Nirukta 12,1: *rājānau punyakṛtāv iti aitiḥāsikāḥ*.

⁸⁹RV 1,157,6c *ātho ha kṣatṛām ādhi dhattha ugrā*.

⁹⁰Schlerath 1960: 10-12.

⁹¹RV 3,38,5cd *dīvo napātā vidāthasya dhībhīḥ kṣatṛām rājānā pradīvo dadhāthe*.

⁹²Geldner 1951: I, 380.

⁹³RV 10,39,11 *nā tām rājānāv adite kútaś canā nāmho aśnoti duritām nákir bhayām / yám aśvinā suhavā rudravartanī purorathām kṛṇuthāḥ pátinya sahā //*

the first half also addresses Aditi, Geldner⁹⁴ suggested that this half verse was originally composed for an Āditya hymn and relates to Mitra and Varuṇa. Mitra and Varuṇa are expressly invoked in verse 9 of the Aśvin hymn Ṛgveda 6,62.

Mitra and Varuṇa as doubles of the Aśvins

According to the Kāṇva hymn Ṛgveda 8,35, verse 13, the two Aśvins are *mitrāvāruṇa-vantā utā dhārmavantā*, ‘accompanied by Mitra and Varuṇa as well as by Dharma’. The primary meaning of *mitrá-* (n.) is ‘contractual alliance, pact of friendship’⁹⁵ and of *vāruṇa-* probably ‘oath, true speech’.⁹⁶ Thus these personified social concepts — important for illiterate tribal societies — were associated with the Aśvins.⁹⁷ In Zarathuštra’s religion, such social principles, including *miθra-*, are aspects of the highest god Ahura Mazdā. I have suggested⁹⁸ that the personification of the Vedic Ādityas⁹⁹ and the Avestan Aməša Spəntas¹⁰⁰ was inspired by the Assyrian religion, where deified social principles and virtues are aspects of Aššur, the highest god: they can be compared to the advisors surrounding the great king.¹⁰¹ The Assyrian religion is likely to have influenced Proto-Indo-Aryan religion during the late 20th and early 19th century BCE, when Assyrian traders operating from Syria and Cappadocia imported tin from Central Asia. Ideological influence is evidenced by the Syrian and Egyptian motifs adopted in seals of the Bactria and Margiana Archaeological Complex. Around 1380 BCE, the Mitanni Aryans invoked Mitra and Varuṇa, Indra and the Nāsatyas as their oath divinities. The Indo-Aryan speakers therefore had all these deities in their pantheon before they entered South Asia.

The dual deity Mitra-and-Varuṇa seems to be a double of the Aśvins, a double which

⁹⁴Geldner 1951: III, 192.

⁹⁵Cf. Mayrhofer 1996: II, 354f. On Mitra and the meaning of his name, see also especially Brereton 1981: 16ff.

⁹⁶The meaning and etymology of Varuṇa’s name is a much debated issue (cf. Brereton 1981: 63ff.; Mayrhofer 1996: II, 515f.). Paul Thieme (e.g. 1973: 347) has suggested that *vāruṇa-* originally meant ‘true speech, [spoken] truth’ and is derived from the Proto-Indo-European root **ver-* ‘to speak solemnly, to speak with truth’ (**uerh₁-* ‘sagen’ in LIV 1998: 630f.; LIV Add. 2001: 174) and is etymologically related to *vratā-* ‘solemn promise, oath’ (Avestan *urvāta-*), Latin *vērus* ‘true’, Greek *eréō* ‘I shall speak’ etc.

⁹⁷The Nāsatyas are, together with Mitra and Varuṇa, and Indra, oath deities sworn by in the Mitanni treaty of c. 1380 BCE. In RV 8,35,12 and 1,120,8, the Aśvins are invoked to guard against the breach of a treaty. An etymology of the name Nāsatya quoted by Yāska on Nirukta 6,13 shows that they were regarded as protectors of the truth: “they are true and not false (*na-asatya*)”, says Aurnāvābha; “they are promoters of the truth”, says Āgrāyaṇa (*satyāṁ eva nāsatyāṁ ity aurnāvābhaḥ / satyasya praṇetārāv ity āgrāyaṇaḥ*). The Dioskouroi, too, were oath deities; cf. Farnell 1921: 193; 228; Güntert 1923: 271; Ward 1968: 26f.

⁹⁸See Parpola 2002a: 87–90.

⁹⁹On the Ādityas, see especially Brereton 1981.

¹⁰⁰On the Aməša Spəntas, see especially Narten 1982.

¹⁰¹Cf. Güntert 1923: 194.

early on overtook the Aśvins' royal function.¹⁰² The Śatapatha-Brāhmaṇa (4,1,4) actually describes the relationship between Mitra and Varuṇa as that prevailing between the king and his priest.¹⁰³ Yet the Aśvins, as the deified chariot-team corresponding to the Dioskouroi, seem to be the original deities of dual kingship. The chariot was a most prominent status symbol in the Sintashta-Arkaim culture, where double burials of the chariot warrior and the charioteer or groom are in evidence (see above, fig. 1).

The association of the chariot with royalty was retained among the Proto-Indo-Aryans of Mitanni as well as the Vedic and Epic Indo-Aryans. Mitanni Aryan kings bore such names as Sauštattar and Parsatattar, both denoting 'chariot warrior', if indeed they can be interpreted as *savyaśthātār- and *prasthātār-.¹⁰⁴ King Tušratta / Tuišeratta = *Tvaiša-ratha = Ṛgvedic tveṣā-ratha- 'one having an impetuous chariot' provides a widely accepted example.¹⁰⁵ Some other Mitanni proper names, such as *Pritāšva and *Priyāšva,¹⁰⁶ might characterize their owners as caring for chariot horses. *Prasthātār- 'chariot warrior' suspected to be the proper name of a Mitanni king is part of the title of the *prati-prasthātār*- priest who along with *adhvaryū*- is in charge of the Vedic pravargya offering to the Aśvins. Vedic texts equate the Aśvins with this priestly pair,¹⁰⁷ where the *adhvaryū*'s title suggests that he originally functioned as the charioteer concerned with the way (*ādhvan*-).¹⁰⁸ The Ṛgveda¹⁰⁹ and later Vedic and Epic texts contain numerous proper names which refer to the chariot or its parts and to the horse.¹¹⁰

¹⁰²I have mentioned this hypothesis briefly in earlier papers (Parpola 2001; 2004 [2005]), but the evidence for it is presented more fully in this paper.

¹⁰³Schlerath (1960: 108) apparently did not understand this relationship to constitute a dual kingship: "*Nach dem Vorbild von Mitra und Varuṇa sollte man auch ein irdisches Doppelkönigtum gelegentlich erwarten.*"

¹⁰⁴See Parpola 2002a: 77f.

¹⁰⁵Cf. Mayrhofer 1974: 23f.; 1992: I, 686.

¹⁰⁶Cf. Schmitt 1967: 244.

¹⁰⁷Cf. Maitrāyaṇī Saṃhitā 1,9,1: 131,7; 2,8,1: 107,10 *aśvīnādhvaryū*; 4,5,4: 68,10 *aśvīnau vai devānām adhvaryū*; 4,13,8. 210: 15 *aśvīnādhvaryavam*; Kātha-Saṃhitā 28,5: 159,12 *aśvīnau vā adhvaryū*; 9,8: 110,18 *aśvīnādhvaryū*; TB 3,2,2,1 & Taittirīya-Āraṇyaka 5,2,5 *aśvīnau hī devānām adhvaryū āstām*; Taittirīya-Āraṇyaka 3,3,1 *aśvīnādhvaryū*; ŚB 1,1,2,17; 3,9,4,3 *aśvīnāv adhvaryū*; Aitareya-Brāhmaṇa 1,18,2 & Gopatha-Brāhmaṇa 2,2,6: 170,13-15 *aśvīnau vai devānām bhiṣajāv aśvīnāv adhvaryū tasmād adhvaryū gharmaṃ sambharatas*.

¹⁰⁸Cf. Parpola 2002a: 78.

¹⁰⁹Cf. e.g. Śrutaratha- and Priyāratha- in RV 1,122,7 and 5,36,6.

¹¹⁰See Velze 1938: 89-91. Cf. also Hopkins (1889: 183), according to whom in the Indian epics, "[t]he chariot gives the honourable title of rathin and atirathin to the knight... the knights are classified as 'those that have chariots', 'superior chariot-men', 'very superior chariot-men', etc. These terms were also employed as proper names... Proper names are also made by forming ratha into the end of a compound, as Vṛkaratha ..."

The Ásvins and Mitra-and-Varuṇa as the day sun and the night sun (the moon or the fire)

According to the Ṛgveda, the chariot of the Ásvins goes around the heaven and earth in one day.¹¹¹ In the āśvinaśāstra to the Ásvins, the same is said of the sun's horses.¹¹² In another verse of this latter hymn, the sun is further said to show the colours of Mitra and Varuṇa in the lap of heaven: his one appearance is infinitely white, the other one is black.¹¹³ Here the sun is conceived of as one divinity having two forms, the white day sun and the black night sun, and these two forms are connected with Mitra and Varuṇa. Some verses of the Ṛgveda suggest that the sun is the chariot of the Ásvins.¹¹⁴

According to the Ṛgveda (6,9,1ab) “*the white day and the black day*” — (*the pair of*) *light and darkness*¹¹⁵ — *manifestly turn around.*¹¹⁶ The colour terms here used of day and night, *árjuna-* ‘white’ and *kṛṣṇá-* ‘black’, are connected with the two members of the chariot team in the Mahābhārata. The mightiest warrior of the Pāṇḍavas is Arjuna, whose name means ‘white’. Arjuna's charioteer is the wise and crafty Kṛṣṇa, whose name

¹¹¹RV 3,58,8cd *rátho ha vām ṛtajā ádriṣṭāh pári dyāvāprthiví yāti sadyāh*.

¹¹²RV 1,115,3 *bhadrá áśvā haritāh sūryasya ... pári dyāvāprthiví yanti sadyāh*. In the Ṛgveda, the sun's chariot is usually pulled by seven horses, which may refer to the seven rays of the sun (cf. AV 7,107,1; RV 1,105,9), or to the seven months of the year, cf. Kirfel 1920: 20f.; Güntert 1923: 269f.; or to the seven heavenly rivers, cf. Lüders 1959: II, 688-691. Seven is a rather unnatural number as chariot horses. One would expect the original number to have been two. According to Homer (Odyssey 23,246 *Lámpon kai Phaéthonth'*, *hoí t' Eō póloi ágousi*), the chariot of the Dawn is pulled by two male colts called Lámpōs and Phaéthōn, both names meaning ‘bright, shining’. Homer (Odyssey 12,132) also mentions the feminine equivalents of these names, Lampetīē and Phaéthousa, as the names for the daughters of the sun-god Hēlios. In Ṛgveda 7,77,3b (*śvetám náyanāṁ sudṛśikam áśvam*), the goddess Dawn is said to drive a beautiful white horse (i.e. the sun), while in Ṛgveda 7,78,4cd she has ascended a chariot drawn by well-yoked horses (*āsthād rátham svadhāyā yujyāmānam ā yám áśvasaḥ suyújo váhanāṁ*). The Dioskouroi are called *leúkippoi* ‘possessing white horses’, once *leukópōloi* ‘possessing white colts’ (Pindar, Pythia 1,66). Their Theban counterparts, Zethon and Amphion, who likewise are twin sons of Zeus and horsemen, are “the two white colts of Zeus” (*leukò pōlō Díos*). On this basis it seems likely that the Ásvins were conceived of as the pair of horses yoked to the sun's chariot, and perhaps this is an older image of them than the chariot team of warrior and charioteer driving the sun's chariot. Cf. Eitrem 1902: 42ff.; Güntert 1923: 261 & 269f.; Burkert 1985: 212; Nagy 1979: 198-200; Parpola 2004 [2005]: 114f.

¹¹³RV 1,115,5 *tān mītrāsya varuṇasyābhićākṣe sūryo rūpām kṛṇute dyōr upāsthe / anantām anyád rūśad asya pājah kṛṣṇām anyád dharitāh sám bharanti*. Brereton (1981: 54) translates this verse as follows: “*In the lap of heaven, Sūrya takes on the (visible) appearance of Mitra and Varuṇa (for it) to be seen. The one face of him (is) shining without limit. The other, the dark one, his horses roll (back) up.*” He adds: “*In the last two lines, the poet describes the movement of the sun from east to west during the day, when its bright side shows, and from west to east at night, when, because its dark side is turned toward men, it is invisible.*” We shall return to this movement of the sun later on.

¹¹⁴Cf. RV 1,47,7cd *āto ráthena suvṛtā na ā gatam sākām sūryasya raśmibhiḥ*; RV 1,47,9ab *téna nāsatyā gatam ráthena sūryatvacā*; the chariot of the Ásvins and its various parts are often said to be golden (cf. e.g. Muir 1874: V, 240f.), just like the chariot of the sun (cf. Kirfel 1920: 20).

¹¹⁵*rājasi* is elliptical dual, mentioning only the darkness as one of the two sides of the sun (cf. RV 10,37,3cd).

¹¹⁶RV 6,9,1ab *āhaś ca kṛṣṇām āhar árjunaṁ ca ví vartete rájasi vedyābhiḥ*. Cf. RV 1,185,1d *ví vartete áhanī cakrīyeva*.

means ‘black’. Originally Kṛṣṇa’s teammate was undoubtedly his elder brother, the strong Balarāma, who is white in colour. The early vaiṣṇava trio of Balarāma (called just Rāma in the Mahābhārata), Kṛṣṇa, and their sister whom the elder brother marries — duplicated by the trio of Rāma, Lakṣmaṇa and Sītā — actually seems to go back to the trio of the two Aśvins and their sister-wife.¹¹⁷ The Yādavas worshipping this trio are descended from the Yadu clan, which belonged to the first immigration wave of the Ṛgvedic Aryans, and which therefore probably worshipped the Aśvins in preference to Indra.¹¹⁸

If the white day and the black night are the two Aśvins, their association with the red dawn¹¹⁹ as their sister-wife is most natural: the three are mentioned together for example in Ṛgveda 7,80,1, where the Vasiṣṭhas praise Uṣas as one who turns around the darkness and the light, the two contiguous ones.¹²⁰ In Ṛgveda 10,39,12, the Aśvins are asked to come with their chariot manufactured by the R̥bhus, which is quicker than the mind and at the yoking of which is born the daughter of the sky (i.e. the dawn) and Vivasvant’s two beautiful days (i.e. the white day and the black day = night).¹²¹ Vivasvant is the sun-god, who according to Ṛgveda 10,17,2 is the father of the Aśvins.

In the Atharvaveda (13,3,13), Mitra and Varuṇa are connected with the two forms that the fire god Agni has during the day and night: “*This Agni becomes Varuṇa in the evening; in the morning, rising, he becomes Mitra.*”¹²² Thus Mitra and Varuṇa are the sun and the fire, the deities of the agnihotra sacrifice — which, in my opinion, is an early variant of

¹¹⁷Cf. Parpola 2002c; also Ward 1968: 62–63.

¹¹⁸Kṛṣṇa opposes Indra in the Govardhana myth.

¹¹⁹According to RV 1,73,7cd, those worthy of worship (the gods or ancient sages, *yajñīyasaḥ* mentioned in b) have created the night and the morning, which are different from each other, and put together the black and the red colour (*nāktā ca cakrūr uṣāsā vīrūpe kṛṣṇām ca vārṇam aruṇām ca sām dhuḥ*).

¹²⁰RV 7,80,1c *vivartāyantīm rājasī sāmante*. Here *rājasī* is elliptic dual, mentioning only the darkness as one of the two sides of the sun (cf. RV 10,37,3cd). Sieg (1923: 11) takes *sāmante* not as an adjectival attribute of *rājasī* but as a substantive referring to the day and night, while *rājasī* are ‘the two realms’. “*Es ist somit zu übersetzen: (die Uṣas), ‘die da die beiden Nachbarinnen die beiden Räume wechseln lässt, die alle Wesen offenbar macht.’*”

¹²¹RV 10,39,12 *ā tēna yātam mānasō jāvyasā rātham yām vām ṛbhavaś cakrūr aśvinā / yasya yoge duhitā jāyate divā ubhē āhanī sudīne vivāsvataḥ*.

¹²²Atharvaveda 13,3,13 *sā varuṇaḥ śāyām agnir bhavati sā mitrō bhavati prātār udyān*, transl. Whitney 1905: II, 729. Renou (1960: 303) points out that this verse continues ideas of the Ṛgveda, where the fire is said to become Mitra when it is kindled (in the morning), while it becomes Varuṇa when born; cf. RV 3,5,4a *mitrō agnir bhavati yāt sāmiddho*; RV 5,3,1ab *tvām agne varuṇo jāyase yāt tvām mitrō bhavasi yāt sāmiddhaḥ*. In a note on RV 5,3,1a, Geldner (1951: II,5) comments on the identification with Varuṇa: “*Wohl weil er aus dem Dunkel kommt.*” In my opinion this is confirmed by RV 6,9,1, where, after a reference to the alternation of the black day and the bright day, it is said that the newly born fire defeated with his light the darkness, like a king (defeats his enemy): *āhaś ca kṛṣṇām āhar ārjunaḥ ca vī vartete rājasī vedyābhiḥ / vaiśvānarō jāyamāno nā rājāvātiraḥ jyōtiṣāgnis tāmānsi*. — Cf. also Atharvaveda 9,3,18 (pronounced while letting down the door, cf. Kauśikasūtra 66,24): “*Of thy rush-work (īta) I unfasten what was tied on, uncovering: [thee] pressed together by Varuṇa let Mitra in the morning open out*” (transl. Whitney 1905: II, 528); RV 6,63,9; 7,44,3; Oldenberg 1917: 182–184.

the gharma offering to the Aśvins.¹²³ The agnihotra is performed at sunset and sunrise, to Agni (Fire) and Sūrya (Sun).¹²⁴ In Ṛgveda 10,88,6, “*Agni is the head of the earth in the night, of him is the rising sun born in the morning.*”¹²⁵ Both Mitra and Varuṇa¹²⁶ and the two Aśvins¹²⁷ are equated with day and night in the Brāhmaṇa texts.¹²⁸

The sun and the fire — the day sun and the night sun — thus seem to be the cosmic and atmospheric phenomena that the two Aśvins as the dual kings were originally conceived of as representing. Instead of the fire, the moon could conceivably represent the nocturnal counterpart of the day sun; in addition, the rising sun and the moon are not infrequently seen together in the sky in the morning. Atharvaveda 7,81,1, gives a characterization of the sun and moon (to whom the hymn is addressed) that rather well fits in with the youthful Aśvins: “*these two playing young ones by their magic power move eastwards and westwards around the ocean*”.¹²⁹ In comparison to the sun and moon, the morning and evening star are much less significant phenomena to qualify as royal symbols; though they are connected with the Dioskouroi in the classical (but not the earliest) Greek tradition as well as with the ‘sons of God’ in the Baltic folk songs, this can be seen as a natural later development with these deities of the dawn and dusk, a development that could have taken

¹²³For the *gharmā-* alias *pravargyā-*, see van Buitenen 1968 and Houben 1991; 2000a.

¹²⁴For the *agnihotrā-*, see Dumont 1939 and especially Bodewitz 1976.

¹²⁵RV 10,88,6ab *mūrdhā bhuvō bhavati nāktam agnīs tātaḥ sūryo jāyate prātār udyān*. The wording leaves no doubt about the connection between this verse and AV 13,3,13 (cf. Güntert 1923: 280). Cf. also Aitareya-Brāhmaṇa 8,28,13 *agner vā ādityo jāyate*.

¹²⁶Cf. Maitrāyaṇī Samhitā 1,5,14: 84,11 & 2,5,7: 56,20-21 & 4,4,3: 52,19 *ahorātré vā mitrāvāruṇau*; 1,8,8: 128,2-3 *vāruṇī rātriḥ*; 1,8,9: 129,2 *mitrām āhaḥ*; 3,2,8: 27,13-14 *āhar vā mitrō rātrir vāruṇaḥ*; Kaṭha-Samhitā 11,10: 157,14 & (without accents) Kapiṣṭhala-Kaṭha-Samhitā 6,1: 69,7-8 *ahorātré vā mitrāvāruṇau*; Taittirīya-Samhitā 2,1,7,3 & 2,1,7,4 *maitrām vā āhar vāruṇī rātriḥ*; 2,4,10,1 *ahorātré vā mitrāvāruṇau*; 6,4,8,3 *mitrō 'har ājanayad vāruṇo rātriḥ*; Taittirīya-Brāhmaṇa 1,7,10,1 *maitrām vā āhaḥ, vāruṇī rātriḥ*; 1,5,3,3 *vāruṇasya sāyam*; Aitareya-Brāhmaṇa 4,10,9 *āhar vai mitro rātrir varuṇaḥ*; Pañcaviṃśa-Brāhmaṇa 25,10,10 *ahorātrau vai mitrāvaruṇāv āhar mitro rātrir varuṇaḥ*; Jaiminīya-Brāhmaṇa 1,312: 130,33-34 *ahorātre eva te [= mitrāvāruṇau] / āhar vai mitro rātrir varuṇaḥ*.

¹²⁷Cf. Maitrāyaṇī Samhitā 3,4,4:49,10 *ahorātré vā aśvīnā*. Cf. also Yāska, Nirukta 12,1: *tat kāv aśvinau / ... ahorātrāv ity eke*.

¹²⁸Brereton (1981: 45-62 and 127-149) argues that in the Ṛgveda “*Mitra and Varuṇa are paired because they exercise complementary authority as kings, not because they are the opposites of each other. While the RV emphasizes their similarity, the YV and the Brāhmaṇas contrast them*” (p. 49). “*The most frequent opposition of this type is that between Mitra/light and Varuṇa/dark*”, and “[t]his opposition emerges entirely within the young Veda. It was not recognized in the RV. The only possible exception might be RV I 115.5” (p. 53). However, the very concept of ‘complementary’ involves ‘difference’, and for instance Oberlies (1998: 192 n. 209) notes that although the contrast between Mitra and Varuṇa was built up systematically after the Ṛgvedic period, it may well have existed in Ṛgvedic times already, as other scholars have suggested (cf. above on AV 13,3,13). Besides, the Atharvaveda and the Yajurveda reflect not only post-Ṛgvedic development, but also ideas and conceptions prevalent among the Indo-Aryan speakers who came to South Asia before those associated with the family books of the Ṛgveda (cf. Parpola 2002a).

¹²⁹Atharvaveda 7,81,1ab *pūrvāparām carato māyāyaitau śīśū krīḍantau pāri yāto 'rṇavām*; for the translation, cf. Kirfel 1920: 24 and Whitney 1905: I, 446.

place independently in Greece and the Baltics. In India, a different astral identification took place: the Aśvins were associated with one of the calendrical asterisms consisting of two stars, called *aśvayújau*. They have also been equated with the zodiacal stars of Gemini.¹³⁰

Agni is the divine priest,¹³¹ the purohita of the gods. As Agni conveys the offerings to the gods, he is “the charioteer of the rites”.¹³² ‘Fire’ is therefore called *váhni*- ‘driver, charioteer’, from the root *vah*- ‘to drive in a chariot, convey by carriage’.

Vicissitudes of the pattern in the history of the Indo-Iranians

The above-sketched pattern has undergone some changes over the course of time. I do not pretend to have solved all the old problems, but would nevertheless like to offer the following as my present understanding of the main outlines of Indo-Iranian religious history, in order to show that the reconstruction suggested here has considerable heuristic power. As I have argued in detail elsewhere,¹³³ the first wave of Aryan speakers apparently came to Central and South Asia during the latter half of the third millennium, and their language was early Proto-Iranian. These were the Dāsas later encountered by the Ṛgvedic Aryans, and the chief deity of their pantheon was Yama, the twin brother of Yamī, the first man and first king, who became the ruler of the dead. Taking first over the rule of the Bactria and Margiana Archaeological Complex, the Dāsas spread to South Asia during the final phase of the Indus Civilization.¹³⁴ Their religion fused with the Harappan religion to become the foundation of Śaiva-Śākta Tantrism.

The Dāsas were followed, in Central Asia and beyond, by a wave of Proto-Indo-Aryan speakers, who meanwhile had developed the horse-drawn chariot, and in whose religion the Aśvin twins had replaced the earlier twins, the promiscuous primeval couple. While this early wave of Proto-Indo-Aryans were ruling the Bactria and Margiana Archaeological Complex, they were in close contact with the Assyrians, and the dual deity Mitra-and-Varuṇa came into being as a double of the Aśvins, and took over their royal function.

Around 1700 BCE, the Bactria and Margiana Archaeological Complex declined due to desiccation and the arrival of another branch of Proto-Indo-Aryan speakers, the Tazabag’yab Andronovo people of Choresmia, who had the Soma-drinking Indra as their

¹³⁰On the astral identifications, cf. Bethé 1905; Ward 1968: 15-18; and especially the critical observations of Hillebrandt (1927: I, 60-64) with the reply of Güntert (1923: 266-276; on the same lines is Gotō 1991; 2005).

¹³¹ṚV 1,1,1 and elsewhere *hótar*- ‘offerer’, also ṚV 3,5,4 *adhvaryú*- and ṚV 4,9,4 *brahmán*-; cf. Macdonell 1897: 96-97; Gonda 1959: 80-81, 86, 92.

¹³²Taittirīya-Saṃhitā 2,5,9,2-3 *rathīr adhvarāṇām*; cf. also Sparreboom 1983: 17.

¹³³See Parpola 2002b.

¹³⁴Cf. also Parpola, in press.

leading deity. Indra had become a regular member of the Proto-Indo-Aryan pantheon by the time the Mitanni Aryan rule started in Syria, around 1500 BCE.

There was still a power struggle going on between Indra and the older Proto-Indo-Aryan gods when the first wave of Ṛgvedic Aryans came to South Asia in 1600 BCE, and the evidence suggests that, at this phase, the Aśvins and Mitra-and-Varuṇa still had the upper hand.¹³⁵ By the time of the second Ṛgvedic immigration around 1300 BCE, however, Indra had established his supremacy in this incoming group of Old Indo-Aryans, the Pūru and Bharata clans, who quickly overpowered their predecessors in the Vedic area of South Asia — while Proto-Tantrism continued outside the Vedic area.

The second Ṛgvedic wave was probably mobilized by the arrival of a fresh wave of Aryan speakers to Central Asia and Iran from the north, namely the Proto-Iranians, who had meanwhile developed mounted warfare and thereby gained military supremacy. They eventually superseded Proto-Indo-Aryan speakers everywhere except in South Asia. Zarathuṣtra's reformation led to religious upheavals in Iran. Indra lost his supremacy there, and Mitra-and-Varuṇa were restored to power, likewise Yima of the older Dāsa layer, which had survived at least in Nuristan, but may also have been reimported by the Proto-Iranians.

The pair of Miθra and Ahura is the Avestan counterpart of Vedic Mitra-and-Varuṇa.¹³⁶ *Asura* 'lord', the principal epithet of Varuṇa, goes back to Proto-Aryan and is attested as a loanword **asera* 'lord, prince' in Proto-Finno-Ugrian (the Volgaic and Permic languages).¹³⁷ In Zarathuṣtra's pantheon, *Asura* Varuṇa became Ahura Mazdā, 'Lord Wisdom', whose supreme symbol is fire. In the Veda, the cognate word, *medhā́-* 'wisdom',¹³⁸

¹³⁵Cf. Parpola 2004 [2005]. I should like to clarify that I no more reckon with an "Atharvavedic wave" coming to South Asia before the traditionally assumed two Ṛgvedic waves, although I did so until recently (cf. still Parpola 2004). I maintain that within the Ṛgveda, the first wave of immigration (connected with the Turvaśa and Yadu, and Anu and Druhyu tribes) is represented by the Kāṇvas and Āṅgīrases, since their onomastics agrees with the Mitanni Aryans, and since their poetry, with its (Sāmavedic) strophic structure, vocabulary, etc. differs from the family books (cf. Parpola 2002a: 56-61). Stanley Insler (1998: 16-17) has shown that the principal authors of the Atharvaveda were the Kāṇvas and the Āṅgīrases, the sāman singers par excellence. The importance of Varuṇa (cf. Renou 1960) and of the royal rites of the purohita (cf. Bloomfield 1899:74) in the Atharvaveda agrees well with the assumption that this collection continues traditions of the first wave of the Ṛgvedic Aryans, in whose religion the cult of the Aśvins (including Sāmavedic songs, cf. the pravargya and agnyādheya rituals) and their doubles Mitra-and-Varuṇa was still important. The sorcery elements of the Atharvaveda, like Śaiva-Śākta Tantrism, seem to go back to the earlier Dāsa tradition (cf. Parpola 2002b).

¹³⁶Cf. e.g. Thieme 1960: 308, with Avestan references.

¹³⁷Cf. Joki 1973: 253; Mayrhofer 1992: I: 147f.; Koivulehto 2001: 247. Koivulehto notes that "the IE *-u-* of the second syllable could not be replaced by the corresponding FU *-u-*, because labial vowels could not, originally, occur except in first syllables."

¹³⁸Both Avestan *mazdā-* and Vedic *medhā́-* go back to Proto-Aryan **m̥z̥-dhā́-* (cf. Mayrhofer 1996: II, 378; Kobayashi 2004: 153).

is connected especially with Agni, fire.¹³⁹ As we have seen, Varuṇa is the night and fire side¹⁴⁰ of the dual divinity Mitra-and-Varuṇa alias Day sun-and-Night sun alias Sun-and-Fire. This agrees with the fact that Apām Napāt, ‘son of the waters’, is called Ahura and is coupled with Miθra in the Avesta,¹⁴¹ while in the Veda, Apām Napāt is another name of the fire god Agni and is conceived of as a horse-shaped sun-fire in the waters.¹⁴² Varuṇa, too, is connected with the waters as their lord, *Apām pati* — not least as the ruler of the nocturnal sky conceived as a heavenly ocean or rivers, which Varuṇa crosses in a boat.¹⁴³ According to the Kauṣītaki-Brāhmaṇa (18,9), the sun becomes Varuṇa after it has entered the waters.¹⁴⁴ In Iran, Miθra’s name eventually came to mean the sun. In the Avesta, Miθra is a warrior god wielding the *vazra* as his weapon, and in front of him runs the god of victory, *Vərəθraγna*, in the shape of a wild boar.

In the Veda, the *vájra*-wielding Indra, the slayer of Vṛtra, occupies the slot of Miθra,¹⁴⁵ the chariot warrior, the solar god of the day. That **vajra*- goes back to Proto-Aryan is confirmed by its presence in Proto-Finno-Ugrian as **vašara* ‘hammer, axe’,¹⁴⁶ In the Veda, Indra’s charioteer is Br̥haspati, the purohita of the gods. Br̥haspati or Brahmanaspati, ‘Lord of the Song’, was originally an epithet of Indra himself, whose kingship thus also comprised the priestly function.¹⁴⁷ Br̥haspati’s becoming a separate purohita-figure, and the creation of the dual deities Indra-Br̥haspatī and Indrāgnī (*bṛhaspāti*- is also an epithet of Agni, the priest of the gods), was undoubtedly in imitation of Mitra-and-Varuṇa.

¹³⁹For Agni’s wisdom, cf. Macdonell 1897: 97; Gonda 1959: 85-91; and especially Güntert 1923: 289 and Kuiper 1976: 34f., who points out that Agni is “called *Asura* (9 times) and ‘wise’: *viśvāvedas* (10 times, cf. *viśvavid* 4 times), *médhira* (8 times, cf. *sumedhā* 4 times) and *prácetas* (21 times)”, while “*Varuṇa* is also called *viśvāvedas*, *médhira* and *prácetas*”. In addition, Agni is *medhākārā*- (RV 10,91,8) and *médhya*- ‘wise’ (RV 5,1,12; as Mātariśvan, RV 8,52,2). According to RV 10,11,1c, Agni knows everything, like Varuṇa (*viśvaṃ sá veda váruṇo yáthā dhiyā*).

¹⁴⁰Cf. also Benveniste & Renou 1934: 72 n. 3: “*En outre, Ātar est le compagnon fidèle de Mithra.*”

¹⁴¹Yašt 13,95; cf. Narten 1982: 61 and 123.

¹⁴²Cf. Findly 1979; Krick 1982: 304, n. 777.

¹⁴³Cf. RV 7,88,3-4; Güntert 1923: 273f.; Lüders 1951, I: 51f.; 320f. — The Aśvins, too, have a ship, one with a hundred oars (RV 1,116,5d *śatāritrām nāvam ātaṣthivāṃsam*).

¹⁴⁴Kauṣītaki-Brāhmaṇa 18,9 *sa vā eṣo ‘paḥ praviśya varuṇo bhavati*.

¹⁴⁵Cf. Thieme (1957: 34): “*H. Güntert (Arische Weltkönig 57) has drawn attention to the fact that Mithra is — partly, I should add — painted with the same colours as the Vedic Indra. Perhaps it would be better to say: they are both, on certain occasions, painted with the colors of the ancient God Victory (*Vr̥thraghna). In any case, there is no sound reason for the ‘suspicion’ that ‘Mithra has taken the place of Indra’ (Güntert)...*”

¹⁴⁶The etymon is attested in Finnic, Saami and Mordvin. Cf. Joki 1973: 339; Mayrhofer 1996: II, 492; Koivulehto 1999: 216. On account of the palatalized sibilant the word was borrowed from Proto-Aryan or Proto-Indo-Aryan rather than Proto-Iranian, where depalatalization took place, cf. Carpelan & Parpola 2001: 125. Two competing etymologies have been proposed for Proto-Aryan **vajra* (cf. Mayrhofer, *l.c.*): Proto-Indo-European **wag*- ‘to break’ (cogently argued by Watkins 1995: 408-413) and PIE **weg*- ‘to be(come) powerful’.

¹⁴⁷Cf. Schmidt 1968: 239.

Indra's charioteer in the Epic is called *Mātali*. In the form *Mātālī*, this name is attested for the first time in the funeral hymn Ṛgveda 10,14.¹⁴⁸ One of the three occurrences in the Atharvaveda¹⁴⁹ mentions the chariot-brought immortal medicine known to *Mātālī* that is in the waters¹⁵⁰; it resembles the Ṛgvedic verse (by Medhātithi Kāṇva) 1,23,1, which mentions “*the nectar in the waters, the medicine in the waters*”¹⁵¹ — this is recited at the vājapeya rite before the chariot-race, when the horses are bathed in water.¹⁵² *Bheṣajā-* ‘medicine’ and the chariot associate *Mātālī* with the *Aśvins*, the divine charioteers and divine physicians.¹⁵³ *Mātālī-* is a hypocoristic abbreviation of *Mātariśvan-*, who is mentioned 27 times in the Ṛgveda (mostly in books 1 and 10) and 21 times in the Atharvaveda. In several passages *Mātariśvan* is the name of Agni, and once (RV 1,190,2) he is a form of *Brhaspati* (the purohita and charioteer of Indra). Otherwise *Mātariśvan* is mostly spoken of as an Indian counterpart of the Greek Prometheus, who brought the hidden fire (Agni) to men from heaven or who produced by friction the hidden Agni.¹⁵⁴

Most explanations of *Mātariśvan*'s name, starting with that offered in the Ṛgveda, assume it to be a compound where the first part is the locative singular of the word *mātār-* ‘mother’.¹⁵⁵ Stanley Insler¹⁵⁶ has, to my mind convincingly, proposed that *Mātariśvan-* is a folk-etymological transformation of earlier **Ātariśvan-* ‘master of fire’. The latter part of the compound, *śvan-*, has preserved the original unreduplicated root *iś-* ‘to master’;¹⁵⁷ it has a direct equivalent in Avestan *isvan-* ‘master’, which is attested twice in the Gāthās. The compound formation has an exact parallel in *prātar-ītvan-*, where the latter part is a similar *-van-* derivative of the root *i-* ‘to go’. In about one third of the occurrences of the name *Mātariśvan*, it is preceded by a word ending in *-m*, so Insler concluded that in some

¹⁴⁸In RV 10,14,3ab (*mātālī kavyair yamō āngirobhir bṛhaspātir ṣkvabhir vāyvdhānāḥ*), *Mātālī* is a divinity mentioned besides Yama and *Brhaspati*, each of these three associated with a different group of forefathers, *Mātālī* with the *Kavyā-*, whose name is derived from *kavī-* ‘poet’.

¹⁴⁹Atharvaveda 8,9,5 (*Mātālī* was born out of *māyā*); 11,6,23; 18,1,47ab (= RV 10,14,3ab).

¹⁵⁰AV 11,6,23 *yān mātālī rathakṛtām amṛtam veda bheṣajām / tām indro apsu praveśayat...* “*The immortal remedy, chariot-brought, which Mātālī knows — that Indra made enter into the waters...*” (transl. Whitney 1905: II, 643).

¹⁵¹RV 1,23,19a *apsv āntār amṛtam apsu bheṣajām...*

¹⁵²Cf. Weber 1892: 787.

¹⁵³Cf. RV 1,157,6a *yuvām ha stho bhiṣajā bheṣajébhir*; Macdonell 1897: 51. Occasionally *Varuṇa* too is said to possess medicines (cf. RV 1,24,9a), and he has a close connection with the waters.

¹⁵⁴See Macdonell 1897: 71–72; Hillebrandt 1927: I, 155–160.

¹⁵⁵Cf. RV 3,29,11c *mātariśvā yād āmimīta mātāri* ‘he (Agni) became *Mātariśvan* when he was formed in his mother’; for other etymologies (excluding that of Insler), see Mayrhofer 1996: II, 346.

¹⁵⁶Stanley Insler read a paper on this topic in 1985 (cf. Watkins 1995: 256, n.), but this paper has not been printed so far. The rest of this paragraph is based on Insler's formulations received by e-mail (cf. above, p.5, n.).

¹⁵⁷Otherwise the root occurs in Sanskrit only in the reduplicated form: *iś- iśe* ‘to master, rule’, *iśvara-* ‘lord’, etc.

original verse line there existed the sequence ...*m* **ātariśvā* that was reinterpreted as ... *mātariśvā*. The reason for this reworking was that the first part of the compound, **ātar-* ‘fire’, had become obsolete in the Vedic language, where *agnī-* ‘fire’ has completely supplanted **ātar-*, just as *ātar-* has replaced *agnī-* in Avestan (apart from one name). The different uses of the word *mātariśvan-* in the Ṛgveda show quite clearly that the original meaning of the word had been lost, apart from the precious reminiscence of the theft of fire by Mātariśvan. It is unreasonable to expect that every compound in Vedic has a congener in Avestan and vice versa, particularly as the Avesta is a much smaller corpus. In this specific case, furthermore, there is no myth among the Iranians about the theft of fire from the gods because fire is the creation and protected offspring of Ahura Mazdā.

The etymology of Mātariśvan’s name suggests that it goes back to Proto-Aryan times. The myth has a close parallel in the Greek myth of Prometheus, whose name is likely to have originally meant ‘robber’, etymologically related to the root *math-* ‘to steal, rob’ that is often used in connection with Mātariśvan.¹⁵⁸ Mātariśvan’s double association with the origin of the fire and with the chariot (as Indra’s charioteer) is paralleled by the chariot-driving Aśvins’ association with the fire-drill.¹⁵⁹ According to the Ṛgveda, Mātariśvan brought the fire, the charioteer (of the sacrifice), to Bhṛgu.¹⁶⁰ Mātariśvan also kindled the hidden fire for the Bhṛgus.¹⁶¹ The Bhṛgus are not only a priestly clan closely associated with the fire as its discoverers for mankind, but are also mentioned as chariot-builders in the Ṛgveda.¹⁶² The word *bhṛgu-* is considered etymologically related with the word *bhārgas-* ‘effulgence’, which characterizes Agni when it is born out of power (i.e. the fire-drill); these words seem to have a cognate in Greek.¹⁶³

Mātariśvan’s theft of Agni is coupled with the eagle’s theft of Soma in Ṛgveda 1,93,6.¹⁶⁴ This latter myth has a close parallel in the Greek myth of the nectar-bringing eagle of Zeus and in the Nordic myth of Odin, who in the shape of an eagle carried off the mead — which corresponds with the honey-beer originally connected with the Aśvin cult rather

¹⁵⁸Cf. Narten 1960; Watkins 1995: 256 n.

¹⁵⁹Cf. ṚV 10,184,3ab *hiranyāyī arāṇī yām nirmānthato aśvinā*.

¹⁶⁰Cf. ṚV 1,60,1 *vāhniṃ yaśāsaṃ.... bharad bhṛgave mātariśvā*.

¹⁶¹Cf. ṚV 3,5,10 *ūd astambhūt samīdhā nākam ṛṣvō agnīr bhāvann uttamō rocanānām / yādī bhṛgubhyaḥ pāri mātariśvā gūhā sāntaṃ havayavāhaṃ samīdhē*.

¹⁶²Cf. ṚV 4,16,20b *brāhmākarma bhṛgavo nā rātham*; 10,39,14ab *etām vām stōmam aśvināv akarmātakṣāma bhṛgavo nā rātham*. On the Bhṛgus, see e.g. Macdonell 1897: 140f.

¹⁶³Cf. ṚV 1,141,1b *devāsya bhārgaḥ sāhaso yāto jāni*; Mayrhofer 1996: II,271, where the old comparison with the Homeric *Phlegúai* or *Phlégues* ‘name of a people’ is rejected as unlikely. However, connection with *bhārgas-* implies affinity with Greek *phlóks* (gen. *phlogós*) ‘flame’ and *phlégō* ‘burn, kindle’, which Pokorny (1959: I,124) compares with the following gloss of Hesychius: *phlegúas = aetòs ksanthós* ‘fiery red’.

¹⁶⁴RV 1,93,6ab *ānyām divō mātariśvā jabhārāmāthnād anyām pāri śyenō ādreh*.

than with Indra's drink Soma.¹⁶⁵ The eagle is likely to be the sun,¹⁶⁶ the diurnal counterpart of the fire associated with the night in the dual deities of Mitra and Varuṇa and the Aśvins.

Varuṇa has preserved his old title *samrāj-*, literally 'co-ruling',¹⁶⁷ a title which in itself suggests dual kingship. According to the Śatapatha-Brāhmaṇa (5,1,1,12-13), "*the royal consecration (rājasūya) is only for the king. For he who performs the royal consecration becomes the king; and unsuited for kingship is the Brāhmaṇa... By performing the vājapeya [which is a sacrifice of the Brāhmaṇa and of Bṛhaspati, the purohita of the gods, cf. ŚB 5,1,1,11], one becomes the samrāj; and the office of the king is the lower, and that of the samrāj the higher...*"¹⁶⁸ The performer of the vājapeya sacrifice, who becomes *samrāj-*, is not supposed to stand up in front of anybody¹⁶⁹ — the symbol of the *samrāj-* is the throne¹⁷⁰.

The horse (*áśva-*) is often said to belong to Varuṇa. His connection with the charioteer is apparent from an episode in the royal consecration: when the king goes to the house of the *sūtá-*, the herald,¹⁷¹ he offers to Varuṇa and gives a horse as a sacrificial gift.¹⁷² In the Indian epics, the charioteer gives the hero advice and encourages him in battle by singing of the feats of his ancestors; hence *sūtá-* means both 'charioteer' and 'bard'.¹⁷³ That Varuṇa and Ahura Mazdā eclipsed Mitra in kingship becomes understandable through the following.

Originally, the chariot warrior as the 'mundane' king was the 'elder brother' and more important than his charioteer and priestly adviser, the 'younger brother'. However, over the course of time, the situation was reversed.¹⁷⁴ The chariot warrior, who goes to war, is the king in his youthful aspect — he is the *yuvarāja-* — and the *samrāj-* stands for the senior king, the *yuvarāja*'s ruling father who stays at home. These two diametrically

¹⁶⁵Cf. Kuhn 1859; Macdonell 1897: 114, etc.

¹⁶⁶Cf. e.g. below, at note 208.

¹⁶⁷Traditionally, the preverb *sam-* has been understood in an emphasizing meaning 'fully, completely' and the compound *sam-rāj-* is translated in the dictionaries as 'universal or supreme ruler, paramount lord or sovereign'. Formally there is no reason why *sam-* could not have been originally used in the basic meaning of '(together) with' — cf. e.g. *saṃ-gír-* 'agreeing together, assenting', and this fits well to the title of the priestly member of the dual kingship.

¹⁶⁸Cf. Weber 1892: 766-770, 798.

¹⁶⁹Taittirīya-Brāhmaṇa 1,3,9,2 *ná kāmī canā pratyávarohati*.

¹⁷⁰Śatapatha-Brāhmaṇa 12,8,3,4 *āsandīvad vāi sāmraṇyam*; cf. Weber 1892: 766-7.

¹⁷¹Cf. Rau 1957: 108-109.

¹⁷²Cf. Śatapatha-Brāhmaṇa 5,3,1,5.

¹⁷³Cf. Rau 1957: 108-109.

¹⁷⁴The change was probably conditioned by conceptions about kingship prevailing in South Asia before the arrival of Indo-Aryan speakers; thus Śambara (= Yama), the main deity of the Dāsas, was associated with death, and the same was probably the case with the Harappan "Proto-Mahiṣa". Cf. Parpola 2002b; 2004.

opposite aspects or phases of kingship — warrior and ruler —¹⁷⁵ are symbolized by the rising young sun, worshipped in the morning in a standing posture, and the setting old sun, worshipped in the evening in a seated posture. Thus, in the royal consecration, the youthful crown prince (*pratihita-*) is given a bow and arrows as his patrimony by his father the king, and he thereafter drives off in a chariot to capture a hundred cows.¹⁷⁶ The crown prince's title *pratihita-* — which is parallel to *puróhita-* — may be reflected in the preverb *práti* in the title *pratiprasthātár-*, one member of the priestly pair specifically connected with the Aśvins; the second part of his title, **prasthātár-*, probably denotes the chariot warrior and is attested as the name of one Mitanni king.

From Varuṇa's being the *samrāj-* in the sense of the ruling king (cf. also the royal consecration as *varuṇasavá-*), he came to be considered as the king and the representative of *kṣatrá-*, the ruling power, and Mitra the purohita and *brāhmaṇ-*, priesthood (cf. Śatapatha-Brāhmaṇa 4.1.4.1-6). However, in Śatapatha-Brāhmaṇa 11.4.3.10-11, while Varuṇa continues being called *samrāj-*, it is Mitra who is connected with the ruling power (*vāruṇaḥ samrājī samrājīpatiḥ ... mitráḥ kṣatrám kṣatrāpatiḥ*). “On the other hand Varuṇa is called a vípra ‘[sacred] poet’ in RV 6.68.3 (in contradistinction to Indra who slays Vṛtra with his mace)... There can be no doubt whatever that Mitra's characteristic rôle is that of a king and not that of a priest: the evidence of the RV is overwhelming and confirmed as genuine by the Avesta”.¹⁷⁷ As argued above, originally Mitra represented kingship and Varuṇa priesthood. In the Atharvaveda, Varuṇa is a master of magic,¹⁷⁸ which was the domain of the royal purohita.

The Dioskouroi and Aśvins as saviours and funeral gods

The Aśvin twins and Mitra and Varuṇa thus stood for the two sides of kingship and of the solar god, the sun and the fire, day and night. In the Veda, night, darkness and Varuṇa are all connected with death.¹⁷⁹ That the two Aśvins were connected not only with day and night but also with life and death as early as Proto-Aryan times is suggested by the Greek evidence. According to Homer, the Dioskouroi “*have this honour from Zeus, albeit in the nether world, they pass from death to life and life to death on alternate days, and enjoy equal honours with the Gods*”.¹⁸⁰ Corresponding to the idea that one of the

¹⁷⁵Cf. Heesterman 1989.

¹⁷⁶Cf. Heesterman 1957: 129f.

¹⁷⁷Thieme 1957: 8 n. 2.

¹⁷⁸Cf. Renou 1960: 301.

¹⁷⁹Cf. e.g. Rodhe 1946: 58ff., 81ff.

¹⁸⁰Odyssey 11.298-304, transl. Farnell 1921: 181.

Dioskouroi is immortal, belonging to the celestials, and the other mortal and belonging to the deceased, sometimes one is depicted with a white horse and the other with a black horse.¹⁸¹

In Greece and India, the equestrian twins were conceived of as saviours, and that this is due to common heritage is shown by the fact that, in both countries, they were also invoked by people in peril at sea,¹⁸² even though the Vedic people no longer had direct contact with the sea.¹⁸³ That, as saviours, the Aśvins were often funerary divinities effecting the regeneration of the dead can be seen from the help they rendered to Vandana.

Vandana had become decrepit with old age; his regeneration out of the ground (also: womb) is compared to the skilful repair of an old chariot that threatens to fall into pieces.¹⁸⁴ Vandana had been buried and was like one who sleeps in the lap of the goddess of destruction (i.e., a dead person); he rested like the sun in darkness; the Aśvins dug him up like a buried ornament of gold, beautiful to look at.¹⁸⁵ In another hymn, too, the dug-up Vandana is compared to a dug-up hidden treasure.¹⁸⁶ The Aśvins lifted Vandana up so that he could see the sun,¹⁸⁷ i.e., live. The Aśvins dug Vandana up from a pit,¹⁸⁸ i.e., grave.

A funerary function for the Aśvins is suggested by the stories of Atri, Kakṣīvant, Cyavāna, Vandana and several other persons whom the Aśvins rescued from distress or rejuvenated, though they were lying buried as if dead. In other words, as “healers” and “saviours”, the Aśvins were largely psychopomps and revivers of the dead. The rejuvenation accomplished by the Aśvins is several times compared to the renovation of an old chariot.¹⁸⁹

¹⁸¹Cf. Eitrem 1902: 6; Bethe 1905: 1091-2.

¹⁸²Cf. Baunack 1899; Michalski 1961: 11; Zeller 1990: 62-68.

¹⁸³“*Le trait qui, avec une singulière clarté révèle l’origine commune des Dioscures et des Aśvins, est leur activité comme sàuveteurs des hommes en détresse sur mer ... Les ancêtres des Grecs et des Aryens habitaient probablement des territoires peu éloignés de la mer, vraisemblablement les bords septentrionaux de la Mer Noire*” (Michalski 1961: 11). This is quite plausible. At the same time, the ocean from which Bhujyu is saved probably also symbolizes death, represented by night and the ocean of the nocturnal sky (cf. Zeller 1990: 67f.).

¹⁸⁴RV 1,119,7 *yuvām vāndanam nīrṛtaṃ jaranyāyā rātham nā dasrā karaṇā sām invathaḥ / kṣétrād ā vipram janatho vipanyāyā prā vām ātra vidhaté dāmsānā bhuvat.*

¹⁸⁵RV 1,117,5 *suṣupvāmsaṃ nā nīrṛter upāsthe sūryaṃ nā dasrā tāmasi kṣiyāntam / śubhé rukmām nā darśatām nīkhātām úd ūpathur aśvinā vāndanāya.*

¹⁸⁶RV 1,116, 11cd *yād vidvāmsā nidhīm ivāpagūḷham úd darśatād ūpāthur vāndanāya.*

¹⁸⁷RV 1,112,5b *úd vāndanam ātrayataṃ svār dṛśé.*

¹⁸⁸RV 10,39,8c *yuvām vāndanam rśyadād úd ūpathur.*

¹⁸⁹Cf. the Buddhist comparison of a person or being as consisting of just the five *khandhas* to a chariot consisting of various parts put together in a functional relationship (see Milindapañña 25-28, transl. Warren 1896: 129-133; Saṃyutta-Nikāya 1,135; Harvey 1990: 52).

Funeral horse races in Greece and in the Baltics

In the Sintashta-Arkaim culture of the southern Urals, deceased aristocrats were buried with their horses and chariots.¹⁹⁰ The chariot was thus intimately involved with burial rites, and was probably assumed to take the dead hero to the other world. In the 23rd song of the Iliad, Homer, when describing the funeral of Patroclus, reports (verses 171-2) that four horses were cast upon his pyre. The chariot, too, was involved in the funeral, but in a different way. In the athletic contests in honour of the dead hero, his belongings were divided as victory prizes, and the most important of these contests was the chariot race described at length in this song. On this occasion, King Nestor tells of another funeral chariot race, when he was beaten by the sons of Aktor, ‘Siamese twins’ of whom one held the reins while the other used the whip.

Willem Caland¹⁹¹ has drawn attention to the fact that a comparable horse race, performed by riders on the day of the burial, belonged to the pre-Christian traditions of the Baltic people as well. The prize consisted either of money placed on the top of the goal post, or of property of the deceased, divided and placed at certain intervals along the route. The burial day ended in a drinking bout.

Evidence for funeral horse races in India

One would expect a funeral chariot race to have survived in ancient India as well, but Willem Caland, unquestionably the best expert on Vedic funeral customs and on Vedic ritual in general, could not quote a parallel from India. Marcus Sparreboom, in his doctoral dissertation on *Chariots in the Veda*, actually maintained that “*a connection with funeral ceremonies cannot be demonstrated for Indian racing practice*”.¹⁹² He did, however, find some indirect evidence: according to the Baudhāyana-Śrautasūtra (11,6-8), a left turn is made at the turning post in the chariot race of the vājapeya rite, just as in the Greek funeral race, although “*in the Vedic ritual, left turns were generally considered inauspicious or associated with funerary ceremonies*”.¹⁹³

I believe that a reference to a funeral chariot race has survived in a hymn to the Aśvins, R̥gveda 1,116: “*O you two who had triumphed with (your) strong-winged (horses) urged to a fast course or through the incitements of the gods, (your) ass won a thousand (cows)*”¹⁹⁴

¹⁹⁰ See Gening et al. 1992.

¹⁹¹ Caland 1914: 484-6, 506.

¹⁹² Sparreboom 1983: 78 (1985: 73).

¹⁹³ Sparreboom 1983: 50 (1985: 45).

¹⁹⁴ One thousand well-nourished cows plus one hundred is the price of the race in R̥gveda 10,102,5 & 9.

in Yama's prize-contest, *O Nāsatyas*".¹⁹⁵ Sāyaṇa,¹⁹⁶ Geldner,¹⁹⁷ Renou,¹⁹⁸ Gonda,¹⁹⁹ Witzel²⁰⁰, Zeller²⁰¹ and Pirart²⁰², among others, have, in various ways, commented upon this verse, but curiously no scholar seems to have interpreted the phrase "Yama's prize-contest" (*ājā yamāsyā pradhāne*) as referring to a funeral chariot race, though Yama is the god of death and the Yama hymns of Book X were used in funeral rites. Pirart, however, makes the significant observation that the verb *śad-* 'to triumph' used here of the Aśvins with regard to the chariot race, is derived from the same Indo-European root as the name *Kástōr*, born by that one of the Dioskouroi twins who is the "tamer of horses".

The Ṛgveda specifies that the Aśvins won a thousand with their ass in Yama's prize-contest. Such a race won by the Aśvins with asses is described in Aitareya-Brāhmaṇa 4,7-9. The context is the 'praise to the Aśvins' (*āśvina-śastra-*), which contains a thousand verses:

"The gods did not agree as to this [praise of a thousand verses], 'Let this be mine; let this be mine.' They said coming to agreement 'Let us run a race for it; his who wins shall it be'. They made the course from Agni, the lord of the house,²⁰³ to the sun; therefore the beginning (verse) is addressed to Agni in the Āçvina... As these deities were running the race, and had started, Agni took the lead first; the Açvins followed him; to him they said, 'Give way; we two will win this.' 'Be it so', he replied, 'Let me have a share here.' 'Be it so' (they said). For him they made a share herein; therefore at the Āçvina (Çastra) (a litany) to Agni is recited. They followed after Uṣas; to her they said, 'Give way; we two will win this.' 'Be it so', she replied, 'Let me have a share here.' 'Be it so' (they said). For her they made a share herein; therefore at the Āçvina (a litany) to Uṣas is recited. They

¹⁹⁵RV 1,116,2 *vīlupātmabhīr āsuhēmbhīr vā devānām vā jūtībhiḥ śāsādānā / tād rāsabho nāsatyā sahasram ājā yamāsyā pradhāne jigāya.*

¹⁹⁶Oldenberg 1909: I, 108.

¹⁹⁷Geldner 1951: I, 153.

¹⁹⁸Renou 1967: 12.

¹⁹⁹Gonda 1981: 55, 98-100, 125.

²⁰⁰Witzel 1984: 257.

²⁰¹Zeller 1990: 111.

²⁰²Pirart 1995: I, 161.

²⁰³"Because the gods made the course from Agni, the lord of the house (gṛhapati), the initial stanza of this litany is addressed to that god: RV. 6,15,13 *agnīr hōtā gṛhāpatiḥ sá rājā etc.* 'Agni is the hotar, the lord of the house...' (Gonda 1981: 99). The Aitareya-Brāhmaṇa (4,7) mentions RV 10,7,3, *agnīm manye pitāram agnīm āpīm...* as an alternative first verse, which some authorities prescribe, since the last words of this stanza, *divī śukrām yajatām sūryasya* '(I revere) the shining, holy (face) of the sun in heaven', would guarantee that he would reach the goal (*kāṣṭhā-*, the turning pillar of the race). This verse is rejected, however, because the repeated mention of Agni would cause the sacrificer to fall into the (funeral) fire (*agnim āpatsyatīti*). It seems that this verse is also considered inauspicious in contrast to the approved verse, which is characterized as *śāntā* 'appeased, calmed down' ('propitious' is the translation of Keith 1920: 203, followed by Gonda 1981: 99).

followed after Indra;²⁰⁴ to him they said, ‘We will win this, O generous one’; they did not dare to say to him ‘Give way’.’ ‘Be it so’, he replied, ‘Let me have a share here.’ ‘Be it so’ (they said). For him they made a share herein; therefore at the Āṣvina (Çastra) (a litany) to Indra is recited. The Aṣvins won the race; the Aṣvins attained it. In that the Aṣvins won the race the Aṣvins attained it, therefore they call it the Āṣvina ... They say ‘In that there are here recitations to Agni, to Uṣas, to Indra, then why do they call it the Āṣvina?’ (It is) because the Aṣvins won the race, the Aṣvins attained it... Therefore they call it the Āṣvina...

By means of a mule chariot Agni ran the race; as he drove on he burned their wombs; therefore they conceive not. With ruddy cows Uṣas ran the race; therefore, when dawn has come, there is a ruddy glow; the form of Uṣas. With a horse chariot Indra ran the race; therefore it as neighing aloud and resounding is the symbol of lordly power; for it is connected with Indra. With an ass chariot the Aṣvins won, the Aṣvins attained; in that the Aṣvins won, the Aṣvins attained, therefore is his speed outworn, his energy spent; he is here the least swift of all beasts of burden; but they did not take the strength of his seed; therefore has he virility and possesses a double seed.²⁰⁵

The āṣvina-śāstra- is recited at the dawn ending an ‘over-night’ (atirātrá-) Soma sacrifice, one that has lasted a whole day (here representing a full life) and continued throughout the following night. Night represents death, and dawn represents rebirth. The text stresses the generative power of the ass, and this seems to be the reason why the Áśvins drive a chariot pulled by asses in the funeral race of Yama.²⁰⁶

²⁰⁴That Indra, in this version of the myth, has replaced the sun-god, who would be expected in this contest taking place in the morning, is clear from the *praiṣa* formula prompting the hotṛ priest to recite the offering verse for the Soma drought of the overnight service: “Let the hotṛ worship the Áśvins ... Agni together with his red horses, he whose back is ghee, Uṣas together with the red (cows), Sūrya together with dappled horses, the Áśvins together with their wonderworks. May the Áśvins do thus. May they be delighted, be drunk, accept gracefully, may they drink Soma. Hotṛ, recite the offering verse!” (Śāṅkhāyana-Śrautasūtra 9,20,31, tr. Caland 1953: 243). On the other hand, neither Indra nor Sūrya are included among the gods of the morning litany (*prātar-anuvāka*-), which is a counterpart of the āṣvina-śāstra-. The author of the Aitareya-Brāhmaṇa (4,9-10), in discussing the division of the āṣvina-śāstra- devoted to Sūrya, “which is quite naturally to be recited after sunrise (ŚŚ. 9,20,20)”, “rejects the statement of others who say that in reciting to the Sun one should use seven metres as in the recitations to Agni, Uṣas and the Áśvins... He prefers only three metres... This additional deity is obviously not regarded as the equal of the three other gods, notwithstanding the repeated admonition not to pass over him in recitation (AiB. 4,10f. passim). Notice that no mention is made of the number of the metres to be used for Indra, to whom is devoted the *pragātha* 7,32,26f. in the Sūrya division (ŚŚ. 9,20,24; ĀśvŚ. 6,5,18)” (Gonda 1981: 99-100).

²⁰⁵Aitareya-Brāhmaṇa 4,7-9, transl. Keith 1920: 202-4.

²⁰⁶A Vedic student who has violated his vow of chastity should sacrifice an ass to Nirṛti, the goddess of destruction, at a crossroad. He has to dress himself in the skin of the ass and eat a piece of the sacrificial victim cut out of its penis (cf. Pāraskara-Gr̥hyasūtra 3,12,1-11; Oldenberg 1917: 332-3; Gonda 1980: 290). — The clay for making the *ukhā* pot used in the agnicayana ritual is fetched with three animals, the horse, the ass and the goat (cf. Śatapatha-Brāhmaṇa 6,3,1,28; only the horse and the goat are involved in fetching the clay for

The symbolism of the *āśvina-śāstra* suits well the funeral context, for “*the Āṇvina is ... the chariot of the gods. With this chariot of the gods he attains in safety the world of heaven. (The Ṣastra) should include the Suparṇa [the ‘good-feathered’ bird]; the Suparṇa is a bird; like it becoming a winged one, a bird, so he attains in safety the world of heaven.*”²⁰⁷ These conceptions are behind the ritual prescriptions concerning the way of reciting the *āśvina-śāstra*: “*Having eaten of ghee, he should recite. Just as in this world a cart or a chariot, when oiled, goes (well), so he when oiled goes. He should call (making a posture) as of an eagle about to fly up.*”²⁰⁸ The Suparṇa bird, which flies to heaven, is Varuṇa’s messenger at the seat of Yama²⁰⁹ and thus connected with death. In the Indus civilization and in the Cemetery H culture of the Punjab (c. 1900-1300 BCE), the peacock seems to have been assumed to carry the dead to heaven. Birds are connected with the Aśvins, too, for the horses pulling their airborne chariot are compared to birds.²¹⁰

The number one thousand is connected with the sun, which is said to have a thousand rays — often understood as cattle. The Aitareya-Brāhmaṇa explains the thousand verses as follows:²¹¹ “*A thousand [verses] should be recited for one desiring heaven; the world of heaven is at a distance of a thousand journeys of a horse hence; (they serve) for the attainment of the world of heaven, the securing, the going to (the world of heaven).*”²¹²

The Aśvins as gods of regeneration and marriage

The funeral context of the *āśvina-śāstra* has gone unnoticed, because the Ṛgveda Brāhmaṇas introduce its exposition by associating it with the marriage of Soma (the Moon) and the Solar Maiden: “*Now when Savitr gave Sūryā to Soma, the king, he made over to his daughter whether she was Prajāpati’s (or his own) on marriage this thousand (of*

making the gharma pot of the pravargya ritual of the Aśvin cult, cf. Oldenberg 1917: 76f.); here it is said of the he-ass that it “*whilst being one, doubly impregnates*” (cf. Śatapatha-Brāhmaṇa 6,3,1,23). In this context, the Maitrayaṇī-Saṃhitā (3,1,6: 7,16) states that “*the ass is the most virile animal of all*” (*sārveṣāṃ paśūnāṃ gardabhō vīryavattamaḥ*). “*Then [he addresses] the ass, with (Vāj. S. XI,13), ‘Yoke ye two the ass,’ he says this to the Adhvaryu and the Sacrificer; — ‘upon this course, ye showerers of wealth!’ ... he thereby lays vigour into the ass*” (Śatapatha-Brāhmaṇa 6,3,2,3, transl. Eggeling 1894: III, 204). This verse, Vājasaneyi-Saṃhitā 11,13, *yuñjāthāṃ rāsabhaṃ yuvām...* is modified from an address to the Aśvins in ṚV 8,85,7: *yuñjāthāṃ rāsabhaṃ rāthe...* (cf. also ṚV 1,46,7c and 8,73,1b *yuñjāthāṃ aśvinā rātham*).

²⁰⁷ Kauṣītaki-Brāhmaṇa 18,4, transl. Keith 1920: 446.

²⁰⁸ Aitareya-Brāhmaṇa 4,7, transl. Keith 1920: 202.

²⁰⁹ Cf. ṚV 10,123,6.

²¹⁰ Cf. ṚV 6,63,7ab *ā vāṃ vāyo ‘śvāso vāhiṣṭhā abhī prāyo nāsatyā vahantu*.

²¹¹ This is said in connection with the morning litany (*prātaranuvāka*) addressed to the Aśvins, but should be also valid for the *āśvinaśāstra*, since it is the same except for some modifications (cf. Śāṅkhāyana-Śrautasūtra 9,20).

²¹² Aitareya-Brāhmaṇa 2,17, transl. Keith 1920: 147. Cf. also Gonda 1981: 91f.

verses) that was in the possession of these deities; they said, ‘Let us run a race for this thousand’; they ran the race, then the Aṣvins were victorious by means of the ass.”²¹³

Actually, the marriage context is also very relevant here, for the conclusion of funeral rituals aiming at rejuvenation and the attainment of heaven coincides with the beginning of new life in the impregnation which takes place at a wedding.²¹⁴ Regeneration implies re-entering the womb: “A son is a light in the highest heaven. The husband enters the wife; having become a germ (he enters) the mother; having become renewed in her, he is born in the tenth month.”²¹⁵

It seems no accident that the Ṛgvedic verses which tell about the birth of the Aśvins start with the words: “‘Tvaṣṭṛ arranged marriage for his daughter’ — this whole world comes together on such news”, and yet are included in the Yama songs of the Ṛgveda related to funerals and ancestor worship.²¹⁶ Saranyū, the mother of the divine twins, had assumed the shape of a mare. She became pregnant with the Aśvins when sniffing the seed of her husband, the bright-shining sun-god Vivasvant, who had assumed the shape of a stallion, but in haste had emitted his seed on the ground.

The birth of the Nāsatyas is here folk-etymologically connected with the nose (*nas-* / *nās-*), which figures prominently in Vedic rites of human fertility: material representing seed is inserted into one of the nostrils of the wife (right nostril if one desires a boy child, left if a girl child). In RV 10,184,2-3, the Aśvins are asked to place an embryo in the wife by means of a golden fire drill, so that he may be born in the tenth month. The embryo is equated with the fire — the embryo of the waters hidden in the aśvattha wood. The fire-drill consists of a female plank of śamī wood and of a male stick of aśvattha wood — and *aśvatthā-* is folk-etymologically explained to have got its name because the fire stood

²¹³Kauṣītaki-Brāhmaṇa 18,1, transl. Keith 1920: 444-5. Similarly, the Aitareya-Brāhmaṇa (4,7): “*Prajāpati gave his daughter to Soma, the King, even Sūryā Sāvitrī; for her all the gods came as groomsmen; for her wedding ceremony he made this thousand (of verses) which they call the Āṇvina (Častra). What is less than a thousand is not the Āṇvina; therefore he should recite a thousand or more*” (transl. Keith 1920: 202).

²¹⁴The mythical explanation of the cup of Soma offered to the Aśvins at the morning pressing (*āśvinagraha-*) also links marriage and rejuvenation. Cyavana, a sage decrepit with old age lay ghostlike on the ground, and was offended by the people of Śaryāta Mānava — they threw clods of earth at him (the word *loṣṭa-*, used here of the clods, is also used of the earthen ‘bricks’ of the funeral monument, *loṣṭa-citi-*). The angered sage caused problems for Śaryāta, who gave his beautiful daughter Sukanyā to the sage in atonement. Through Sukanyā, Cyavana made the Aśvins rejuvenate him: Cyavana was thrown into water (or: pool of youth on the Sarasvatī), and he emerged young again. Finally, he sacrificed with a thousand cows (the same number that the Aśvins won in the race). He thus got all his three wishes fulfilled: *punaryuvā syām, kumārīm jāyām vindeya, sahasreṇa yajeyeti*. Cf. Śatapatha-Brāhmaṇa 4,1,5; Jaiminīya-Brāhmaṇa 3,120-128; Caland 1919: 251-257 with further references.

²¹⁵Śloka verses of the Śunaḥśepa legend recited at the royal consecration, according to Aitareya-Brāhmaṇa 7,13; translation modified from that of Keith 1920: 300.

²¹⁶RV 10,17,1-2. The myth is fully related in the Bṛhaddevatā (6,127 — 7,7, ed. Tokunaga 1997: 118-120); see further Bloomfield 1893: 172-188; Tokunaga 1997: 266-7.

(-tthá- < -sthá-) in it one year in the shape of the horse (ásva-).²¹⁷

The Aśvins are deities of both death and (re)birth, saving people by helping them make the dangerous, liminal passage. They appear in the morning and evening, at the junctures between night and day, or death and life: Janus-like, their white-and-black appearance unites these opposites.²¹⁸ In this, they are like the Dioskouroi, of whom one is immortal and the other mortal, and who visit both the heavenly abode of the gods and the nether world in turn. I agree with Thomas Oberlies (1993) that they are very much “gods of the middle position, or space in between”.

“The mountain” as the turning post and the axis mundi

The Jaiminīya-Brāhmaṇa contains another case where the gods did not agree among themselves and decided on the matter by means of a chariot race. This concerns the appropriation of the ājya lauds: “*They said: ‘Let us compete in a chariot-race for them and make the mountain the turning-post.’ ... because they made the mountain the turning-post, therefore that (mythical) mountain is called a stick (kāṣṭhā).*”²¹⁹ Bodewitz comments: “*According to Caland, Auswahl, 22, n. 6 the mountain probably is the sun. In my opinion giri without further qualifications denotes the primordial hill, the cosmic mountain, the axis mundi, later mostly identified with Meru. Because this cosmic mountain was used as the turning-post (kāṣṭhā) in the chariot-race of the gods, therefore it is also called the stick (kāṣṭhā [sic for kāṣṭhā])*²²⁰. *This seems to refer to the fact that this cosmic hill was also regarded as the worldtree and used as the stick in the churning of the ocean. Nirukta 2,15 probably equates āditya and kāṣṭhā on account of the identity of sun and axis mundi. Cf. also TB. 1,3,6,5 on kāṣṭhā being identified with suvarga loka.*”²²¹

²¹⁷Cf. Krick 1982: 158-9; 174-6. On the Nāsatyas’ connection with the nose, see Parpola 2004 [2005]: 123f. In Śatapatha-Brāhmaṇa 12,9,1,14, the two Aśvins are equated with the two nostrils (*nāsike aśvīnau*) — but the same chapter also equates the two ears with the two Aśvins and the eyes with the two cups of the Aśvins.

²¹⁸The twin sons of Aktor, who beat Nestor in a funeral chariot race (cf. Iliad 23,638-642), had, according to Aristarchus, one body with two heads, four arms and four legs (cf. Murray 1925: II, 540-1). Weber (1892: 773, n. 1) suggested that in India, too, the Aśvins may have been understood to be one person: the often recurring ritual formula *devasya tvā savituḥ prasave śvinor bāhubhyām...* speaks of just two arms of the Aśvins, though these are mentioned in the dual and would thus have four arms. However, as Werner Knobl has pointed out to me, the speakers of Vedic Sanskrit generally spoke of body parts that come in pairs (hands, eyes, etc.) in the dual, whether the beings having those parts stood in the singular, dual or plural: cf. RV 2,24,7c *té bāhūbhyām dhamitām agnīm āśmani* ‘they (i.e., the seers) [produced] in the rock the fire that was fanned with their two arms’; RV 10,7,5c *bāhūbhyām agnīm āyāvo jananta* ‘the Āyus generated the fire with their two arms’.

²¹⁹Jaiminīya-Brāhmaṇa 1,105, transl. Bodewitz 1990: 61.

²²⁰*Kāṣṭhā-* (n.) ‘stick’ and *kāṣṭhā-* (f.) ‘turning post’ may have the same or different origin, cf. Mayrhofer 1992: I, 345f.

²²¹Bodewitz 1990: 235.

In the Epic and Purāṇic cosmography, the sun and other heavenly bodies drive heavenly chariots in circles around the world mountain Meru; their apparent risings and settings are caused by their appearance to the view of the inhabitants of the Bhāratavarṣa (who live south of Mount Meru) in the morning, and their disappearance behind the mountain in the evening.²²² This idea of the world mountain is supposed to have come from the ancient Near East, because Mount Meru is mentioned just once in the Veda, in a very late text,²²³ and because the Vedic people had a different astronomical conception that excludes the theory of the world mountain.²²⁴ However, this Vedic conception is partly similar to the later theory, since according to it, too, the sun and the moon never really rise or set. In my opinion, the idea of a world mountain is also present in the conception of a turning post as the axis mundi.

According to the Aitareya-Brāhmaṇa (3,44,4), “*The (sun) never really sets or rises. In that they think of him ‘He is setting’, verily having reached the end of the day, he inverts himself; thus he makes evening below, day above. Again in that they think of him ‘He is rising in the morning’, verily having reached the end of the night he inverts himself; thus he makes day below, night above.*”²²⁵ The sun (or the single wheel of the sun’s chariot) is understood to have a bright side and a dark side; it turns its bright side downwards (towards the earth) in the morning in the east; it turns this bright side upwards (towards the sky) in the evening in the west.²²⁶ This conception can be traced back to the Ṛgveda: particularly clear is the earlier cited verse RV 1,115,5, which speaks of the bright and dark sides of the sun as visible forms of Mitra and Varuṇa.²²⁷

The Aśvins complete their circuit (*vartīs-*) around the world in one day, just like the sun. This is enacted in the Vedic ritual by the *adhvaryu* and *pratiprasthātār* priests, who impersonate the two Aśvins: they go around the sacrificial stake, covering with their hands the *śukra-* and *manthin-* cups of Soma, which are explained to represent the sun and the moon: “*thereby they make them invisible; whence no one sees yonder sun and moon when they go forward (eastwards).*”²²⁸ *Having gone round to the front (of the stake), they uncover*

²²²Cf. Kirfel 1920: 129f.

²²³Mahāmeru in Taittirīya-Āraṇyaka 1,7,3.

²²⁴Cf. Sieg 1923: 1-2, with further references.

²²⁵Transl. Keith 1920: 193.

²²⁶Cf. Speyer 1906; Sieg 1923.

²²⁷See Sieg 1923: 3ff.

²²⁸Cf. RV 10,111,7cd ā yān nāksatraṃ dādṛṣe divo ná pūnar yatō nākir addhā nū veda; Geldner (1951: III, 334) translates: “Wenn das kommende Tagesgestirn (noch) nicht sichtbar geworden ist, weiss niemand etwas Sicheres von dem wieder Gehenden”, with this comment: “Der Gegensatz der kommenden und wider gehenden, also der auf- und untergehenden Sonne oder der Tages- und Nachtsonne. Von Letzter weiss man nichts Gewiss, so lange sie nicht wieder als das Tagesgestirn sichtbar wird...”

*(the cups), and offer them while standing in front: thereby they make them visible; whence every one sees yonder sun and moon when they go backwards [westwards]”.*²²⁹

The Finnic folk epics of the Sampo and related themes

The pre-Christian epic songs of Finnish folk poetry, epitomized in Lönnrot's *Kalevala*, have the *Sampo* as one of their central themes. This magic mill grinding out all kinds of riches was created by a heroic smith, Ilmarinen, the maker of the sky and its luminaries, for the Mistress of the inimical North, whose beautiful daughter is wooed by him and his brother Väinämöinen, master of magic songs and a water deity. The *Sampo* was locked up by the Mistress in the rocky mountain of the North behind many locks, but the epic heroes of the south came and stole it, fleeing by boat. The Mistress of the North followed the boat of the robbers, eventually in the shape of a giant eagle carrying warriors on her back. In the ensuing struggle, the treasure fell into the sea and broke into thousands of pieces.²³⁰

The magic mill *Sampo* shares with the vault of heaven the standing epithet *kirjokansi* 'having a decorated lid'. The most widely supported interpretation sees in the *Sampo* a world pillar that rose from the northern mountain to the pole star, having the rotating starry heavens as its cover.²³¹ The two hero brothers have been compared with the Dioskouroi (who rescue their sister Helen) and the *Aśvins*: they woo and rescue the solar maiden locked in the northern mountain.²³² Heinrich Lüders saw a striking parallelism between Väinämöinen's opening the mountain of the north with a magic song and thus releasing the heavenly luminaries, on the one hand,²³³ and the opening of the cave of Vala and the release of the light and the cows by *Br̥haspati* or *Aṅgiras* using the sacred song or expression of truth (*ṛta-*).²³⁴

Early Aryan loanwords in Finno-Ugrian languages and the Nāsatya cult

The Finno-Ugrian languages have a considerable number of early Aryan loanwords.²³⁵

²²⁹Śatapatha-Brāhmaṇa 4.2,1,18, transl. Eggeling 1885: II, 283-284. Similarly Maitrāyaṇī Saṃhitā (4,6,3: 81, 18), the Kaṭha-Saṃhitā (27, 8: 147, 20) and the Taittirīya-Saṃhitā (6,4,10,2-3); cf. also Śatapatha-Brāhmaṇa 8,1,2,1 = 8,6,1,18 and Kauṣītaki-Brāhmaṇa 7,6; Caland 1912: 119f.; Kirfel 1920: 25f.; Sieg 1923: 3.

²³⁰For a typological analysis of the original folk songs, see Kuusi 1949 (in Finnish with a German summary).

²³¹See Setälä 1932: 242-4; 322-332; 524-560; Harva 1943; 1948: 47; Anttonen 2000: 166-9, 177.

²³²Kemppinen 1960. As many others (cf. Setälä 1932: 129-146; 561-575), Kemppinen sees the maiden of the North, the maiden of gold made as her substitute by the smith, and the *Sampo* all as symbols of the sun which was locked in the mountain of the North in winter.

²³³Lüders 1959: II, 521.

²³⁴Lüders 1959: II, 510-537.

²³⁵See Joki 1973; Koivulehto 1999; 2001; 2003.

For instance, the word for ‘hundred’, which contains several diagnostic sounds having divergent developments in different branches of Indo-European: Proto-Finno-Ugrian **śata*, modern Finnish *sata*, can only come from the Aryan branch.²³⁶ Modern Finnish *orja* means ‘slave’, while its cognate in Saami means ‘south’: these northernmost Finnic people took their southern neighbours as war-captives and used their ethnic name, *Árya*-, for their slaves. English *slave* similarly comes from the ethnic name of Slavs.²³⁷ One of my major new insights put forward in the present paper is that many of the loanwords taken over from Proto-Aryan into the Finno-Ugrian languages are related to the cult of the Nāsatyas, and I am citing them throughout also as evidence for the antiquity of the cultic features concerned.²³⁸

Finno-Ugrian peoples of the Volga-Urals region were once ruled by an Aryan-speaking elite, and today have ethnic names with an Aryan etymology. Thus the Cheremis call themselves *Mari*. The word is also an appellative meaning ‘man, husband’ (cf. also *marlan kajaš* ‘(woman) to marry, lit. go to the man’). It goes back to *Merya* in the Old Russian “Nestor’s Chronicle” and to early Proto-Aryan **meryo*-.²³⁹ This word is important for the early history of the Aśvin cult, for the Near Eastern chariot warriors were called *ma-ri-ia-an-nu*, this word coming from Mitanni Aryan.²⁴⁰ In the Ṛgveda, too, *mārya*- is used of a ‘young man’, both as a ‘(chariot) warrior’²⁴¹ and as ‘lover, wooer’.²⁴² The chariot-driving Aśvins are the husbands, lovers or wooers²⁴³ of the sun’s daughter Sūryā, the Dawn.

Honey, beer and the Nāsatyas

Proto-Finno-Ugrian **mete* ‘honey’, from early Proto-Aryan **medhu*-, was borrowed, like **merya*-, before the late Proto-Aryan sound change of Proto-Indo-European **e* into **a*.²⁴⁴ That it indeed came from Proto-Aryan and not from some other branch of Indo-

²³⁶Cf. Joki 1973: 311; Koivulehto 2001: 248.

²³⁷Cf. Joki 1973: 297; Koivulehto 2001: 248; Carpelan & Parpola 2001: 112f.

²³⁸This insight proved to be powerful heuristically, for immediately after submitting the first version of the present paper to the Tōhō Gakkai on the 28th of April, 2005, I discovered one more previously unrecognized Proto-Aryan loanword in Finno-Ugrian and could include this new finding (and several less successful leaps to this direction) in a new version submitted on the 8th of May 2005.

²³⁹Cf. Joki 1973: 280; Carpelan & Parpola 2001: 111f. (the meaning ‘mortal’ given here is incorrect; Katz 2003: 123f. suggests derivation from Proto-Aryan **mārtya*- ‘mortal, man’).

²⁴⁰Cf. Mayrhofer 1996: II, 330 (references to skepticism concerning this etymology are also given).

²⁴¹Cf. Dīrghatamas’ horse hymn RV 1,163,8a *ānu tvā rātho ānu māryo arvann*.

²⁴²E.g., RV 1,115,2b *māryo nā yōśām abhy èti paścāt*.

²⁴³RV 10,85,8c *sūryāyā aśvīnā varā*, 9b *aśvīnāstām ubhā varā*.

²⁴⁴Cf. Joki 1973: 283–5; Koivulehto 2001: 247f.; Carpelan & Parpola 2001: 114f. The word could not become **metu* in Proto-Finno-Ugrian, because **u* was restricted to the first syllable (cf. **asura* > PFU **asera*).

European, is shown by the Komi compound *ma-siś* ‘beeswax’, where Komi *ma* goes back to Proto-Permic **mo* from Proto-Finno-Ugrian **mete*. The latter part of the compound is Proto-Volga-Permic **šišta* ‘beeswax’ (Mordvin *šta*, Mari *šište*, Udmurt *śus* < **śušt*, Komi *śiś*), corresponding to Sanskrit *śiṣṭá-* ‘what is left over’, past participle of the verb *śiṣ-* not known from any Iranian language. The Komi compound has an exact counterpart in Sanskrit *madhu-śiṣṭa-* ‘beeswax, honeycomb’, attested in the Rāmāyaṇa (5,60,10 ed. Gorresio)²⁴⁵ in a description of the drunken revelry of the monkeys in the honey-forest Madhuvana. The mid-Volga region has been famous for its honey-forests. Honey-beer was the only kind of alcoholic drink in Russia until the days of Peter the Great, and beeswax one of its principal trade products.²⁴⁶

“Of all the [Vedic] gods the Aśvins are most closely connected with honey (*madhu*), with which they are mentioned in many passages. They have [in their chariot] a skin[-bag] filled with honey... They only are said to be fond of honey (*madhūyu*, *mādhvī*) or drinkers of it (*madhupā*)... They give honey to the bee²⁴⁷ (1,112,21 cp. 10,40,6) and are compared with bees (10,106,10)...”²⁴⁸ After the chariot race of the vājapeya rite, the brahman priest who represents Br̥haspati, the divine purohita and charioteer, receives a golden vessel full of honey.

All vājapeya charioteers receive an abundance of alcoholic *surā*, a drink also associated with the Aśvins. “Drinking this, they sit down enjoying themselves and being exalted”, says Baudhāyana.²⁴⁹ Another rare occasion when *surā* is consumed in Vedic ritual is the *sautrāmaṇī* rite, which Baudhāyana prescribes to be celebrated when the erection of the funeral monument has been completed.²⁵⁰ Iranian evidence suggests that, in Proto-Aryan times, *surā* was (mare’s or any other) milk fermented with honey, in other words, kumiss.²⁵¹ This is suggested also by the facts that the Aśvins were offered a drink of hot

²⁴⁵The critical edition of the Rāmāyaṇa (5,60,9c) has *madhūcchiṣṭa-*, with the prefix *ud-* added to the past participle, but cf. also *madhuśeṣa-* ‘wax’ recorded in the Śabdakalpadruma.

²⁴⁶Cf. Carpelan & Parpola 2001: 115-125; we were not aware that the same etymology for Mari *šište* ‘wax’ etc. had been briefly proposed earlier by Blažek (1990: 43), who in turn was not aware that this had been done still earlier by Katz (2003: 224; cf. Aikio & Kallio, in press).

²⁴⁷Proto-Finno-Ugrian has **mekše* ‘bee’ from early Proto-Aryan **mekši*, which appears to come from Late Indo-European **mekpi* from Proto-Indo-European **metk^wi* < **medh(u)* ‘honey’ + the verbal root **k^wi-*, which in the Aryan branch alone (cf. Sanskrit *ci-*) has the meaning ‘to collect, hoard, pile’. Cf. Carpelan & Parpola 2001: 114f. — The traditional Proto-Aryan reconstruction is **mekš-* > **makš-* (cf. R̥gvedic *mākṣ-* f.? and *mākṣā-* f.); for **mekši-*, cf. R̥gvedic *mākṣikā-* f., Pāli *makkhikā-* f., Prakrit *macchī* f., Younger Avestan *maxšī* f., etc. (cf. Mayrhofer 1996: II, 287).

²⁴⁸Macdonell 1897: 49-50. Cf. especially RV 4,45,3 *mādhvaḥ pibatam madhupébhir āsābhir utā priyām mādhone yun̄jāthām rātham / ā vartanīm mādhunā jin̄vathas pathó d̄ṛtīm vahethe mādhumantam aśvinā*.

²⁴⁹Baudhāyana-Śrautasūtra 11,11: 79, 8-9; transl. Sparreboom 1983: 48f. (1985: 43).

²⁵⁰Cf. Caland 1896: 162.

²⁵¹Cf. Hillebrandt 1927: I, 481-491; Mayrhofer 1996: II, 737. In Khotanese Saka, *hurā* means ‘fermented

milk mixed with honey in the *pravargya* or *gharma* ritual, and that the Soma drink, when offered to the Aśvins and to Mitra and Varuṇa, had to be mixed with milk and honey.²⁵² The Aśvins are also said to have produced one hundred vessels of *surā* from the hoof of the horse,²⁵³ and the *surā* is purified with a filter made of horse hair.

In Vedic times, *surā* was beer made of germinated rice and barley. Rice, of course, is of Indian origin, but beer was probably also made of barley in Proto-Aryan times. Barley is sacred to Varuṇa, and the word for ‘barley’ has been borrowed from early Proto-Aryan (**yeva*) into Proto-Finno-Ugrian (**yüwä*).²⁵⁴ *Surā*, too, has been borrowed into the Permic languages of the Urals as **sur* (Udmurt *sur*, Komi *sur*) ‘beer’; in Komi there is also the compound *ma-sur* ‘honey-beer’.²⁵⁵

Finnish *peijas* from Proto-Finno-Ugrian **paiyas* denotes a ‘ritual drinking bout in connection with marriage, funerals, and bear-killing’. It goes back to Proto-Aryan **paiya-s*, which has become *péya-* (m.) ‘ritual drink offering’ in Vedic.²⁵⁶ Twelve *péya-* offerings are to be performed during the year preceding the *vājapeya* sacrifice.²⁵⁷ As a neuter noun, *peya-* denotes a drink, e.g., *madhupéya-*, a honey drink of which the Aśvins partake.²⁵⁸

Vāja ‘generative power’ and the new year feast

The main prize of the *vājapeya* is *vāja-*,²⁵⁹ vigour or power generating new life and food.²⁶⁰ *Vāja-* comes from the Old Indo-Aryan root **vaj-* ‘to be powerful’, which is attested only in nominal and verbal derivatives, from Proto-Indo-European **weg-* ‘to be(come) powerful’.²⁶¹

mare’s milk’, and the Avestan text Nīrangistān expressly states that *hurā* is made of mare’s milk. An Atharvavedic hymn ascribed to Brhaspati (who is mentioned repeatedly in it), 10,6, mentions in verse 5 *sūrām mādhu* which corresponds to Avestan (Vīdēvdāt 14,17) *huraiiā vā maδəuš* (cf. Mayrhofer 1996: II, 303).

²⁵²Cf. Hillebrandt 1927: I, 450ff.

²⁵³Cf. RV 1,116,7cd *kārotarāc chaphād āsvasya vṛṣṇaḥ śatām kumbhāñ asiñcatam sūrāyāḥ*; RV 1, 117,6cd *śaphād āsvasya vājino jānāya śatām kumbhāñ asiñcatam mādḥūnām*. The last quarters of the verses are identical except that the latter has *mādḥūnām* instead of *sūrāyāḥ* (cf. Hillebrandt 1927: I, 482).

²⁵⁴Cf. Joki 1973: 265; Mayrhofer 1996: II, 404–5; Koivulehto 1999: 223; Carpelan & Parpola 2001: 127.

²⁵⁵Cf. Joki 1973: 317; Mayrhofer 1996: II, 737.

²⁵⁶Cf. Koivulehto 2003; 2005.

²⁵⁷Cf. Śāṅkhāyana-Śrautasūtra 15,1: 1. *śaradi vājapeyaḥ*, 2. *annādyakāmasya*, 3. *vājena yakṣyamāṇaḥ purastāt samvatsaram peyair yajñakratubhir yajate*, 4. *pāṇam vai peyāḥ / annam vājāḥ*, 5. *pāṇam vai pūrvam athānnam*, 6 *tayor ubhayor āptyai*; Baudhāyana-Śrautasūtra 18,51 *māsānām eva rūpaṁ peyāḥ samvatsarasya rūpaṁ vājāḥ*.

²⁵⁸RV 10,41,3d *-āta ā yātam madhupéyam aśvinā*, RV 1,34,11b *devébhir yātam madhupéyam aśvinā*.

²⁵⁹For an exhaustive study of *vāja-* as prize, see Hintze 2000, especially pp. 85–119.

²⁶⁰In the marriage hymn Atharvaveda 14,2, the bride is commanded to win *vāja* being girded threefold with the milk of the earth, with the milk of the herbs and with progeny and riches (verse 70).

²⁶¹Cf. Mayrhofer 1996: II, 540f.; LIV 1998: 601–602 (“Für den Ansatz **h₂weg*’ ...gibt es keinen Anhaltspunkt”).

The *vāja*- as the prize and goal of the *vājapeya* is represented by the top-piece of the sacrificial stake, called *caṣāla*- and made of wheat. After the chariot race of the *vājapeya*, a ladder is erected against the sacrificial post,²⁶² and the sacrificer ascends it. Having reached the top, he touches the top-piece made of wheat, saying “*We have reached the sun, O gods!*”²⁶³ “*And as to why he touches the wheat: wheat is food, and he who offers the Vājapeya, wins food, for vāja-peya is the same as anna-peya (food and drink)*”.²⁶⁴ The *vājapeya* texts emphasize the *vāja*’s identification with food,²⁶⁵ and all growth and vegetation on the earth depends upon the sun.²⁶⁶

The *vājapeya* is to be performed in the autumn. The combination of the sun and food as the prize or goal of the *vājapeya* has led to the suggestion that the race was originally part of the new year celebrations at winter solstice.²⁶⁷ Its purpose would have been to infuse the nature with new generative power.

The Finns have celebrated *kekri* in late autumn at the end of the agricultural year with feasting, games and prognostications about the new year.²⁶⁸ *Kekri*, from earlier **kekrāj*, is a derivative from Proto-Finno-Ugric **kekrä*, ‘wheel, circle, cycle’, borrowed from early Proto-Aryan **kekro-* (from Proto-Indo-European *k^wek^wlo-*), a protoform of Sanskrit *cakrá*-.²⁶⁹ In Saami, **kekrä* developed into *geavri* meaning ‘a circular thing’.²⁷⁰

***Caṣāla* and Finnic **kärsä* ‘pig’s snout’**

In the *vājapeya*, the top-piece of the sacrificial pillar is called *caṣāla*-. This word is attested twice in the Ṛgveda, both times in connection with the sacrificial pillar.²⁷¹ The original meaning is thought to be the disk-like front part of a boar’s snout. This meaning is certain in Maitrāyaṇī Saṃhitā 1,6,3, where it is said that “*this earth was in the begin-*

²⁶²According to Aitareya-Brāhmaṇa 5,28,1, “*his (i.e. the sacrificer’s) sacrificial post is the sun over there*” (*asau vā aśyādityo yūpaḥ*). Ascending the sacrificial stake instead of the turning post may represent a syncretistic absorption of the rituals that prevailed in South Asia before the arrival of the Rgvedic Aryans, since the sacrificial stake played an important role in those rituals (cf. Bärdeau 1989).

²⁶³Śatapatha-Brāhmaṇa 5,2,1,12 *atha godhūmān upa spr̥ṣati / svār devā aganmēti, svār hy eṣa gachati yō vājapēyena yājate*.

²⁶⁴Śatapatha-Brāhmaṇa 5,2,1,13, transl. Eggeling 1894: III, 33.

²⁶⁵Cf. Thite 1968: 31-34, 36, 38.

²⁶⁶Cf. Gonda 1966: 86.

²⁶⁷Kuiper 1960: 240; cf. Sparreboom 1983: 16.

²⁶⁸Cf. Vilkkuna 1968: 244-259.

²⁶⁹In RV 1,164,48, the year is compared to the (solid disk-)wheel (*cakrá*-); cf. Rau 1983: 22f.

²⁷⁰Cf. Koivulehto 2000; 2001: 249.

²⁷¹RV 1,162,6b *caṣālam yé aśvayūpāya tākṣati i*; RV 3,8,10ab *śṛṅgānīvēc chṛṅgīnām sām dadṛśe caṣālavantaḥ svāravaḥ pṛthivyām* “*Wie die Hörner der gehörnten (Tiere) sehen die Pfosten aus, wenn sie mit dem Knauf versehen auf der Erde (stehen)*” (Geldner 1951: I, 346).

ning as large as the snout of a boar”²⁷². With the meaning ‘pig’s snout’ the word can be explained as a dissimilatory development of earlier **carṣāla-*, a derivative (with the suffix *-āla-*) of the root *carṣ-* / *karṣ-* ‘to drag, to draw furrows’, cf. Avestan *karša-* m. n. ‘furrow’.²⁷³ Indo-Aryan *carṣ-* goes back to Proto-Aryan **carṣ-* < early Proto-Aryan **cerṣ-* < **kerṣ-* from Proto-Indo-European **k^wels-* ‘to draw furrows’ (cf. Hittite *gul-ša-an-zi* ‘they incise’; Greek *télson* n. ‘the last furrow of a field’).²⁷⁴ The pig’s habit to scratch the earth is often compared to ploughing.²⁷⁵ The Maitrāyaṇī Saṃhitā (1,6,3) speaks of the boar’s snout and the earth in the context of the establishment of sacred fires, where soil thrown up by the boar must be used.²⁷⁶ According to the corresponding passage of the Kaṭha-Saṃhitā (8,2), the size of the earth was in the beginning as much as the creator god Prajāpati in the shape of a boar brought up in his mouth (*mukha*)²⁷⁷ when diving to the bottom of the primeval ocean.²⁷⁸ According to the Śatapatha-Brāhmaṇa (14,1,2,11), in the beginning the earth had just the measure of a span; she was dug up by a boar called Emūṣa, who was her husband, Prajāpati.²⁷⁹ Correspondingly, one must use soil dug up by a boar for making the gharma pot.²⁸⁰ The gharma pot is the vessel in which heated milk is offered to the Nāsatyas. The gharma offering seems to have started with the Kāṇva family of the eighth book of the R̥gveda — representing the first immigration wave of the Indo-Aryans, among whom the Aśvin cult prevailed. The myths concerning the boar Emuṣa seem to go back to the Kāṇvas.²⁸¹

Proto-Finno-Ugrian **kārsä* ‘pig’s snout’ is probably a front vocalic variant²⁸² of earlier

²⁷²Cf. Maitrāyaṇī Saṃhitā 1,6,3: 90,4-6 *yāvad vai varāhāśya caṣālam tāvatīyām āgra āsīd - yād varāhāvīhatam upāsyaṅnīm adhata imām evā tām nāpārāḍ – asyā enaṃ mātṛāyam ādhīyādhatte – tasmād eṣā varāhāya vimradata – eṣā hy āsyā mātṛāṃ bibhārti*. For a translation and commentary see Krick 1982: 149f.

²⁷³Cf. Mayrhofer 1992: I, 538f. and 319f. As a possible new Proto-Finno-Ugrian loanword from Proto-Aryan *karṣ-* ‘to drag, to draw furrows, plough’, cf. also Old Indo-Aryan *kṛṣf-* f. ‘ploughing, field’ (RV 10,34,13), I would like to suggest Finnish *karhi* < **karši* ‘harrow made of logs by breaking off branches’, *karhia*, *karhita* ‘to harrow, scrape’, with cognates in Estonian, Mordvin and Mari (in the Volgaic languages the meaning is ‘brushwood, branches’); cf. SKES I (1955): 162; SSA I (1992): 312.

²⁷⁴Cf. Mayrhofer 1992: I, 319f.; LIV (1998): 347f.; LIV Add (2001): 100.

²⁷⁵For the Proto-Dravidian root **uḷu-*, the meanings ‘to plough’ and ‘to dig up soil with snout (as pigs do)’ are recorded throughout the language family; cf. Burrow & Emeneau 1984: 67 no. 688.

²⁷⁶Cf. Krick 1982: 145-155.

²⁷⁷Biardeau (1989: 43) points out that the word *mukha-* ‘mouth’ corresponds to *caṣāla-* in the other variant of the story and thus confirms the meaning ‘snout’. For a drawing of the yūpa and the caṣāla (which does resemble the snout), see Biardeau 1989: 42.

²⁷⁸Cf. Krick 1982: 152.

²⁷⁹Śatapatha-Brāhmaṇa 14,1,2,11 *tām emūṣā iti varāhā ūj jaghāna; sò ’syāḥ pātiḥ prajāpatiḥ*.

²⁸⁰Cf. Krick 1982: 154.

²⁸¹Cf. RV 8,77,10 and Krick 1982: 151 n. 393 with further references.

²⁸²On account of the vowel harmony (considered to be a Proto-Finno-Ugrian feature), most suffixes have front and back vocalic variants in Finnish (e.g. *-lla* / *-llä*, *-pa* / *-pä*, etc.), and formation of front and back vocalic word pairs is common in Finnic; sometimes the meaning remains the same, sometimes there is semantic divergence

**karsa*²⁸³ from Proto-Aryan **karša-* ‘pig’s snout; furrow’ (cf. Avestan *karša-* m. n. ‘furrow’) from early Proto-Aryan **koršo-* < Proto-Indo-European **k^wolso-*. This is a new etymology; to my knowledge, no extra-Finno-Ugrian source has been proposed for the word before. Within the Finno-Ugrian family, the etymon is found only in the Finnic branch.²⁸⁴

Another word connected with the pig has been borrowed from Proto-Aryan into Proto-Finno-Ugrian: the protoform of Finnish *oras* ‘boar; castrated hog’ and Mordvin *uroś*, *urozi* ‘castrated hog’ is reconstructed as *(v)*oraś* ‘boar’ and this is derived from early Proto-Aryan **vorāzha* ‘boar’.²⁸⁵ While in the R̥gveda Indra has an inimical relation with the boar, which is conceived of as a demon²⁸⁶ — the boar seems to have been appreciated in the Bactria and Margiana Archaeological Complex, which during its peak phase has produced among other things a magnificent ceremonial mace head depicting the boar —, in the Avesta the god of victory, *Vərəθraγna*, runs in the shape of a boar (*varāza*) in front of Miθra and cuts down men false to the contract (*miθrō.drujəm mašyānəm*).²⁸⁷ The popularity of this image in later Iran and Armenia is attested in the numerous names containing the word ‘boar’ (*varāz*);²⁸⁸ compare also the half-Iranian (with Iranian *Mihira*

(cf. e.g. Finnish *tyhmä* ‘stupid’ and *tuhma* ‘naughty’).

²⁸³Jorma Koivulehto has (orally) suggested that the replacement of Proto-Aryan **-rš-* with **-rs-* in Proto-Finno-Ugrian can best be explained by assuming that Proto-Finno-Ugrian at this stage did not yet have the phoneme **š*, at least not in this cluster (for **š*, cf. Sammallahti 1988: 482, 490); another alternative is to assume that the word was borrowed so early that the RUKI rule did not yet apply (**karsa*), but the RUKI rule seems to be very early, as it exists in Balto-Slavic as well (on the RUKI rule, cf. now Kobayashi 2004: 149).

²⁸⁴Finnish *kärsä* ‘(pig’s) snout’ (attested since 1745); Ingrian *kärsä* ‘(pig’s) snout; beak of a vessel’; Karelian *kärsä* ‘(pig’s) snout; hollow of a pipe or ladle’; Lydic *kärz(ä)* ‘pig’s snout’; Vepsian *kärz* ‘pig’s snout’; Votyian *kärsä* ‘pig’s snout; beak of a vessel’; Estonian *kärss* (gen. *kärsa*) ‘pig’s snout’. The word has been borrowed from Finnic into Russian (*kyárzya*, *kyárza* ‘pig’s snout’) and from Finnish into Saami (*gærssse* ‘pig’s snout’). Cf. SKES II (1958): 262b; SSA I (1992): 478a.

²⁸⁵Cf. Joki 1973: 296; Mayrhofer 1996: II, 514f.; Koivulehto 1999: 216.

²⁸⁶Cf. RV 1,61,7; 1,121,11; 8,77,10; 10,99,6; Macdonell 1897: 41; 67. Yet the Maitrāyaṇī Samhitā (3,9,4: 119,3-8) while dealing with the *caśāla* in connection with the making of the sacrificial pillar, says that it belongs to Indra, because Indra raised it as a *vajra* against *Vṛtra*: *indrasya caśālaṃ – yé vái devāḥ sādhyá yajñám atyámanyanta téśāṃ vá etád yád upáriṣṭāc caśālasyaṅgulimātrām kāryam – aṅgulimātrām hí tád āgrā āsīt – yát táto vársyāḥ kurýād vájro bhūtá yajamānasya paśūn ávaṭiṣṭhēd – índro vái vṛtráya vajram údāyachat – sò ’vltīyata – táśya vá etád ánuṇadyai yác caśālaṃ pṛthumātrām kāryam – pṛthumātrām hí tád āgrā āsīt – yád aṇimató ’grhñāt tásṃád aṇimató – yád índra udāyachat tásṃád aindrām*.

²⁸⁷Cf. Yašt 10,70-72 “Grass-land magnate Mithra we worship ..., in front of whom flies Ahura-created *Vərəθraγna* in the shape of a wild, aggressive, male boar with sharp fangs and sharp tusks, a boar that kills at one blow, is unapproachable, grim, speckle-faced, and strong, has iron hind feet, iron fore-feet, iron tendons, an iron tail, and iron jaws; as he (= *Vərəθraγna* = boar) catches up with the opponent(s), beset by passion — simultaneously by manly valour —, he knocks them (lit. the opponents) down with a toss (of his head): he does not even think he has struck, nor has he the impression he is hitting anybody, until he has smashed even the vertebrae, the pillars of life, even the vertebrae, the springs of vitality; he cuts to pieces everything at once, mingling (lit. he who mingles) together on the ground the bones, the hair, the brains, and the blood of men false to the contract.” (Transl. Gershevitch 1959: 107, 109; the Avestan text *ibid.* 106, 108).

²⁸⁸Cf. Benveniste in Benveniste & Renou 1934: 35; also *ibid.* 69 (Cyrus as a beast more ferocious than the

< *Miθra*) proper name of the famous astronomer *Varāha-mihira*, who lived in northwest India around AD 600.

The Indian tradition has preserved an indication of how the god of victory in the shape of a boar goes in front of *Miθra* — the original chariot-warrior. According to the Baudhāyana-Śrautasūtra (10,50), on the eleventh day of the fire-altar ritual, the sacrificer should procure for the rituals of the twelfth day, among other things, a second hotar priest for reciting the battle hymn called *āpratiratha*, and a chariot for the sake of the offering upon the *çaṣāla*.²⁸⁹ On the twelfth day, the fire is carried forward while the *āpratiratha* hymn is recited²⁹⁰ and the chariot is made to roll forwards, as usual.²⁹¹ Different kinds of offerings follow; among other things “*he offers five oblations on the front part of the chariot [rathamukhe] respectively with the [five] formulas [recorded in Taittirīya-Saṃhitā 3,4,7, beginning with], bhuvanasya pate ...*”²⁹². On analogy with the sacrificial pole, this means that the top-piece, *çaṣāla*, is fixed to the tip of the pole at the very front of the chariot. Thus the boar symbolized by his snout always goes in front of the chariot-warrior.

Some other chariot-related terms in Proto-Finno-Ugrian

Besides **kekrä* ‘wheel’ and **kärsä* ‘pig’s snout’ as the copper front-plate of the chariot pole, there are other early Finno-Ugrian loanwords from Proto-Aryan that can be associated with the chariot and thereby with the cult of the Nāsatyas. One is Proto-Finno-Ugrian **rešmä* ‘rope’ from early Proto-Aryan **rećmi-* ‘string, rope, cord’.²⁹³ Old Indo-Aryan *raśmi-* denotes ‘rays of the sun’ and ‘reins’ connected with the charioteer and the Aśvins.²⁹⁴ Volga-Finnic **warsa* ‘foal’ has been considered as a relatively young loan

wild boar) and 72 (Ātar, the fire, later takes the place of Vərəθraγna).

²⁸⁹Cf. Baudhāyana-Śrautasūtra 10,50 *athaitasminn evaikādaśe 'hni dvādaśāyāhna upakalpayata dvitīyaṃ hotāraṃ apratirathasyānuvaktāraṃ ... rathaṃ çaṣālahomīyaṃ ... Bhavasvāmin's commentary (Vivaraṇa) explains the term çaṣālahomīyaṃ as follows: çaṣālahomīyaṃ / lohābaddhatvān mukhaṃ çaṣālavād bhavatīti çaṣālam ucyate / mukhahomārtham ity arthaḥ* (Caland 1913[-1923]: III, index p. 60), “*Because the front (of the chariot) has copper fixed to it, it is 'provided with a çaṣāla' and called çaṣāla; it is for the sake of the libation on the front (of the chariot), this is the meaning*”. The “*excellent bhāṣya on the agnipraśna (X)*” (Caland 1913[-1923]: III, index p. 25) called Mahāgnisarvasva comments: *çaṣālahomīyaṃ rathamukhahomārtham rathacaṣālavān lohābaddhaṃ rathāgrāṃ çaṣālaśabdenocyate / tatra kriyamāṇā homāś çaṣālahomāḥ / tadārtho rathāś çaṣālahomīyaḥ* (Caland 1913[-1923]: III, index p. 60; Caland refers to chapter 10,54, where the offerings are prescribed). “*(The word) çaṣālamukhīyaṃ (means) 'for the sake of the offerings at the front of the chariot': the word çaṣāla denotes the tip of the chariot provided with a 'snout of the chariot', i.e. united with (a plate of) copper. The offerings which are performed there are called çaṣāla offerings. The chariot (to be procured) for the sake of these (offerings) is the çaṣālahomīya (chariot).*” The commentary translations are mine.

²⁹⁰Cf. Baudhāyana-Śrautasūtra 10,51.

²⁹¹Cf. Krick 1982: 336f.

²⁹²Baudhāyana-Śrautasūtra 10,54, transl. Kashikar 2003: II, 693.

²⁹³Cf. Koivulehto 2001: 250 (cf. also Mayrhofer 1996: II, 441).

²⁹⁴Cf. e.g. RV 8,35,21a (to the Aśvins) *raśmīṃr iva yachatam adhvarāṃ ūpa*.

from Iranian (Scythian) — comparing Ossetic *wyrs*, *urs* ‘stallion’ — on account of *-rs-*, which is rare in early Finno-Ugrian,²⁹⁵ but **kārsä* ‘snout’ suggests that **warsa* could be a similar borrowing from Proto-Aryan **vṛsan-/vṛšan-* ‘male, bull, stallion’.²⁹⁶ The etymon is used of the virile stallions that pull the chariot of the Aśvins.²⁹⁷

I would like to propose a possible new etymology for Finnic *kupera* ‘convex’,²⁹⁸ namely Old Indo-Aryan *kūbara-*, *kūbera-*.²⁹⁹ The word *kūbara-* denotes the convex railing of the chariot-box.³⁰⁰ The variant form *kūbera-* is first attested in the Atharvaveda (8,10,28) as the proper name of Kubera Vaiśravaṇa, the chief of robber bands, later the Hindu god of riches.³⁰¹ The leader of warring bands had a chariot, and the association with a chariot is visible from the name that Kubera’s son has according to Epic sources: *Nalakūbara*, which corresponds to *Naṭakuvera* in Pāli.³⁰² The first part of these *bahuvrīhi* compounds denotes the material of which the convex chariot railing was made: *naḍa-*, *nada-*, *naḷa-*, *nala-* ‘reed’.³⁰³ This word is involved in the proper name of King Naḍa Naiṣidha of the Śatapatha-Brāhmaṇa,³⁰⁴ corresponding to the Epic king Nala Naiṣadha,³⁰⁵ the latter is famed for his skills as a charioteer.³⁰⁶

A necklace of gold or silver, *niṣkā-*, is given to the adhvaryu priest in the horse sacrifice.³⁰⁷ The sacrificial gifts regularly given at the *vājapeya* also include 17 *niṣkas*.³⁰⁸

²⁹⁵Cf. Joki 1973: 337; Mayrhofer 1996: II, 575f.; Koivulehto 1999: 226f.

²⁹⁶This has already been proposed among others by E. N. Setälä and Jalo Kalima, cf. Joki 1973: 337.

²⁹⁷Cf. RV 7,69,1ab *ā vām rátho ródasti badbadhānó hiraṇyáyo vṛṣabhir yātv áśvaih*.

²⁹⁸Finnish *kupera* (attested since 1791), Ingrian *kuppēra*, Karelian *kupera*, *kuber*, all meaning ‘convex’; cf. SSA 1 (1992): 444.

²⁹⁹As the Indo-Aryan words are etymologically unexplained, the loan direction might also be the opposite; on the Finno-Ugrian side there are other apparently related words, such as Finnish *kupa*, *kupare*, *kupertaa* etc. having the general sense of something round or convex (cf. SSA 1, 1992: 443f.).

³⁰⁰Cf. Sparreboom 1983: 152 and 56f.: “The *kūbara* is the heavy curved top or rail of the framework which ran around the front and two sides of the platform of the car to protect the occupants standing on it”; Mayrhofer 1992: I, 385f. The oldest attestations are Maitrāyaṇī Samhitā 2,1,11 and the Kaṭha-Samhitā 10,5; other references in Rau 1983: 28.

³⁰¹Cf. Mayrhofer 1992: I, 366f.; Horsch 1966: 26f.

³⁰²Mayrhofer (1992: I, 366f.) cites these names, but does not connect them with the chariot railing.

³⁰³Cf. Mayrhofer 1996: II, 7-8.

³⁰⁴Śatapatha-Brāhmaṇa 2,3,2,1-2 equates King Yama with the *gārhapatya* fire and Naḍa Naiṣidha with the southern fire, and says that day by day Naḍa takes Yama southwards. Cf. Krick 1982: 438.

³⁰⁵Cf. Mayrhofer 1996: II, 8.

³⁰⁶Cf. Mahābhārata 3,69, where Nala serves as King Rtuṣarṇa’s charioteer with the adopted name Bāhuka (he is here “deformed” like Kubera), and his skills are wondered at by his own old charioteer: “When Vārṣṇeya heard the roar of the chariot and saw the driver’s control of the horses, he wondered about Bāhuka’s horsemanship. ‘Is this Mātali, the charioteer of the King of the Gods? For I find the same great talent in the valiant Bāhuka.... Or could it possibly be King Nala...?’ ... Yes, Bāhuka knows the same tricks that Nala knew, for I see that Bāhuka’s horsemanship is equal to Nala’s...” (transl. van Buitenen 1975: II, 352).

³⁰⁷Cf. Śatapatha-Brāhmaṇa 13,4,1,11.

³⁰⁸Cf. Śāṅkhāyana-Śrautasūtra 15,3,12-15; Āpastamba-Śrautasūtra 18,3,4.

The third ājya laud of the mahāvratā rite is to be sung on the verses Jaiminīya-Saṃhitā 3, 54,10-12 corresponding to Ṛgveda 8,6,1-3, where mention is made of charioteers (*vāhmayah*) and their vehicle (*vāhasā*) — words fitting the ājya lauds which derive their name from the chariot race (*ājī-*) of the gods.³⁰⁹ While prescribing this laud, the Jaiminīya-Brāhmaṇa (2,12) states that it belongs to Indra and symbolizes the necklace; therefore the necklace i.e. the garland is worn in front (on breast).³¹⁰ The text uses the expression *niṣka- maṇi-* instead of plain *niṣka-* and glosses it with *sraja-*. *Maṇi-* ‘necklace’ (cf. Ṛgveda 1,122,14 *maṇi-grīvā-* ‘wearing a maṇi necklace on one’s neck’) is one of the few Mitanni Aryan words that have been etymologically identified in the Akkadian documents of the Near East: *mani-nnu* ‘necklace’ has the same Hurrian suffix *-nnu* as the earlier discussed *mariannu-* ‘chariot warrior’.³¹¹ The Mitanni king Tušratta describes in detail over 20 *maninnu* necklaces that he has sent to his son-in-law Nimmureya, the king of Egypt, among many other gifts on the occasion of his wedding with Tušratta’s daughter.³¹² Old Indo-Aryan *niṣkā-* goes back to Proto-Aryan **niṣka-*, and if we can explain the substitution of Proto-Aryan **š* with Proto-Finno-Ugrian **s* in the same way as in **kārsä* < **karša-*, we have a Proto-Aryan loanword in Finnic **niska* ‘neck’.³¹³ The difference in meaning (Proto-Indo-Aryan ‘neck-ornament’ vs. Finnic ‘neck’) is paralleled by Proto-Aryan **grīvā-* ‘neck’ (cf. also Ṛgvedic *niṣkā-grīva-* ‘wearing a niṣka on one’s neck’) vs. Old Slavonic *grivŭna* ‘neck-ornament’. *Niṣkā-* has been used in Vedic India also as a kind of monetary unit, and so has been *grivŭna*.³¹⁴

The world pillar and the churning of the milk ocean

We have seen that Proto-Finno-Ugrian had borrowed the word for wheel, **kekrä*, from early Proto-Aryan. This is important for interpreting the magic mill of the Finnish folk epic, the *Sampo*. *Sampo* originally denoted the world pillar: a related word, meaning ‘pillar, pole, boundary stone, world pillar’, is Finnic **sampas* (Finnish *sammas*, *sampas*,

³⁰⁹Cf. Pañcaviṃśa-Brāhmaṇa 7,2,1 and Jaiminīya-Brāhmaṇa 1,105 quoted above (cf. note 219).

³¹⁰Jaiminīya-Brāhmaṇa 2,12 *mahañ indra ya ojasety aindram bhavati / niṣkasya haitan maṇe rūpam / tasmān niṣkaṃ maṇiṃ srajaṃ [srajaṃ most mss. : sraja ed.] purastād bibhrati*.

³¹¹Cf. Mayrhofer 1996: II, 293.

³¹²See EA 25 in Moran 1992: 73f. An example: “1 *maninnu*-necklace, cut: 37 genuine lapis lazuli stones, 39 (pieces of) gold leaf; the centerpiece a genuine *hulalu*-stone mounted on gold.”

³¹³The etymon is attested only in the Finnic branch (Finnish *niska*, Karelian *niska*, Lydic *niisk(e)*, Vepsian *nišk*, Votyian *niska*, Estonian *niska* [< Finnish], Livonian *nī'sk*) and as a Finnish loanword widely in Saami (North Saami *nis'ke* ‘neck’, etc.); cf. SSA 2 (1995): 224-225. The word has been linked etymologically to Sanskrit *niṣkā-* by Blažek (1990: 41) without further comment; Koivulehto has considered the etymology and discussed it with me on several occasions, but rejected the comparison on account of the **š* problem.

³¹⁴Cf. Rau 1974: 52f.; Mayrhofer 1996: II, 48, and 1992: I, 509.

Estonian *sammas*, *sambas*). Its derivation from Proto-Aryan **stambha*-s ‘prop, post, (cosmic) pillar’, first suggested in 1930, is now widely accepted.³¹⁵

The Sampo was understood to be a magic mill grinding out any grain and other material wealth for its owner. Martti Haavio has compared the Sampo to the Indian epic and purāṇic myth of the churning of the milk ocean, in which the cosmic mountain was used as the churning stick and all sorts of treasures were produced.³¹⁶ Above, I have already quoted Henk Bodewitz to the effect that the turning post (*kāṣṭhā*-) of the divine chariot race represents the cosmic mountain as the churning stick (*kāṣṭhā*-) of the cosmic ocean.

The chief product from the churning³¹⁷ of the milk ocean was the nectar of immortality. The Vedic domestic ritual describes a ceremony of receiving honoured guests, called *arghá*-.³¹⁸ That this ceremony goes back to Proto-Aryan times is suggested by the Finnish compound *arvovieras* ‘honoured guest’, with Proto-Finno-Ugrian **arva* ‘price, value’ from Proto-Aryan **argha* ‘price, value’.³¹⁹ The guest was offered a drink which consisted of sour milk (*dádhi*-) and honey (and ghee); its name *madhuparká*- or *madhumantha*- suggests it was churned.³²⁰

This drink can be connected with the horse and the Aśvins. A famous horse of the R̥gvedic period is Dadhikrāvan: its name contains the word *dádhi*- ‘sour milk’. The same word is found in the name of Sage Dadhyañc, whom the Aśvins decapitated and revived with a horse’s head, so that he would be able to teach them the secret of “honey-knowledge”, *madhu-vidyā*. This secret amounted to reviving the dead, and probably involved a drink of immortality containing honey and sour milk. In the Finnish folk epic, the mother of a dead hero asks the bee to fetch honey from the highest heaven so that she can revive her son. A unique grave in the mid-Volga region near Samara contained a human skeleton, which had the skull of a horse instead of a man. This archaeological find from the Sintashta-Arkaim horizon — probably representing the Proto-Aryan culture — parallels the Vedic myth of Sage Dadhyañc.³²¹

³¹⁵Cf. Kalima 1930; Mayrhofer 1996: II, 753f.; Koivulehto 1999: 230. Kalima and Koivulehto point out that original *st-* has been replaced with *s-* also in some very old Baltic and Germanic loanwords in Finnic.

³¹⁶Haavio 1967: 189-203; cf. Anttonen 2000: 168. For the purāṇic myth of *amṛtamanthana*, see Rüping 1970.

³¹⁷The Aśvins are associated with churning (*manthana*-) also by fire-churning or fire-drilling, which symbolizes the generation of offspring.

³¹⁸Cf. Hillebrandt 1897: 79.

³¹⁹Cf. Joki 1973: 251; Koivulehto 1999: 216.

³²⁰Cf. Hillebrandt 1927: I, 476-7.

³²¹Cf. Anthony & Vinogradov 1995; Carpelan & Parpola 2001: 121f.

The turning post of the chariot race as the world pillar

The vājapeya sacrifice culminates in a chariot race. The sacrificer touches the two wheels and ascends the chariot with the formula, “*At the impulse of God Savitr, may I win vāja through the vāja-winning Br̥haspati*”. At the same time, the brahman priest puts his arms on the wheel and ascends it. This chariot wheel had been placed horizontally on the top of a post consisting of a chariot axle and fixed in the ground at the starting point of the race, on the border of the sacrificial area. The brahman priest recites the formula, “*At the impulse of God Savitr, may I ascend the highest vault through the vāja-winning Br̥haspati*”. When the race starts at noon, the brahman priest sings the *vājinām sāman*³²² and either he himself or some assistant turns the chariot wheel on which he is sitting three times sunwise.³²³

Here the formula equates the rotating chariot wheel on the top of a chariot axle expressly with the highest heaven, to which the brahman symbolically ascends. We obtain a model corresponding to the conception behind the magic mill of the Finnic poems, the cosmic pillar supporting the rotating, star-decorated vault of heaven, Finnish *sampo* from Proto-Aryan **stambha*-.

The Vedic concept of “world pillar” or “axis mundi” is associated with the verb *sta(m)bh-* and its variant *ska(m)bh-*. In the long Skambha hymns of the Atharvaveda (10,7-8), the cosmic pillar, which props heaven and earth apart from each other, is praised as the ultimate principle behind everything and identified with the *brāhman*. The noun *stambha*- is also used of the axle of the chariot.³²⁴

In the Jaiminīya-Upaniṣad-Brāhmaṇa, the atmosphere separating heaven and earth is compared to the axle keeping the two wheels apart.³²⁵ According to the Ṛgveda, Indra

³²²Grāmegeya-Gāna 11,2,30 on Sāmaveda 1,435 = Jaiminīya-Saṃhitā 1,42,9 (not in the RV): *āvir maryā ā vājam vājino agman*.

³²³Cf. Baudhāyana-Śrautasūtra 11,8 *gāyati brahmā vājinām sāma / tam ya eva kaś ca parikarmy āveṣṭayati / dhavanty ājīṣṭaḥ*, Āpastamba-Śrautasūtra 18,4,3 *cātvalē rathakṣakṛtīm kṣiṭhām nikhāya tasmīn audumbaram rathacakraṃ saptadaśāraṃ pratimuñcati*, 8 *dēvasyāhaṃ savitūḥ prasave br̥haspatinā vājajitā vājam jeṣam ity audumbaram rathacakraṃ brahmārohati*, 9 *tam āha vājinām sāma gāyeti*, 10 *tasya cakram triḥ pradakṣiṇam āvartayati*, 11 *vartamāne brahmā gāyati*. Lāṭyāyana-Śrautasūtra 5,12,9 *pūrveṇāgnīdhrīyaṃ sthūṇā nikhātā syāt*, 10 *dakṣiṇena mārjāṭīyaṃ antarvedīti śāṇḍilyaḥ*, 11 *tasyām audumbaram saptadaśāraṃ rathacakraṃ pratimuktaṃ syāt*, 12 *tadabhāve yat kiṃ ca rathacakraṃ*, 13 *tasmīn bāhū ādadhyaḍ devasyāhaṃ savitūḥ prasave satyasavaso br̥haspater vājino vājajito varṣiṣṭham adhinākaṃ ruheyam iti*, 14 *ratheṣv ājīm dhāvatsv āvir maryā iti gāyed ...* 18 *parivartayan gāyet parivartya gāyed gītvā vā parivartayed gāyato vānyaḥ parivartayet*.

³²⁴Cf. *án-akṣa-stambham* ‘so as not to interfere with the axle-tree’ in Śatapatha-Brāhmaṇa 3,6,4,10-11 (cf. Eggeling 1885: II, 164; Sparreboom 1983: 156). The noun *viṣkambha*- denotes a ‘beam running parallel to the axle of a cart’ in Paippalāda-Atharvaveda 20,26,5-6; Pañcaviṃśa-Brāhmaṇa 6,5,14; Lāṭyāyana-Śrautasūtra 1,9,23, and Drāhyāyana-Śrautasūtra 3,1,21 (cf. Sparreboom 1983: 74f. and 149).

³²⁵Jaiminīya-Upaniṣad-Brāhmaṇa 1,20,3 *tad yatha kṣiṭhena palāṣe viṣkabdhē syātām akṣeṇa vā cakrāv evam*

“has with his might separated from each other heaven and earth, like the wheels are separated by the axle”.³²⁶ Here the demiurge separating heaven and earth from each other is Indra, but the Ṛgveda ascribes this same feat to many deities. I discovered this by going through all the numerous occurrences of the verbs *sta(m)bh-* and *ska(m)bh-*, with or without the preverb *vi-* ‘apart’. The association with the chariot, however, suggests that this feat originally belonged to the Aśvins, to whom Vasiṣṭha prays in the Ṛgveda thus: “May your golden chariot, forcing apart the two worlds (heaven and earth), come here with virile horses!”³²⁷ If the axle of the Aśvins’ chariot is the world pillar keeping heaven and earth apart, the Aśvins should be driving around so that the wheels of their chariot are horizontal, parallel to level ground. This would be in accordance with the world view according to which the sun’s single wheel turns its luminous side towards heaven during the night and towards earth during the day. According to Ṛgveda 1,185,1d, “day and night turn around like two wheels”,³²⁸ and in the Mahābhārata, the two wheels of Kṛṣṇa’s chariot are compared to the sun and the moon.³²⁹

The sun and the pillar

In the chariot race of the gods — won by the Aśvins — the course was from Agni, the fire, to Sūrya, the sun. The Ṛgveda also speaks of “races which have the sun as their prize”³³⁰, and the chariot of the Aśvins is called “sun-finding”³³¹. The goal in the vājapeya race is the turning post (*kāṣṭhā-*), which the Brāhmaṇa texts equate with the world of heaven.³³² In many Ṛgvedic hymns, the sun is the cosmic pillar.³³³ The sun

etenemau lokau viṣkabdhau, “As two leaves might be propped apart by means of a peg, or two wheels by means of an axle, so these [two] worlds are propped apart by means of this [atmosphere]” (transl. Oertel 1896:98).

³²⁶RV 10,89,4cd *yó ākṣeneva cakrīyā śácibhir viśvak tasthāmbha prthivīm utá dyām*.

³²⁷RV 7,69,1ab *ā vām rátho ródasī badbadhānó hiraṇyáyo vṣabhir yātv ásvaiḥ*.

³²⁸RV 1,185,1d *ví vartete áhanī cakrīyeva*. Cf. RV 6,9,1ab *áhaś ca kṛṣṇám áhar árunam ca ví vartete rájasi vedyābhiḥ*.

³²⁹Mahābhārata 5,81,15 “The chariot shone like the blazing Doomsday fire and traveled like a bird, with two wheels resembling sun and moon to adorn it” (transl. van Buitenen 1978: III, 359). — I would like to compare the sun and the moon as chariot wheels to the round plates made of gold and silver, which are placed above and beneath the *gharma* vessel (that represents the sun) in the pravargya ritual sacred to the Aśvins; these two surrounding plates have counterparts also in the royal rites of the Veda.

³³⁰*svārmīlhesv ājīṣu*, RV 1,63, 6; 1,130,8; 1,169,2; 8,68,5. See now Hintze 2000: 78-81; 84; 133.

³³¹RV 7,67,3d *svarvídā vāsumatā ráthena*.

³³²Cf. Taittirīya-Brāhmaṇa 1,3,6,5 *vājino vājam dhāvata kāṣṭhām gacchatéty āha / suvargó vái lokāḥ kāṣṭhā / suvargám evā lokāṇi yanti / suvargām vā eté lokāṇi yanti yá ājīm dhāvanti / prāñco dhāvanti / prāñ iva hí suvargó lokāḥ*.

³³³RV 9,74,2a speaks of the sun as “the supporting, well-raised pillar of the sky” (*divó yá skambhó dharūṇaḥ svātataḥ*). The two Agni hymns, RV 4,13 and 4,14, have an identical last fifth stanza in which it is wondered how is it possible that the sun does not fall from the sky, though it is not fastened nor bound – as the pillar of the sky it protects the firmament (*ánāyato ánibaddhaḥ kathāyām nyānān uttānó ’va padyate ná / káyā yāti*

seems to become the cosmic pillar at sunrise, when its light separates heaven and earth.³³⁴ This fits the idea that the sun in its daily course turns around at sunrise and sunset, and accordingly the rising sun should represent the turning post in the chariot race won by the Aśvins. In fact, when Ṛgveda 1,116,17 speaks of the goddess Dawn as ascending the chariot of the Aśvins after these had won the chariot race for her marriage, it compares her to one who has victoriously reached the goal with the horse-chariot.³³⁵

The vājapeya sacrificer climbs the sacrificial post after his victorious race. Having reached the top, he raises his arms³³⁶ and recites the formula, “*We have come to the heaven [or: the sun, suvaḥ], to the gods; we have become immortal...*”³³⁷ The vājapeya in many ways emphasizes the image of the sun or wheel at the top of a post. Inevitably, one is reminded³³⁸ of “Aśoka’s pillars”, which are called *stambha*³³⁹ and have the solar “dharmacakra” on the top (see fig. 2). Their occurrence in connection with the stūpas makes one suspect that they are survivals of an ancient tradition of erecting a turning post for a funeral chariot race near the funeral monument. The Vārāha-Gr̥hyasūtra prescribes a tree or a *caitya* (i.e., a funeral monument) as appropriate marks for the bridegroom to make a sunwise



Figure 2: Reconstruction of the top of Aśoka’s pillar at Sarnath. After Agrawala 1964: fig. 6b.

svadhāyā kó dadarśa divā skambhāḥ sāmṛtaḥ pāti nākam). In RV 1,59,2ab, Agni is the head of the sky and the navel of the earth: he became the hub of these two worlds (*mūrdhā divō nābhīr agnīḥ pṛthivyā āthābhavad aratī ródasyoḥ*). According to RV 4,6,2cd, Agni has made his light shine upwards like Savitar, like a builder (raises a pillar to prop up the roof), he has raised his smoke to the sky to prop it (*ūrdhvām bhānūm savitēvāśren mēteva dhūmām stabhāyad ūpa dyām*). In RV 3,5,10ab, “*Rising high by means of fuel, Agni has propped up the vault of heaven, becoming the highest of all lights*” (*ūd astambhūt samīdhā nākam ṛṣvō ḡnīr bhāvann uttamō rocanānām*). In RV 10,3,2cd, propping up the light of the sun, the hub of heaven (i.e., Agni as the sun) shines with the Vasus (*ūrdhvām bhānūm sūryasya stabhāyān divō vāsubhīr aratīr ví bhāti*).

³³⁴According to RV 5,45,2d, “*the sky became fixed like a well-erected pillar*” (*sthūṇeva sūmitā dṛmḥata dyāuḥ*), and Geldner (1951: I, 50) in his introduction to the hymn notes: “*Das Hauptthema ist der Sonnenaufgang, aber nicht der gewöhnliche, alltägliche, sondern wie Grassmann und Oldenberg richtig erkannt haben, der erste Sonnenaufgang nach langer Regenzeit und trübem Himmel.*”

³³⁵Cf. RV 1,116,17 *ā vām rātham duhitā sūryasya kārṣmevātiṣṭhad ārvaṭā jāyanti / viśve devā ānv amanyanta hṛdbhīḥ sām u śriyā nāsatyā sacethe*. For the phrase describing the reaching of the goal, cf. RV 9,36,1c *kārṣman vājī ny ākramīt* and RV 9,74,8b *kārṣmann ā vājy ākramīt sasavān*. The term *kārṣman*- is derived from the root *karṣ-* and refers to a furrow drawn on the ground at the goal of the race; cf. Mayrhofer 1992: I, 342.

³³⁶Cf. Baudhāyana-Śrautasūtra 11,11: 80, 6-7 *āntaṃ gatvā bāhū udgr̥hṇāti suvar devāṃ aganmāmṛtā abhūma...*

³³⁷Taittirīya-Saṃhitā 1,7,9e, transl. Keith 1914: 108; cf. Śatapatha-Brāhmaṇa 5,2,1,12-14.

³³⁸Cf. also the ‘thousand-spoked wheel’ (*sahasrāra-cakra-*) on the top of the spine (*meru-daṇḍa-*) equated with the cosmic mountain Meru in the microcosm of Tantric Yoga, which in its rudiments can be traced back to the Br̥had-Āraṇyaka-Upaniṣad.

³³⁹Cf. Bareau 1975: 177.

turn with his chariot after an eastward start, when he takes the bride and the nuptial fire to his own house after the wedding.³⁴⁰ This has a parallel in the Iliad (23,326–333), where Nestor points out the turning post to his son Antilochus as being a dead tree trunk flanked by two white stones, a sign marking an old funeral or previously used as a turning post.³⁴¹

The funeral monument and the chariot wheel

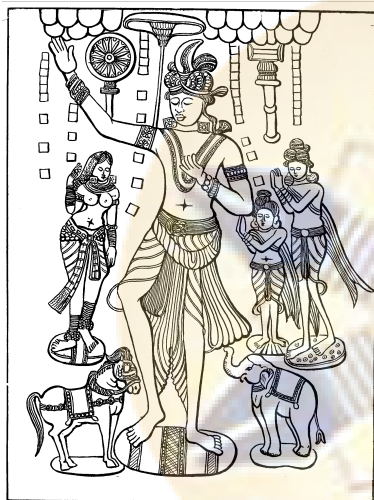


Figure 3: The *cakkavatti rājā* with his insignia including the *dharmacakra* on top of a pillar in a relief of a stūpa at Jagayyapeta, Andhra Pradesh (c. 100 BCE). After Agrawala 1964: fig. 97.

The stūpa is the funeral monument of the Buddha as the spiritual emperor, equal to a *cakkavatti rājā*, whose insignia include the *dharmacakra* on the top of a pillar (see fig. 3). The term *cakravartin* for the universal emperor³⁴² is connected with the Buddha in the story of his first sermon which equalled the *dharmacakrapravartana*, setting the wheel of law rolling. This is obviously related to the turning of the wheel on which the brahman priest is sitting, personifying Bṛhaspati, the royal priest of the gods.

A similar episode is also known from the Vedic ritual of establishing the sacred śrauta fires, *agnyādheya*.³⁴³ The newly lighted fire is taken in a procession from the gārhapatyā hearth to the āhavanīyā hearth, where it is to be placed upon the hoofprint made by the young horse that leads the procession. Simultaneously, the brah-

man priest rolls a chariot wheel (or alternatively a whole chariot) forwards so that the wheel turns around three times. According to the Taittirīya-Brāhmaṇa, this means that the sacrificer, by means of a human chariot, mounts a divine chariot.³⁴⁴ While rolling the wheel, the brahman priest mutters battle hymns, in which Bṛhaspati is prayed to for help and victory.³⁴⁵

³⁴⁰ Vārāha-Gr̥hyasūtra 15,4 ... *iti prāñcam prayāpya pradakṣiṇam āvṛtya yathārthalakṣaṇyaṃ vṛkṣaṃ caityaṃ vopatiṣṭheta*.

³⁴¹ Cf. Sparreboom 1983: 70–71.

³⁴² On the term *cakravartin*- as denoting the world ruler and as a reminiscence of the nomadic lifestyle of the early Indo-Aryan speakers, see Scharfe 1987; 1989: 51–55.

³⁴³ For a thorough description and discussion of this episode, see Krick 1982: 301ff. Cf. also Caland 1899.

³⁴⁴ Taittirīya-Brāhmaṇa 1,1,6,8 *rathacakraṃ pravartayati / manuṣyārathenaiva devarathaṃ pratyavarohati*.

³⁴⁵ Cf. Krick 1982: 327.

While the horse leads this procession carrying the fire, the sacrificer recites verses of the praise hymn to the victorious horse who is brought to be sacrificed, Ṛgveda 1,163.³⁴⁶ In this hymn, the horse is praised as having been created by the Vasu gods out of the sun, as given by Yama and as first yoked by Trita and as (its chariot) first mounted by Indra. This splendid horse arises from the womb of the waters.

Trita Āptya, mentioned in this hymn as the yoker of the horse, appears in the Ṛgveda as a companion of Indra, and has a Proto-Aryan background.³⁴⁷ According to Ṛgveda 1,105,17, Trita was put down in a pit, but saved from distress by Br̥haspati.³⁴⁸ Trita's case is similar to that of Vandana and others saved from a pit or distress by the Nāsatyas, and the pit here denotes the grave.³⁴⁹ In a later version of this myth the word used for the pit, *kūpa*,³⁵⁰ is understood as a well, which is its other meaning. Trita and his two brothers, Ekata and Dvita, roam thirsty in a desert and find a well. Trita descends into the well and gives water to his brothers. But after the two had slaked their thirst, they left Trita in the well, covered him with a chariot wheel (*rathacakreṇāpidhāya*) and went away. He was saved when he supernaturally saw the Traita song and praised Parjanya with it.³⁵¹ In the Kāṇva hymn to Varuṇa, “Trita is described as one in whom all wisdom is centred, as the nave in a wheel.”³⁵² He is like the brahman priest (Br̥haspati) sitting upon the chariot wheel.

Some ancient stūpas have the ground plan of the wheel.³⁵³ The chariot wheel is one of the Vedic *citis*.³⁵⁴ It is true that the *rathacakra-citi* is a fire altar (for one who wants to annihilate foes), not a funeral monument, but only a builder of a fire altar was entitled to a funeral monument, *loṣṭa-citi* or *śmaśāna-citi*. A funeral monument that has a round layout was, according to the Śatapatha-Brāhmaṇa (13,8,1,5), only used by the easterners

³⁴⁶Cf., also for an annotated translation of the hymn, Krick 1982: 306-311.

³⁴⁷On Trita see, e.g., Macdonell 1897: 67-69; Hillebrandt 1927: II, 307-311; Watkins 1995: 464-468.

³⁴⁸Cf. ṚV 1,105,17 *tritāḥ kūpe 'vahito devān havata ūdāye / tāt chuśrāva br̥haspatiḥ ...*

³⁴⁹Cf. Hillebrandt 1929: II, 307, n. 5.

³⁵⁰Geldner (1951: I, 136) points out that the assumed composer of ṚV 1,105, Kutsa, was in ṚV 1,106,6 also in a similar situation, thrown into a pit, which is here called *kātā*.

³⁵¹Cf. Jaiminīya-Brāhmaṇa 1,184.

³⁵²Macdonell 1897: 68. Cf. ṚV 8,41,6 *yāsmīn viśvāni kāvyā cakre nābhīr iva śrūtā / tritām juīṣ saparyata vrajē gāvo nā saṃyūje //*

³⁵³Cf. Parpola 2002b: 310-312, and Kuwayama 2002: 44-68 & pl. 11-12. Since these stūpas were only constructed during the first two centuries of the Christian era (excepting the stūpa of Nāgārjunakoṇḍa, which is from the early third century) and since there are some striking structural similarities (concentric circles of walls, a thick outermost wall and a wheel-like plan comprising a hub with spokes), which are not found in the earlier stūpas, Kuwayama considers these round stūpas as loans from Augustan Rome — similar circular tombs of stone or brick were built in Imperial Rome and its provinces. — I do not deny that Kuwayama's thesis has considerable likelihood, but point out that the wheel-shaped *citis* of the Veda do provide us with Indian antecedents.

³⁵⁴Cf. Taittirīya-Saṃhitā 5,4,11,2; Baudhāyana-Śulbasūtra 16; Mānava-Śrautasūtra 10,3,6,13 — 10,3,7,7.

and others worshipping asuras (demons), while the worshippers of gods make them four-cornered. Yet several Vedic Sūtras give the option of making the funeral monument either four-cornered or round, the Atharvavedins even preferring a round one.³⁵⁵ The wheel-shaped ground plan harks back to Proto-Aryan times, for it is attested in the ceremonial centres of the Sintashta-Arkaim culture of the southern Urals around 2000 BCE, and for instance in the famous Arzhan kurgan of the early Sakas in Tuva, dated to c. 900 BCE.

Conclusion

Some of the main theses of this paper may be briefly summarized. Proto-Aryan was spoken in the Sintashta-Arkaim culture of the Volga steppes and the southern Urals. By 2000 BCE, this culture developed the horse-drawn chariot, and the deified two-man chariot team of the chariot warrior and his charioteer became the model for a dual kingship and the “twin sons of the sky”, the main divinities of the pantheon. The chariot and its mythic lore spread to the Proto-Greeks and Proto-Balts as well as to the Proto-Finno-Ugrians of the mid-Volga and mid-Urals, who were ruled by a Proto-Aryan-speaking elite. Many of the Proto-Aryan loanwords surviving in Finno-Ugrian languages testify to the Nāsātya cult. Particularly important is the term *stambha*, which denoted the turning post of chariot races and the world mountain around which the two Aśvins, as the day and night aspects of the sun, make their daily circles. The sun and the fire represented these white and black aspects of the sun, symbolized by the wheel, the chariot, and the horse. The night sky was imagined to be an ocean, and the night-sun, or fire, was hiding as a man- or horse-shaped embryo in its womb.

The worship of the divine twins or the sun and the fire was associated with the sunrise and sunset, which were understood to be moments of birth and death. Night and darkness symbolized death, and the generation of light at early dawn by means of a fire-drill symbolized the generation of new life. The twins were funeral deities who saved the deceased from the distress of the grave — this was especially the function of the charioteer, the *nāsātya*, who carried the worshipper to the world of heaven (the solar world) in his divine chariot in the morning. They were also deities of (re)generation and fertility who “rejuvenated” old and decrepit people by making them re-enter the womb in connection with marriage ceremonies — this was especially the function of the warrior, the *marya*, who was the prototypical wooer and bridegroom, and the husband of his beautiful sister, the dawn, the daughter of the sun or sky.

³⁵⁵ Āpastamba-Śulbasūtra 13; Hiraṇyakeśi-Kalpasūtra 25,14; Kauśikasūtra 85,8; cf. Caland 1896: 141f.

The divine twins were worshipped at the liminal passages of dawn and dusk, at funerals and marriages, and at the turning points of the solar year. Their cult involved the worship of fire and the sun, including especially the generation of fire with a fire-drill and regular morning and evening drink offerings poured into fire, as well as chariot races. The favourite drink of the twins was honey-beer, a mixture of sour milk and honey. Its preparation involved churning, and gave rise to the myth of “the churning of the milk ocean”. Perhaps the twins themselves, going daily around the central world mountain as the day and night sun, were the original churners, then replaced by devas and asuras, divinities associated with the day³⁵⁶ and night³⁵⁷ respectively. The product was the “nectar of immortality”, which was conceived of as seed that could revive the dead.

What happened to the divine twins after the Proto-Aryan period has been already sketched above (pp.27-33) and need not be repeated here. The dual kingship was preserved in India, although it has not been recognized as such, in the team of the king and the purohita, and in Buddhism as the recognition of a spiritual emperor besides the universal mundane emperor, the *cakkavatti rājā*. As this term indicates, the wheel and the chariot remained supreme symbols of kingship in India, while the Buddhist stūpa has preserved some salient features of the Proto-Aryan burial mounds, their *stambhas* probably going back to ancient turning posts of funeral chariot races.³⁵⁸

References

- Agrawala, Vasudeva S. 1964. *The wheel-flag of India, Chakra-dhvaja*. Varanasi: Prithivi Prakashan.
- Aikio, Ante & Petri Kallio, in press. Review of: Katz 2003. *Die Sprache*.
- Anthony, David W. 1995. Horse, wagon and chariot: Indo-European languages and archaeology. *Antiquity* 69 (264): 554-565.
- 1998. The opening of the Eurasian steppe at 2000 B. C. E. Pp. 94-113 in: Victor H. Mair (ed.), *The Bronze Age and Early Iron Age peoples of eastern Central Asia*, I. (Journal of Indo-European Studies Monograph 26: I.) Washington, D. C.: Institute for the Study of Man.
- Anthony, David W. & N. B. Vinogradov 1995. Birth of the chariot. *Archaeology* 48 (2): 36-41.
- Anttonen, Veikko 2000. The enigma of the sacred pillar: Explaining the Sampo. Pp. 165-192 in: Nils G. Holm et al. (eds.), *Ethnography is a heavy rite: Studies of comparative religion in honor of Juha Pentikäinen*. (Religionsvetenskapliga skrifter, 47.) Åbo: Åbo Akademi.

³⁵⁶Cf. Proto-Finnic **taivas* ‘sky’ from Proto-Aryan **daiva-s* ‘sky; god’ > Sanskrit *deva-* ‘god’ (cf. Joki 1973: 323; Mayrhofer 1992: I, 742f.).

³⁵⁷In the Veda, the *asuras*, and especially Varuṇa, have the magic power of making things invisible, and this characteristic would fit deities of the night. Proto-Finno-Ugrian **asera* from Proto-Aryan **āsura-* has already been referred to above (n. 137).

³⁵⁸It would be interesting to have the polo grounds of northern Pakistan examined archaeologically to see if any evidence of such turning posts could be found. Could the often anthropomorphic stone stelae connected with the burial mounds of the Eurasiatic steppes be interpreted as turning posts of horse-races (or even earlier races of bullock carts)?

Bureau, André 1975. Les récits canoniques des funérailles du Buddha et leur anomalies: Nouvel essai d'interprétation. *Bulletin de l'École Française d'Extrême-Orient* 62: 151-189.

Baunack, Theodor 1896. Ueber einige Wunderthaten der Aśvin. *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 50: 263-287.

——— 1899. Bhujyu, ein schützling der Aśvin. *Zeitschrift für vergleichende Sprachforschung auf dem Gebiete der indogermanischen Sprachen* 35: 485-563.

Benveniste, Emile 1993. *Indoeuropäische Institutionen: Wortschatz, Geschichte, Funktionen*. Herausgegeben und mit einem Nachwort zur deutschen Ausgabe versehen von Stefan Zimmer. Frankfurt: Campus Verlag.

Bergaigne, Abel 1878-83. *La religion védique d'après les hymnes du Rig-veda*, I-III. (Bibliothèque de l'École des Hautes Études, Sciences philologiques et historiques, 36; 53; 54.) Paris: F. Vieweg.

Bethe, Erich 1905. Dioskuren. Col. 1097-1123 in: Georg Wissowa (Hrsg.), *Paulys Real-Encyclopädie der classischen Altertumswissenschaft, Neue Bearbeitung*, 5. Stuttgart: J. B. Metzlersche Buchhandlung.

Biardeau, Madeleine 1989. *Histoire de poteaux: Variations védiques autour de la Déesse hindoue*. (Publications de l'École Française d'Extrême-Orient, 154.) Paris: École Française d'Extrême-Orient.

Biezais, Haralds 1975. Baltische Religion. Pp. 307-391 in: Åke W. Ström & Haralds Biezais, *Germanische und Baltische Religion*. (Die Religionen der Menschheit, 19: 1.) Stuttgart: Verlag W. Kohlhammer.

Blažek, Václav 1990. New Fenno-Ugric — Indo-Iranian parallels. Pp. 40-43 in: *Uralo-Indo-germanica: Balto-slavyanskije yazyki i problema uralo-indoevropskikh svyazej. Materialy 3-ej balto-slavyanskoj konferentsii, 18-22 yunya 1990 g.*, II. Moskva.

Bloomfield, Maurice 1893. Contributions to the interpretation of the Veda. *Journal of the American Oriental Society* 15: 143-188.

——— 1899. *The Atharva-Veda and the Gopatha-Brāhmaṇa*. (Grundriss der indo-arischen Philologie und Altertumskunde, 2: 1: B.) Strassburg: Karl J. Trübner.

Bodewitz, H. W. 1976. *The daily evening and morning offering (agnihotra) according to the Brāhmaṇas*. (Orientalia Rheno-Traiectina, 21.) Leiden: E. J. Brill.

——— 1990. *The Jyotiṣtoma ritual, Jaiminīya Brāhmaṇa I, 66-364: Introduction, translation and commentary*. (Orientalia Rheno-Traiectina, 34.) Leiden: E. J. Brill.

Brereton, Joel Peter 1981. *The Ṛgvedic Ādityas*. (American Oriental Series, 63.) New Haven: American Oriental Society.

Bobomullov, Saïdmurād 1997. Ein bronzezeitliches Grab aus Zardča Chalifa bei Pendžikent (Zeravšan-Tal). *Archäologische Mitteilungen aus Iran und Turan* 29: 121-134.

Buitenen, J. A. B. van 1968. *The Pravargya: An ancient Indian iconic ritual described and annotated*. (Deccan College Building Centenary and Silver Jubilee Series, 58.) Poona.

——— 1975. *The Mahābhārata [vol. II]: 2 The Book of the Assembly Hall, 3 The Book of the Forest, translated and edited*. Chicago: The University of Chicago Press.

——— 1978. *The Mahābhārata [vol. III]: 4 The Book of Virāṭa, 5 The Book of the Effort, translated and edited*. Chicago: The University of Chicago Press.

Burkert, Walter 1985. *Greek religion, archaic and classical*. Translated by John Raffan. Oxford: Basil Blackwell.

Burrow, Thomas & M. B. Emeneau 1984. *A Dravidian etymological dictionary*. Second edition. Oxford: Clarendon Press.

Caland, Willem 1896. *Die altindischen Todten- und Bestattungsgebräuche*. (Verhandelingen der Koninklijke Akademie van Wetenschappen te Amsterdam, Afdeeling Letterkunde, I: 6.) Amsterdam: Johannes Müller.

- 1899. Zur Exegese und Kritik der rituellen Sūtras, XXXI: Das Rad im Ritual. *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 53: 699-701.
- 1904-1913[-1923]. *The Baudhāyana Śrauta Sūtra belonging to the Taittirīya Saṃhitā edited*, I-III. (Bibliotheca Indica, Work 163.) Calcutta: The Asiatic Society.
- 1912. Kritisch-exegetische Bemerkungen zu den Brāhmaṇas. *Wiener Zeitschrift für die Kunde des Morgenlandes* 26: 107-126.
- 1914. Die vorchristlichen baltischen Totengebräuche. *Archiv für Religionswissenschaft* 17: 476-512.
- 1919. *Das Jaiminīya-Brāhmaṇa in Auswahl: Text, Übersetzung, Indices*. (Verhandelingen der Koninklijke Akademie van Wetenschappen te Amsterdam, Afdeeling Letterkunde, Nieuwe Reeks, 19: 4.) Amsterdam: Johannes Müller.
- Carpelan, Christian, and Asko Parpola 2001. Emergence, contacts and dispersal of Proto-Indo-European, Proto-Uralic and Proto-Aryan in archaeological perspective. Pp. 55-150 in: Carpelan et al. 2001.
- Carpelan, Christian, Asko Parpola and Petteri Koskikallio (ed.) 2001. *Early contacts between Uralic and Indo-European: Linguistic and archaeological considerations*. (Mémoires de la Société Finno-Ougrienne, 242.) Helsinki: Suomalais-Ugrilainen Seura.
- Cattani, M. 2004 [2005]. Margiana at the end of Bronze Age and beginning of Iron Age. Pp. 303-315 in Kosarev et al. 2004 [2005].
- Cornelius, Friedrich 1942. *Indogermanische Religionsgeschichte*. München: Ernst Reinhardt Verlag.
- Debrunner, Albert 1954. Die Nominalsuffixe. Band II, 2 von Jacob Wackernagel's *Altindische Grammatik*. Göttingen: Vandenhoeck & Ruprecht.
- Dumont, P.-E. 1939. *L'agnihotra: Description de l'agnihotra dans le rituel védique d'après les Śrautasūtras ...* Baltimore: The Johns Hopkins Press.
- Eggeling, Julius 1882-1900. *The Śatapatha-Brāhmaṇa according to the text of the Mādhyandina school translated*, I-V. (Sacred Books of the East, 12; 26; 41; 43; 44.) Oxford: Clarendon Press.
- Eitrem, S. 1902. *Die göttlichen Zwillinge bei den Griechen*. (Skrifter udgivne af Videnskabselskabet i Christiania, 1902, II: Historisk-filosofisk Klasse, 2.) Christiania: A. W. Brøggers Buchdruckerei.
- Epimakhov, A. V. 2002. *Yuzhnoe Zaural'e v èpokhu srednej bronzy*. Chelyabinsk: Izdatel'stvo YuUrGU.
- Falk, Harry 1994. Das Reitpferd im vedischen Indien. Pp. 91-101 in: Hänsel & Zimmer (Hrsg.) 1994.
- Farnell, L. R. 1921. *Greek hero cults and ideas of immortality*. Oxford: Oxford University Press.
- Findly, E. Banks 1979. The 'Child of the Waters': A revaluation of Vedic Apām Napāt. *Numen* 26: 164-184.
- Frame, Douglas 1978. *The myth of return in early Greek epic*. New Haven: Yale University Press.
- Geldner, Karl Friedrich 1928. *Vedismus und Brahmanismus*. Zweite Auflage. (Religionsgeschichtliches Lesebuch, 9.) Tübingen: J. C. B. Mohr (Paul Siebeck).
- 1951. *Der Rig-Veda aus dem Sanskrit ins Deutsche übersetzt und mit einem laufenden Kommentar versehen*, I-III. (Harvard Oriental Series, 33-35.) Cambridge, Mass.: Harvard University Press.
- Gening, V. F., G. B. Zdanovich & V. V. Gening 1992. *Sintashta: Arkheologicheskie pamyatniki arijskikh plemen Uralo-Kazakhstanskikh stepej*, 1. Chelyabinsk: Yuzhno-Ural'skoe knizhnoe izdatel'stvo.
- Gonda, Jan 1959. *Epithets in the R̥gveda*. (Disputationes Rheno-Traiectinae, 4.) 's-Gravenhage: Mouton & Co.

- 1966. *Ancient Indian kingship from the religious point of view*. Reprinted from 'Numen' III and IV with addenda and an index. Leiden: E. J. Brill.
- 1974. *The dual deities in the religion of the Veda*. (Verhandelingen der Koninklijke Nederlandse Akademie van Wetenschappen, Afdeling Letterkunde, Nieuwe Reeks, 81.) Amsterdam: North-Holland Publishing Company.
- 1981. *The Vedic morning litany (prātaranuvāka)*. (Orientalia Rheno-Traiectina, 26.) Leiden: E. J. Brill.
- Gotō, Toshifumi 1991. *Asvín- to Násatya-*. *Journal of Indian and Buddhist Studies (Indogaku bukkyōgaku kenkyū)* 39 (2): 977-982.
- 2005. *Asvín- and Násatya in the R̥gveda and their prehistoric background*. Paper read at the Harvard-Kyoto Roundtable on Ethnogenesis in Central and South Asia, Kyoto 8 June 2005.
- Greenhalgh, P. A. L. 1973. *Early Greek warfare: Horsemen and chariots in the Homeric and Archaic ages*. New York: Cambridge University Press.
- Gubaev, A., G. Koshelenko & M. Tosi (eds.) 1998. *The archaeological map of the Murghab delta: Preliminary reports 1990-1995*. Roma: Istituto Italiano per l'Africa e l'Oriente.
- Güntert, Hermann 1923. *Der arische Weltkönig und Heiland*. Halle (Saale): Verlag von Max Niemeyer.
- Haavio, Martti 1967. *Suomalainen mytologia*. Porvoo: Werner Söderström Osakeyhtiö.
- Hänsel, Bernhard & Stefan Zimmer (Hrsg.) 1994. *Die Indogermanen und das Pferd*. (Archaeolingua, 4.) Budapest: Archaeolingua Alapítvány.
- Harris, J. R. 1906. *The cult of the divine twins*. Cambridge: Cambridge University Press.
- Harva, Uno 1943. *Sammon ryöstö*. Porvoo: Werner Söderström Osakeyhtiö.
- 1948. *Suomalaisten muinaisuus*. Porvoo: Werner Söderström Osakeyhtiö.
- Harvey, Peter 1990. *An introduction to Buddhism: Teachings, history and practices*. Cambridge: Cambridge University Press.
- Heesterman, J. C. 1957. *The ancient Indian royal consecration: The rājasūya described according to the Yajus texts and annotated*. (Disputationes Rheno-Traiectinae, 2.) 's-Gravenhage: Mouton & Co.
- 1989. King and warrior. Pp. 97-122 in: J. C. Galey (ed.), *Kingship and the kings*. (History and anthropology, 4.) London: Harwood Academic Publishers.
- Hiebert, F. T. 1994. *Origins of the Bronze Age oasis civilization of Central Asia*. (Bulletin of the American School of Prehistoric Research, 42.) Cambridge, MA: Peabody Museum.
- Hiebert, F. T. & K. M. Moore 2004 [2005]. A small steppe site near Gonur. Pp. 294-302 in: Kosarev et al. 2004 [2005].
- Hillebrandt, Alfred 1897. *Ritual-Litteratur, vedische Opfer und Zauber*. (Grundriss der indoarischen Philologie und Altertumskunde, 3: 2.) Strassburg: Karl J. Trübner.
- 1927-29. *Vedische Mythologie*, I-II. Zweite veränderte Auflage. Breslau: M. & H. Marcus.
- Hintze, Almut 2000. *'Lohn' im Indoiranischen: Eine semantische Studie des R̥gveda und Avesta*. (Beiträge zur Iranistik, 20.) Wiesbaden: Dr. Ludwig Reichert Verlag.
- Hopkins, Edward W. 1889. *The social and military position of the ruling caste in India, as represented by the Sanskrit Epic. With an appendix on the status of women*. New Haven: American Oriental Society. [Reprinted from: *Journal of the American Oriental Society* 13 (1889): 57-376.]
- Horsch, Paul 1966. *Die vedische Gāthā- und Śloka-Literatur*. Bern: Francke Verlag.
- Houben, Jan E. M. 1991. *The Pravargya Brāhmaṇa of the Taittirīya Āraṇyaka: An ancient commentary on the Pravargya ritual. Introduction, translation and notes*. Delhi: Motilal Banarsidass.
- 2000a. On the earliest attestable forms of the Pravargya ritual: R̥g-Vedic references to the Gharma-Pravargya, especially in the Atri-family book (book 5). *Indo-Iranian Journal* 43: 1-25.

——— 2000b. The ritual pragmatics of a Vedic hymn: The “riddle hymn” (Rgveda 1.164) and the Pravargya ritual. *Journal of the American Oriental Society* 120 (4): 499-536.

Insler, Stanley 1996. Avestan *vāz* and Vedic *vāh*. *Studien zur Indologie und Iranistik* 20 [Festschrift für Paul Thieme]: 169-186.

——— 1998. On the recensions of the Atharva Veda and Atharvan hymn composition. *Wiener Zeitschrift für die Kunde Südasiens* 42: 5-21.

Jamison, Stephanie W. 1991. *The ravenous hyenas and the wounded sun: Myth and ritual in ancient India*. Ithaca: Cornell University Press.

Jarrige, Jean-François & Marielle Santoni 1979. *Fouilles de Pirak*, I. (Publications de la Commission des Fouilles Archéologiques, Fouilles de Pakistan, 2.) Paris: Diffusion De Boccard.

Joki, Aulis J. 1973. *Uralier und Indogermanen: Die älteren Berührungen zwischen den uralischen und indogermanischen Sprachen*. (Mémoires de la Société Finno-Ugrienne, 151.) Helsinki: Suomalais-Ugrilainen Seura.

Kalima, Jalo 1930. Parista suomen s-alkuisesta sanasta. *Virittäjä* 34: 346-348.

Kane, Pandurang Vaman 1941. *History of Dharmasāstra*, II. Poona: Bhandarkar Oriental Research Institute.

Kashikar, C. G. 2003. *The Baudhāyana Śrautasūtra, critically edited and translated*, I-IV. (Kalāmūlaśāstra series, 35-38.) New Delhi: Indira Gandhi National Centre for the Arts, and Delhi: Motilal Banarsidass Publishers Pvt. Ltd.

Katz, Hartmut 2003. *Studien zu den älteren indoiranischen Lehnwörtern in den uralischen Sprachen*. Aus dem Nachlass herausgegeben von Paul Widmer, Anna Widmer und Gerson Lumpp. Heidelberg: Universitätsverlag Carl Winter.

Keith, Arthur Berriedale 1920. *Rigveda Brahmanas: The Aitareya and Kauṣītaki Brāhmaṇas of the Rigveda, translated from the original Sanskrit*. (Harvard Oriental Series, 25.) Cambridge, Mass.: Harvard University Press.

Kemppinen, Iivar 1960. *Suomalainen mytologia*. Mit deutschem Resumé. Helsinki: Kirja-Mono Oy.

Kirfel, Willibald 1920. *Die Kosmographie der Inder nach Quellen dargestellt*. Bonn: Kurt Schroeder.

Kobayashi, Masato 2004. *Historical phonology of Old Indo-Aryan consonants*. (Study of Languages and Cultures of Asia and Africa Monograph Series, 42.) Tokyo: Research Institute for Languages and Cultures of Asia and Africa, Tokyo University of Foreign Studies.

Koivulehto, Jorma 1999. Varhaiset indoeurooppalais-kontaktit: Aika ja paikka lainasanojen valossa. Pp. 207-236 in: Paul Fogelberg (ed.), *Pohjan poluilla: Suomalaisen juuret nykytutkimuksen mukaan*. (Bidrag till kännedom av Finlands natur och folk, 153.) Helsinki: Societas Scientiarum Fennica.

——— 2000. Fest und Zyklus des Jahres: Jul und Kekri. *Neuphilologische Mitteilungen* 101: 235-252.

——— 2001. The earliest contacts between Indo-European and Uralic speakers in the light of lexical loans. Pp. 235-263 in: Carpelan et al. 2001.

——— 2003. Arjalaisia lainoja. Paper read at the meeting of the Finno-Ugrian Society, Helsinki, 21 March 2003.

——— 2005. Noin jalot vietettiin hevonsuistajan Hektorin peijaat. *Virittäjä* 109: 322-335.

Krick, Hertha 1982. *Das Ritual der Feuergründung (Agnýādheya)*. Herausgegeben von Gerhard Oberhammer. (Österreichische Akademie der Wissenschaften, Philosophisch-historische Klasse, Sitzungsberichte, 399.) Wien: Verlag der Österreichischen Akademie der Wissenschaften.

Kuhn, Adalbert 1859. *Die Herabkunft des Feuers und des Göttertrankes: Ein Beitrag zur vergleichenden Mythologie der Indogermanen*. Berlin: Ferd. Dümmler.

Kuiper, F. B. J. 1960. The ancient Indian verbal contest. *Indo-Iranian Journal* 4: 217-281.

——— 1976. Ahura Mazdā ‘Lord Wisdom’? *Indo-Iranian Journal* 18: 25-42.

Kuusi, Matti 1949. *Sampo-eepos: Typologinen analyysi*. (Mémoires de la Société Finno-Ougrienne, 96.) Helsinki: Suomalais-Ugrilainen Seura.

Kuwayama, Shoshin, 2002. *Across the Hindukush of the first millennium: A collection of papers*. Kyoto: Institute for Research in Humanities, Kyoto University.

Kuz'mina, E. E. 1994. *Otkuda prishli indoarii? Material'naya kul'tura plemen andronovskoj obshchnosti i proiskhozhdenie indoirantsev*. Moskva: Rossijskij Institut Kulturologii.

Kuznetsov, P. F. 2004. Rekonstruktsiya krepliniya konskoj uzdy po rezultatam izucheniya diskovidnykh psaliev Povolzh'ya. Pp. 31-38 in: Usachuk 2004.

Lawergren, Bo 2003. Oxus trumpets, ca. 2200-1800 BCE: Material overview, usage, societal role and catalogue. *Iranica Antiqua* 38: 41-118.

Liddell, Henry George & Robert Scott 1940. *A Greek—English lexicon*. A new edition, revised and augmented throughout by Henry Stuart Jones with the assistance of Roderick McKenzie and with the co-operation of many scholars. Oxford: Clarendon Press.

Littauer, Mary Aiken 1981. Early stirrups. *Antiquity* 55: 99-105.

Littauer, Mary Aiken & Joost H. Crouwel 2002. *Selected writings on chariots, other early vehicles, riding and harness*. Edited by Peter Raulwing. (Culture and history of the ancient Near East, 6.) Leiden: Brill.

LIV: Lexicon der indogermanischen Verben: Die Wurzeln und ihre Primärstammbildungen. Unter Leitung von Helmut Rix ... bearbeitet von Martin Kümmel et al. Wiesbaden: Dr. Ludwig Reichelt Verlag, 1998.

LIV Add: Lexicon der indogermanischen Verben. Addenda und Corrigenda zur ersten Auflage, zusammengestellt von Martin Kümmel. Wiesbaden: Dr. Ludwig Reichelt Verlag, 2001.

Lombardo, G. 2004 [2005]. The metallurgy of southern Tajikistan farming sites in the Late Bronze — Early Iron Age and its relations with the Namazga VI and Andronovo cultures. Pp. 391-404 in: Kosarev et al. 2004 [2005].

Lüders, Heinrich 1951-59. *Varuṇa*, I-II. Aus dem Nachlass herausgegeben von Ludwig Alsdorf. Göttingen: Vandenhoeck & Ruprecht.

Macdonell, A. A. 1897. *Vedic mythology*. (Grundriss der indo-arischen Philologie und Altertumskunde, 3: 1 A.) Strassburg: Karl J. Trübner.

Mallory, J. P. 1989. *In search of the Indo-Europeans: Language, archaeology and myth*. London: Thames & Hudson.

Mannhardt, Wilhelm 1875. Die lettischen Sonnenmythen. *Zeitschrift für Ethnologie* 7: 73-104, 209-244, 281-330.

Mayrhofer, Manfred 1966. *Die Indo-Arier im Alten Vorderasien. Mit einer analytischen Bibliographie*. Wiesbaden: Otto Harrassowitz.

——— 1974. *Die Arier im Vorderen Orient — ein Mythos? Mit einem bibliographischen Supplement*. (Österreichische Akademie der Wissenschaften, Philosophisch-historische Klasse, Sitzungsberichte 294: 3.) Wien: Verlag der Österreichischen Akademie der Wissenschaften.

——— 1992-2001. *Etymologisches Wörterbuch des Altindoarischen*, I-III. (Indogermanische Bibliothek, Zweite Reihe.) Heidelberg: Carl Winter — Universitätsverlag.

Michalski, Stanisław Fr. 1961. Ásvins et Dioscures. *Rocznik Orientalistyczny* 24 (2): 7-52.

Moorey, P. R. S. 1986. The emergence of the light, horse-drawn chariot in the Near East c. 2000-1500 B. C. *World Archaeology* 18 (2): 196-215.

Moran, William L. 1992. *The Amarna letters, edited and translated*. Baltimore: The Johns Hopkins University Press.

Muir, J. 1874. *Original Sanskrit texts on the origin and history of the people of India, their religion and institutions, collected, translated and illustrated*, 5. Third edition. London: Williams and Norgate.

- Murray, A. T. 1924-25. *Homer: The Iliad, with an English translation*, I-II. (The Loeb Classical Library.) London: William Heineman Ltd., and Cambridge, Mass.: Harvard University Press.
- Myriantheus, L. 1876. *Die Aṇvins oder arischen Dioskuren*. München: Theodor Ackermann.
- Nagy, Gregory 1979. *The best of the Achaeans: Concepts of the hero in ancient Greek poetry*. Baltimore: The Johns Hopkins University Press.
- Narten, Johanna 1960. Das vedische Verbum *math*. *Indo-Iranian Journal* 4: 121-135.
- 1982. *Die Aməša Spəntas im Avesta*. Wiesbaden: Otto Harrassowitz.
- Nilsson, Martin P. 1955. *Geschichte der griechischen Religion*, I. (Handbuch der klassischen Altertumswissenschaft, 5: 2: I.) München: C. H. Beck'sche Verlagsbuchhandlung.
- Oberlies, Thomas 1992. [Review of Zeller 1990.] *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 142 (2): 412-425.
- 1993. Die Aśvin: Götter der Zwischenbereiche. *Studien zur Indologie und Iranistik* 18: 169-189.
- O'Brien, Steven 1997. Divine twins. Pp. 161-165 in: J. P. Mallory and D. Q. Adams (eds.), *Encyclopedia of Indo-European culture*. London: Fitzroy Dearborn Publishers.
- Oertel, Hanns 1896. The Jāminiya or Talavakāra Upaniṣad Brāhmaṇa: Text, translation, and notes. *Journal of the American Oriental Society* 16: 79-260.
- Oldenberg, Hermann 1909-12. *Ṛgveda: Textkritische und exegetische Noten*, I-II. (Abhandlungen der Königlichen Gesellschaft der Wissenschaften zu Göttingen, Philologisch-historische Klasse, Neue Folge, 11: 5 & 13: 3.) Berlin: Weidmannsche Buchhandlung.
- 1917. *Die Religion des Veda*. Zweite Auflage. Stuttgart: J. G. Cotta'sche Buchhandlung Nachfolger.
- Parpola, Asko 2001. Horse and chariot in Indo-Iranian and Greek religion: Common heritage from the Pontic-Caspian steppes. Paper presented in absentia in a conference on "The horse and horsemen: Horse-breeding and riding in social culture and political genesis" organized by V. M. Masson and E. E. Kuz'mina in Ashkhabad, 21-29 October 2001, and published on pp. 146-148 of the proceedings: *Ro'l' akhaltekinskogo konya v formirovanii mirovogo konozavodstva: Materialy mezhdunarodnoj nauchnoj konferentsii*. Ashkhabad: Prezidentskaya programma Rukhnama, Posvyashchaetsya 10-oj godovshchine nezavisimosti Turkmenistana.
- 2002a. From the dialects of Old Indo-Aryan to Proto-Indo-Aryan and Proto-Iranian. Pp. 43-102 in: Nicholas Sims-Williams (ed.), *Indo-Iranian languages and peoples*. (Proceedings of the British Academy, 116.) London: Oxford University Press for the British Academy.
- 2002b. Pre-Proto-Iranians of Afghanistan as initiators of Śākta Tantrism: On the Scythian / Saka affiliation of the Dāsas, Nuristanis and Magadhans. *Iranica Antiqua* 37: 233-324.
- 2002c. Pandafē and Sītā: On the historical background of the Sanskrit epics. *Journal of the American Oriental Society* 122 (2): 361-373.
- 2004. From archaeology to a stratigraphy of Vedic syncretism: The banyan tree and the water buffalo as Harappan-Dravidian symbols of royalty, inherited in succession by Yama, Varuṇa and Indra, divine kings of the first three layers of Aryan speakers in South Asia. Pp. 479-515 in: Arlo Griffiths & Jan E. M. Houben (eds.), *The Vedas: Texts, language & ritual. Proceedings of the Third International Vedic Workshop, Leiden 2002*. (Groningen Oriental Studies, 20.) Groningen: Egbert Forsten.
- 2004 [2005]. Gandhāra Graves and the Gharma pot, the Nāsatyas and the nose: In pursuit of the chariot twins. Pp. 102-128 in: M. F. Kosarev, P. M. Kozhin & N. A. Dubova (red.), *U istokov tsivilizatsii: Sbornik statej k 75-letiyu Viktora Ivanovicha Sarianidi*. Moskva: Staryj sad. To be republished in: *Ancient Pakistan* 16 (Peshawar: Department of Archaeology, University of Peshawar).
- in press. Administrative contact and acculturation between Harappans and Bactrians: Evidence of sealings and seals. Pp. 281-288 in: Catherine Jarrige (ed.), *South Asian Archaeology 2001*. Paris: ADPF Éditions Recherche sur les Civilisations.

Penner, S. 1998. *Schliemanns Schachtgräber und der europäische Nordosten: Studien zur Herkunft der frühmykenischen Streitwagenausstattung*. (Saarbrücker Beiträge zur Altertumskunde, 60.) Bonn: Rudolf Habelt Verlag.

——— 2004. Die Wangenscheiben aus Mykene und ihre nordöstlichen Beziehungen. Pp. 62-81 in: Usachuk 2004.

Piggott, Stuart 1983. *The earliest wheeled transport: From the Atlantic coast to the Caspian Sea*. London: Thames and Hudson.

——— 1992. *Wagon, chariot and carriage: Symbol and status in the history of transport*. London: Thames and Hudson.

Pirart, Eric 1995-2001. *Les Nāsatya*, I-II. (Bibliothèque de la Faculté de Philosophie et Lettres de l'Université de Liège, 261; 280.) Genève: Droz.

Plath, Robert 1994. Pferd und Wagen im Mykenischen und bei Homer. Pp. 103-114 in: Hänsel & Zimmer (Hrsg.) 1994.

Pokorny, Julius 1959. *Indogermanisches etymologisches Wörterbuch*, I. Basel: Francke Verlag.

Rau, Wilhelm 1957. *Staat und Gesellschaft im alten Indien nach den Brāhmaṇa-Texten dargestellt*. Wiesbaden: Otto Harrassowitz.

——— 1974. *Metalle und Metallgeräte im vedischen Indien*. (Akademie der Wissenschaften und der Literatur [zu Mainz], Abhandlungen der Geistes- und sozialwissenschaftlichen Klasse, Jahrgang 1973: 8.) Wiesbaden: Franz Steiner Verlag GmbH.

——— 1983. *Zur vedischen Altertumskunde*. (Akademie der Wissenschaften und der Literatur [zu Mainz], Abhandlungen der Geistes- und sozialwissenschaftlichen Klasse, Jahrgang 1983: 1.) Wiesbaden: Franz Steiner Verlag GmbH.

Raulwing, Peter 2000. *Horses, chariots and Indo-Europeans: Foundations and methods of chariotry research from the viewpoint of comparative Indo-European linguistics*. (Archaeolingua, Series minor, 13.) Budapest: Archaeolingua.

Renou, Louis 1960. Varuṇa dans l'Atharvaveda. *Paideuma* 7 (4-6 = Festschrift Herman Lommel): 300-306.

——— 1967. *Études védiques et pāṇinéennes*, 16. (Publications de l'Institut de Civilisation Indienne, Série in-8:o, 27.) Paris: Éditions E. de Boccard.

Rodhe, Sten 1946. *Deliver us from evil: Studies on the Vedic ideas of salvation*. (Skrifter utgivna av Svenska sällskapet för missionsforskning, 2.) Lund: C. W. K. Gleerup.

Rüping, Klaus 1970. *Amṛtamanthana und Kūrma-Avatāra: Ein Beitrag zur puranischen Mythen- und Religionsgeschichte*. Wiesbaden: Otto Harrassowitz.

Sammallahti, Pekka 1988. Historical phonology of the Uralic languages, with special reference to Samoyed, Ugric, and Permian. Pp. 478-554 in: Denis Sinor (ed.) *The Uralic languages: Description, history and foreign influences*. (Handbuch der Orientalistik, 8:1.) Leiden: E.J. Brill.

Sarianidi, V. 2001. The Indo-Iranian problem in the light of the latest excavations in Margiana. Pp. 417-441 in: Klaus Karttunen & Petteri Koskikallio (eds.), *Vidyārnavaṇḍanam: Essays in honour of Asko Parpola*. (Studia Orientalia, 94.) Helsinki: The Finnish Oriental Society.

Scharfe, Hartmut 1987. Nomadisches Erbgut in der indischen Tradition. Pp. 300-308 in: Harry Falk (Hrsg.), *Hinduismus und Buddhismus: Festschrift für Ulrich Schneider*. Freiburg: Hedwig Falk.

——— 1989. *The state in Indian tradition*. (Handbuch der Orientalistik, 2: 3: 2.) Leiden: E. J. Brill.

Schlerath, Bernfried 1960. *Das Königtum im Rig- und Atharvaveda: Ein Beitrag zur indogermanischen Kulturgeschichte*. (Abhandlungen für die Kunde des Morgenlandes, 33: 3.) Wiesbaden: Franz Steiner Verlag.

Schmidt, Hanns-Peter 1968. *Brhaspati und Indra: Untersuchungen zur vedischen Mythologie und Kulturgeschichte*. Wiesbaden: Otto Harrassowitz.

- Schmitt, Rüdiger 1967. *Dichtung und Dichtersprache in indogermanischer Zeit*. Wiesbaden: Otto Harrassowitz.
- Setälä, E. N. 1932. *Sammon arvoitus*. Helsinki: Kustannusosakeyhtiö Otava.
- Sieg, Emil 1923. Der Nachtweg der Sonne nach der vedischen Anschauung. *Nachrichten von der Königlich Gesellschaft der Wissenschaften zu Göttingen, Philologisch-historische Klasse*, 1923: 1-23.
- SKES 1955-1981 = *Suomen kielen etymologinen sanakirja*, I-VII. (Lexica Societatis Fenno-Ugricae, 12.) Helsinki: Suomalais-Ugrilainen Seura.
- Sparreboom, Marcus 1983. *Chariots in the Veda*. [Ph.D. thesis, University of Leiden.] Leiden: Krips Repro Meppel.
- 1985. *Chariots in the Veda*. (Memoirs of the Kern Institute, 3.) Leiden: E. J. Brill.
- Speyer, J. S. 1906. A remarkable Vedic theory about sunrise and sunset. *Journal of the Asiatic Society of Great Britain and Ireland* 1906: 723-727.
- SSA 1992-2000 = *Suomen sanojen alkuperä: Etymologinen sanakirja*, 1-3. (Suomalaisen Kirjallisuuden Seuran toimituksia, 556.) Helsinki: Suomalaisen Kirjallisuuden Seura.
- Thieme, Paul 1957. Mitra and Aryaman. *Transactions of the Connecticut Academy of Arts and Sciences* 41: 1-96.
- 1960. The 'Aryan' gods of the Mitanni treaties. *Journal of the American Oriental Society* 80: 301-317.
- 1973. King Varuṇa. Pp. 333-349 in: *German scholars on India*, I. Varanasi: The Chowkhamba Sanskrit Series Office.
- Thite, G. U. 1968. À propos of the Vājapeya. *Journal of the University of Poona, Humanities Section*, 29: 31-39.
- Tokunaga, Muneo 1997. *The Brhaddevatā: Text reconstructed from the manuscripts of the shorter recension with introduction, explanatory notes, and indices*. Kyoto: Rinsen Book Co.
- Usachuk, A. N. (red.) 2004. *Psali: Èlementy upryazhi i konskogo snaryazheniya v drevnosti*. (Arkheologicheskij al' manakh, 15.) Donetsk: Institut Arkheologii NAN Ukrainy.
- Velze, J. A. van 1938. *Names of persons in early Sanscrit literature*. [Ph. D. thesis.] Utrecht.
- Vilkuna, Kustaa 1968. *Vuotuinen ajantieto: Vanhoista merkkipäivistä sekä kansanomaisesta talous- ja sääkalenterista enteineen*. Toinen, korjattu ja lisätty painos. Helsinki: Otava.
- Wace, Alan J. B. & Frank H. Stubbings (eds.) 1962. *A companion to Homer*. London: Macmillan & Co. Ltd.
- Wagner, Norbert 1960. Dioskuren, Jungmannschaften und Doppelkönigtum. *Zeitschrift für Deutsche Philologie* 79 (1): 1-17 & (3): 225-247.
- Ward, Donald 1968. *The divine twins: An Indo-European myth in Germanic tradition*. (Folklore Studies, 19.) Berkeley: University of California Press.
- Warren, Henry Clarke 1896. *Buddhism in translations*. (Harvard Oriental Series, 3.) Cambridge, Mass.: Harvard University Press.
- Watkins, Calvert 1995. *How to kill a dragon: Aspects of Indo-European poetics*. New York: Oxford University Press.
- Weber, Albrecht 1892. Über den vājapeya. *Sitzungsberichte der Königlich Preussischen Akademie der Wissenschaften zu Berlin*, 1892 (39): 763-813.
- Whitney, William Dwight 1905. *Atharva-Veda-Samhitā, translated into English with a critical and exegetical commentary*. Revised and brought nearer to completion and edited by Ch. R. Lanman. I-II. (Harvard Oriental Series, 7-8.) Cambridge, Mass.: Harvard University Press.
- Wikander, Stig 1957. Nakula et Sahadeva. *Orientalia Suecana* 6: 66-96.
- Witzel, Michael 1984. Sur le chemin du ciel. *Bulletin d'Études Indiennes* 2: 213-279.
- Zeller, Gabriele 1990. *Die vedischen Zwillingsgötter: Untersuchungen zur Genese ihres Kultes*. (Freiburger Beiträge zur Indologie, 24.) Wiesbaden: Otto Harrassowitz.
- Zimmer, Heinrich 1879. *Altindisches Leben: Die Cultur der vedischen Arier nach den Samhitā dargestellt*. Berlin: Weidmannsche Buchhandlung.