

Viṣṇu's Highest Stride

Catalin Anghelina
Ohio State University, Columbus, Ohio
Anghelina10@yahoo.com

Despite the fact that there are few Vedic hymns dedicated to him, Viṣṇu has always been considered as one of the most important gods in Hinduism. Viṣṇu's importance is apparent in the well-known Vedic myth of the three strides. This myth, in which the god divides/measures the universe, practically shows Viṣṇu as a supreme creator-god. Through this divine act, Viṣṇu reaches the highest point in the universe. Later (purāṇic) traditions explicitly show Viṣṇu as dwelling at the North Pole of the celestial vault. The Vedic evidence shows that these traditions are older, going back to the Vedas themselves. Thus, Viṣṇu's last stride reaches the North Pole of the sky. At the same time, the other two strides represent a partition of the sky into regions with eschatological importance. These are the *pityāna* and *devayāna*.

1) Viṣṇu's Seat in the Universe

It is well known that, in comparison to Indra, Soma, Agni, or even Varuṇa, Viṣṇu, who is a divinity of the highest rank in Hinduism, is celebrated but in few hymns of the Rig Veda.¹ Nevertheless, despite this statistical subordination, some of Viṣṇu's traits make him more important than it might appear. One of the most striking features of his personality, which is not infrequently mentioned or alluded to in the Rig Veda, is that he takes three strides in the creation or measuring of the universe.² These three strides encompass the whole Cosmos, and the third one is said to be the highest (e.g., 1.155.5, 5.3.3, 7.99.1, 10.1.3). The place of this last step is likened to an eye fixed in the sky (1.22.20-1), which shines down greatly (1.154.6), and the poets pray for reaching it (1.154.5).

Another divine act of Viṣṇu, which is closely associated with the three strides, is that by which he sets up the *skambha*

¹RV 1.154-6, 6.69, 7.99-100; cf. Macdonell (1898: 37); Gonda (1954: 1); Indra, for example, is celebrated in more than 300 hymns; cf. Macdonell (1898: 54).

²Among the most recent discussions on this topic, cf. Gonda (1954: 55-80); Kuiper (1962, 1983); Bhattacharji (1970: 284-286).

in the sky in that place where his dwelling place is situated. This is made clear in *RV* 1.154.1 where we read: “let me now sing the heroic deeds of Viṣṇu, who has measured apart the realms of earth, who propped up (*askabhāyad*) the upper dwelling-place (*uttaram sadhastham*), striding far as he stepped forth three times.”³ The verb *skabh-* is obviously related to *skambha*, which is the *axis mundi*. Therefore, Viṣṇu’s act represents the setting up of the *skambha* in the sky.⁴ The act of propping up the sky and keeping it apart from the earth belongs also to Indra and Varuṇa.⁵ Nevertheless, it is only Viṣṇu who has his dwelling place along the axis, more precisely on its top. The sole fact that this place is the highest in the universe has been rightly considered sufficient to make Viṣṇu one of the most important gods even in the Rig Veda.⁶

One of the strangest features of Viṣṇu’s strides is that they both encompass the whole universe and reach its highest place. This makes it extremely difficult to localize them. In fact, Oldenberg (1894: 229) simply rejected any speculation about the places Viṣṇu could have stepped over. In his opinion, the number ‘three’ in this case is the result of a poetic fantasy and does not have any special meaning, whereas the epithet ‘highest’ (*paramam padam*) would be only a metaphor for Viṣṇu reaching the absolute.

At this point, for a better understanding of what these strides represent, I will briefly present below some of the myth’s most important elements in the Rig Veda. These passages were classified and summarized by Macdonell (1895: 171) and Kuiper (1962: 139). They give a general picture about how and where these strides took place.

Viṣṇu strode with three steps over the earthly regions (1.154.1-3; 1.155.4; 6.49.13; 7.100.3-4) and fixed the upper sphere while stepping thrice (1.154.1-3). He also traversed the triple world (*tridhātu*) with these three strides (1.154.4). His last step is the highest one, to the place where the gods

³The translation belongs to O’Flaherty (1981: 226).

⁴*AV* 10.7 is dedicated entirely to *skambha*. In the Rig Veda, *skambha* appears as the *axis mundi* in 1.34.2, 8.41.10, 9.74.2, 9.86.46, 10.5.6, 10.44.4.

⁵To Indra: cf. 2.17.5; 10.89.4; 5.29.4; 6.44.24; to Varuṇa: cf. 6.70.1; 7.86.1; 8.41.10; 5.62.3 (with Mitra). It seems natural that Indra or Varuṇa keep the sky asunder from the earth. Indra is the creator-god, who actually separated the sky from the earth, whereas Varuṇa as the sky (-god) has to stay apart from the earth.

⁶Cf. Gonda (1954: 2).

rejoice (1.155. 5; 7.99.1; 8.29.7).

Despite these peculiar features of Viṣṇu's mythological character, the myth from above has not been explained satisfactorily so far. Leaving aside the issue of the number of strides, there has been no agreement about the signification of Viṣṇu's divine act in measuring/dividing/creating the Universe. Thus, it has been widely assumed that the steps represent either the tripartite division of the universe, i.e. sky, earth and the air in-between, or the rising, ascension and setting of the sun.⁷ These assumptions, however, do not seem plausible. The problems arise when the myth talks about Viṣṇu's three strides as taking place both on earth and in the heavenly sphere (that is, over the whole the triple world, *tridhātu*), which seems to make no sense. Another problem is Viṣṇu's last step, which brings him to the 'highest' place in heaven, where the gods rejoice. The mortals can see only the first two steps (1.155.5, 7.99.1), and can only pray to attain that dear highest abode, where Viṣṇu put his third step (1.154.5). Because this third step is the highest, Kuiper (1962: 141) thinks it represents the sun's zenith. The fact, however, that Viṣṇu's third step brought him to the highest place is incompatible with the notion of the sun's daily path, which starts from the rising and ends at the setting, after passing through the zenith. The third step should be at the setting place and not at the zenith.⁸ Besides, it is hard to understand how Viṣṇu's strides encompassed the whole universe if they represented only points along the sun's daily path. This daily path is not the same during the year while the sun moves from one tropic to another. More probable appears the hypothesis regarding the division of the universe into earth, heaven and air. As we shall see below, this hypothesis is not very well founded either. The initial question, therefore, remains: where could these steps be?

The answer to the above question should be twofold. First, one needs to explain what the triple-partition represents. This means to find out if in the Vedic tradition there are relevant cosmic places, which may be able to divide the universe into three parts. Second, this needs a connection to the *skambha* reaching the highest point in the sky, which is

⁷Cf. Macdonell (1898: 37-38); Kuiper (1962: 137-151, esp. 140); O'Flaherty (1981: 225-7); *RV*1.154 is dedicated entirely to Viṣṇu's three strides.

⁸Cf. Macdonell (1898: 38).

the place of Viṣṇu's last step. Only these mythological elements taken together can give a satisfactory answer to the riddle.

A tradition such as the one presupposed above exists in the Hindu world. This tradition emerges in the epic text of the *Viṣṇu Purāṇa*, and concerns Viṣṇu's dwelling place. There Viṣṇu's seat is explicitly stated to be located at the North Pole (Skt. *dhruva* 'the Pole Star') of the celestial vault. The passage in question runs as follows: "The space between the seven *R̥ṣis* (Ursa Major-my note) and *Dhruva*, the third region of the sky, is the splendid celestial path of Viṣṇu (*Viṣṇupada*), and the abode of those sanctified ascetics who are cleansed from every soil, and in whom virtue and vice are annihilated. This is that excellent place of Viṣṇu to which those repair in whom all sources of pain are extinct, in consequence of the cessation of the consequences of piety or iniquity, and where they never sorrow more. There abide *Dharma*, *Dhruva*, and other spectators of the world, radiant with the superhuman faculties of Viṣṇu, acquired through religious meditation; and there are fastened and inwoven to all that is, and all that shall ever be, animate or inanimate. The seat of Viṣṇu is contemplated by the wisdom of the Yogis, identified with supreme light, as the radiant eye of heaven. In this portion of the heavens the splendid *Dhruva* is stationed, and serves for the pivot of the atmosphere. On *Dhruva* rest the seven great planets, and on them depend the clouds. The rains are suspended in the clouds, and from the rains come the water which is the nutriment and delight of all, the gods and the rest; and they, the gods, who are the receivers of oblations, being nourished by burnt-offerings, cause the rain to fall for the support of created beings. This sacred station of Viṣṇu, therefore, is the support of the three worlds, as it is the source of rain".⁹

Thus, the *Viṣṇu Purāṇa* makes it clear that Viṣṇu's seat is located at the North Pole of the celestial vault. This may come as a surprise and be interpreted as a later Purāṇic invention. The myth of a supreme deity dwelling at the North Pole, however, is not something peculiar to the Purāṇic tradition only. Altaic people in Siberia also believe that their supreme god lives on the top of a mountain that reaches the North Pole of the sky.¹⁰ Also, in a recent article, Anghelina (2008)

⁹Cf. Wilson (1972: 187-188, Book II, viii)

¹⁰See Holmberg (1923: 39-41).

made the suggestion that the prehistoric Greeks may have adopted a religion in which the supreme god was located at the celestial North Pole. These pieces put together raise the hypothesis that the above Purāṇic tradition may be older than it seems. The issue now is to determine how old this tradition may be and whether it may go back to the Vedas.¹¹ In fact, this is not trivial since Pingree (1990: 274-280) claimed that the above cosmological structure is the result of late Babylonian and Greek influences.

The proof that the Purāṇic tradition is not a recent invention may be found in three passages from the Atharva Veda. These passages unequivocally and consistently state that Viṣṇu's region in the cosmos is 'immovable', in Sanskrit *dhruvā dik*.¹² This led Kuiper (1962: 144-145) to believe that Viṣṇu is positioned in the center of the universe. *Dhruvā* is, of course, an adjective in this phrase, but the corresponding noun, *dhruva*, means clearly the North Pole of the sky. Both words derive from the root *dhṛ*, which means 'to be fixed, immovable' in its intransitive use. Thus, the Purāṇic tradition may put Viṣṇu's region in the cosmos in a completely different perspective. The Vedic Viṣṇu is positioned not in the center of the Universe, but on the axis about which the universe revolves, more precisely on its top, at the North Pole. An additional proof for the existence of a Vedic *Viṣṇupada* can be met with in *RV* 10.82.2, where the creator-god Viśvakarman is said to live in the sky region beyond the *saptaṛṣis* 'the seven sages', who metaphorically represent the constellation Ursa Major.¹³ This place, which is also said to be the *caḥṣus* 'eye' of heaven, is obviously the *Viṣṇupada*.¹⁴ All this confirms again the cosmological structure in the *Viṣṇu Purāṇa*, which, therefore, must go back to the Rig Veda itself.

Let us go back to the three strides. Viṣṇu's third step is the highest one. In addition to this, *RV* 1.154.6 reveals that the footprint of this final step is the place where Viṣṇu propped up the sky with the *skambha*. The picture is completed by the fact that, after having separated the sky and

¹¹Penner (1966: 283-99, esp.297), attributes the cosmogonic myth (the cosmic egg) in the *Viṣṇu Purāṇa* to the Vedic tradition; he makes no reference to the issues treated here.

¹²Cf. *AV* 3.27.5, 12.3.59, 15.14.5.

¹³Cf. Geldner (1951).

¹⁴Cf. *RV* 1.22.20-1 and 10.82.1

the earth, Viṣṇu dwells on top of the *skambha* (RV 1.154.1), which is the *axis mundi*. The cosmic place of this *axis mundi*, however, has been elusive in the interpretation of this myth. Thus, the *skambha* has been seen as reaching the zenith, since it has been thought that it is there where Viṣṇu's third and highest stride brings him. The conclusions reached above leave no room for such interpretation. There is no rationale for the *skambha* to reach the zenith. At the same time, it would be hard to accept that people who could notice the North Pole of the sky could see the *axis mundi* as passing through the zenith.¹⁵ Therefore, the *skambha* cannot be anything else but the 'real' *axis mundi*. The *axis mundi* is an archaic mythological element and is met with in several cultures, especially in those from the steppes of Asia. Interestingly, in these Asiatic cultures the *axis mundi* is explicitly said to pass through the North Pole of the sky.¹⁶ Therefore, as in some of these northern Asiatic traditions, the Vedic *skambha* is not different from the apparent axis, which connects the North and South Poles of the celestial vault. This is the axis about which the heaven turns in its daily apparent motion. Also, geometrically, from an earthly standpoint, the highest point of the celestial spheroid is its North Pole, not the zenith.¹⁷ It makes sense then for Viṣṇu to put there his highest step.¹⁸ Consequently, however younger than the Vedas the Purāṇas may be, the concept of the North Pole is indeed old and goes back to the Vedas themselves.¹⁹

2) The Vedic Cosmogonic Myth

It would be interesting to see if Viṣṇu's location at the North Pole can be related to the Vedic cosmogonic myth.²⁰ In

¹⁵This assumes that *dhruva* was known as the North Pole during the Vedic period (cf. Vedic *dhruvā dik*). A clear reference to the Pole Star is attested only later, in the Purāṇas; cf. West (2007: 352).

¹⁶This seems to be the case among the Altaic or Arctic peoples; cf. Eliade (1972: 259-266).

¹⁷The use of the term 'spheroid' is a neutral one, since one cannot be sure whether the Vedic world believed the world to be a sphere from a strictly geometrical point of view.

¹⁸Viṣṇu is also associated with the sacrificial post *yūpa*; this is another representation of the *axis mundi*; cf. Gonda (1954: 81-84).

¹⁹Wilson (1972: vii) thought that "The theogony and cosmogony of the Purāṇas may probably be traced to the Vedas".

²⁰For discussion, cf. e.g., Kuiper (1983: 9-23); Kramrisch (1963: 140-175); Brown (1965: 23-34).

this myth, the creation of the world takes place as a result of the well-known cosmic fight between Indra and the demon Vṛtra. This myth, which is the basis of Indra's nature²¹, is told in *RV* 1.32. Vṛtra's slaying has as its effect the release of the Waters (1.32.2). This is one of the most important features of Indra's myth and what the Waters represent has been a mystery.²² In any case, as a consequence of this act Indra generated the sun, the sky and the dawn (1.32.4). Elsewhere, he is said to have supported the sky or spread out Mother Earth (6.72.2; 10.62.3; 2.13.5). As a consequence, he is called *viśvakarman* 'the All-Creator' (8.98.2; 9.63.7) and is the lord over all creation (8.98.2; 10.153.5). Indra also set the sun in the sky (1.51.4; 1.52.8).²³

The Vedic myth is similar to the Greek myth of creation. In the Hesiodic cosmogonic myth, the earth and the sky are the result of a development which had its roots in Chaos (Gk. Χάος).²⁴ At the beginning, loving Ouranos covers (καλύπτουσι) Gaia entirely from all parts (ἀμφὶ Γαίῃ).²⁵ Then, since Ouranos' covering of Gaia did not allow their children to come out, Kronos castrates Ouranos (*Th.* 168-182). So far, the myth does not talk about a separation of the sky and earth. The second part of the myth, however, presupposes this when it talks about the pillars that keep apart the sky and earth, which are obviously a metaphor for the same *axis mundi*. This is the well-known story of Atlas supporting the sky. As it was the case with the Vedic myth, the interpretations of the Greek myth had always difficulties in establishing the location of this *axis mundi*. Thus, the place of the cosmic pillars has been seen in the West, because Atlas, who upholds the sky, is said to be close to the garden of the Hesperides.²⁶ From a cosmic

²¹ Cf. Macdonell (1898: 58).

²² Macdonell (1898: 59) sees them as 'heavenly'; Hillebrandt (1929: II 145) believes the waters are earthly; cf. Bhattacharji (1970: 259). Brown (1942: 97) sees them as forming the atmospheric Ocean. I would suggest that the waters are a metaphor for the act of giving birth, which, in the case of humans (and other mammals, in general), is preceded by the 'release' of water (the break of the amniotic sac).

²³ For the discussion, see Brown (1942: 96-97).

²⁴ The Greek and Vedic myths display some differences as well. In the Vedic myth, Sky and Earth are created by Tvaṣṭṛ (cf. Brown (1942: 94), whereas in the Greek myth Gaia is Ouranos' mother.

²⁵ Cf. *Th.* 127, 176.

²⁶ The Greek etymology of the 'Hesperides' is usually associated with that of

perspective, there is no rationale for Atlas being located in the west. How can the sky be held up in its place only from the west?

The pillars which are held by Atlas stretch on both sides of the earth (*ἀμφίς*), as the passage at *Od.* 1.50-4 seems to show: ἔχει δέ τε κίονας αὐτὸς | μακράς, αἱ γαῖάν τε καὶ οὐρανὸν ἀμφίς ἔχουσι. In all likelihood, the above covering on all sides ended by a separation of the earth and sky on both sides of the earth. Interestingly, the same idea of primordial covering appears in both the Greek and Vedic myth. In the former, the sky ‘covers’ from all sides the earth, in the latter, *Vṛtra* envelops with his body everything which the universe is made of. In fact, the etymology itself of the name *Vṛtra* shows this.²⁷ Therefore, the Greek and the Vedic creation started from a state of affairs, in which everything was held obstructed and hidden. The parallels between the two myths do not stop here. In a recent paper, Anghelina (2008) argued for the Greek Olympus as echoing a prehistoric mythology where the seat of the supreme god, Olympus, was located at the North Pole of the celestial vault. The argument of that article is based on the fact that Olympus is named in the Greek epic ‘the immovable seat of the gods’ (*ἔδος ἀσφαλὲς θεῶν*), which seems to be a direct allusion to the North Pole.²⁸ The argument further implies that the *axis mundi* should be considered as passing through the poles of the heavenly sphere and that Tartarus, the lowest region of the ‘Underworld’, should be considered as the region under the South Pole of the celestial vault.

If the above hypotheses hold true, then the Vedic and Greek myths share some essential features: the separation between the earth and the sky, the *axis mundi*, about which the sky revolves, the supreme deity dwelling at the North Pole. In other words, one can say that the Vedic myth is practically

ἔσπερος ‘evening, western’.

²⁷Root *vr̥* ‘to cover’; cf. Macdonell (1898: 159). The idea is already found in *ŚB* 1.1.3.4-5: “*Vṛtra* in truth lay covering all this which here extends between heaven and earth. And because he lay covering all this, therefore his name is *Vṛtra*”; cf. Bhattacharji (1970: 257-258).

²⁸Olympus is a ‘mountain’ in the Greek myth. Interestingly, *Viṣṇu* dwells also on a mountain; this is shown by his epithets *girikṣit-* (*RV* 1.154.3), *giriṣṭhā-* (2) etc; cf. Kuiper (1983: 55). This mountain then may be the North Pole of the sky, the ‘highest’ cosmic point.

identical to the Greek myth in its essential aspect, that is, from a cosmological perspective. One should also recall, however, that Indra is the supreme god of the Vedic world. This makes the Vedic story different from its Greek counterpart, where Zeus, as the supreme god, is located at the North Pole. In the Vedic case, it is Viṣṇu and not Indra who is located there. Indra is never said to have his dwelling place at the North Pole despite the fact that he is also in some passages associated with the *skambha*. In such mythologies, however, the North Pole cannot be other than the seat of the supreme god. This may show that initially the supreme god of the Indo-Aryans was not associated with the North Pole. If this is so, then the Vedic myth may display the archaic, non-Indo-European version of the myth, in which a pre-Indo-Aryan god, namely Viṣṇu, was associated with the axis as the supreme god of the world.²⁹ The Hindus took over the myth and, while they kept Viṣṇu associated with the axis, transferred some of the attributes of the pre-Indo-Aryan god to their supreme god Indra.³⁰ This may also be the explanation why Viṣṇu became eventually the main god of Hinduism. It is his position at the North Pole, the eternally immovable point in the universe, which led to it.³¹ This is also why he eventually became identical with Brahman, the Absolute (cf. e.g., the episode of the *sahasranāma* 'thousands names' of Viṣṇu in the *Mahābhārata*).

The existence of a supreme deity dwelling at the North

²⁹Dumézil (1968: 230-237) argues for Viṣṇu's myth as being of Indo-European origin. This hypothesis is based on the comparison between Viṣṇu and the Scandinavian god Viðarr, who would share some common features. None of these similarities, however, concern Viṣṇu's three strides or his association with the *skambha* and the celestial North Pole; moreover, the Scandinavian god is not a supreme creator god.

³⁰Interestingly, in the myth, Viṣṇu is Indra's friend; cf. Macdonell (1898: 39); Bhattacharji (1970: 14). For the discussion about Viṣṇu's non-Aryan character, cf. Kuiper (1962: 138); Przyłuski (cf. *Archiv Orientalni* 4 /1932) sees Viṣṇu as originally Dravidian. Indra is at least an Indo-Iranian deity; cf. West (2007: 245-246).

³¹It is also interesting to notice that Viṣṇu's iconic representations show him with four arms, which hold a mace (*gadā*), a shell (*śaṅka*), a lotus (*padma*), and a wheel (*cakra*), respectively. Given that Viṣṇu is the god of the axis, the four arms cannot be other than the four cardinal points of the celestial vault. As for the objects Viṣṇu holds, they may symbolize the rotating vault (the wheel), the axis (the mace), the originally covered universe (the shell), and the moment of the creation (the lotus). All these attributes hint to an originally supreme creator-god.

Pole calls for an inquiry regarding the opposite cosmic place, which is the South Pole of the vault. We have seen above that, in the Greek myth, there are elements that allow seeing the location of Tartarus at the South Pole of the celestial vault. The existence of a concept of hell in the Vedic world, however, is very difficult to detect. This is because there are very few passages referring to hell or to some other equivalent.³² The most complete set of hints is contained in *RV* 7.104. Thus, Vṛtra is situated in the lap of destruction (*nirṛti*) (9), under the three earths (*tisraḥ pṛthivīr adho astu viśvāḥ*) (11). Indra is asked to smite the enemies and put them below all creation (*viśvasya jantor adhamas padīṣṭa*) (16), in the endless pits (*vavrān anantān ava sā padīṣṭa*) (17), in the abyss (*paśāṇe*) (5) or in the bottomless darkness (*anārambhāṇe tamasi*) (3). Those who reach this place are anti-divine creatures: Vṛtra, all the *asuras* and *dasyus* (cf. *AV* 9.2.18), *rakṣasas*, sorcerers (7.104.23) etc.³³ Brown (1941: 79-80) rightly noticed that the place of hell is contrasted with the ordered universe. The latter consists of earth, sky and operates by the *ṛta* 'order', whereas the former, that is, 'beneath the earth', is only the lap of Nirṛti 'destruction, non-order'. This is consistent with the creation hymn *RV* 10.129, where the original chaos, the non-existent *asat*, is contrasted with the ordered creation *sat* or *ṛta*.³⁴ Certainly, this latter Vedic hymn is more abstract than Indra's story of creation. One could say with Brown (1941: 80) that it may represent a later stage, which reshaped a rather 'concrete' myth in more abstract terms.

In conclusion, the Vedic myth does not say anything about the heavenly South Pole. The only indication regarding the cosmic location of 'hell' is that it lies under the 'three earths'. Interestingly, this place is not one of extinction for ordinary mortals. In fact, these do not go there, but to Yama's abode, which is clearly located in heaven (*svargaloka*).³⁵ The Vedic world's goal was a happy life on earth and its continuation in heaven. This was supposed to be obtained by

³²For the discussion that follows, cf. Brown (1941: 76-80); Macdonell (1898: 169-170); also cf. Bhattacharji (1970: 66-69), who analyzes how the concept of hell changed in the later Hindu cosmic systems.

³³All these mentioned in *RV* 7.104.

³⁴The *sat* was covered by the *asat* (*kim āvarīvaḥ*) (*RV* 10.129.1); the verb for 'cover' has the same root *vṛ*.

³⁵Cf. Macdonell (1898: 167, 169-172); Witzel (1984: § 3).

respecting the ritual.³⁶

The above description of the Vedic Underworld is similar to the Greek Tartarus. Tartarus is close to Chaos and is a huge chasm (Gk. *χάσμα*) hidden in misty gloom (Gk. *ζόφω ἠερόεντι*).³⁷ It is the place where the Titans were imprisoned by Zeus and where Atlas upholds the sky with his head and hands (*Th.* 746-747). The Titans are, of course, the equivalent of the *asuras*.³⁸ Anghelina (2008) made the hypothesis that this place represents a space of some sort under the South Pole of the sky. In fact, this seems plausible since Atlas holds up the sky in that place. In the Vedas, however, the similarities between the Greek myth and the Hindu one do not go any further.

Fortunately, there is a tradition in which the analogy with the Greek myth is complete. This is, again, the tradition from the *Viṣṇu Purāṇa*. There hell is antipodal to the highest heaven: "The gods in heaven are beheld by the inhabitants of hell as they move with their heads inverted".³⁹ This is also the place of the cosmic serpent, Śeṣa Ananta 'infinite', which is located in the lowest part of the Underworld, and on which Viṣṇu sleeps during the intervals of creation. On its head, Śeṣa upholds the worlds with both their inhabitants and the gods themselves: "Below...is the form of Viṣṇu called Śeṣa...; Śeṣa bears the entire world like a diadem upon his head..."⁴⁰ In this way, the cosmic snake is located symmetrically to Viṣṇu's place, in a position which reminds one of Greek Atlas. The passages in the *Viṣṇu Purāṇa*, however, which talk about the different levels in hell, seem to refer to places inside the earth. Therefore, although Śeṣa is diametrically opposed to Viṣṇu, thus being located on the *axis mundi*, the lowest hell seems to be situated inside the earth. This is an obstacle to the above theory, which anticipated the Vedic hell as being located at the South Pole of the celestial vault. Certainly, one cannot say how far the earth stretches below its surface and whether its lowest corner reaches the heavenly vault again. I think,

³⁶ Cf. Bodewitz (2002: 221).

³⁷ *Th.* 740 and 729, respectively.

³⁸ The *asuras* are the offspring of Prajāpati (therefore, they are gods); cf. Macdonell (1898: 156); also Varuṇa was originally an *asura* (cf. Greek Atlas); cf. Bhattacharji (1970: 24).

³⁹ Cf. Wilson (1972: 172 (Book II vi)); also cf. Warren (1905: 86).

⁴⁰ Cf. Wilson (1972: 169, 170 (Book II v)).

however, that the answer needs to be looked for elsewhere. This has to do with the metamorphosis of Yama's character from the time of the Rig Veda to the later times of the Purāṇas. In the Rig Veda, it is clearly stated that Yama's kingdom is in heaven, and that Yama is a benevolent god who presides over the Fathers. In the later period, another eschatological conception emerges: Yama becomes the king of a kingdom where he judges and punishes the dead with torments. His celestial and full-of-light figure becomes degraded to that of a dark god of the underworld.⁴¹ The change in Yama's role and character may offer a clue about a change which may have occurred in Hindu eschatology. This change may reflect the confluence of two different religions. The celestial one of the Vedas, where the dead and Yama's kingdom were located in the sky, and a 'chthonic' one, for which the world of the dead was located inside/under the earth.⁴² This latter religious belief could explain Yama's change of place and function. It may also explain why the concept of hell of the earlier religion became associated with the interior of the earth, and why it continued to be diametrically opposed to Viṣṇu's place.

The cosmic picture from above becomes coherent for both the Greek and Vedic cosmological myths. These myths conceive of the universe as a spheroid revolving about the *axis mundi*. This axis passes through the northern and southern poles of the spheroid. At the North Pole is the seat of the supreme god. The South Pole is the place of the gods' cosmic enemies.

3) Viṣṇu's Three Strides

Another issue, which still remains to be elucidated, is the one from which this whole discussion started. This concerns the significance of Viṣṇu's three strides. So far it has been shown that Viṣṇu's third step reached the North Pole of the sky, which is the 'highest' place in the universe/sky. Where could the other two be located?

⁴¹Several passages in the Hindu epics *Mahābhārata* and *Rāmāyana* talk about these; cf. Bhattacharji (1970: 66-67); Bodewitz (2002: 221-222) thinks that the dark and dreaded Yama is the original character, which continued to exist outside the Vedic eschatology; the Vedic celestial Yama would be a more recent creation. The theory I am proposing here is, of course, totally opposed to this view.

⁴²Pingree (1990) argues for a Babylonian influence.

The information that Viṣṇu's three strides divided the sky/world in three parts is met with often in Hindu texts. In the Rig Veda it is clearly stated that Viṣṇu traversed the triple world *tridhātu* (1.154.6).⁴³ In *ŚB* 5.4.2.6, we read that "Viṣṇu's three steps are these (three) worlds; thus having ascended these worlds, he is high above everything here".⁴⁴ 'Above everything' in this context cannot mean anything else but Viṣṇu's presence at the North Pole. The triple division of the sky is also specifically mentioned in the Rig Veda in many hymns.⁴⁵ It is in one of these where one can get a clue about how the division is made. In *RV* 9.113.9 the poet prays for reaching the place where one can walk freely in the triple sky and firmament (*caraṇaṃ trināke tridive divaḥ*). Here *trināka* clearly indicates that the division is made not on a vertical axis, but on the sky's vault itself (*nāka*). This is at odds with the commonest interpretation that the division represents different levels on the vertical axis which leads to the zenith, that is, earth, air and sky (*pr̥thivī, antarikṣam, dyauḥ*).⁴⁶ I cannot find, however, any convincing evidence for this interpretation.⁴⁷ In fact, there is no Vedic passage in which it is said that Viṣṇu's three strides divide the universe into earth, air and sky. What all these passages say is that Viṣṇu encompasses the above regions. For example, in the Yajur Veda, *TS* 2.4.12.3, we read: "Viṣṇu deposited himself in three places, a third on the earth, a third in the atmosphere, a third in the sky, for he was afraid of his growth".⁴⁸ This does not necessarily mean that his strides were put in these places separately, but only that they encompass all these places. In other words, the passage does not say that one step is in heaven, one on earth and one in the air, but simply that each of these places represents a third of Viṣṇu. Again, in *AV* 7.26.8, it is said that Viṣṇu should behold the patrons of the sacrifice (*sūri*) "from the sky, from the earth and from the wide atmosphere" *divo vā viṣṇav uta vā pr̥thivyā maho vā viṣṇav uta vā*

⁴³This may mean 'in a triple way'; cf. Kuiper (1962: 141).

⁴⁴Cf. Gonda (1966: 92).

⁴⁵Cf. e.g., *RV* 1.164.10; 2.27.8; 3.56.2; 4.53.5; 5.60.6; 5.69.1; 7.87.5; 7.101.4.

⁴⁶Cf. e.g., Kramrisch (1963: 149, 151, 275); Kuiper (1962: 140).

⁴⁷Certainly, it is still possible that these later interpretations alluded indeed to the division of the world into earth, atmosphere and sky. This does not change my argument for an original partition of the vault itself.

⁴⁸This is one of the examples given by Kuiper (1962: 140) to support the interpretation of the triple division of the universe into earth, air and sky.

'ntarikṣād. The ablatives in this passage do not show that the god put his steps on earth, air and sky, but only that he is ubiquitously present in all these places, encompassing them.

The above arguments strengthen the hypothesis that the triple division of the sky is not on the vertical axis, but on the firmament itself. In addition, this division should have its highest point represented by the North Pole of the celestial vault, or by the region that surrounds it (*Viṣṇupada*). With regard to the other parts of the division, the most relevant passage can be met with in the Rig Veda itself. In *RV* 1.35.6, which is a hymn dedicated entirely to Savitṛ, we read: “There are three skies: two of them are the lap of Savitṛ (*upasthām*), and the last one is the one who controls men, in the world (*bhuvana*) of Yama. Immortal things rest on him like a chariot wheel on a lynch-pin”. In this passage we deal explicitly with the ‘three skies’ (*tisro dyāvah*), which hints explicitly to the fact that the sky is divided in three parts.⁴⁹ In addition, the sun is said to be held in the lap of two of the three skies. This may be a very important hint regarding the location of these parts of the sky. It is very likely that this metaphor implies that these two skies, the sun’s ‘lap’, are identical with or include that part of heaven between which the sun moves during its yearly course, that is, the sky between the summer and winter tropics. Passages in the Veda show that the ancient Hindus knew that the yearly course of the sun is determined by the two extremities represented by the winter and summer tropics. This knowledge is transparent at *RV* 1.105.16, 3.30.12, where it is said that the sun cannot go beyond some regions of the sky; obviously, these are the tropics.⁵⁰ The sky region between the tropics, however, does not represent the whole sky outside the *Viṣṇupada*. This means that this region rather represents the middle part of another, wider sky division, which is very important as well in the Hindu tradition.

This division comes up clearly in the *Viṣṇu Purāṇa*, in the same passage from above, in which the *Viṣṇupada* was defined. In this passage it is said that there are two ‘paths’ in the sky. The path of the fathers, *pitṛyāna*, lies approximately south of the celestial equator. More precisely, it is said that it lies north of the constellation Agastya (today’s Canopus, which is located

⁴⁹ Cf. *RV* 3.56.2; 7.87.5.

⁵⁰ Cf. Kirfel (1920: 26); Homeric Greeks also had this knowledge (cf. *Od.* 15.404, τροπαὶ ἡελίοιο); cf. Heubeck (1989).

towards the south of the celestial vault, practically opposed to Ursa Major in the sky), and south of the line of the Ajavīthī (Scorpio and Sagittarius). The path of the gods, *devayāna*, on the other hand, lies to the north of the sky's vault, between Nāgavīthī (Aries and Taurus) and the seven Ṛṣis (Ursa Major).⁵¹ That the equator played a role in this division is shown by the fact that, between about 4,000 BC and 2,000 BC, the equinoxes, which represent precisely the celestial equator, were represented by Taurus and Scorpio.⁵² The above passage then may describe this astronomical situation. The constellations which are mentioned, however, are not exactly diametrically opposed in the sky, although they are very close to being so.⁵³ This may show that the equatorial division of the sky was not made 'perfectly' from a geometrical and astronomical standpoint. If, however, one considers that the above constellations represent the first constellations beyond the celestial equator in the two halves of the sky respectively, then the division of the sky can be considered perfectly symmetrical. Thus, the above considerations show that the sky was indeed divided in the middle. The three skies then that result from this division are *pitṛyāna*, *devayāna* and *Viṣṇupada*.⁵⁴

The above argument about the *pitṛyāna* and *devayāna* relies on passages from the *Viṣṇu Purāṇa*, which is a later text. This may be, again, an obstacle to the theory. The fact, however, that the division of the sky must have occurred within the above time-frame shows that *pitṛyāna* and *devayāna* must be older. This conclusion is also supported by the Vedic evidence. Thus, the tradition of the two paths is preserved in

⁵¹ Cf. Wilson (1972: 187); also see Kirfel (1920: 140-141).

⁵² The constellations representing the equinoxes shift in time due to the astronomical phenomenon of precession. Today the equinoxes are represented by Pisces and Virgo.

⁵³ The border between Scorpio and Sagittarius corresponds to the border between Taurus and Gemini.

⁵⁴ Witzel (1984: § 5) suggested that *pitṛyāna* and *devayāna* represent portions of the Milky Way south and north of the celestial equator. The division points from above, which are located between Taurus and Gemini, on one side, and Scorpio and Sagittarius, on the other, may point to this fact, since the Milky Way passes through these regions. This does not change my argument here about Viṣṇu's three strides as having to do with the division of the sky itself. Therefore, Viṣṇu's first two steps can be still seen as dividing the vault approximately in the middle. It is also worth mentioning that the Ursa Major (*devayāna*'s northern limit) does not lie close to the Milky Way, which may be an argument against Witzel's theory.

RV 10.2.7 and 10.88.15. The latter passage mentions both of them: “Zwei Wege, so hörte ich von den Vätern, (gibt es) für die Götter und die Sterblichen. Auf diesen beiden kommt all dies Lebendige zusammen, das zwischen dem Vater (Himmel) und der Mutter (Erde) ist”.⁵⁵ This conception can be also seen in the Upaniṣads, where it has to do with the cycles of reincarnations. People who follow *devayāna* reach Brahman and do not return to the earthly existence, whereas those who follow *pitṛyāna* continue their existence cycles. This shows that the *pitṛyāna* and *devayāna* may be relevant not only from an astronomical point of view, but also from an eschatological one.⁵⁶

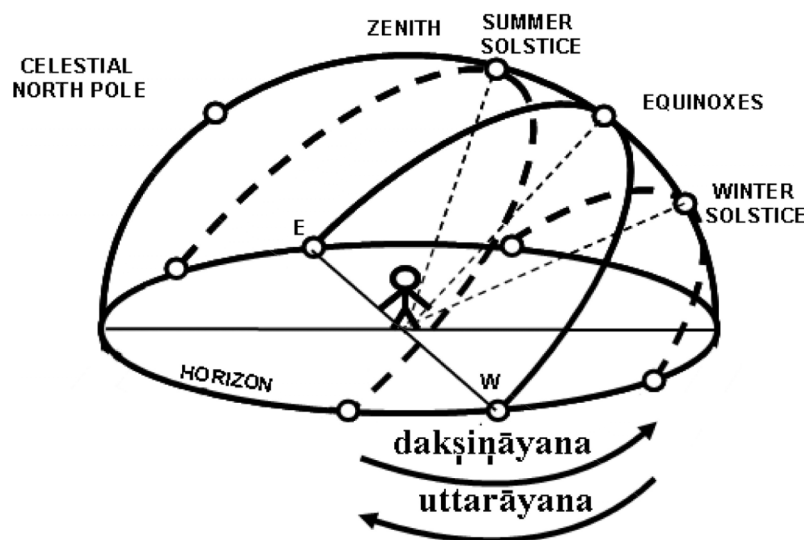


Figure 1: The yearly path of the sun between the solstices.

The Hindu world also knows a similar distinction between two other ‘paths’. These have to do with the sun’s yearly

⁵⁵This is Geldner’s translation (1951); the original Sanskrit runs as follows: *dve sruti aśṇavam piṭṛṇām ahaṃ devānām uta martyānām/ tābhyām idaṃ viśvam ejaṭ sam eti yad antarā pitaram mātaram ca.*

⁵⁶Cf. *KB* 19. 3; *ŚB* 2.1.3.1; *BU* 6.2.2, 15-6; also, cf. Kirfel (1920: 26). This is also the meaning the commentators assumed for 10.88.15; cf. Geldner (1951). In *ŚB* 2.3.4 it is said that the ‘fathers’ did not have evil dispelled from them by the sun and die before they attained the fully measure of life, whereas the gods have evil dispelled from them by the sun. This may also be able to explain the name of the Ursa Major ‘the Seven Ṛṣis’: these are the ancestors who followed the *devayāna* and reached a place close to Viṣṇu’s. In fact, Viṣṇu’s place is the one which everybody desires to get to (cf. *RV* 1.154.5).

course between the tropics. The two movements of the sun, which are defined by the two limits in the sky represented by the tropics, are called the two *ayanas* 'paths'. The ascending path, when the sun moves from the winter tropic towards the northern summer tropic, is called *uttarāyana* 'the path upward' (Figure 1). The reversed, descending path is called *dakṣiṇāyana*, literally the 'path to the south'.⁵⁷ These are clearly mentioned in the *Śatapatha Brāhmaṇa* (2.1.3), where we read: "now when he (the sun) moves northward, then he is among the gods, then he guards the gods; and when he moves southward then he is among the fathers, then he guards the fathers".⁵⁸ It is interesting that the two sets of 'paths' have been considered identical.⁵⁹ The above considerations seem to show something different. While the *uttarāyana* and *dakṣiṇāyana* are strictly related to the sun's yearly course, the *pitryāna* and *devayāna* are relevant from an eschatological point of view and represent a partition of the sky, in which the celestial equator (or, better said, the middle of the sky) plays an important role (Figure 2).

If, therefore, the above hypotheses hold true, then Viṣṇu's first two strides represent those divisions of the sky which constitute *pitryāna* and *devayāna*. From these astronomically and religiously important celestial regions, Viṣṇu leaped further up, to the spherical cap defined by Ursa Major and the North Pole (*Viṣṇupada*).⁶⁰ This is Yama's region (*yamasya bhuvana*) as well (*RV* 1.35.6), which is in the *parame vyoman*, the 'highest sky' (*RV* 10.14.8). Moreover, it is called *devamāna* the 'house of the gods' (*RV* 10.135.7) and, therefore, it seems natural for Agni to have his place here as well, in the *parame vyoman* (*RV* 6.8.2). It is also this place which is mentioned in *ŚB* 4.3.4.27: "he who sacrifices, sacrifices with the hope: 'may there be a place for me in

⁵⁷A parallel, but not identical case can be found in the Babylonian astronomy/mythology. There Marduk draws *miṣrātu* 'boundary lines' in the sky, which represent the sun's yearly motion through the 'paths/skies' of Enlil, Anu and Ea. These paths represent a symmetrical tripartite division of the sky, which includes the tropics; cf. Horowitz (1998: 165).

⁵⁸The translation belongs to Eggeling (1882).

⁵⁹Cf. e.g., Bryant (2001: 251-258); for discussion, cf. Kay (1981: 27).

⁶⁰A very plastic episode is described in the *Viṣṇu Purāṇa* (cf. Wilson (1972: 188): Viṣṇu's toe, from which the river Ganges flows down, is located at the North Pole.

Yama's world'''.⁶¹

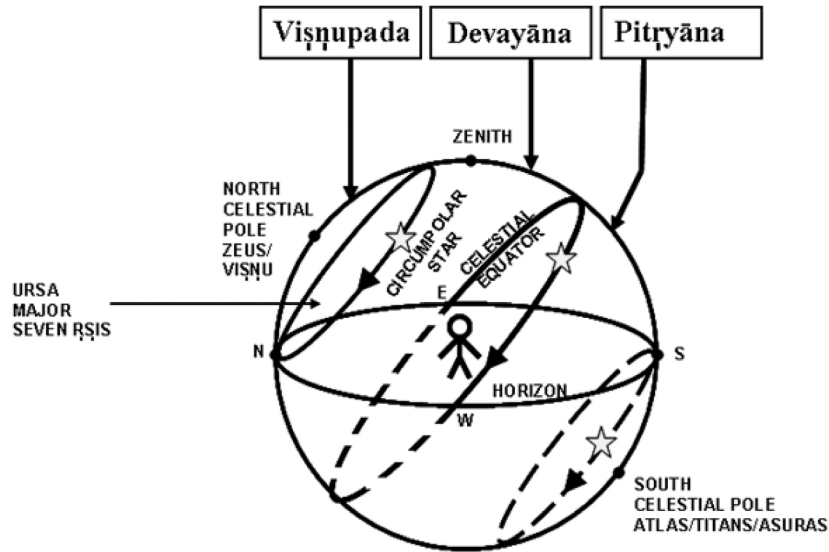


Figure 2: The Vedic division of the celestial vault.

The description of the ‘three skies’ or, as they are called sometimes, *lokas* is now completed. An exhaustive discussion, however, on all the instances where these three *lokas* or skies appear in texts is beyond the scope of this paper and certainly needs additional work. Gonda (1968) summarizes all the important passages in this respect. It suffices only to mention three other relevant passages, which may show that the location of these *lokas* has to do with the firmament of the sky.⁶² The first example comes from *JB* 3.341ff., where it is clearly stated that different *lokas* belong to different gods. In this passage, Prajāpati, after creating the gods, goes upwards to different celestial *lokas* and substitutes the gods with himself in each of them. He thus unites all these *lokas* into a single one, which is called *nāka-*, the celestial firmament. This shows once again that the *lokas* should not be considered divisions on the vertical axis, but only regions in the sky. The second example comes from the *skambha* hymn. In *AV* 10.7.29 it is said that “In the *skambha* the worlds (*loka*), in the *skambha* penance, in the *skambha* right is set...” If the *skambha* is

⁶¹ Cf. Gonda (1966: 65).

⁶² Sometimes there are more than three *lokas* mentioned; cf. Gonda (1966: 56, 58). These may also be considered portions of the sky vault.

indeed the apparent axis about which the sky turns, then these *lokas* cannot be anything else than portions of the sky, that is, heavenly stripes, which revolve, of course, about the *skambha*.

The last passage belongs to *RV* 1.164.48 where we read: "Twelve fellies, one wheel (*cakram*), three naves (*trīṇi nabhyāni*) - who has understood this? Three hundred and sixty are set on it like poles that do not loosen." This passage has been generally assumed to represent the year divided by twelve months and 360 days, which seems indeed to be the first explanation at hand.⁶³ At the same time, the tripartite division here has been interpreted as representing the seasons, which is somewhat problematic.⁶⁴

This riddle, however, can be explained in a slightly different way. Since in ancient times any time measurement was based on the observation of the sky, the above passage can be interpreted in astronomical terms. The wheel here is the wheel of the cosmos, the sky of the fixed stars, which perpetually rotates about the poles. The twelve months correspond to the twelve full moons of the year, each month being a thirty-day period from one full moon to another.⁶⁵ This may also be the case with the 360 'poles' attached to the wheel, which could represent the yearly successive phases of the moon. Under these assumptions, the 'three hubs' can also have a plastic and astronomical representation. They may represent precisely the three *lokas* from above, the tripartite division of the sky wheel. This hypothesis would describe more appropriately the original meaning of the Sanskrit word for 'hub', *nabhya*.

4) Conclusion

The conclusion of this paper then is that the cosmic structure of the Vedic world seems to be different from what previous theories proposed. The Hindu cosmos is a huge wheel which rotates about its axial poles. These are metaphorically represented by the *skambha*. At the North Pole is located the

⁶³Cf. O'Flaherty (1981: 81); Geldner (1951); Skt. *trīṇi nabhyāni* means literally 'three hubs'.

⁶⁴Other Vedic texts talk about five or six seasons (Skt. *ṛtu*); cf. Bryant (2001: 341); cf. Kirfel (1920: 26). Geldner talks about 'drei Doppeljahreszeiten', which also does not seem very plausible.

⁶⁵This is called *tithi*; the lunar month (called synodic month in scientific astronomy) has 30 *tithis*, and the lunar year 360; cf. Bryant (2001: 340 n.23).

supreme god, who has around him all the other gods in the 'house of the gods'. The opposite, symmetrical pole is the place where the celestial gods drove down their enemies, who are also gods. Also, the Vedic sky is divided in three parts, which have eschatological importance. The southern sky, *pitryāna*, belongs to the ordinary dead (the 'fathers'). The northern one, *devayāna*, belongs to those who had a fulfilled life and, probably, escaped the reincarnation cycles. It is in this region where we find the seven Ṛṣis (Ursa Major), that is, those sages who managed to get the closest to the gods. Finally, above the Ursa Major, the last sky is *Viṣṇupada*, the above-mentioned 'house of the gods', which 'controls men'.

Thus, the Vedic myth confirms previous hypotheses that, on the other side of the Indo-European world, the Greek cosmos may echo a similar structure. Moreover, this confirmation does not come as an additional hypothesis only, but is expressed in the Hindu tradition more clearly than in its Greek counterpart. Basically, one can say that, despite inherent variations, the Greek and Vedic myths represent one and the same myth. Such an assumption certainly raises the issue whether this myth is of Indo-European origin. The fact that the master of the axis is Viṣṇu and not the Vedic supreme god, Indra, may be an indication that the myth does not have an Indo-European origin. In addition, since traces of this myth can be found among the shamanistic cultures of the Altaic peoples in northern Asia, it may be the case that the origins of the myth are to be found there. Be it as it may, the myth shows that these ancient peoples were not fabricating preposterous stories, but were trying to express their understanding of the cosmos while being amazed by its mystery. And this is, in fact, what we as humans must never cease doing.⁶⁶

⁶⁶I would like to thank the anonymous *JIES* reviewer for his/her remarks to improve this paper. I am also thankful to Dr. Radu Bercea from the University of Bucharest for bibliographical suggestions. Finally, I thank my wife, Mirela, for her wonderful hypothesis regarding the symbolism of the 'release of the waters'.

References

- Anghelina, C.
2008 The immovable Olympus. *JIES* 36:428-441
- Bhattacharji, S.
1970 *The Indian Theogony*. Cambridge: Cambridge Univ. Press.
- Bodewitz, H. W.
2002 The underworld in the Veda. *JAOS* 122: 213-223.
- Brown, N.
1941 The Rig Vedic equivalent of hell. *JAOS* 61: 76-80.
1942 The creation myth of the Rig Veda. *JAOS* 62: 85-98.
1965 Theories of creation in the Rig Veda. *JAOS* 85: 23-34.
- Bryant, Edwin
2001 *The Quest for the Origins of the Vedic Culture*. Oxford Univ. Press.
- Dumézil, G.
1968 *Mythe et épopée* I. Paris: Gallimard.
- Eggeling, J.
1882 *SBE* 12. Oxford: Oxford Univ. Press.
- Eliade, M.
1972 *Shamanism*. Princeton: Princeton University Press.
- Geldner, K. F.
1951 *Der Rig-Veda*. Cambridge: Harvard University Press.
- Gonda, J.
1954 *Aspects of Early Viṣṇuism*. Utrecht.
1966 *Loka: World and Heaven in the Veda*. Amsterdam.
- Heubeck, A., and A. Hoekstra
1989 *A Commentary on Homer's Odyssey* II. OUP
- Hillebrandt, A.
1929 *Vedische Mythologie*. 2 vols. Breslau.
- Holmberg, U.
1923 Der Baum des Lebens. In: *Annales Academiae Scientiarum Fennicae* XVI/3, 1-70. Helsinki
- Horowitz, W.
1998 *Mesopotamian Cosmic Geography*. Indiana: Eisenbrauns.
- Kay, G.R.
1924 *Hindu Astronomy* (1981). New Delhi.

- Kirfel, W.
1954 *Das Purāṇa vom Weltgebäude*. Bonn.
- Kramrisch, S.
1963 The triple structure of creation in the Rig Veda. *HR* 2. vol.1-2: 140-75, 256-85.
- Kuiper, F. B. J.
1962 = Kuiper (1983: 41-55). The three strides of Viṣṇu. In: *Indological Studies in Honor of W. Norman Brown*: 137-51. New Haven.
1983 *Ancient Indian Cosmogony*. Delhi.
- Macdonell, A.
1895 Mythological studies in the Rigveda. *JRAS* 27:165-189.
1898 *Vedic Mythology*. Strassbourg.
- O'Flaherty, W. D.
1981 *The Rig Veda*. Penguin Books.
- Oldenberg, H.
1894 *Die Religion des Veda*. Berlin.
- Penner, H. H.
1966 Cosmogony as myth in the Viṣṇu Purāṇa. *HR* 5: 283-99.
- Pingree, D.
1990 The Purāṇas and Jyotiḥśāstra: Astronomy. *JAOS* 110: 274-80.
- Warren, W. F.
1905 Problems still unsolved in Indo-Aryan cosmology. *JAOS* 26: 84-92.
- West, M. L.
2007 *Indo-European Poetry and Myth*. Oxford: Oxford University Press.
- Wilson, H. H.
1972 *Viṣṇu Purāṇa*. Calcutta. (first edition London 1840).
- Witzel, M.
1984 Sur le chemin du ciel. *BEI* 2: 213-279.

Genitive and Adjective in Tocharian¹

Douglas Q. Adams
Department of English
University of Idaho

In Indo-European languages generally a noun may modify another noun either by being put in the genitive (*the power of the president/the president's power*) or by being made into an adjective (*presidential power*). The choice is often determined by definiteness and/or animacy. Some branches of Indo-European, i.e., western Anatolian languages, Slavic, and Tocharian, choose the adjectival option much more commonly than is "standard" in Indo-European. How these two options are distributed, particularly in Tocharian, forms the basis of this investigation. Particularly interesting from the syntactic point of view is the possibility, in multiply embedded structures (*John's neighbor's boy*) where the modifiers are adjectives, of an adjective's agreeing in gender with the noun underlying the next adjective in the train, rather than the head noun of the noun phrase itself, in Tocharian and some Slavic languages.

Introduction

In almost all Indo-European languages, one noun may modify another in one of three ways: (1) as part of a compound (e.g., *farmhouse*), (2) as a genitive (or prepositional phrase that has replaced the genitive) (e.g., *the president's power/the power of the president*), or (3) by being turned into an adjective (e.g., *presidential power*). Our interest in this paper will be on the second and third options and their interrelationships.

In the Germanic and Romance languages the genitive option is typically used when the modifying noun is definite and the adjectival option used when the modifying noun is indefinite, i.e., *presidential power* is the power of a president or the power of presidents in general, whereas *the president's power* is typically the power of a particular individual.² As a corollary,

¹I appreciate the input of both Melanie Malzahn and Craig Melchert into this paper which is much the better for their assistance. Anything the reader finds wrong-headed or unlikely must, of course, be laid at my door, not theirs.

²The distinction is by no means absolute, particularly one can use the genitive option in a generic sense, e.g., *under the constitution the president's powers are*

named individuals are by definition definite and thus are not normally to be found as adjectives (e.g., *Sam's book* but not **the/a Samuelan book*).³ It is also the case that many nouns, but by no means all, have derived adjectives beside them. Where no adjective exists, the genitive does duty for both the definite and indefinite (e.g., *the sense of smell*⁴). So far as I can tell, Albanian, Modern Greek, Baltic, Iranian, and Indic(?) are roughly similar to Germanic and Romance. Tocharian, Slavic, (some) Greek, and (some) Anatolian form a typological subgroup of Indo-European wherein all nouns, personal or not, dependent on another noun may either be in the genitive case⁵ or in the form of a derived adjective.⁶ We will be looking at the data, first from the point of view of Tocharian to see whether the patterns of use of the two alternatives match or don't match.

considerable. Thus here, and elsewhere, we can expect lots of fuzzy edges and statistical truths rather than 'bright line' absolutes.

³There are exceptions of course in the case of important cultural or political figures (e.g., *Shakespearean plays*, *the Jacobean Age*, *Jacksonian democracy*). Wherever these occur in English, however, they seem learned rather than colloquial and they are all ultimately modeled on Latin examples of the type that may, in turn, be modeled on Greek sources (see below, section 5). One might note that this same set of personal names normally does not take part in compounding either.

⁴There is, of course, *olfactory* as an adjective corresponding to *smell*, but it is hardly colloquial. This kind of adjective and its relationship to the genitive has received very little attention at the hands of English grammarians. Of the classic, large-scale grammars of English, e.g., Curme (1935), Jespersen (1936), Quirk et al. (1972), and Huddleston and Pullum (2002), only Quirk et al. mention this type of adjective specifically (and briefly) and even they do not explore its relationship to the genitive.

⁵Or of course in a prepositional phrase such as English 'of the house.'

⁶These derived adjectives are usually called "possessive adjectives" in both Slavic and Anatolian. I'm going to use the semantically neutral 'denominal adjectives' (following Quirk, et al. [1972:263]) to distinguish them from Tocharian adjectives in *-tstse* 'provided with X, possessing X,' e.g., *ekaññetstse* 'having possessions,' *stanātstse* 'having trees,' *tärkarwatstse* 'cloudy.' Melchert has used the term 'genital adjectives' for Anatolian.

Following Benveniste, Watkins (1967:2191) notes that in a number of older Indo-European languages (among which are Latin and Hittite) the dative case is the case of possession (*liber est Marco* 'Marcus has a book'), while the genitive is the case of belonging (*liber est Marci* 'the book belongs to Marcus/the book is Marcus's'). While neither in grammar nor the real world is there a bright line separating possession from belonging, the denominal adjectives of Tocharian, Slavic, and Anatolian are centered around belonging.

1. The Situation in Tocharian⁷

I have sampled Tocharian B nouns⁸ to see whether they have genitives or derived denominal adjectives attested. For all nouns both denominal adjectives and genitives are possible.⁹ Characteristic of the Tocharian languages is the widespread use of derived denominal adjectives where in English, etc., one would expect a nominal genitive, e.g., TchB *šaiššesšem* [ADJ.] *skwanma* ‘the fortunes of the world’ or *po ešanešana* [ADJ.] *tekanmane kartse* ‘[it is] good for all diseases of the eyes.’¹⁰ Certainly at times the two formations are semantically identical, e.g., TchB *šlentse* [GEN.] *tronkne lyam=ompalskoñne* ‘he sat [preterite] in meditation in a hollow of the mountain’ but *šl[i]ye* [ADJ.] *gune cau šamy ompalskoñne* ‘he sat [imperfect] in meditation in that mountain cave,’ or TchB *oñkolmamts* [GEN.] *walo* ‘king of the elephants,’ but A *oñkälmeñ* [ADJ.] *wäl* ‘king of the elephants,’ B *klīye rano trenksate rūpn=eniwentse* [GEN.] ‘the woman clung to/took on the shape of a man’ (9b4), but *eñkwaññe* [ADJ.] *šotri* ‘male sign’ [membrum virile]’ (400a2), B *rūpn=eniwentse* [GEN.] ‘in the shape of a man’ (9b4), but *šecakāññe* [ADJ.] *rupsa* ‘in the shape of a lion’ (576b7), B

⁷While we are certainly going to be talking about both syntax and semantics of Tocharian adjectives, we will not have to talk about their word-order. That task has been capably done by Gabrielle Knoll (1996). Suffice it to say that in Tocharian B adjectives normally precede the noun they modify. In ordinary prose the percentage of adjectives which precede is something on the order of 90%. It is even higher in Tocharian A. The adjectives we are discussing here follow the same rules.

⁸The sample consisted of at least 30% of those nouns listed in *A Dictionary of Tocharian B*—for designations of animals the sample is essentially 100%. Tocharian B also has denominal adjectives derived from the first and second person pronouns. In Classical Tocharian we have *ñiñne* ‘of me’ and *tañne* ‘of thee’ (in Classical and Late Tocharian we have *ñšašše* and *cišše* respectively with the same meanings [Peyrot, 2008:95] and *yesašše* ‘of you’). They are very rare (by happenstance the first person plural is not attested), in contrast to the genitive pronouns (*ñi*, *tañ*, *wesāñ/wesi*, *yesāñ/yesi*), but I have no exact statistics on them and will leave them out of account in what follows.

⁹Admittedly not all nouns have both a genitive and a derived adjective attested, but it is clear that both are so widespread that both must be essentially universal.

¹⁰See Zimmer (1982/83) for a most useful discussion of the function of denominal adjectives in *-šše/ši* in Tocharian. He explicitly notes their use where in other Indo-European languages we might expect a genitive (genitive of possession, of origin, of place, etc.). They may also be used in place of a genitive as the object of a nominalized verb. But they do not occur as the subject of a nominalized verb. Hajnal (2004) also gives a list of the functions of the denominal adjectives.

skrenantse [GEN.] *paruwa* ‘crow-feathers’ (W-32b3), but *skrenše* [ADJ.] *paiyye* ‘crow-foot’ (M-1b8).¹¹

Denominal adjectives can be derived from singulars (e.g., B *ekašše* ‘of an eye’ from *ek* ‘eye,’ B *cmelše*, A *cmolši* ‘pertaining to (a) birth’ from *camel* and *cmol* ‘birth’), duals (e.g., B *ešanešše* ‘of the two eyes’ from *ešane* ‘the two eyes’), and plurals (e.g., B *cmelašše*, A *cmolwāši* ‘pertaining to births’ from *cmela* and *cmolu* ‘births’). Naturally, the number of attested derivatives of duals and plurals is small.¹²

Definiteness *per se* seems not to be the strongest predictor of the choice between genitive and adjective.¹³ However, animacy does. If the noun represented by the genitive or denominal adjective is low in animacy, the adjective is overwhelmingly chosen; if the noun is high in animacy, the genitive is overwhelmingly chosen.

	-animate +abstract	-animate +concrete	+animate -human	+animate +human -proper	+animate +human +proper
adjective only	67	59	52	26	02
Total adjective ¹⁴	88	85	65	61	02
both	21	26	13	35	00
Total genitive ¹⁵	28	39	61	74	32
genitive only	07	13	48	39	32

It is noteworthy that the two “curves” (i.e., for denominal adjectives and genitives) are rather different in that they are not altogether mirror-images of each other. The genitive shows a steady upward slope from inanimate abstracts to human

¹¹It is important to note that in all of these examples the modifier, whether and adjective or a genitive, has generic rather than specific meaning. Thus, in these cases at least, it is not a question of genitive = definite and adjective = indefinite.

¹²Not surprisingly, where the context is unambiguous, the singular denominal adjective can be used in place of the plural (and presumably dual), e.g., A *ñäkci kropam* ‘in a crowd of gods’ (YQ 1.12 1/2a3 [Ji, et al., 1998:114]). Hajnal (2004) provides a substantially complete list of all such adjectives derived from duals or plural. He also provides several examples of singular denominal adjectives used interchangeably with plural denominal adjectives (pg. 148).

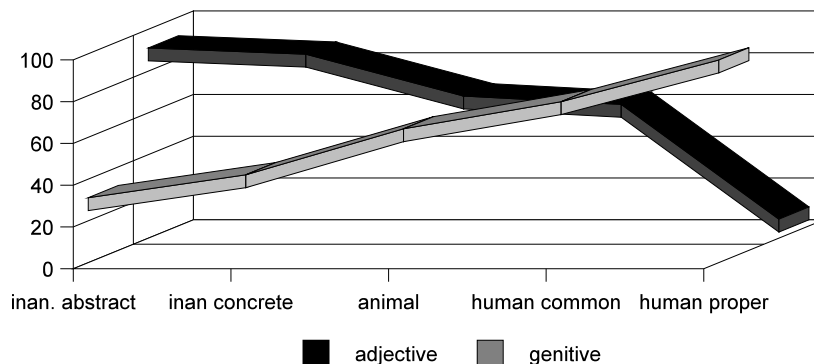
¹³It is quite possible that the role of definiteness in the choice of adjective or genitive is being underestimated: given the very fragmentary nature of most Tocharian texts, the determination of definiteness which depends so much on contextual and discourse clues is often difficult to ascertain.

¹⁴The sum of “adjective only” and “both.”

¹⁵The sum of “genitive only” and “both.”

proper nouns. Denominal adjectives, on the other hand, show distinct steps: a high plateau for inanimates, a lower plateau for animate common nouns (both animal and human) and very low “plateau” for human proper nouns.

Adjectives and Genitives in Tocharian B



Thus, while the overall incidence of denominal adjectives is 56% in Tocharian B and genitives are correspondingly 44% of the total, for abstract nouns the ratio is 76 to 24, for concrete inanimate nouns the ratio is 69 to 31, for concrete animate but non-human nouns the ratio is 51 to 48, and for common human nouns the ratio is 45 to 55,¹⁶ and for proper (personal) human nouns the ratio is 4 to 96. In the middle animate categories (concrete animate but non-human and common human nouns) it would appear that definiteness plays a role (and favors the genitive). Thus the adjective *lantuññe* always, so far as I can tell, means ‘royal,’ i.e., ‘pertaining to a king/to kings in general,’ while the genitive *lānte* means ‘of a [particular] king’ and often conjoined with the proper name of the king, thus ‘of king X,’ just as in English. However, as already noted, the fragmentary nature of most surviving texts makes definiteness in any particular instance often difficult to demonstrate. The ratios for Tocharian A appear to be quite similar.

Nested Modifiers

Genitives and denominal adjectives participate in some interesting syntactic behavior. The two may be conjoined as modifiers of the same noun, e.g., B *sañkantse* [GEN.] *pelaiykneṣṣe* [ADJ.] *wāntare* ‘a legal affair of the community.’ A

¹⁶ Cf. *rūpn=ēñwentse* [GEN.] ‘in the shape of a man,’ but *ṣecakāññe* [ADJ.] *rupsa* ‘in the shape of a lion.’

noun may be modified by a genitive that is itself modified by an adjective, e.g., B *kroksām̐ts* [GEN.] *weṣeñña māka* [ADJ.] ‘the sound of many bees.’¹⁷ Indeed, if the dependent genitive is itself modified by a “regular” adjective (i.e., one that is not derived from a dependent genitive), the genitive is apparently never changed into a denominal adjective.¹⁸ The modifying adjective is sometimes in an overtly marked genitive form, but more often in the unmarked accusative form (for the agreement rule, see Krause and Thomas, 1960:92). The modifying adjective may be a “regular” one, as with the previous examples, or a denominal one, e.g., TchB *jambudvipṣeṃ* [ADJ.] *śāmnantsā* [GEN.] *naumye ysāṣṣe* ‘the golden jewel of the peoples of India.’

Expectedly, a noun may be modified by a genitive which, in turn, is modified by another genitive, B *Airawantaṃtse* [GEN.] *oṅkolmām̐ts* [GEN.] *lānte* [GEN.] *seyi* [GEN.] *śuñc* ‘the trunk of Airawanta, the son of the king of elephants.’¹⁹ Less expectedly, the noun may be modified by a denominal adjective in turn modified by a genitive, *akālk seyī* [GEN.] *cmelñeṣṣe* [ADJ.] ‘the wish for the birth of a son.’²⁰ A noun may be modified by a denominal adjective which, in turn, is modified by another denominal adjective, B *lakṣaṇai* [ADJ., FEM. ACC. SG.] *klautsaiṣṣe* [ADJ., MASC. NOM. SG.] *ṣpel* [NOUN, MASC. NOM. SG.] ‘poultice of fish ears’ which shows the more

¹⁷Other examples (all B): *trai* [ADJ.] *śaiṣṣentso* [GEN.] *kāṣṣi* ‘teacher of three worlds’ (45a4), *mamepi* [ADJ.] *ypan̐tse* [GEN.] *traksim* ‘seeds of ripe barley’ (W-10a5), *po tetemoṣām̐ts* [ADJ.] *onolments* [GEN.] *srukālñe* ‘the death of all born beings’ (2a3), *tsrorsa larepi* [ADJ.] *soṃskentse* [GEN.] ‘by the separation of [my] dear son’ (86b4) (note here that we have, not a regular adnominal genitive, but objective genitive), *śiñcaccepi* [ADJ.] *ṣlentse* [GEN.] *tsāñkarwaṣṣe* ‘NOUN [in lacuna] pertaining to the peaks of the snowy mountain’ (H-ADD.149.79a4). Compare English *a young children’s edition* (Huddleston and Pullum, 2002:444) or, with a compound rather than a genitive, *those Egyptian cotton shirts* (ibid.) or German *ein wilder Schweinskopf* or *voller Mondenschein* (both from Goethe, quoted by Jespersen, 1936:284).

¹⁸The only possible exception is *alyek ypoysi brāhmani* ‘foreign brahmans’ but *alyek-ypoysi* is probably better taken, as it usually is, as a compound (or, rather, a denominal adjective derived from a compound).

¹⁹Other examples (all B): *larona waipeccenta ṣaṇ śamnāṣṣeṃts* ‘the precious possessions of his own people’ (46b4), *tañ ṣaulantse ākeṣ* ‘toward the end of thy life’ (520a4), *lānte ypoyn̐tse salyai* ‘the border of the king’s country’ (86a5).

²⁰Other examples (all B): *sārwanāṣṣe tañ pālentaṣṣe meñe* ‘the full moon of thy face’ (71a5), *śiñcaccepi ṣlentse tsāñkarwaṣṣe N* ‘[something] pertaining to the peaks of the snowy mountain’ (H-ADD.149.79a4), or *sārwanāṣṣe mañḍālñe poṣiñtse* ‘the mañḍala of the Buddha’s face’ (H-149-ADD.4a4).

deeply embedded denominal adjective (*lakṣaṇai*) agreeing in the genitive (formally accusative, see above) case appropriate to the genitive noun underlying the denominal adjective *klautsaiṣṣe* from the feminine noun *klautso* ‘ear’).²¹ In both these cases the denominal adjective looks to be the surface structure manifestation of a more underlying genitive. It would appear that animates do not appear as denominal adjectives at the first level of embedding and inanimates do not (normally) appear as genitives at the second level of embedding.

Tocharian Rule: after adjective-agreement has been applied, a genitive may be turned into a denominal adjective; both rules are iterative, working up from the most embedded sentence to the least; the genitive-to-adjective rule is more likely to be triggered the lower the animacy of the noun in the genitive case and the lower the definiteness (animacy will trump definiteness). Thus:

[[[gen] gen] NOUN]
 [[[adj_a] gen_a] NOUN] (i.e., adjective agrees with genitive, not NOUN)
 [[[gen] adj_b] NOUN_b] (i.e., adjective agrees with NOUN)
 [[[adj_a] adj_b] NOUN_b] (i.e., first adjective agrees with genitive that underlies second adjective; second adjective agrees with NOUN)

Tocharian denominal adjectives may also be antecedents of pronouns, for which see the discussion below (section 3).

²¹Other examples (all B): *kewiye melteṣe ṣpel* ‘poultice of cow dung’ (P-2a6), *pañāktāmñe perneṣṣe akālksa* ‘by wish for Buddha-worth’ (81a6), *klyomñai ytāriṣṣe* ... *yepesa* ‘with the knife of the noble way’ (174a6), and *empelye saṃsārāṣṣai kwaṣṣaine* ‘in the village of the terrible samsāra’ (295a2), and *ñwai-riṣṣe* ‘inhabitant of *Ñuwa Riye’ (SI B Toch. 12.1 [Pinault, 1998:16]). In the last three examples the first adjective has explicitly the gender appropriate to the noun underlying the second (like *lakṣaṇai klautsaiṣṣe ṣpel*); the *empelye* of the text is not to be “corrected” away to *empelyai* as often suggested. The first two examples do not show that kind of agreement overtly because all the nouns and adjectives are masculine.

Particularly interesting is the double example at 41a3: *mākce_u ykeṣṣa kektseñe tā_u kenaṣṣe satāṣlñe* ‘whatever place the body [has], exhalation [has] that [place on] earth.’ Here we have *mākce_u*, which is masculine, agreeing with the underlying *ike* ‘place’ (masc.), even though *ike* (rather the genitive *ykentse*) has become *ykeṣṣa*, a feminine adjective to agree with the feminine noun *kektseñe*. Conversely *tā_u* is feminine to agree with the feminine noun *kem* which has been replaced by the adjective, *kenaṣṣe* (masculine to agree with *satāṣlñe*). Note particularly that the *relative pronoun* (*mākce_u*) is masculine because the underlying noun is masculine.

Form of Denominal Adjectives in Tocharian

Denominal adjectives in *-(i)ye* [A *-i*], *-ññe* [A *-ñi* and *-eñ*], and *-sse* [A *-sī*] would appear to all serve the same range of functions and thus to be synonymous.²² Occasionally there will indeed be synonymous doublets: (all B) *rññe* ~ *rīsse* ‘pertaining to a city,’ (common) *ñākcyē* ~ (rare) *ñākteññe* ‘divine,’ *šlye* ~ *šleşse* ‘pertaining to a mountain,’ *keñiye* ~ *kenāsse* ‘pertaining to the ground, land.’ The suffix *-(i)ye* occurs in sporadic clusters across most of the spectrum of animacy: natural features: B *wriyeşse* ‘dew-’ from *war* ‘water’ (with secondary *-sse*, cf. Gk. *hudria* ‘water-pot,’ Alb. *ujë* ‘water’ [*< *udryom*]), B *šlyiye* ‘mountain-’ from *šale* ‘mountain,’ B *keñiye* ‘land-, earth-’ from *keñ* ‘land, earth’ (cf. Skt. *kṣāmya-* ‘earthen,’ Gk. *chthónios* ‘in or under the earth’), A *wärti* ‘forest-’ from *wärt* ‘forest’; other (mixed inanimates): B *keşcyē* ‘hungry’ from *kest* ‘hunger’ (cf. A *kaşši* ‘hungry’ which surely belonged to this type earlier²³), B *ypiye* ‘barley-’ from *yap* ‘barley’ (cf. Gk. *zeiaí* [pl.] ‘spelt’), A *ariñci* ‘heart-’ from *ariñc* ‘heart,’ A *kom-pärkãñci* ‘eastern’ from *kom-pärkãnt* ‘dawn,’ A *-puklyi* ‘having so many years’ from *pukul* ‘year,’ A *-koñi* ‘having so many days’ from *koñ* ‘day,’ A *was̄ti* ‘house-’ from *was̄t* ‘house’; animals (mostly domestic): B *kuñiye* ‘canine’ from *ku* ‘dog’ (cf. Skt. *śunyam* ‘a number of dogs’), B *kaiyye* ‘bovine’ and B *kewiye* ‘butter’ from *keu* ‘cow’ (probably reflecting PIE **g^wóuyo-* and **g^wouyó-* respectively, cf. Skt. *gávya-* ~ *gavyá-* ‘bovine,’ Gk. *tessará-boios* ‘four cows-worth,’ Arm. *kog̃i* ‘butter’), B *aiyye* ‘ovine’ (cf. Skt. *ávya-* ‘ovine,’ Gk. *oia* ‘sheepskin’), B *aşiyē* ‘hircine’ from *as̄* ‘(she-)goat,’ B *wärmiye* ‘ant-’ from *warme* ‘ant,’ A *şiški* ‘leonine’ from *şišäk* ‘lion’; highly animate common nouns: B *patarye* ‘paternal’ (cf. Skt. *pītrya-* ~ *pītriya-*, Gk. *pátrios*, Lat. *patrius*, all ‘paternal,’ OIr *aithre* ‘paternal side of the family’), B *matarye* ‘maternal,’ A *lãñci* ‘royal’ from [acc.] *lãnt* ‘king,’ B *ñākciye* [A *ñākci*] ‘divine’ from *ñakte/ñkät* ‘god.’²⁴ It is of course the ubiquitous PIE suffix **(i)yo-*. It is significant that it does not appear at the highest end of the animacy spectrum, proper nouns.

²²Knoll (1996) tries hard to differentiate these different morphological types semantically, but, in reality, they all seem to be the same.

²³The nominative masculine plural of *kaşši* is *kaşšiñ*. The ending is *-iñi* in the regular denominal adjectival type. Both types of Tocharian A plural are etymologically secondary.

²⁴The large number of this set of words with exact extra-Tocharian cognates shows its antiquity; the lack of palatalization in *şiški* and *was̄ti* suggest this suffix had a certain amount of post-Proto-Tocharian productivity in Tocharian A.

The other two suffixes, *-ññe* and *-ṣṣe* have more predictable distributions. The Tocharian B suffix *-ññe*, does not normally appear with inanimate abstract nouns at all; it appears rarely with inanimate concrete nouns (e.g., *eñcuwaññe* ‘of iron,’ *ysārñe* ‘wheaten’), but appears, beside *-(i)ye*, just about two thirds of the time (68% *-ññe*, 32% *-(i)ye*) with words designating animals and 79% of the time with human common nouns (beside mostly *-ṣṣe*). Given this connection with animacy, it is surprising that there are few adjectives in *-ññe* from human proper nouns.²⁵ In PIE terms *-ññe* represents **-n-yo-* and reflects adjectives derived from the common *n*-stem doublets of Proto-Tocharian.²⁶ Tocharian A *-ñi* is rare and does not show the same animacy distribution as TchB *-ññe* (A *oñi* ‘human [from *oñk*] ‘human being’ [cf. B *eñkwaññe*], but *praskañi* ‘frightful,’ and *yokañi* ‘thirsty’). The suffix *-eṃ* (= B *-aññe* and *-eññe*), however, does show the expected predilection for animate nouns (e.g., *oñkāleṃ* ‘pertaining to an elephant’ [B *oñkolmaññe*], *pättāmñktem* ‘pertaining to the Buddha’ [B *pañāktāññe*], *lwem* ‘pertaining to an animal’ [B *lwāññe*]).

The suffix *-ṣṣe* [A *-ṣi*] occurs everywhere else and is the only suffix than can form denominal adjectives from duals and plurals, no matter what semantic group they may belong to.²⁷ It is universal in forming denominal adjectives from abstract inanimates, and almost universal for human proper nouns at the other end of the animacy scale. Precisely because it is so productive, it has long since spread far beyond its original distribution and its exact origin is not as obvious as it is for *-iye* and *-ññe*.

It is hard not to take *-ṣṣe* as somehow related to the Common Anatolian denominal adjective suffix, *-assa-*. This ending is ubiquitous in Luvian and certain other western Anatolian languages, and is found residually in Hittite.²⁸

²⁵ *Dharmasomāññe* beside *Dharmasome* (the author of the *Udānālañkāra*) is an exceptional example of *-ññe* from a human proper name.

²⁶ The same *n*-stem doublets that have left their trace in the ubiquitous genitives singular in *-ntse*, genitive plurals in *-nts*, and animate accusative singulars in *-m* (see Adams 1988). Very rarely we have *-uññe* rather than *-ññe*, i.e., *kotruññe* ‘pertaining to the family’, *lantuññe* ‘royal’, *lykuññe* ‘pertaining to a thief.’

²⁷ The one exception is B *-pikwalaññe* used in forming compound adjectives denoting age, e.g., *ikaṃ-pikwalaññe* ‘twenty years’ old.’

²⁸ Thus Hittite *hanzāssa-* ‘offspring,’ *iugassa-* ‘yearling’ *pedassahh-* ‘to put in place’ (< **pedessa-* < *peda-* ‘place’) (Kloekhorst 2008:216), *genussa-* ‘knee-pad.’

However, Anatolianists are not in full agreement about the history of *-assa-*. Heretofore the standard explanation (Melchert in various publications) takes it as reflecting PIE **-eh_aso-* and compares it directly with Latin *-ārius* (e.g., *agrārius* ‘agrarian’) from **-eh_asyo-*.²⁹ If **-eh_aso-* is indeed the PIE ancestor of Anatolian *-assa-*, then Tocharian *-ṣṣe* must have arisen from *-āṣṣe* by redivision into *-ā-ṣṣe* and then the spread of *-ṣṣe* to other noun types (just as the productive suffix *-tste* ‘having X’ is redivided from *-ātstse* from PIE **-eh_atyo-*).

However, Kloekhorst (2008:216), following Georgiev (1967:164), thinks (with good evidence) that PIE **-Vh₂sV-* is preserved in Hittite as *-VhsV-* and that *-assa-* comes from **-Vsyo-*. If so, the Tocharian *-ṣṣe* and Anatolian *-ssa-* are the PIE genitive ending **-syo* added to the various stem vowel types and reanalyzed as an inflectable stem-formative rather than an inflectional ending.³⁰

2. The Situation in Old Church Slavonic

Superficially at least the situation in Slavic, particularly Old Church Slavonic, most nearly resembles that which we find in Tocharian. Particularly it is the case that, as with Tocharian, the derivation of denominal adjectives from nouns is fully productive, though, unlike Tocharian, denominal adjectives can only be derived from the singular of the noun.

A peculiarity of Slavic, which has received less attention than it deserves, is that Slavic, unlike Tocharian, has *two* systems of derived denominal adjectives superimposed on one another. The first, and older, system derives adjectives from nouns from abstract inanimates up the animacy scale through the “lower” end of the non-proper human nouns. This system has varied exponents, including descendants of PIE **-(i)yo-*, but is probably most commonly characterized by Proto-Slavic **-bško/a-*, e.g., *zemŕn-* ‘earth’ > *zemŕsko/a-* ‘earthly,’ *mirŕ* ‘world’ > *mirŕsko/a-* ‘worldly,’ *čŕlověkŕ* ‘human being’ > *čŕlověčŕsko/a-* ‘human.’ This system acts much as does in English, etc. (and to a certain extent in Tocharian), in that “there is a strong

They may also occur nominalized: *Istanamassa-* ‘deity of the ear,’ *Sakuwassa-* ‘deity of the eye,’ *Tarhuntassa-* ‘city of (the god) *Tarhunta-*, etc. (Hoffner and Melchert 2008:56).

²⁹Though not customary to do so, I would add Greek adjectives in *-aios* (< **-eh_asyo-*) as well.

³⁰Both Lycian and Carian also show examples of secondary inflection of the inherited genitive ending **-oso* (Melchert, forthcoming).

tendency for adjectives to be used for indefinite reference, whereas nouns are used for definite reference. *Dijavolb přeměni se vb možeskb* [ADJECTIVE] *obrazb* (Suprasliensis 78.24) ‘The devil changed himself into the form of a man’ [beside] *vblēzb vb lono moža* [GEN.] *močaaše* (Suprasliensis 567.60) ‘Getting into the man’s chest, it was torturing him’” (Huntley 2002:179-180).³¹

However, unlike English and Tocharian, there is a second system, for personal nouns only (i.e., those at the very top of the animacy scale). Adjectives from *o*-stem nouns at this level have the suffix *-ovo/a-*³² and adjectives from *a*-stem nouns have the suffix *-ino/a-*. Nouns at this level are almost by definition definite and thus the adjective does not signify indefinite reference. Rather, the adjective is normally used when the modifier is singular and itself unmodified, whereas in all other situations the modifier is in the form of the genitive.³³ Thus the difference between adjective and genitive is formal rather than semantic and has nothing to do with definiteness or animacy.³⁴

2.1. Nested Modifiers in OCS and in Slavic in General

Nested modifiers in Old Church Slavonic are handled similarly but not identically to Tocharian. The normal situation in OCS is for a genitive to modify a genitive; there are expected instances of an adjective, “regular” or denominal, modifying a genitive as well. While it is easy enough to find examples of the construction wherein a noun is modified by an adjective which, in turn, is modified by a genitive in Tocharian B³⁵, there is one example only of this in all OCS: *da sbtvorō volō*

³¹It should be noted that not quite all nouns permitted the derivation of an adjective. Those nouns which were themselves nominalized adjectives or participles did not permit further derivation. Further examples of this and all Old Church Slavonic types are to be found in Huntley (1984).

³²This suffix is not wholly restricted to this second system; it also provides a few adjectives to the first system as well, e.g., *dobū* ‘oak’ > *dobovo/a-* ‘oaken.’

³³“... genitive is replaced by possessive adjective if the possessor is represented by a substantive which denotes a person or an animal and which is not otherwise modified” (Lunt 1968:128).

³⁴Corbett (1987:307), unlike many investigators, makes a clear distinction between “possessive adjectives,” in *-in-* or *-ov-* and formed from animate nouns, and other “denominal adjectives” which “behave rather differently.” His article is devoted to the first group.

³⁵Cf. (above) *sārwanāšše* [‘face’ ADJ.] *maṅḍālne poyšintse* [‘Buddha’ GEN.] ‘on the maṅḍala of the Buddha’s face.’

otbčŕ [ADJECTIVE] *si* [DATIVE]³⁶ ‘that I should do the will of my father’ (Suprasliensis 349.27, quoted in Huntley 1993:177). Likewise there are only two examples of the construction whereby adjectives modify adjectives known in Old Church Slavonic. However, unlike the case of Tocharian, in both cases the adjectives agree in number, gender, and case with the noun the higher adjective modifies: *otb uzdy* [GEN. SG. F.] *koňbnyje* [ADJ., GEN. SG. F.] *česarę* [ADJ., GEN. SG. F.] ‘from the bridle of the horse of the Emperor’; *obrazomb* [INST. SG. M.] *krestbnyimb* [ADJ., INST. SG. M.] *xristovomb* [ADJ., INST. SG. M.] ‘with the sign of the cross of Christ’ (Suprasliensis 5.19; Huntley 1993:177). In Tocharian the doubly embedded adjective agrees with the noun underlying the higher derived embedded adjective.³⁷

The Old Church Slavonic rule, then, is that an unmodified genitive may be turned into a denominal adjective; the genitive-to-adjective rule is triggered by lack of definiteness, except with high animacy nouns (personal names and the like) where it is essentially exceptionless; in the rare cases where a modified genitive is turned into a denominal adjective, its dependent genitive is also made into an adjective (by case attraction) agreeing with highest noun. Thus for embedded modifiers we have:

[[[gen] gen] NOUN]
 [[[adj_a] adj_a] NOUN_a] (very rare)

The situation in the other Slavic written languages is not always the same. In general we can see a tendency for the denominal adjective to give way before the genitive. This tendency is strongest in Polish but also very strong in Russian (see Corbett 1987 for a very useful summary of the situation in Slavic). Polish, Russian, and most other modern Slavic languages are like OCS in that the denominal adjective option is only possible with unmodified modifiers. Nested modifiers to adjectives do not occur. However, on the southern rim of the West Slavic languages we find a set of languages, Slovak, Old Czech (but not contemporary Czech), and Upper Sorbian (not

³⁶Old Church Slavonic uses both genitive and dative, apparently synonymously (and thus unlike Latin and Hittite [Watkins 1967]).

³⁷E.g., *laksañai* [ADJ., FEM. ACC. SG.] *klautsaišše* [ADJ., MASC. NOM. SG.] *špel* [NOUN, MASC. NOM. SG.] ‘poultice of fish ears’ as discussed above.

Lower Sorbian), that do allow nested modifiers where both modifiers appear as denominal adjectives. In such cases the more deeply embedded modifier agrees with the noun underlying the less deeply embedded modifier, just as in Tocharian.³⁸ Thus we have (examples all from Corbett):

- Old Czech: *ot krvi* [NOUN, GEN. SG. FEM.] *Abelovy* [ADJ., GEN. SG. FEM.] *pravého* [ADJ., GEN. SG. MASC.] ‘from the blood of the just Abel’
 Slovak: *môjho* [ADJ., GEN. SG. MASC.] *otcova* [ADJ., NOM. SG. FEM.] *knižnica* [NOUN, NOM. SG. FEM.] ‘my father’s library’
 Upper Sorbian: *w našeho* [ADJ., GEN. SG. MASC.] *nanowej* [ADJ., LOC. SG. FEM.] *chěži* [NOUN, LOC. SG. FEM.] ‘in our father’s house’

Old Russian shows a few such constructions, the best in Corbett’s opinion being: *toě* [ADJ., GEN. SG. FEM.] *Marfynimŭ* [ADJ., INST. SG. MASC.] *mužemŭ* [NOUN, INST. SG. MASC.] ‘with the husband of that Martha.’ Though found in only a small minority of modern Slavic languages, this construction may well be Proto-Slavic and the situation in OCS, where the denominal adjective could take no further modifiers, may be an innovation.³⁹

2.2. Control of Denominal Adjective on Pronouns and Relative Pronouns in Slavic.

Corbett’s focus in his 1967 article is on whether the modifier, once in the form of a denominal adjective, can control (i.e., be the antecedent of) personal pronouns and relative pronouns, as well their own attributive modifiers (as discussed above). All Slavic languages allow the denominal adjective to function as the antecedent of a personal pronoun,⁴⁰ some

³⁸At times Upper Sorbian shows case attraction of the more deeply embedded modifier to the case of the higher modifier—just as in Old Church Slavonic on those rare occasions where there are nested denominal modifiers in that language.

³⁹Corbett takes the situation in Old Church Slavonic as original and the expanded possibilities of Upper Sorbian, etc., as innovations. However, since in attested Slavic the trend has otherwise been uniformly in the direction of replacing the denominal adjective with the genitive, it would seem more likely that the most expansive use of the denominal adjective is the earlier situation and that already in Old Church Slavonic we see the beginnings of increasing restrictions on them.

⁴⁰Polish is a partial exception. An example of the control of a personal pronoun is Macedonian, *Pred nas e majčniot* [ADJ., NOM. SG. MASC.] *stan* [N., NOM. SG. MASC.]. *Taa* [PRO., NOM. SG. FEM.] *saka da go prodade* ‘Before us is

allow for both personal pronoun and relative pronoun,⁴¹ fewer yet are like Upper Sorbian and allow for a personal pronoun, a relative pronoun, and an attributive modifier. There is a hierarchy: control of the attributive modifier implies the control of a relative pronoun implies the control of a personal pronoun.⁴²

3. Tocharian Denominal Adjectives and (Relative) Pronouns.

When comparing the Slavic situation with Tocharian, we have to remember that in Slavic the denominal (or “possessive”) adjective is used with highly animate nouns whereas in Tocharian highly animate nouns usually are in the genitive. Since the more animate the noun, the more likely it is to serve as an antecedent for either a personal or relative pronouns (Itagaki and Prideaux 1985), it is not too surprising that relevant Tocharian examples are in short supply. An inexhaustive survey has turned up no cases of a denominal adjective serving as the antecedent of a personal pronoun. However, we do have a most interesting example of one serving as the antecedent of a relative pronoun: (41a3) *mākce_u ykeṣṣa kektseñe tā_u kenaṣṣe satāṣlñe* ‘whatever place the body [has], exhalation [has] that bit of earth.’ This line of poetry is grammatically complex, one might even say convoluted, but it is clear that the relative pronominal adjective *mākce_u* is controlled by *ike* ‘place’ which lies behind the denominal adjective *ykeṣṣe*.⁴³

mother’s [lit.: maternal] flat. She wants to sell it” (Corbett 1987:311).

⁴¹An example of controlling a relative pronoun is provided by nineteenth century Russian, *Iskal pokrovitel’stva* [N, GEN. SG. NEUT.] *Kazimirova* [ADJ., GEN. SG. NEUT.], *kotory postupil črezvyčajno neostorožno* “(He) sought Kazimir’s patronage, who acted extremely imprudently” (Corbett 1987:308).

⁴²English does not usually allow control by denominal adjectives of personal, or relative pronouns, e.g., **The Elizabethan age was an astounding era. She [i.e., Elizabeth].....* That kind of sentence does not seem entirely grammatical to me, but is acceptable to others (e.g., an anonymous reviewer). Other restricted contexts of morphological derivation, e.g., *John became a guitarist because he thought it was a beautiful instrument* (Corbet, 1987:306, from Lakoff and Ross, 1972:121) also have a variable reception. Such a sentence is questionable for some native speakers of English, but perfectly acceptable for others (including the author).

⁴³Just as an aside, the cases of control in Slavic do not include those situations where a single modifier has an appositive. In OCS some 5% of all possessive constructions were of this sort. An Old Russian example is *vnukъ Volodimerъ* [ADJ.] *Monomaxa* [GEN.] ‘Vladimir Monomax’s grandson’ (Suzdal’ Chronicle, Laurentian manuscript). (Exactly the same concatenation of names appears as

4. Situation in the Anatolian Languages

The relationship between denominal adjective and genitive in Anatolian runs the gamut of possibilities. Hittite has a virtually non-existent system of denominal adjectives paired, as one would expect, with robust use of the genitive. The western Anatolian language, Luvian, Lycian, and Lydian, however, show a much greater use of denominal adjectives--to the point that Cuneiform Luvian has only denominal adjectives.⁴⁴ Since there are no genitives in Cuneiform Luvian (CLuvian), the use of the denominal adjective says nothing about definiteness or animacy. It is significant in this situation that CLuvian, like Tocharian, can form denominal adjectives from plural nouns, though only in the dative-locative and ablative-instrumental, as well as singular ones. These “plural adjectives” are formed by inserting a *-nz-* before the case ending, thus (dat-loc.) *-aššanzanz(a)* and *-aššanzati* (e.g., DINGIR.MEŠ-*aššanzati waššarahiti* ‘by the favor of the gods’ [Melchert, 2002:188]). It is also interesting to note that nested modifiers can occur in CLuvian; they are all adjectives of course and, unlike Tocharian (but as occurs rarely in OCS and Upper Sorbian), they all agree with the ultimate head noun (Melchert 2003:202), thus [[[adj_a] adj_a] NOUN_a] only (e.g., *ta-ni-ma-si-na* REGIO-*ni-si-na* INFANS-*ni-na* ‘a child of every country’), i.e., case attraction is mandatory.

Lydian is largely like CLuvian in that the genitive has been almost entirely ousted from its original noun-modifying role (the genitive singular has entirely disappeared; the genitive plural has very largely shifted its use to that of a dative). Noun modification, except in a few cases of genitive plurals, is done with denominal adjectives in *-Vli-*. I have no data on nested modifiers in Lydian: I assume they act as they do in CLuvian.

Lycian (and Milyan), on the other hand, have both productive genitives and productive denominal adjectives. Human proper names, with one exception, and topographic proper names take the genitive as noun modifiers, while

adjective + adjective and genitive + genitive in the same manuscript [Richards 1976:262-263].)

⁴⁴The discussion of the situation in the various Anatolian languages owes much to H. Craig Melchert (p.c.). I am very much in his debt, but he is not responsible if I have misconstrued the data.

common nouns and *divine* proper names take denominal adjectives. Whether we take the distinction between proper and common nouns as one of definiteness or animacy (or some combination of both), the behavior of divine names in this regard is surprising. Once again I have no data on embedded modifiers.

Like Lycian, Hieroglyphic Luvian (HLuvian), with both genitive and denominal adjectives, shows yet another pattern: for divine proper names the ratio of genitive to adjective is 66% to 33% (15 tokens), for other personal proper names the ratio is 83% to 17% (18 tokens), while for other human and divine animate common nouns it was 11% to 89% (19 tokens). There was only one example of an animate common noun (“sheep and goats”) and that took a genitive. Inanimate common nouns took the genitive 17% and the adjective 83% (6 tokens).⁴⁵ Anatolian is like Tocharian in that inherited denominal adjectives could be of either the shape **(i)yo-* or **eh₂so-* (or *-syo-*; see above); Hittite and Lydian have added **-lo-* much as Tocharian has added **-nyo-*.

5. Greek and Latin

Both Greek and Latin act a little like Slavic in that they have a system of “ordinary” denominal adjectives for low-animacy nouns and a second system for high animacy nouns. Actually, since this second system derives adjectives from proper nouns (including geographical names), it is not so much high animacy as it is high definiteness (Delbrück 1893:446-448, Wackernagel 1908:137-146). Within Greek this option is most widely exercised in Aeolic dialects where, for instance, patronymics are in adjectival form and not in the genitive common to other varieties of Greek. Greek examples, all Homeric, include *naûs Agamenonéê*, *Aiolíê nêsos*, *Telemônios Aías*. As an increasingly rare variant the denominal adjective was a possibility even in medieval Greek.⁴⁶ Within Italic it is, I think,

⁴⁵I am indebted to Craig Melchert (p.c.) for these figures. He knows of no instances in any of the Anatolian languages of a denominal adjective controlling a (relative) pronoun. However, the paucity of data makes this absence probably non-significant. It should be noted that in HLuvian we find the same mixed appositive usage seen in Slavic, e.g., *za wanin=za Zahanas* [GEN.] *Zitis* [GEN.] *nimuwiyayan=za* [Adj.] ‘this stele [is] Zahanas’, Zitis’ son [adj]’ (Melchert 1990:202ff).

⁴⁶Wackernagel (1908:138) notes a Byzantine, *Doukikês rîzês kládon* ‘a shoot of the Dukas family.’ As in Slavic and HLuvian there is the possibility of

possible to read the evidence that this kind of denominal adjective was restricted to divine names (e.g., *flāmen diālis*) and that its extension to other proper nouns was a matter of Greek influence on Latin. Whether by inheritance or borrowing, the situation in Classical Latin was very similar to that in Greek. In both languages the denominal adjective might appear occasionally with a common noun such as ‘father’ (e.g. Pindar’s *patría óssa* ‘his father’s voice’ or Latin *patrio corpore* ‘from his father’s body’ or *ex maerore patrio* ‘from the sufferings of his father.’ In both Greek and Latin the option of substituting a denominal adjective for a genitive existed only in the case of unmodified genitives, so the issue of nested modifiers does not arise; there is no evidence that denominal adjectives could control either personal or relative pronouns.⁴⁷

The rule by which genitives of personal names could be replaced by denominal adjectives has been borrowed, as a largely literary device, in western European languages, whether Germanic or Romance, and thus examples such as English, “a Shakespearean sonnet.”

6. Indo-Iranian

Indic and Iranian would appear to act very differently with respect to denominal adjectives. Iranian languages form denominal adjectives freely from nouns at the low end of the animacy scale (i.e., like Germanic and Romance languages), but not from higher up. Indic, on the other hand freely forms denominal adjectives from all nouns; an older stratum shows *-(i)ya-*, a newer stratum shows *vṛddhi*, e.g., from *índra-* ‘Indra’ we have both *índriyá-* and *aindrá-* ‘pertaining to Indra.’ I find no discussion that suggests when one uses the adjective and when one uses the genitive. Neither in Indic nor in Iranian does the adjective control a personal or relative pronoun.

appositives differing in form, e.g. (Homeric) *Gorgeiē kephalē deinoōio pelōrou* ‘the head of the Gorgon, a frightful creature.’

⁴⁷An anonymous reviewer suggests that patronymic adjectives may form a category of their own (and adds Gaulish patronymics in *-iknos* and Lepontic ones in *-alos*) and thus, by implication, they may not be particularly relevant to this discussion. Certainly they are “special cases” in the high frequency of their occurrence instead of genitives. Still there are enough cases where we find denominal adjectives that are not patronymics in Greek and Latin (I can say nothing about Continental Celtic), e.g., *Gorgeiē kephalē deinoōio pelōrou*, *flāmen diālis*, that it seems wisest to include them here

7. Armenian

Attested Armenian would appear to be very much like Germanic and Romance: widespread adjective derivatives of low animacy nouns used in generic situations, but no adjective derivatives for high animacy nouns. However, there is some evidence that the situation may have been different in pre-Armenian. The ending of the genitive plural is *-c'*, which is commonly taken as a reflex of an adjectival PIE **(i)sko-* (Godel 1975:106). If derived adjectives were widespread, it makes sense that they might replace the genitive plural if the latter were threatened disappearance,⁴⁸ since *the power of presidents* is essentially the same as *presidential power*. The reanalysis of **-isko-* as STEM VOWEL + **-sko-* (similar to the reanalysis suggested for PIE **-eh_asyo-* in Tocharian) would have been greatly aided by the productivity of *i*-stems in pre-Armenian. Adjectives derived from *i*-stems would have been ambiguous as to whether they should be segmented **-isko-* (historically correct) or **-i-sko-* (innovative, whence **-o-sko-*, etc.).

8. Conclusions

Tocharian acts like Proto-Slavic, and possibly some western Anatolian languages, e.g., Hieroglyphic Luvian, with regard to control issues.⁴⁹ Like western Anatolian, and possibly Sanskrit, Tocharian has a single integrated system of denominal adjectives from the bottom to top of the animacy scale.⁵⁰ Only Tocharian and, limited to oblique cases, Hieroglyphic Luvian have denominal adjectives derived from duals and plurals as well as singulars.

The basic goal of this paper is to examine the denominal adjectives of Tocharian, both morphologically and, more importantly, syntactically and to compare the Tocharian phenomena with similar constructions in the other Indo-European groups. Having done so, it is hard not to ask oneself if there are any implications for Proto-Indo-European itself. Was Proto-Indo-European like Tocharian, Proto-Anatolian, and

⁴⁸At least the genitive plural of *o*-stems, **-om*, would have suffered the same fate as the accusative singular **-om* and disappeared.

⁴⁹The indeterminacy with regard to western Anatolian is of course due to the paucity of evidence.

⁵⁰Contrast Slavic, Greek, and Latin with *two* systems, one for low animacy nouns and another for very high animacy nouns.

Proto-Slavic with a productive system of deriving, from virtually every noun, denominal adjectives with the ability to substitute for virtually any genitive and retain that genitive's ability to act as the antecedent for pronouns? Or was Proto-Indo-European like most attested Indo-European languages with only a restricted set of denominal adjectives (mostly to inanimate nouns) and no ability for those adjectives to act as antecedents of pronouns?

If we posit these phenomena for Proto-Indo-European, we are certainly reconstructing a situation that no one has heretofore done, and on the basis of a clear minority of the attested Indo-European branches. On the other hand, the dialect distribution of those branches is a strong one: Anatolian and Tocharian, the first branches to break away from the rest of Proto-Indo-European, and Slavic, with residual remnants in Greek and Italic (and possibly Armenian).

If we do not posit these phenomena in Proto-Indo-European, then the Anatolian, Tocharian, and Slavic situations would be the result of independent innovations. Ultimately our decision between these two possibilities may depend on our assessment of the likelihood of this sort of thing being an independent creation. Certainly we have attested cases of its disappearance in both Slavic (e.g., Russian with regard to Old Church Slavonic) and probably Anatolian⁵¹ and no certainly attested examples of its creation. But, we are dealing with very limited data that will not support any statistical argument for or against. For what it is worth, I am inclined to believe, on the basis of the totality of not altogether compelling evidence, that Proto-Indo-European did look a lot like Tocharian or Upper Sorbian.

References

- Adams, Douglas Q.
 1988 The Expansion of the PIE *n*-stems in Tocharian: The systematic development of a paradigm. *Tocharian and Indo-European Studies* 2:7-30.

⁵¹Hittite for instance is almost certainly innovative in the very low productivity of denominal adjective creation, whether measured either against all we know about Proto-Indo-European or its sister Anatolian languages. Whether Proto-Anatolian was like "average Proto-Indo-European" in this regard or more like the attested western Anatolian languages cannot be known with any certainty.

- Corbett, Greville D.
1987 The Morphology/Syntax Interface. *Language* 63:299-345.
- Curme, George O.
1935 *Grammar of the English Language*. Boston and New York, D. C. Heath.
- Delbrück, B.
1893 *Vergleichende Syntax der Indogermanischen Sprachen, Erster Theil*. Strassburg, Trübner.
- Georgiev, V. I.
1967 Die Genetivformen des Hieroglyphisch-Hethitischen. *Revue hittite et asianique* 25, fasc. 81:157-165.
- Godel, Robert
1975 *An Introduction to the Study of Classical Armenian*. Wiesbaden, Dr. Ludwig Reichert Verlag.
- Hajnal, Ivo
2004 Zur Genese agglutinierender Flexionsmuster im Tocharischen: die Adjektive auf B -*şse*/A -*si*. In *Artes et Scientiae: Festschrift für Ralf Peter Ritter zum 65. Geburtstag*, pp. 137-157. Edd. Peter Anreiter, Marialuise Haslinger, Heinz Dieter Pohl. Vienna, Edition Praesens.
- Hoffner, Harry A., Jr., and H. Craig Melchert
2008 *A Grammar of the Hittite Language*. Winona Lake, Indiana, Eisenbraus.
- Huddleston, Rodney, and Geoffrey K. Pullum
2002 *The Cambridge Grammar of the English Language*. Cambridge, Cambridge University Press.
- Huntley, David
1984 The distribution of the denominative adjective and the adnominal genitive in Old Church Slavonic. In *Historical Syntax* (Trends in Linguistics, Studies and Monographs, 23), ed. Jacek Fisiak. Mouton, Berlin, New York, and Amsterdam.
1993 Old Church Slavonic. In *The Slavonic Languages* (Routledge Language Family Descriptions), Comrie, Bernard, and Greville D. Corbett (edd.). Routledge, London and New York.
- Itagaki, Nobuya, and Gary G. Prideaux.
1985 Nominal properties as determinants of subject selection. *Lingua* 66:133-149.
- Jespersen, Otto
1936 *A Modern English Grammar on Historical Principles, Part II: Syntax*. 4th ed. Heidelberg, Winter.

- Ji Xianlin, Werner Winter, and Georges-Jean Pinault
 1998 *Fragments of the Tocharian A Maitreyasamiti-Nāṭaka of the Xinjiang Museum, China*. (Trends in Linguistics, Studies and Monographs 113.) Mouton de Gruyter, Berlin and New York.
- Kloekhorst, Alwin
 2008 *Etymological Dictionary of the Hittite Inherited Lexicon*. (Leiden Indo-European Dictionary Series, Vol 5.) Leiden, Brill.
- Knoll, Gabriele
 1996 *Die Verwendungsweisen der Adjektive im Tocharischen. Inauguraldisertation, Johann-Wolfgang-Goethe Universität zu Frankfurt am Main*.
- Krause, Wolfgang, and Werner Thomas
 1960 *Tocharisches Elementarbuch: Band I, Grammatik*. Heidelberg, Carl Winter.
- Lakoff, George, and John Robert Ross
 1972 A note on anaphoric islands and causatives. *Linguistic Inquiry* 3:121-125.
- Lunt, Horace G.
 1968 *Old Church Slavonic Grammar*. 5th ed. Mouton, s'Gravenhage.
- Melchert, H. Craig
 1990 Adjectives in *-iyo- in Anatolian. *Historische Sprachforschung* 103:198-207.
 2000 Aspects of Cuneiform Luvian Nominal Inflection. In *The Asia Minor Connexion: Studies on the Pre-Greek Languages in Memory of Charles Carter*, pp.173-183. Yoël L. Arbeitman, ed. Peeters, Leuven and Paris.
 2003 Language. In *The Luwians* (Handbook of Oriental Studies, 68.), pp. 170-210. H. Craig Melchert (ed.). Brill, Leiden and Boston.
 (forthcoming) Genitive case and Possessive Adjective in Anatolian.
- Peyrot, Michaël
 2008 *Variation and Change in Tocharian B*. (Leiden Studies in Indo-European, 15.) Amsterdam: Rodopi.
- Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech, Jan Svartik
 1972 *A Grammar of Contemporary English*. London, Longman.
- Richards, Karen Rondesvedt
 1976 Toward a History of the Possessive in Literary Russian: The Demise of the Possessive Adjective. In *Papers From the Parasession on Diachronic Syntax, April 22, 1976*. Sanford B. Steever, Carol A. Walker, Salikoko S. Mufwene (edd.). The Chicago Linguistic Society, Chicago.

Wackernagel, Jacob

- 1908 Genetiv und Adjeektiv. In *Mélanges de linguistiques offerts à M. Ferdinand de Saussure*, pp. 125-152. Paris, H. Champion.

Watkins, Calvert

- 1967 Remarks on the Genitive. In *To Honor Roman Jakobson: Essays on the Occasion of his Seventieth Birthday*, pp. 2191-2198. (Janua Linguarum, Studia Memoriae Nicolai van Wijk Dedicata, Series Maior, 33.) The Hague, Mouton.

Zimmer, Stefan

- 1982/83 Die Funktion der tocharischen *ši/šše*-Adjektive. *KZ* 96:277-289.

Textual Perspectives on Prehistoric Contacts: Some Considerations on Female Death Demons, Heroic Ideologies and the Notion of Elite Travel in European Prehistory

Matthias Egeler
Jesus College
University of Oxford
matthias.egeler@daad-alumni.de

In 2005, Kristiansen and Larsson proposed a reconstruction of the European Bronze Age as an epoch characterised by a heroic ideology and long-distance travels of warrior-aristocrats. The present article comments on the general plausibility of this hotly debated theory from an inter-disciplinary perspective. Reviewing some results of on-going work on the early Irish, Norse, Etruscan and Greek demonologies of death, it notes that the combination of the motifs of the female bird-shaped demon, her functioning in the transition to a blissful afterlife and her marked sexuality reoccurs throughout early European demonologies with a frequency which might be taken to indicate a (pre-)historical connection between the corresponding figures. The complete lack of meaningful archaeological evidence for the respective demons in most of north-western Europe precludes a strictly archaeological tracing of the route of transmission of such figures. Yet the particular nature of the phenomenon suggests a transmission based on circumstances strikingly similar to those which Kristiansen and Larsson suggested for the European Bronze Age. As such conclusions have been reached on the basis of material entirely distinct from the data used by Kristiansen and Larsson, this might give some support to the general notion of the reconstruction of a 'heroic (Bronze) Age' in European prehistory.

heimskt er heimalit barn
"homish (silly) is the home-bred bairn"
(Icelandic proverb)

In 2005, Kristiansen and Larsson presented their views of the Bronze Age in an extensive monograph describing it as an epoch characterized by an obsession with travel and the acquisition of knowledge and prestige by means of travelling.

Volume 37, Number 3 & 4, Fall/Winter 2009

Particularly the area from Scandinavia to the Aegean is depicted as a tightly interconnected region where travelling warrior-chiefs established long-ranging personal contacts. In doing so, these travelling chiefs are perceived as creating a basis for their later high status among their own people by establishing on the one hand the connections necessary to obtain the raw materials for producing bronze, and on the other hand acquiring prestigious knowledge of both technological and cosmological kinds. These ideas have been received positively (Klejn 2008 [cf. the response by Kristiansen and Larsson 2008]; Vander Linden 2007; Jones-Bley 2006 [reviewing the book from an Indo-Europeanist's perspective]), as well as critically (Nordquist and Whittaker 2007 [but cf. the response by Kristiansen and Larsson 2007]; Harding 2006). In the following I want to present some (largely non-archaeological) observations made on the basis of material entirely distinct from the sources used by Kristiansen and Larsson, which might likewise suggest the reconstruction of a 'heroic age' characterised by long-distance cultural contact in European prehistory. That my discussion reaches parallel results on the basis of a fundamentally different methodology and data set might lend some support to the theory of a heroic Bronze Age, though it is neither claimed that my observations offer definite proof for such a characterisation of the Bronze Age nor that the theories of Kristiansen and Larsson are the only viable way of explaining them.

My starting points are specific similarities between pre-Christian religions in north-western Europe and the Mediterranean. In the north, particular attention will be paid to mythological characteristics of the Norse Valkyries and Irish demons, such as the *Bodb*. Both are female supernatural figures of the battlefield, associated with violent death, are markedly sexual and sometimes appear as birds. Such similarities have been discussed since Lottner (1870), and scholarship frequently concluded that they indicate a genetic relationship or at least some mutual influence between these figures.¹ The underlying assumption is that recurring close and

¹Lottner 1870; Donahue 1941; Birkhan 1970: 509-515, 583; Gulermovich Epstein 1997, 1998a, 1998b. Ellis Davidson 1988: 97-100 notes the similarities without drawing explicit conclusions; in the light of the works of Gulermovich Epstein, I am not convinced by the rejection by Herbert 1996: 149.

complex similarities between mythological figures of geographically close cultures are indicative of interdependence. In the present article, the case for a connection between the Irish and Norse figures will be outlined. Furthermore, I shall posit that this connection can be extended to Mediterranean figures. Finally, I shall discuss which type of historical background would allow cross-cultural connections of this particular kind to arise.

Given the diversity of the available material and the wide chronological and geographical span of the relevant demons, such an investigation into the possibility of cultural contact requires an explicit methodology for the assessment of any similarities. As a means to determine whether such similarities suggest cultural contact, I propose the following methodological points: (1) to allow the conclusion of a historical relationship, a motif combination should be complex; (2) to indicate a prehistoric date of such a connection, the motifs should appear already in the earliest available sources; (3) the notion of interdependency is strengthened if the motifs in question were distributed across a geographical continuum; and (4) a viable theory of the path of transmission must be offered.

To enhance clarity, the discussion of each class of demon will follow the same structure. It will treat the relationship of the demon to *death*, and its affinity to *birds*. It will be asked whether the demon *feeds on corpses*, whether it plays a role in the *transition of the deceased to the realm of the dead*, and how it is related to *violence and warfare*. Finally, its *sexuality* will be surveyed. In the interest of brevity, examples shall be sampled; for a fuller account cf. Egeler (forthcoming).

The starting point will be the Irish class of demons represented by the Bodb.² Figures appearing as the Bodb, Némain, Macha or the Morrigan are regularly mutually identified by native Irish tradition (e.g. *O'Mulconry's Glossary* 813) and have been so thoroughly conflated that it seems preferable to sum up the characteristics of the class as a whole,

²Fundamental on these figures was Hennessy 1866-1869 and 1870; more recent are Carey 1982/83; Le Roux and Guyonvarc'h 1983; Clark 1987; Clark 1991: esp. 21-52; Bauer-Harsant 1996; Herbert 1996; Gulermovich Epstein 1997, 1998a, 1998b. So the Irish evidence and its Irish context are well established, which makes it legitimate to explore a wider European context. – Unless indicated otherwise, all datings of texts are taken from the respective editions or Thurneysen 1921.

rather than to get lost in an attempt to grasp individual characters.

The Bodb is fond of death. As *Bruiden Meic Dareó* 5 relates: after a great massacre “the gory, raging Bodb was joyful, and the women were grief-stricken because of that conflict”. She frequently appears as a hooded crow (cf. Hennessy 1870: 33-35); in *Táin Bó Regamna* 5 (9th century), the Morrígan takes the form of a black bird. She is called ‘red-mouthed’, as in *Táin Bó Cúailnge II* line 3431 (12th century). In *Tochmarc Ferbe* (lines 623f.; 12th century), warriors are told that they have fed the Bodb by means of their weapons. This reference to her feeding makes clear that the Bodb feeds on the dead, which suggests why she is red-mouthed: the red is the blood of the corpses that she devours. Correspondingly the native Old Irish (cf. Mac Neill 1932) glossary of O’Mulconry explains “the mast (*mesrad*) of Macha, that are the heads of men after they have been slaughtered” (813). The term *mesrad* denotes both ‘harvest, mast’ and ‘feeding with mast’; so the heads of the dead warriors may not only be harvest, but also harvest for eating (Gulermovich Epstein 1998a: 48 note 10). Thus the Bodb is intimately linked with war. In *Tochmarc Emire* 50 (Version III, 12th century) she is explained as ‘goddess of battle’; but she is also fond of sex. In *Cath Maige Tuired* 84 (probably an 11th-century recension based on 9th-century material), the Morrígan grants help in war in exchange for intercourse. In *Táin Bó Cúailnge I* lines 1845-1871 (a 9th-century passage), she asks the hero for sexual favors and offers help in battle and riches in return. So, in sum, the Bodb appears as a demoness closely related to violent death, frequently appearing as a carrion bird and in this form feeding on the fallen warriors, closely associated with war and markedly sexual. A Gallo-Roman dedication stone to [*C*]athubodua (CIL XII 2571, from Haute-Savoie), meaning “battle-Bodb”, might indicate that she was also known among the continental Celts and possibly a pan-Celtic demon (Pictet 1868: esp. 11, 16f.; Hennessy 1870: 32f.; Gulermovich Epstein 1998a: 220f.; cf. Donahue 1941: 8; Birkhan 1970: 492; Green 1995: 43). Also numismatic evidence for the Bodb in Gaul has been suggested (Allen 1980: 142f.).

In Scandinavia, the Valkyries show similar affinities.³ Their name means ‘choosers of the slain’, which may indicate choosers of which warrior dies in battle or which of the dead warriors goes to Valhalla (cf. Ellis 1943: 67). In *Volsunga saga* 1 (13th century) a Valkyrie uses a crow-dress to fly, though Valkyries in bird-shape more frequently appear as swans, as at the beginning of the *Völundarqviða* (probably 12th/13th century). There are only uncertain hints that the Valkyries might have fed on the slain: associations with and terminological parallels to corpse-devouring beings led Neckel (1913: 75-79, 81) to conclude that the Valkyries were also sucking the blood of the fallen warriors.

The Valkyries are prominently involved in the transition of the dead to their afterlife: thus in the *Hákonarmál* (10th century), Odin sends two Valkyries to fetch the dead king Hákon from the battle-field to Valhalla; in the same poem they also determine the outcome of the battle. As for their sexuality, they frequently appear as the mistresses of heroes, as in the Helgi poems of the Poetic Edda (perhaps 11th and 12th/13th century). That their relationship to the dead warriors in Valhalla also showed sexual aspects and the corresponding problems is implied by the *Helgaqviða Hundingsbana in fyrri* 38 (pre-dating c. 1250), where someone is, among other charges of sexual misbehavior, also accused of having been a shameful Valkyrie about whom the dead warriors in Odin’s hall were brawling. So some of the main characteristics of the Valkyries can be summed up as a close relationship to violent death, an affinity to birds by appearing in the shape of a crow or swan, a function in the transition of the dead warrior to a blissful afterlife by fetching him to Valhalla, a close involvement in war and a markedly sexual trait in their relationship to heroes.

So both the Bodb and the Valkyries are female demons closely associated with death – be it by rejoicing over slaughter or as ‘choosers of the slain’ (Figure 1). Both have a marked affinity to birds, appearing as hooded crow or crow and swan

³On Valkyries in general cf.: Golther 1890; Kaufmann 1892; Neckel 1913: 74-89; Ellis 1943 (cf. index); Steblin-Kamenskij 1982; Lorenz 1984: 448-451; Ellis Davidson 1988: 92-97; Price 2003: 331-346; Zimmermann 2006, 2007; Egeler (forthcoming). – Unless indicated otherwise, all datings are taken from the respective editions, de Vries 1964, 1967 or the commentary of von See *et al.* on the Poetic Edda

The Bodb	The Valkyries
<ul style="list-style-type: none"> • <i>Female demon</i> • <i>Death:</i> rejoicing over bloodshed • <i>Birds:</i> appearance as hooded crow • <i>Devouring:</i> red-mouthed; severed heads as mast • <i>Transition to the realms of the dead:</i> - • <i>Violence and war:</i> 'goddess of battle' • <i>Marked Sexuality:</i> demanding sexual favors from heroes 	<ul style="list-style-type: none"> • <i>Female demon</i> • <i>Death:</i> 'choosers of the slain' • <i>Birds:</i> appearance in form of a swan or crow • <i>Devouring:</i> ? cf. parallels to/ associations with devouring beings • <i>Transition to the realms of the dead:</i> fetching slain heroes to Valhalla • <i>Violence and war:</i> deciding death and victory • <i>Marked Sexuality:</i> mating with dead and living heroes

Figure 1: Summary and juxtaposition of some main characteristics of the Bodb and the Valkyries.

respectively. Both make their main appearances in contexts of warfare, and both show a strongly sexual trait in their relationship with heroes. Within my proposed comparative framework, the main differences between them are that the Valkyries may not devour corpses, whereas the Bodb does not seem to function as a psychopomp, as there is no clear evidence for Ireland that the demonic bird feeding on the corpse played such a role.

Celtiberian: The Rite of the Vultures

- *Female demon:* -
- *Death:*
feeding on fallen heroes
- *Birds:*
vulture
- *Devouring:*
feeding on fallen heroes
- *Transition to the realms of the dead:*
bringing about the transition of the hero to heaven
- *Violence and war:*
ritual feeding restricted to martial heroes
- *Marked sexuality:* -

Figure 2: Main traits of the Celtiberian 'rite of the vultures'.

But at least in one Celtic area, among the Celtiberians, the feeding of the carrion bird on the corpse *was* important for the way of the deceased to the otherworld (Marco Simón 1998: 125-128). According to Silius Italicus, *Punica* III, 340-343 and Aelian, *De natura animalium* X, 22 those – and only those – fallen in war were fed to the vultures, and these vultures were thought to carry their souls to heaven (Figure 2). The existence of this ritual may be supported by scenes on Spanish ceramics and stone monuments (Marco Simón 1998: 126f.). In this Celtiberian ritual the vulture feeds on the dead like the Bodb, and this brings about the transition of the deceased to the realms of the dead; furthermore, the ritual is restricted to those fallen in warfare, just as the interest of the Bodb in Ireland focuses on the dead of the battlefield and the heroes of war. So while our knowledge about this ritual is very limited, everything that is known about it strongly recalls the Bodb. Perhaps it was due to similar ideas about the transition of the warrior to his afterlife that the Celts did not bury their fallen warriors after the battle of the Thermopylae during the invasion of Greece in 280 BC (Pausanias 10.21.6f.; Marco

Simón 1998: 127f. with further possible continental Celtic parallels; cf. Sopeña Genzor and Ramón Palerm 2002: 228f. note 3). If all this is taken together with the possible attestation of the Bodb on the Gallo-Roman dedication stone, this might indicate a direct link between the Bodb and the beliefs standing behind the Celtiberian ritual (Gulermovich Epstein 1998a: 228f. *et passim*; cf. Marco Simón 1998: 128 note 36).

Etruscan: Vanth

- *Female demon*
- *Death:*
appearing in scenes of dying
- *Birds:*
winged
- *Devouring:* -
- *Transition to the realms of the dead:*
accompanying the dead to the netherworld
- *Violence and war:*
in scenes of violent death
- *Marked sexuality:*
nude depiction, ? emphasis on pudenda

Figure 3: Summary of main characteristics of Vanth.

In Etruria another winged female death demon appears, the demoness Vanth (Figure 3).⁴ For her, no literary sources are extant. She is securely attested only on images, some inscribed with her name. From the 5th century BC onwards she can be identified in funerary iconography and in scenes of death – not exclusively, but frequently violent death (e.g. Paschinger 1992: 25f., 303, with fig. 9). Mostly she has large wings (e.g. Paschinger 1992: 17, 20, with fig. 1), which may be a different way of expressing the affinity to birds that the northern demons exhibited by transforming themselves into birds. Frequently, Vanth accompanies the deceased on his journey to the netherworld (e.g. Weber-Lehmann 1997a no. 21), which recalls the Valkyries as choosers of the slain and the function of the Celtiberian vultures. Vanth is often

⁴In general on Vanth cf. e.g. von Vacano 1962; Krauskopf 1987: esp. 78-85; Paschinger 1992; Weber-Lehmann 1997a; de Grummond 2006: 220-225; on her general context within the Etruscan demonology of death cf. Krauskopf 1987. Her resemblance especially to the Valkyries has in passing already been noted by Enking (1943: 65), Richardson (1964: 243) and de Grummond (2006: 223f.).

depicted in a dress borrowed from the iconography of the classical Erinyes, but in many instances she appears in a purely Etruscan way largely or entirely naked (e.g. Cappelletti 1992 nos. 61, 62), iconographically identical with the *lasas* of the retinue of the Etruscan goddess of love (for the *lasas* cf. Lambrechts 1992). Vanth may even appear as explicitly presenting her pudenda (disputed, cf. Weber-Lehmann 1997a no. 57 and 1997b; Krauskopf 1987: 82; de Grummond 2006: 224-226 with fig. X.21, 254 note 25), which would strengthen the suspicion that her iconographic similarity to the *lasas* is indeed again indicative of a marked sexuality. Thus Vanth shows a pattern of character traits very similar to those observable in the Irish Bodbs and the Norse Valkyries: she as well is a *female* supernatural figure embedded in the realm of *death* – including *violent* death – who shows the *avian* trait of being winged, functions as a *psychopomp*, and can iconographically be identical with markedly *sexual* figures.

Other Mediterranean cultures also know supernatural figures with this and closely similar patterns of character. Several demons can only be mentioned in passing which come close to the motif complex under discussion without making a perfect match: thus, the Roman Furies can appear winged (e.g. Virgil, *Aeneid* VII, 408f.) and show a close relationship to the underworld by appearing as gatekeepers of the region where the condemned are punished (e.g. *Aeneid* VI, 548-558). This office also assigns to them a central position on the route of this particular group of the dead to their infernal destiny. An isolated passage in Statius may even hint at a more general role of the Furies in the ritual initiation of the dead to the netherworld (*Thebaid* VIII, 9-11). And Horace mentions the Furies as death demons of battle who hand their victims over to the entertainment of Mars (*Carmina* I.28.17). The Greek Erinyes have their home in the realm of the dead (e.g. *Iliad* IX, 571f.), are frequently described as winged (e.g. Euripides, *Iphigenia in Tauris* 289), suck the blood of their prey from its limbs (e.g. Aeschylus, *Eumenides* 264-266), and drag it still living to Hades (*Eumenides* 267f.). Later, they lead the condemned souls to their chastisement in Pseudo-Plato, *Axiochos* 371E, and appear on the battlefield in Quintus Smyrnaeus V, 25-37. The Keres are a synonym of perdition (e.g. *Iliad* II, 301f.), fly through the air (Apollonius Rhodius, *Argonautica* IV, 1665-1667), appear among the demons of the

battlefield (e.g. *Iliad* XVIII, 535-540), feed on the blood of slain warriors (Hesiod, *Scutum* 248-257) and drag their victims to the netherworld (e.g. *Odyssey* XIV, 207f.). Finally, also the Harpies appear snatching away their victims to Hades (*Odyssey* XX, 61-78); iconographically, they are normally depicted as winged women (cf. Kahil and Jacquemin 1988), and in the *Aeneid* their hunger is much emphasized (III, 216-218). So several of the motifs discussed here reappear with some frequency in Mediterranean mythologies. There, the deadly bird-woman seems to have been ubiquitous.

It might be important to note the frequent appearance of demons which partake to some extent in the motif complex of the devouring, warlike, markedly sexual supernatural bird-woman guiding the dead to the otherworld. However, passing them by and proceeding to a much better match, the Greek Sirens come into focus (Figure 4).⁵

Greek: The Sirens

- *Female demon*
- *Death:*
common in funerary art
- *Birds:*
half bird, half woman (rare instances of male sirens)
- *Devouring:*
devouring their victims on their island
- *Transition to the realms of the dead:*
carrying the souls of the dead: Xanthos
- *Violence and war:*
depicted watching combat, knowledge of Trojan war
- *Marked sexuality:*
early iconographic association with sexuality
(but virgins according to the later scholia on Homer)

Figure 4: Summary of main characteristics of the Sirens.

Iconographically, Sirens are represented with bodies composed of parts of women and birds (though rare male sirens occur, cf. e.g. Hofstetter 1990: 26). They are closely related to death: from at least the late 5th and 4th century BC onwards, they are common in funerary art (Hofstetter 1990: 26-28, 151-186 *et passim*). Already on an Attic pinax dating c. 590/80 BC, a Siren is depicted under a death bed (Hofstetter 1990: 81, 88f. [A 55]). They also appear as devouring beings:

⁵On Sirens in general cf. e.g. Weicker 1902; Buschor 1944; Hofstetter 1990, 1997.

in the *Odyssey* (XII, 45f.) they sit among the remains of their victims, and that they devour them is mentioned explicitly from Hellenistic times onwards (e.g. scholion Q on *Odyssey* XII, 184).

The 'Siren Tomb' in Xanthos in Lycia (Asia Minor) is a 5th century BC pillar tomb of a local dynast (Hofstetter 1990: 243 [O 61]; Gabelmann 1984: 43).⁶ On four corner slabs, Sirens are carrying small anthropomorphic figures, while the other reliefs mostly depict the heroised ancestors of the deceased (Hofstetter 1990: 248): so the Sirens appear to be carrying the souls of the dead to the realms of their ancestors (Hofstetter 1990: 248; Buschor 1944: 36-38; cf. Zahle 1975: 75). Here Sirens appear as psychopomps. That such a functioning as carriers of souls was a widespread connotation of Siren-figures might be indicated by 4th century BC terracotta Sirens from Southern Italy, where they are depicted as carrying small anthropomorphic figures (Hofstetter 1990: 255f. [W 20] with plate 31,1; Hofstetter 1990: 302; Buschor 1944: 35f. with fig. 26), or 6th century BC gemstones showing the same motif (Hofstetter 1990: 293-295 [V 33 and V 35], 390 note 1131; cf. with further material Zahle 1975: 75; Buschor 1944: 35f.).

Sirens do not appear particularly linked to warfare, but they can appear in scenes of violence. Thus a Corinthian vase dating *c.* 590-570 BC shows two Sirens framing the combat of two warriors (Hofstetter 1990: 49, 52 [K 64]; cf. Hofstetter 1997 no. 71 with illustration). Similarly, one may also recall the promise of wisdom that the Sirens make to Odysseus: it is a promise of deeper knowledge about the Trojan war (*Odyssey* XII, 184-191).

As to the Sirens' sexual aspect, the scholia on Homer claim that the Sirens were virgins (scholia H.Q.T. and V. on *Odyssey* XII, 39). In iconography, however, a clear and much earlier link exists between Sirens and sexuality. On an Attic vase dating *c.* 480 BC (Hofstetter 1990: 122 [A 178]) a Siren named Ἰμερόπα "voice of desire" appears to be wooed by an Eros-figure named Ἰμερος "desire" – this desire is clearly sexual (cf. Hofstetter 1990: 131; Weber-Lehmann 1997b: 230). This survey therefore suggests that Sirens may be associated with

⁶Its traditional designation as 'Harpy Tomb' has been shown as a misnomer: Zahle 1975: 74; Hofstetter 1990: 389 note 1113.

	The Bodb	The Valkyries	Celtiberian Vultures	Vanth
Female Demon	X	X		X
Death	rejoicing over bloodshed	'choosers of the slain'	feeding on slain heroes	appearing in scenes of death
Birds	hooded crow	crow or swan	vulture	winged
Devouring	red-mouthed; severed heads as mast	? cf. parallels to/associations with devouring beings	feeding on slain heroes	-
Transition to the Realm of the Dead	-	fetching slain heroes	carrying to heaven by feeding	guiding the dead to the netherworld
War	'goddess of battle'	deciding victory	restricted to martial heroes	in scenes of violent death
Marked Sexuality	sexual favours from heroes	mating with dead and living heroes		nudity; exhibition of pudenda

Figure 5: Summary table of central traits of several Irish, Norse and Mediterranean female demons associated with death.

The Furies	The Erinyes	The Keres	The Harpies	The Sirens
X	X	X	X	(rare male Sirens)
gatekeepers of the place of punishment in the netherworld	beings of the netherworld	synonym for perdition	snatching away to the netherworld	in funerary context
winged	winged	? cf. flying	winged	half bird, half woman
-	drinking the blood of their victims	drinking blood of slain warriors	? cf. hungriness in the Aeneid	devouring their victims
gatekeepers of the place of punishment in the netherworld	dragging to Hades; leading souls to punishment	dragging to Hades	snatching away to the netherworld	carrying souls in Xanthos
handing over victims to Mars	in later literature on battlefield	appearing in battle scenes	-	knowledge of Trojan war; in combat scenes
-	-	-	-	'voice of (sexual) desire'

the complete set of motifs under discussion. Figure 5 tabulates the occurrence of these motifs.

A frequent recurrence of a motif complex as summed up in Figure 5 raises the question of its interpretation. Such recurrences might reflect mere chance. But they might also indicate historical relationships between these mythological figures. To assess this question, the methodological points suggested above may be considered. Firstly, in order to make chance unlikely and to indicate interdependence, the motif combination should be complex. The motif combination in question does indeed seem reasonably complex: (1) female (2) bird-like demons of (3) death who occasionally (4) devour the slain, (5) play a role in the passage of the deceased to the realm of the dead and (6) are markedly sexual.

A second methodological point is that the traits should be attested in the earliest available sources to indicate prehistoric contact. This is on the whole the case, allowing for the generally poor state of the material. Also, thirdly, the distribution pattern of the motif should constitute a geographical continuum: the assumption of interdependence is much more plausible if the spread can have taken place continuously. Yet our sources do not provide a continuum of information; while historical data are comparatively rich in the Mediterranean and in early medieval north-western Europe, the evidence from antiquity is extremely scarce for 'barbarian' Europe north of the Alps – thus, it is little surprise that the demons in question are abundantly attested in the Mediterranean and in early medieval north-western Europe, while transalpine Europe in antiquity provides little evidence for their existence. Between the Mediterranean of antiquity and early medieval north-western Europe, there is a long period bridged only by tantalizing suggestions. This distribution pattern reflects the state of evidence in general: its chronological and geographical gaps reflect general problem areas. On the other hand, for those areas and periods about which we are well informed there is evidence for such demons. In this sense – viewed in the light of the available evidence in general – there is a continuum of attestations of this motif complex; this is as good a continuum as one can expect with the available data. Nevertheless, the chronological gap between the Mediterranean and early medieval data seems at first glance to discourage the hypothesis of a historical

connection between them. But during the historical period, the Irish Bodb shows a striking longevity. She may be attested as [C]athubodua 'Battle-Bodb' already in Roman Gaul. In Ireland herself, she is first attested in a poem dated to the 7th century AD (*Táin Bó Cúailnge I*, lines 957-962; Herbert 1996: 145; Olmsted 1982, though he wishes to emend her out of the text against the evidence of all manuscripts: 171 note 17). The oldest manuscript recording her beyond doubt under her name Morrígan was written AD 876/877 (Stokes and Strachan 1901: xiii, 2). Her presence abounds throughout the whole Middle Ages, and even as late as the late 18th/early 19th century AD a native Irish vocabulary records the *Badb-catha*, the 'Bodb of Battle', translates the name as hooded crow and associates the *Badb-catha* and the hooded crow with some of the other old battlefield demons (Hennessy 1870: 34f.). Thus, there is well over a millennium of continuity attested for the Bodb even after she had ceased to be a recognised part of the religion of the island – and in all this time she did not enter the surviving Irish archaeological record. This strongly suggests that she could have been present for a very long time before the first textual attestation without becoming archaeologically visible.

So only one methodological point remains to be considered: the question of transmission. If this could be resolved, it would seem possible to consider that the Irish and Norse demonologies of the battlefield might be related reflections of a wider European phenomenon, which might also extend into the Mediterranean and may be descended in all these areas from a common root.

The question of the transmission of this motif-complex, however, struggles with a fundamental problem inherent in the available data and mentioned already above: the Bodb does not enter the Irish archaeological record; so it is not possible to trace her way to Ireland directly. The Valkyries might appear in the Scandinavian archaeological record, but the possible attestations are few, problematic and too late (Viking Age) to be of any value in establishing a theory about the spread of these figures (cf. Price 2003: 336f.; Zimmermann 2006: 50f.). Therefore, the question of transmission can only be approached on the basis of general considerations on the characteristics of the female death-demons. One has to ask: given the specific nature of the phenomenon in question,

what would an epoch of European prehistory look like which would have offered suitable conditions for this particular complex to spread? After this fundamental question has been answered, one can proceed to ask whether an epoch of such a specific character is attested in (or has been suggested for the reconstruction of) European prehistory.

The *Bodb* and the Valkyries are entirely embedded in the world of war. More specifically, they are intimately linked with the life and death of the hero; the war they are such an intrinsic part of is an aristocratic and high-status phenomenon (at least in the self-perception of the respective aristocrats, which is what matters in the current context). Since they are deeply embedded in an ideology of aristocratic heroism and the world of war one should search for their origin in an epoch which would have been characterised by such heroic and aristocratic values. As the demons would during this epoch have spread across more or less the whole of Europe, this hypothetical 'heroic age' would furthermore have been characterised by far-ranging contacts between the representatives of this heroic-aristocratic ideology. These contacts could for instance have been maintained by travels undertaken by such warrior-aristocrats. Such a link of the transmission of the female death-demons to cultural contacts within a class of warriors is also underlined by a certain shift of emphasis between the characters of the Celto-Germanic and the Graeco-Etruscan demons: while the connection to war is a core trait of the north-western European demons and the Celtiberian funerary rituals, it is peripheral in the classical Mediterranean examples. The classical demons are not so much – as the 'barbarian' demons – demons of death in battle as rather demons of death in general; mainly in this function they are also secondarily related to war. This shift from 'demon of death' to 'demon of death in war' could be explained by a transmission of these ideas by a travelling warrior-elite. Such travelling warrior-chiefs might have incorporated the foreign death demon into the way of life they followed and made it a demon of death in heroic combat, as we meet it in the north. *One plausible way of transmission for the motif-complex of the female death-demon would thus be found in an epoch dominated by a travelling warrior-aristocracy.* It is essential to emphasise that this hypothesis has been developed on the basis of the demon-data alone, without recourse to current discussions

about the nature of European prehistory. The material available about the nature of early European death demons has to be assessed in its own right before it is set into the wider context of discussions in archaeological theory. Only then can there be a meaningful discourse between data and theory and between the approaches of different disciplines, studying texts on the one hand and the archaeological record on the other. Meaningful inter-disciplinary work cannot consist in confounding the methods of different disciplines, but only in using the methods of each discipline to their full measure and then trying to draw a synthesis from the results achieved by different independent approaches.

After the demon-data have been reviewed in their own right, however, it is necessary to engage with current archaeological thinking about the nature of European prehistory. The question is whether European prehistory knows an epoch which is characterised by similar traits as they have been suggested as a possible, though highly hypothetical background for the pan-European phenomenon of the female death-demons.

The European Bronze Age has been described in exactly such terms by Kristiansen and Larsson (2005). They reconstructed this period as an epoch of a specific character, at the heart of which lay a heroic ideology which used travelling as a means of gaining prestige. Travels, so they suggest, were used as a way of building up long-ranging contacts between high-status persons in order to sustain the supply of raw metals. At the same time, the traveller was able to acquire new knowledge and experience. Both the personal contacts as basis of the metal supply and new technological and cosmological insights would constitute the basis of the high status of the aristocratic traveller after his return to his home country. It would be beyond the scope of the present article to sum up the methods and materials used by Kristiansen and Larsson in the reconstruction of Bronze Age ideology; the reader has to be referred to their book. Rather than present an assessment of their *archaeological* approach, the purpose of the present article is to note that the main lines of the conclusions derived from a study of the early European demonology of death strikingly coincide with the conclusions which Kristiansen and Larsson draw from the study of the Bronze Age archaeological record. So in line with the materials discussed here, their

theories have explanatory force. They underline the possibility of reconstructing at least one ‘heroic age’ for European prehistory, and they could localise the hypothetical ‘heroic age’ postulated on the basis of the demon-data in time.

It should also be noted that attitudes such as the ones which Kristiansen and Larsson reconstruct for the Bronze Age are well attested for historical periods; thus their reconstruction for prehistory is not intrinsically implausible. Kristiansen and Larsson (2005) refer to the *Odyssey*. Already in its third verse the poem tells us: *πολλῶν δ' ἀνθρώπων ἴδεν ἄστεα καὶ νόον ἔγνω* “he [Odysseus] saw the cities and learned the manners of many peoples”. One of the most illustrious Greek heroes is depicted as a far-travelled man, who has seen large parts of the world and learnt their ways. Here, travelling and the knowledge gained by it becomes a basis for prestige.

What in Greece is expressed in one verse, may be expressed in the negative in Old Norse as a single word. One term of contempt in Old Norse is the word *heimdragi*, denoting a ‘stay-at-home’: someone who never gets out into the world and has a corresponding character, i.e. limited and lazy (Sveinbjörn Egilsson and Finnur Jónsson 1913-1916 *s.v.* ‘heimdragi’). Its oldest extant attestation stems from the late 10th century (Finnur Jónsson 1912 A: 185; 1912 B: 174) – little earlier than the foundation of a Norse settlement as far west as L’Anse aux Meadows in Newfoundland (Ingstad 1985: 453-457), and a time when warriors from the Norse settlements in Russia were already prominent in the service of the Byzantine empire (Sigfús Blöndal and Benedikz 1978: 32-46). In this oldest attestation of the word, handed down in a version of *Flóamanna saga* 24 (Þórhallur Vilmundarson and Bjarni Vilhjálmsson 1991: 291f., lower text), the term appears in a stanza meaningfully inscribed on a broken oar, as the stanza contrasts the comfort of the lazy stay-at-home with the toils of the (‘real’) man who rowed on the sea. In a stanza in *Ragnars saga* 19 it is woven into an accusation of lacking military prowess; the *heimdragi* here is a man who lacks the energy to go to war abroad, and the experience thereof. In his *Háttatal* 98f., Snorri uses the term to contrast with the wise, brave, generous nobleman who sets up warships. However, while ‘going abroad’ in these instances is essentially ‘going campaigning’, the *heimdragi* is also set in opposition to travellers in slightly more peaceful settings. Thus Rognvaldr

the Crusader and Sigmundr in *Orkneyinga saga* 88 swim over the Jordan after visiting the holy places in the Holy Land, and mark their travels by twisting knots in bushes, thereby uttering stanzas reviling those who were too lazy and cowardly to face the journey. In doing so, they again use the word *heimdragi* (Finnur Jónsson 1912 A: 511; 1912 B: 485). Thus the term *heimdragi* implies an attitude which sees the hero and nobleman essentially as a far-travelled man. A similar idea is expressed by the Icelandic proverb fronting this article. Both this term and this proverb express that the stay-at-home is not valued; only those that venture out into the world find respect. Prestige is linked to travelling and the experience gained. When this attitude became prominent in the north cannot be said, but on a textual basis (distinct from a strictly archaeological perspective), there is nothing intrinsically implausible about the suggestions of Kristiansen and Larsson regarding the status of travel in the Bronze Age. In this way, a model based on social values as expressed in the third verse of the *Odyssey* and by the Old Norse *heimdragi* has merit for assessing similarities between Irish, Norse, Etruscan and Greek demons of death. In such societies, which attribute prestige to the experience of travelling, ideas would have travelled together with the travelling individuals so that the question of the transmission of ideas would posit no problems.

On the basis of all this, several preliminary conclusions can be considered. First: the data available for the early European demonology of death suggest that the respective figures are part of a pan-European continuum of such demons, which are likely to be historically connected. Second: the character of the figures and the shifts in emphasis between the classical Mediterranean and the 'barbarian' area could be taken to suggest a location of the transmission of such ideas in a hypothetical 'heroic age' characterised by warrior-aristocrats with far-ranging inter-regional contacts, perhaps based on travel. Third: the hypothetical 'heroic age' postulated on the basis of the demon-material strikingly coincides with the reconstruction of the Bronze Age suggested by Kristiansen and Larsson. This both strengthens the highly hypothetical model of an early European 'heroic age' and shows that the theory proposed by Kristiansen and Larsson has explanatory force. This is the more important as the hypothetical model of cultural contact proposed on the basis of the demon-material is

both in terms of data and method independent from Kristiansen and Larsson. Fourth: a short glance at Odysseus and the Norse derogatory term *heimdragi* illustrated that 'heroic' attitudes which use travelling as a means of gaining prestige are historically well attested. To postulate such attitudes also for an epoch of prehistory therefore does not postulate something which would be typologically rare. Thus, there is nothing intrinsically implausible in the assumption that similar values might also have been prominent in parts of prehistory.

It should however be acknowledged that the data reviewed in this article do not by themselves conclusively *require* an interpretation as indicators of elite travelling. Other ways of transmission, like trade contacts, could be considered. Yet an explanation by a model based on long-distance trade would have difficulties in explaining the shift in character between the classical and the 'barbarian' demons: while the classical demons are demons of death in general, the 'barbarian' demons are demons of death in battle in particular. This might be taken to indicate that some link to warfare or an heroic ideology played a role in the transmission of these ideas; a transmission along trade routes therefore seems unlikely (though not impossible). Another and more important alternative to a recourse to Bronze Age ideologies would be an interpretation based on the historically well attested large-scale employment of Celtic mercenaries by Western Greek and Hellenistic rulers (Griffith 1935; Szabó 1991), which would accommodate the shift from demons of death to demons of death in battle. As the 'barbarian' archaeological record does not allow one to determine the time in which the female death- and battlefield-demons first occurred among Celts and Germans, such a comparatively late transmission cannot be firmly excluded. However, the motif of the devouring of the slain has in the Mediterranean of this period probably hardly any religious significance; so an explanation would have to be attempted as to how the devouring could acquire the strong religious significance which it seems to possess in the Celtiberian vulture ritual, where it appears to be firmly embedded in living religious practice. This problem might not be insurmountable and does not make it impossible to connect the similarities between the classical Mediterranean and the Celto-Germanic demons with

Celtic mercenary activity; but such a model would imply that some of the similarities between these figures would probably be due to partly independent parallel developments or involve a certain amount of ‘creative misunderstanding’. The nature of the material does not allow firm conclusions to be drawn. It can only be stated – but this can be stated – that an epoch characterised by (‘heroic’) elite travelling in European prehistory could constitute a tempting explanation how the close similarities between the Norse, Irish and Mediterranean demons could have arisen. It could serve as a model offering one possible explanation for empirical observations which a more locally restricted approach to prehistory would not be able to explain, but which seem in need of explanation.

Acknowledgements

This article has been written with the support of a ‘DAAD Doktorandenstipendium’. I owe thanks to Kristján Ahronson, Nora Brüggemann, Thomas Charles-Edwards, Wilhelm Heizmann, and Heather O’Donoghue (who also pointed me to the Icelandic proverb introducing the article; it is with its English rendering taken from Cleasby and Gudbrand Vigfusson 1874 *s.v.* ‘heimskr’). This does of course not imply that these scholars would necessarily subscribe to my views, and the blame for any shortcomings lies solely with me.

Bibliography

Irish source texts

- Bruiden Meic Darcó*. Ed. & transl. by Rudolf Thurneysen 1917. In: Morands Fürstenspiegel. *Zeitschrift für celtische Philologie* 11: 56-106, there 59-69.
- Cath Maige Tuired*. Ed. & transl. by Elizabeth A. Gray 1982. *Cath Maige Tuired. The Second Battle of Mag Tuired*. (=Irish Texts Society 52), London: Irish Texts Society.
- O’Mulconry’s Glossary*. Ed. by Whitley Stokes 1900. O’Mulconry’s Glossary. In: Stokes, Whitley and Kuno Meyer (eds.) *Archiv für celtische Lexikographie*. Vol. I, 232-324. Halle a. S.: Max Niemeyer – London: David Nutt – Paris: Emile Bouillon.
- Táin Bó Cúailnge I*. Ed. & transl. by Cecile O’Rahilly 1976. *Táin Bó Cúailnge Recension I*. Reprint 2003, Dublin: Dublin Institute for Advanced Studies.

Táin Bó Cúailnge II. Ed. & transl. by Cecile O’Rahilly 1967. *Táin Bó Cúailnge from the Book of Leinster*. Reprint 2004, Dublin: Dublin Institute for Advanced Studies.

Táin Bó Regamna. Ed. & transl. by Johan Corthals 1987. *Táin Bó Regamna. Eine Vorerzählung zur Táin Bó Cúailnge.* (=Österreichische Akademie der Wissenschaften, philosophisch-historische Klasse, Sitzungsberichte, 478. Band; Veröffentlichungen der keltischen Kommission Nr. 5), Wien: Verlag der Österreichischen Akademie der Wissenschaften.

Tochmarc Emire. Ed. by A. G. van Hamel 1933 in: *Compert Con Culainn and other Stories.* (=Mediaeval and Modern Irish Series III), 16-68. Reprint 1978, Dublin: Dublin Institute for Advanced Studies.

Tochmarc Ferbe. Ed. & transl. by E. Windisch 1897. *Tochmarc Ferbe.* In: Stokes, Wh. and E. Windisch (eds.) *Irische Texte mit Übersetzung und Wörterbuch.* Dritte Serie, 2. Heft, 445-556. Leipzig: Verlag von S. Hirzel.

Norse source texts

Eddic poems (*Völundarqviða*; *Helgaqviða Hundingsbana in fyrri*) are referred to according to Gustav Neckel 1983. *Edda. Die Lieder des Codex Regius nebst verwandten Denkmälern. I. Text.* 5. verbesserte Auflage von Hans Kuhn. Heidelberg: Carl Winter Universitätsverlag. For a transl. cf. e.g.: Lee M. Hollander 2004. *The Poetic Edda.* 2nd, revised edition, 11th paperback printing, Austin: University of Texas Press.

Flóamanna saga. Ed. by Þórhallur Vilmundarson and Bjarni Vilhjálmsson 1991: 229-327. For a transl. cf. Gudbrand Vigfusson and F. York Powell 1905. *Origines Islandicae.* Vol. II, 629-672. Oxford: Clarendon Press. (For the poem cf. also Finnur Jónsson 1912 B: 174.)

Hákonarmál. Ed. & transl. by Finnur Jónsson 1912 A: 64-68; 1912 B: 57-60.

Háttatal. Ed. by Anthony Faulkes 1991. *Snorri Sturluson: Edda. Háttatal.* Oxford: Clarendon Press. For a transl. cf. e.g.: Anthony Faulkes 1992. *Snorri Sturluson: Edda*, 165-220. London: J. M. Dent & Sons – Rutland: Charles E. Tuttle.

Orkneyinga saga. Ed. by Sigurður Nordal 1913-1916. *Orkneyinga saga.* (=STUAGNL 40), København: L. S. Møllers Bogtrykkeri. For a transl. cf. e.g.: Alexander Burt Taylor 1938. *The Orkneyinga Saga.* Edinburgh – London: Oliver and Boyd.

Ragnars saga. Ed. by Olsen 1906-1908 S. 111-222. For a translation cf. e.g.: Herrmann 1923: 137-195.

Völsunga saga. Ed. by Olsen 1906-1908 S. 1-110. For a translation cf. e.g.: Herrmann 1923: 37-136.

The Journal of Indo-European Studies

Secondary literature and further sources

Allen, Derek F.

- 1980 *The Coins of the Ancient Celts*. Edited by Daphne Nash. Edinburgh: Edinburgh University Press.

Bauer-Harsant, Ursula

- 1996 'Many Names – Many Shapes: The War Goddess in Early Irish Literature – with Reference to Indian Texts. A Study in the Phenomenology of Religion.' Unpublished PhD-Thesis, University of Edinburgh.

Birkhan, Helmut

- 1970 *Germanen und Kelten bis zum Ausgang der Römerzeit. Der Aussagewert von Wörtern und Sachen für die frühesten keltisch-germanischen Kulturbeziehungen*. (=Österreichische Akademie der Wissenschaften, Philosophisch-historische Klasse, Sitzungsberichte 272), Wien – Graz – Köln: Österreichische Akademie der Wissenschaften in Kommission bei Hermann Böhlau Nachf.

Blöndal, Sigfús and Benedikt S. Benedikz

- 1978 *The Varangians of Byzantium*. By Sigfús Blöndal. Translated, revised and rewritten by Benedikt S. Benedikz. Cambridge – London – New York – Melbourne: Cambridge University Press 1978.

Buschor, Ernst

- 1944 *Die Musen des Jenseits*. München: Verlag F. Bruckmann.

Cappelletti, Maria and Francesco Roncalli

- 1992 *Museo Claudio Faina di Orvieto: Ceramica etrusca figurata*. Di Maria Cappelletti, curatela scientifica di Francesco Roncalli. [Milano] – [Perugia]: Electa; Editori Umbri Associati.

Carey, John

- 1982/83 Notes on the Irish War-Goddesses. *Éigse* 19: 263-275.

Clark, Rosalind

- 1987 Aspects of the Morrígan in Early Irish Literature. *Irish University Review* 17: 223-236.
1991 *The Great Queens: Irish Goddesses from the Morrígan to Cathleen Ní Houlihan*. (=Irish Literary Studies 34), Gerrards Cross: Colin Smythe.

Cleasby, Richard and Gudbrand Vigfusson

- 1874 *An Icelandic-English Dictionary*. Oxford: Clarendon Press.

de Vries, Jan

- 1964, 1967 *Altnordische Literaturgeschichte*. 2 vols. (=Grundriß der Germanischen Philologie 15, 16), zweite, völlig neubearbeitete Auflage, Berlin: Walter de Gruyter & Co.

Donahue, Charles

- 1941 The Valkyries and the Irish war-goddesses. *Publications of the Modern Language Association of America* 56: 1-12.

Egeler, Matthias

- (forthcoming) Keltisch-mediterrane Perspektiven auf die altnordischen Walkürevorstellungen. In: Heizmann, Wilhelm; Klaus Böldl and Heinrich Beck (eds.) *Analecta Septentrionalia. Beiträge zur nordgermanischen Kultur- und Literaturgeschichte*. (=RGA-Ergänzungsband 65), 393–466. Berlin – New York: de Gruyter.

Egilsson, Sveinbjörn and Finnur Jónsson

- 1913-1916 *Lexicon poeticum antiquæ linguæ septentrionalis. Ordbog over det norsk-islandske skjaldesprog*. København: S. L. Møllers Bogtrykkeri.

Ellis, Hilda Roderick

- 1943 *The Road to Hel. A Study of the Conception of the Dead in Old Norse Literature*. Cambridge: Cambridge University Press; London: Bentley House; New York – Toronto – Bombay – Calcutta – Madras: Macmillan.

Ellis Davidson, Hilda R.

- 1988 *Myths and Symbols in Pagan Europe. Early Scandinavian and Celtic Religions*. Manchester: Manchester University Press.

Enking, Ragna

- 1943 Culśu und Vanθ. *Mitteilungen des Deutschen Archaeologischen Instituts, Roemische Abteilung* 58: 48-69.

Gabelmann, Hamns

- 1984 *Antike Audienz- und Tribunalszenen*. Darmstadt: WBG.

Golther, Wolfgang

- 1890 Studien zur germanischen sagengeschichte. I der valkyrjenmythus. *Abhandlungen der philosophisch-philologischen Classe der königlich bayerischen Akademie der Wissenschaften* 18: 401-438.

Green, Miranda

- 1995 *Celtic Goddesses. Warriors, Virgins and Mothers*. London: British Museum Press.

Griffith, G. T.

- 1935 *The Mercenaries of the Hellenistic World*. Cambridge: University Press.

de Grummond, Nancy Thomson

- 2006 *Etruscan Myth, Sacred History, and Legend*. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.

- Gulermovich Epstein, Angélique
 1997 The Morrígan and the Valkyries. In: Greppin, John and Edgar C. Polomé (eds.) *Studies in Honor of Jaan Puhvel: Part Two: Mythology and Religion*. (=Journal of Indo-European Studies Monographs 21), 119-150. Washington D.C.: Institute for the Study of Man.
- 1998a 'War Goddess: The Morrígan and her Germano-Celtic Counterparts.' Unpublished PhD-Thesis, Los Angeles: University of California.
- 1998b Divine Devouring: Further Notes on the Morrígan and the Valkyries. In: della Volpe, Angela and Edgar C. Polomé (eds.) *Proceedings of the Seventh UCLA Indo-European Conference, Los Angeles, 1995*. (=Journal of Indo-European Studies Monograph 27), 86-104. Washington D.C.: Institute for the Study of Man.
- Harding, Anthony
 2006 Facts and Fantasies from the Bronze Age. *Antiquity* 80: 463-465.
- Hennessy, W. H.
 1866-1869 The Goddess of War of the Ancient Irish [Read January 25, 1869]. *Proceedings of the Royal Irish Academy* 10: 421-440.
- 1870 The Ancient Irish Goddess of War. *Revue Celtique* 1: 32-55.
- Herbert, Máire
 1996 Transmutations of an Irish Goddess. In: Billington, Sandra and Miranda Green (eds.) *The Concept of the Goddess*, 141-151. London – New York: Routledge.
- Herrmann, Paul
 1923 *Isländische Heldenromane*. (=Thule. Altnordische Dichtung und Prosa, zweite Reihe, 21. Band), Jena: Eugen Diederichs.
- Hofstetter, Eva
 1990 *Sirenen im archaischen und klassischen Griechenland*. (=Beiträge zur Archäologie 19), Würzburg: Konrad Triltsch Verlag.
- 1997 Seirenes. In: Jaeger, Bertrand; Pierre Müller, Pascale Linant de Bellefonds, Wolf-Rüdiger Megow, Bruno Magri and Lilly Kahil (eds.) *Lexicon Iconographicum Mythologiae Classicae VIII* (2 parts), vol. VIII.1: 1093-1104; vol. VIII.2: 734-744. With 'Anhang: Etruskische Sirenen' by Ingrid Krauskopf: vol. VIII.1: 1104; vol. VIII.2: 744. Zürich – Düsseldorf: Artemis Verlag.
- Ingstad, Helge
 1985 *The Norse Discovery of America. Volume two. The Historical Background and the Evidence of the Norse Settlement discovered in Newfoundland*. Oslo – Bergen – Stavanger – Tromsø: Norwegian University Press.
- Jones-Bley, Karlene
 2006 Review of Kristiansen and Larsson 2005. *Journal of Indo-European Studies* 34: 213-221.

- Jónsson, Finnur
 1912 *Den norsk-islandske skjaldedigtning*. I. Bind, A: Tekst efter handskrifterne. B: Rettet tekst. København og Kristiania: Gyldendalske Boghandel – Nordisk Forlag.
- Kahil, Lilly; catalogue in collaboration with Anne Jacquemin
 1988 Harpyiai. In: Jaeger, Bertrand; Pierre Müller, Christian Augé, Rainer Vollkommer, Madeleine Gasser and Lilly Kahil (eds.) *Lexicon Iconographicum Mythologiae Classicae IV* (2 parts), vol. IV.1: 445-450; vol. IV.2: 266-271. Zürich – München: Artemis Verlag.
- Kauffmann, Friedrich
 1892 Vingolf. *Zeitschrift für deutsches Altertum und deutsche Litteratur* 36: 32-41.
- Klejn, Leo S.
 2008 The Bronze Age of Europe: Reflections on K. Kristiansen and T. Larsson: *The Rise of Bronze Age Society* (2005). *Norwegian Archaeological Review* 41: 213-228.
- Krauskopf, Ingrid
 1987 *Todesdämonen und Totengötter im vorhellenistischen Etrurien. Kontinuität und Wandel*. (=Istituto di Studi Etruschi ed Italici: Bibliotheca di "Studi Etruschi" 16), Firenze: Leo S. Olschki Editore.
- Kristiansen, Kristian and Thomas B. Larsson
 2005 *The Rise of Bronze Age Society. Travels, Transmissions and Transformations*. Cambridge – New York – Melbourne – Madrid – Cape Town – Singapore – São Paulo: Cambridge University Press.
 2007 The Classical Tradition strikes back. Reply to Comments on *The Rise of Bronze Age Society* from Gullög Nordquist and Helène Whittaker. *Norwegian Archaeological Review* 40: 85-93.
 2008 Reply to Leo Klejn: Reflections over 'The Rise of Bronze Age Society'. *Norwegian Archaeological Review* 41: 229-231.
- Lambrechts, Roger
 1992 Lasa. In: Jaeger, Bertrand; Pierre Müller, Pascale Linant de Bellefonds, Rainer Vollkommer and Bruno Magri (eds.), *Lexicon Iconographicum Mythologiae Classicae VI* (2 parts), vol. VI.1: 217-225; vol. VI.2: 104f. Zürich – München: Artemis Verlag.
- Le Roux, Françoise and Christian-J. Guyonvarc'h
 1983 *Mórrígan – Bodb – Macha : La souveraineté guerrière de l'Irlande*. (=Celticum 25, supplement to Ogam – Tradition Celtique 30 [1978]), 2nd edition, Rennes : Ogam – Celticum.
- Vander Linden, Marc
 2007 Review of Kristiansen and Larsson 2005. *Cambridge Archaeological Journal* 17: 356-358.

- Lorenz, Gottfried
 1984 *Snorri Sturluson: Gylfaginning. Texte, Übersetzung, Kommentar.* (=Wissenschaftliche Buchgesellschaft Darmstadt, Texte zur Forschung 48), Darmstadt: WBG.
- Lottner, C.
 1870 P.S. [to W. M. Hennessy's 'The Ancient Irish Goddess of War']. *Revue Celtique* 1: 55-57.
- Mac Neill, Eoin
 1932 De origine Scoticae linguae. *Ériu* 11: 112-129.
- Marco Simón, Francisco
 1998 *Die Religion im keltischen Hispanien.* (= Archaeolingua: Series Minor 12). Translation from Spanish by Markus Albrecht and Peter Gusenbauer, revised by Wolfgang Meid. Budapest: Archaeolingua Alapítvány.
- Von der Muehl, Peter
 1984 *Homeri Odyssea.* Ed. stereotypa ed. 3. (1962), Stuttgartiae: Teubneri.
- Neckel, Gustav
 1913 *Walhall: Studien über germanischen Jenseitsglauben.* Dortmund: Fr. Wilh. Ruhfus.
- Nordquist, Gullög and Helène Whittaker
 2007 Comments on Kristian Kristiansen and Thomas B. Larsson (2005): *The Rise of Bronze Age Society. Travels, Transmissions and Transformations.* Cambridge University Press, Cambridge. *Norwegian Archaeological Review* 40: 75-84.
- Olmsted, Garrett
 1982 Mórrigan's Warning to Donn Cuailnge. *Études Celtiques* 19: 165-172.
- Olsen, Magnus
 1906-1908 *Völsunga saga ok Ragnars saga loðbrókar.* (=STUAGNL 36), København: S. L. Møllers Bogtrykkeri.
- Paschinger, Elfriede
 1992 *Die etruskische Todesgöttin Vanth.* (=Sonderschriften des Österreichischen Archäologischen Institutes 20 [in 2 parts]), Wien: VWGÖ.
- Pictet, Adolphe
 1868 Sur une nouvelle déesse gauloise de la guerre. *Revue Archéologique, Nouvelle Série* 18: 1-17.

- Price, Neil S.
 2003 *The Viking Way. Religion and War in Late Iron Age Scandinavia.* (=Aun 31), 2nd edition, Uppsala: Department of Archaeology and Ancient History, Uppsala University.
- Richardson, Emeline
 1964 *The Etruscans: Their Art and Civilisation.* Chicago – London: University of Chicago Press.
- von See, Klaus; Beatrice la Farge, Eve Picard, Katja Schulz, Debora Dusse, Ilona Priebe and Betty Wahl
 2000 *Kommentar zu den Liedern der Edda. Bd. 3: Götterlieder.* Heidelberg: Universitätsverlag C. Winter.
- von See, Klaus; Beatrice la Farge, Wolfgang Gerhold, Debora Dusse, Eve Picard and Katja Schulz
 2004 *Kommentar zu den Liedern der Edda. Bd. 4: Heldenlieder.* Heidelberg: Universitätsverlag C. Winter.
- von See, Klaus; Beatrice la Farge, Wolfgang Gerhold, Eve Picard and Katja Schulz
 2006 *Kommentar zu den Liedern der Edda. Bd. 5: Heldenlieder.* Heidelberg: Universitätsverlag C. Winter.
- Sopeña Genzor, Gabriel and Vicente Ramón Palerm
 2002 Claudio Eliano y el funeral descarnatorio en Celtiberia: Reflexiones críticas a propósito de *Sobre la naturaleza de los animales*, X, 22. *Palaeohispanica* 2: 227-269.
- Steblin-Kamenskij, M. I.
 1982 Valkyries and Heroes. *Arkiv för nordisk filologie* 97: 81-93.
- Stokes, Whitley and John Strachan
 1901 *Thesaurus Palaeohibernicus. A Collection of Old-Irish Glosses, Scholia, Prose and Verse. Vol. I: Biblical Glosses and Scholia.* Cambridge: At the University Press.
- Szabó, Miklós
 1991 Mercenary Activity. In: Moscati, Sabinato; Otto Herrmann Frey, Venceslas Kruta, Barry Raftery, Miklós Szabó, Ermanno Arslan and Daniele Vitali (eds.) *The Celts, 333-336.* Published on the occasion of the exhibition “The Celts, the Origins of Europe”, Palazzo Grassi, San Samuele 3231, Venice, March – December 1991. London: Thames and Hudson.
- Thurneysen, Rudolf
 1921 *Die irische Helden- und Königsage bis zum siebzehnten Jahrhundert.* Teil I und II. Halle (Saale): Verlag von Max Niemeyer.

- Vilmundarson, Þórhallur and Bjarni Vilhjálmsson
 1991 *Harðar saga / Bárðar saga / Þorskrúðinga saga / Flóamanna saga / Þórarins þátr Neffjólfssonar / Þorsteins þátr uxafóts / Egils þátr Síðu-Hallssonar / Orms þátr Stórolfssonar / Þorsteins þátr tjaldstæðings / Þorsteins þátr forvitna / Bergþúá þátr / Kumlbúa þátr / Stjörnu-Odda draumr.* (=Íslenzk Fornrit XIII), Reykjavík: Hið Íslenska Fornritafélag.
- von Vacano, O. W.
 1962 *Vanth – Aphrodite: Ein Beitrag zur Klärung etruskischer Jenseitsvorstellungen.* In: Renard, Marcel (ed.) *Hommages à Albert Grenier.* (=Collection Latomus LVIII), vol. 3, 1531-1553. Bruxelles: Latomus, Revue d'études latines.
- Weber-Lehmann, Cornelia
 1997a *Vanth.* In: Jaeger, Bertrand; Pierre Müller, Pascale Linant de Bellefonds, Wolf-Rüdiger Megow, Bruno Magri and Lilly Kahil (eds.) *Lexicon Iconographicum Mythologiae Classicae VIII* (2 parts), vol. VIII.1: 173-183; vol. VIII.2: 122-127. Zürich – Düsseldorf: Artemis Verlag.
 1997b *Die sogenannte Vanth von Tuscania: Seirene anasyromene.* *Jahrbuch des Deutschen Archäologischen Instituts* 112: 191-246.
- Weicker, Georg
 1902 *Der Seelenvogel in der alten Litteratur und Kunst. Eine mythologisch-archaeologische Untersuchung.* Leipzig: B. G. Teubner.
- Zahle, Jan
 1975 *Harpyiemonumentet i Xanthos. En lykisk pillegrav.* (=Studier fra Sprog- og Oldtidsforskning, udgivet af det filologisk-historiske samfund 289), København: G. E. C. Gads Forlag.
- Zimmermann, Ute
 2006 *Bier und Unsterblichkeit – zur Funktion der Walküren in Walhall.* In: Marold, Edith and Ulrich Müller (eds.) *Femogtyvende tværfaglige vikingesymposium, Kiels Universitet 2006.* Moesgård: Forlaget Hikuin og Afdeling for Middelalder- og Renæssancearkæologi, Aarhus Universitet, 45-56.
 2007 *Walküren.* In: Beck, Heinrich; Dieter Geuenich and Heiko Steuer (eds.) *Reallexikon der Germanischen Altertumskunde. 35. Band,* 595-602. 2nd ed., Berlin – New York: Walter de Gruyter.

***The Indo-European Language Family:
Questions about its Status***

Journal of Indo-European Studies Monograph 55

Edited by Angela Marcantonio

Angela Marcantonio: **Introduction**; Henning Andersen: **The satem languages of the Indo-European Northwest: First contacts?**; E. Annamalai and S. B. Steever: **Ideology, the Indian homeland hypothesis and the comparative method**; Edwin Bryant: **The Indo-Aryan migration debate**; Onofrio Carruba: **Indo-European vowel alternations: (Ablaut/apophony)**; Paolo Di Giovine: **Verbal inflection from “Proto-Indo-European” to the Indo-European languages: A matter of coherence?**; Bridget Drinka: **Stratified reconstruction and a new view of the family tree model**; Alexander Häusler: **The origin and spread of the Indo-Germanic people**; Nicholas Kazanas: **Indo-European linguistics and Indo-Aryan indigenism**; Angela Marcantonio: **Evidence that most Indo-European lexical reconstructions are artifacts of the linguistic method of analysis**; Yaron Matras: **Defining the limits of grammatical borrowing**; Rüdiger Schmitt: **Iranian archaisms vs. Vedic innovations – and the Indo-Iranian unity.**

The JIES Monograph Series
1133 13th St. NW, #C-2, Washington DC 20005
iejournal@aol.com, Telephone (202) 371-2700,
Fax (202) 371-1523
VISA/MC, US dollar cheque or M.O. accepted
Order securely online at <http://JIES.org>

(Historical) Linguistics and (Classical) Philology^(*)

Georgios K. Giannakis
University of Ioannina, Greece

The issue of the relation of historical linguistics and classical philology was raised during the nineteenth century, when, as a result of Sir William Jones' declaration for the resemblance and possible genetic relation between Sanskrit, Ancient Greek, Latin, and other old languages, the new science of historical and comparative linguistics began to take shape. Up until the last quarter of the nineteenth century the two fields were in a sense the two faces of the same coin, but with the Neogrammarian 'turn' linguistics managed to define in a clear way its subject matter, formulate its own distinct method, and evolve into a more or less independent and self-determined scientific field of study. The 'linguistics *cum* philology' approach which is suggested in the study for viewing the relation between historical linguistics and philology, classical philology in particular, is supported by a number of arguments that form the common ground of the two fields, namely etymology, textual criticism, text linguistics, poetics, the study of dialects, the decipherment of unknown scripts, the relation of linguistics and philology with other related fields such as archaeology, myth, and culture.

Introduction

It may sound a bit tautological and/or superfluous to invest time and energy in discussing a topic that may have either been solved long time ago or that may call upon no solution at all. Yet, for reasons to be elaborated below we believe that the issue warrants a fruitful discussion and a new and fresh look. The title of the study suggests alternative readings, with both, none or either one of the determinatives and qualifying adjectives of the correlation. In all cases the kernel of the conjunction, i.e. 'linguistics' and 'philology', remains stable and unchanged, perhaps signalling the basic

^(*)For comments and suggestions on an earlier version of the paper thanks are due to Raimo Anttila, Richard Janko and two anonymous referees for the JIES. Needless to say, for the remaining errors and shortcomings the responsibility lies with the author.

thesis of the writer that the two poles of the correlation should be seen together, and thus justify the undertaking. We assure the reader that this is no word play, but simply the alternative options in dealing with the topic, seeing it either from the broad perspective of the possible relation between linguistics and philology or from the narrower and more concrete vantage point of relating historical linguistics and classical philology. Furthermore, an issue may be taken with regard to the conjunction 'and', i.e. whether it can be read as additive or complexive. The answer to this question will turn out to be rather difficult, but definitely weighing more towards the latter solution.

For historical reasons, in the following pages we propose to investigate the ways and means by which one can determine both the terms and the conditions under which historical linguistics and classical philology are related and/or differentiated. By the term 'historical reasons' we simply allude to the fact that ever since the issue was raised (in the nineteenth century), the emphasis was alternately placed upon the side of language or that of philology, depending on the individual researcher's personal taste, his theoretical or ideological allegiance, or the overall climate of the particular period in question.¹ The turning point is located in the last

¹The history of the relation of linguistics to philology, as an epistemological problem, is of special interest for the evolution of both fields. In short, it could be described as a love-and-hate relation, i.e. as a process from an originally close association to a gradual disengagement, then to near complete divorce of linguistics from philology, and finally a reunion with the formation of new interdisciplinary trends in which linguistic and philological approaches meet each other again. However, the relation of historical linguistics and classical philology has always been a really close one ever since the first suspicion was removed, especially directed from classical philologists towards the newly founded discipline of historical linguistics in the first half of the nineteenth century. Some characteristic items of the literature on this issue are the following (listed in chronological order): Curtius (1845 and 1862/1886), Schleicher (1850), Förster (1851), Bréal (1878), Brugmann (1885), Bolling (1929), Sturtevant and Kent (1929), Debrunner (1930), Vendryes (1951), Robinett et al. (1952-53), White (1953-54), Reid (1956), Arbuckle (1970), Stechow (1970), Beyer and Cherubim (1973), Hofmann (1973), Jankowsky (1973), Latacz (1974), Hildebrandt (1975), Storost (1984), Jäger (1975), and others. For a good summary of the story and the basic bibliography, see Anttila (1975), and Koerner (1989); see also Giannakis (2005: 259-274). For the general possibility for cooperation of the two fields, see the essays in Ahlqvist (1982: 395ff.), Fisiak (1990), Eichner and Rix (1990); see also Ziolkowski (1990).

quarter of the nineteenth century with the Neogrammarians and the primacy of linguistics over philology as far as the theoretical foundations of the proposed correlation are concerned.²

Linguistics and/or Philology?

The 'and/or' disjunction reflects the two extreme attitudes and stances taken by scholars in the past or today. Traditionally, philology is identified with the interpretation of texts, particularly the texts of classical antiquity. Following a long tradition of approaching the classical texts, it aspires to imbue them with their original spirit, and reenact, as it were, the historical, social, and cultural milieu within which they were conceived, matured and executed. Their reading and understanding involve the knowledge of social history and the history of ideas in the broad sense of the terms. August Boeckh declared that philology is 'the knowledge of what is known', i.e. philology is a kind of re-cognition (cf. Gk. *ἀναγλυνώσκειν*), as it leads to familiarization with the accumulated knowledge of the past. Boeckh's definition reflects his concept of philology as an 'encyclopedia', in other words the idea of the unity of knowledge (*Einheitstheorie*), as a prerequisite for interpreting classical texts. His reference to this idea is quite compelling, as he states: "When the idea of encyclopaedic knowledge is used in connection with philology, however, the knowledge must be organized into a unity, because here the general knowledge common to all the sciences is very prominent. The particular here is bound up in the general. This unification of knowledge becomes the more important, the more the single parts are divided among different brains" (1968: 31). This knowledge is for Boeckh both a theory and an epistemological principle, to the development of which he devoted his entire scholarly life.³ In

²Within this frame, it is interesting to note the shift of the emphasis from philology to linguistics as seen in the two essays by teacher and student, namely Curtius' "Philologie und Sprachwissenschaft" (delivered in 1862, published in 1886) and Brugmann's "Sprachwissenschaft und Philologie" (1885), with the symbolic reversal in the order of the members of the correlation, intending in this way to underline the priority of the position of linguistics over that of philology, and at the same time to signal the passage from linguistics as an accessory of classical philology to linguistics as an autonomous science: the 'Neogrammarian controversy' is well under way!

³The original German edition of Boeckh's work was published in 1886, and

this way, philology sees and understands the mind of the past as present and makes the strange familiar (see also Gadamer 2004: 233).

It is true that knowledge has been compartmentalized as a result of the progress of science and of the subsequent overspecialization. Yet, Boeckh's idea of a holistic knowledge is both possible and necessary. Towards this goal one sees the need to 'read the past' by decoding the message of classical texts. This decoding requires the prior reading of the linguistic code in which these texts are written. And by linguistic code we mean the system of the language of the text, which amounts to the analysis of the phonological system, the morphological (= grammatical) structure, the syntactic organization, as well as of the lexicon and the meaning. In plain words, we need to proceed to the interpretation of the texts, and, as is stated by Gadamer (2004: 399), "the interpretation places the object, as it were, on the scales of words." Hermeneutics is the end but also the means for the final understanding of classical texts. However, understanding and interpretation are indissolubly bound together. Classical philology is doing precisely that, and this seems to be its exclusive task. Thus, the analytic and interpretive processes of philology become possible through the previous recognition and reading of the linguistic code of the texts, linguistics' task par excellence. By way of its analytic means, grammatical analysis decomposes the units into their constituent parts, e.g., sounds, morphemes, lexemes and lexical syntagms, and then recomposes them into larger units so that the meaning hidden in them be revealed. This analysis-to-synthesis process of philology is executed with the

was the result of his teaching the subject for over fifty years in Heidelberg and Berlin. The English edition omits a few parts that were thought not to be necessary for understanding the technique and method suggested by the author. Boeckh believes that the linguistic analysis is only one out of four fundamental methodological approaches of the text. The others are the historical, the individual, and the generic interpretation.

As we see, we enter here into a rather difficult philosophical issue which addresses the question of the nature of history and of historical explanation as a whole. Boeckh's idea is only one out of many equally strong theories for studying the past. From the point of view of historical linguistics, excellent treatments are to be found in Anttila (1989) and Lass (1980 and 1997). From the historian's point of view, the issue has been dealt with, among others, by Collingwood (1946), Gardiner (1961), Carr (1987), and Cannadine (2002).

The Journal of Indo-European Studies

techniques and mechanisms provided by linguistics. Philology is working with complete wholes (the texts), linguistics puts together the constitutive components into these wholes. In this sense, the cooperation of the two fields seems to be ideal. These are necessary, albeit not sufficient, conditions in order for the text to turn into a relevant subject, or to achieve the link between text and reader, and ultimately to reach its final interpretation.

Calvert Watkins puts the relation between text and reader in the following manner: "It is a commonplace that the historical linguist deals first of all with a text, and his first task is the interpretation of the meaning of that text. Now there is a realm of meaning called 'semantics', and a realm of meaning nowadays called 'pragmatics'. The latter, as Michael Silverstein has succinctly put it in a recent paper, 'is the study of the meaning of the language forms as these depend on the linkage of signs to the context in which they occur (we call this the 'indexical' meaning of signs).' Despite the relative novelty of the term pragmatics [...] the historical linguist has been dealing with this all along; he just calls it philology" (1981: 238-239). Or, to put it in Carroll's way, philology is "the large middle ground between linguistic science and the literary and humanistic studies" (1955: 65).

This is indeed the "middle" approach on the matter. On the other hand, as will be seen later, theoretical linguistics and philology are characterized by a gradual centrifugal tendency, and most linguists today see very little –if any at all– relation between the two fields of study.

As in the past, likewise in the present views on the matter diverge into two main camps. On the one hand there are those who believe that between linguistics and philology there is no relation, since each has its own goals and a different methodology. This is the view of the majority of theoretical linguists, whose main interest focuses on theory and on spoken languages rather than on texts. The second group holds the view that historical linguistics and classical philology cannot be kept apart from each other, but are complementary and interrelated. To this group belong most historical linguists as well as all those who work on the vicinity of linguistic studies in conjunction with contiguous and interdisciplinary fields, such as sociolinguistics, ethnography of speech, anthropological linguistics, text linguistics, etc. These fields of

study regain for linguistics its humanistic character that was endangered under the pressure of extreme formalism and of the mechanistic views of language during the second half of the twentieth century. Anthropological linguistics in particular has many similarities with (traditional) classical philology, as it sets similar priorities and its approach is not confined to linguistic description alone but moves beyond form and investigates the relation of language to human history and civilization.⁴

Despite the differences with regard to method and goals between theoretical linguistics and those of classical philology, the relation of the latter to historical linguistics is still strong. Therefore, our answer to the dilemma posed by the title of this section ‘linguistics and/or philology?’ is ‘linguistics *and* philology’, a position to be argued for in the rest of the paper, but with a number of qualifications.

The ‘linguistics *cum* philology’ approach

The approach suggested here is methodologically a synthesis, or better a fusion, of the techniques of historical linguistics and of classical philology: it is not a matter of simple addition of the linguistic and of the philological methods, but the result of their combination into a new complexive synthesis and into a ‘new’ method. This method is supported by a series of arguments and/or examples of application, among them the following: the linguistic analysis of texts (the text-linguistic method); the critical edition of texts, the chronology of textual evidence and other similar documents; the placement of the philological documents within the general sociohistorical and cultural era of their genesis; linguistic geography and language variation; the possible relation of a particular philological document with a broader historical and/or comparative framework of genetically related traditions, and its ultimate projection back to a ‘proto-philological’ tradition; the decipherment of unknown scripts; perhaps, the best case exemplifying this method is etymology, to which a distinct section is devoted in this study.⁵

⁴Anttila (1975: 151) comments on this point: “Society needs linguistics and linguistics needs society. Ethnography without linguistics is unspeakable and linguistics without ethnography is mindless, unsociable.”

⁵For a discussion of all these, see Giannakis (2005: 259-295), whereas a detailed treatment of the relationship between historical linguistics and

As will become clear in the course of the study, our proposal is not simply an epistemological issue, but is a matter of substance, and addresses a central issue of historical linguistics. There definitely exist discrete borders between historical linguistics and classical philology, but at the same time there is also a broad common ground between the two, such that one is justified in speaking of parallel and complementary courses. This relation is more pronounced in the case of Indo-European linguistics, which was characterized by Debrunner (1930: 21) as the “child of classical philology and general linguistics”.

As is the case with pragmatics, philology too studies linguistic signs in context, what is usually termed by semioticians the indexical function of signs. In line with Benveniste’s concept of ethnosemantics, Watkins (1989) calls this approach ‘new comparative philology’, intending to highlight by the term the close link between historical and comparative linguistics with philology, on the analogy of, or, perhaps, in contradistinction to ‘comparative philology’ which had been used earlier for comparative linguistics. The main feature of this ‘new’ approach is its strong dependence on philological documents, since these are the sole evidence for linguistic history. In this sense, the historian has no other choice but live with the texts, often attested in an incomplete and fragmentary form, and apply the historical method in evaluating and interpreting them in such a way that they turn into valid and adequate evidence. In this procedure, very often philological analysis is a sort of microscopic examination of particular details of the texts. Linguistics in its turn attempts, by way of a macroscopic approach, to re-compose and re-construct the various sides of the philological analysis and sew them together into larger, more composite, and more coherent wholes that amount to the system of the language. In this way, linguistic investigation goes far beyond the particularities of a single text or of a group of texts, or even of a single language, acquiring thus a universal character.

History and comparison are the two central issues of historical and comparative linguistics; yet they are not immediately obvious to the classical philologist. Next we turn to a brief discussion precisely of this question.

classical philology, along with a host of related issues, is to be found in a monograph under preparation.

‘Classical philology’: what does it really mean?

We referred earlier to the compound determinative adjective ‘historical-comparative’, which applies to the linguistic aspect of the correlation ‘linguistics and philology’. This adjective automatically introduces two important features of our investigation, namely history and comparison. The core question to be addressed here is the following: “What exactly is ‘classical philology’?”. The search for an answer to this question raises a large number of related questions, all begging an answer. These questions relate to the very nature of classical philology, and are of the type “when?, where?, and how?”. In other words, one should rethink the issue of the temporal and/or spatial determinatives of classical philology, i.e. to search for its beginnings, its continuation into and influence upon post-classical traditions, as well as its possible relatives. The first is a historical concern, the second a geographic, and the last a comparative concern. The subquestion “where?” tackles the spatial/geographic determinants of the field of classical philology: is classical philology confined (or should it be confined) to the familiar geographical and cultural territory of classical antiquity, Greece and Rome, or can/should it be opened up to embrace other classical traditions as well, especially traditions of related linguistic (and philological) stocks, e.g. Indo-European? As for the question “how?”, one needs to look for the distant beginnings of classical philology and its projection back in time to possible genetic relations and a common proto-philological source. The last issue is, to my mind, of extremely high interest, since it may lead to the discovery of the distant origins and, in the course of time, of unknown relatives of classical philology. Admittedly from this point on we start moving onto the less familiar and more ambiguous sphere of reconstruction of a proto-philological tradition, on the model of the linguistic reconstruction of protolanguages. This procedure, i.e. the breaking of the traditional confines of classical philology –before, after, and laterally– widens the view by means of vertical, horizontal and lateral relations, and prolongs the temporal range by the bilateral projection both into the past and into the future.

At this point an important issue must be clarified, namely our reference to cognacy. What is meant here is that there

may exist cognate features in different philological traditions, in a way parallel and similar to cognate linguistic traditions. This cognacy may be generic, thematic, ideological, cultural and mythological, or formal and structural, a fact that is determined by applying the comparative method to philological traditions on any or all of the aforementioned aspects.⁶ With the proviso that comparison be conducted according to the prescriptions of the comparative method, the common features may be projected back to some common source from which there sprang all or some of the compared traditions, or at least some of their features. The comparison must be confined within cognate linguistic traditions, with an effort to locate those features that may derive from a common proto-philological source. In other words, the effort should be directed to demonstrating which of the observed similarities among the comparanda may be of common ancestry.⁷

As with cognate languages, classical philology must look for its relatives –prehistoric, ancient, and more recent. As was also mentioned earlier, we are talking here of cognate Indo-European traditions. This co-examination can be conducted on different levels and to various extents, by geographical zones, but also on the entirety of the family; by generic type, e.g. epic poetry, sacral/mythological literature, legal texts, etc.; it can also be approached in terms of motif and/or theme, e.g. the theme of killing the serpent as represented in the widely attested motif of the struggle between man and serpent

⁶Gasparov (1996), for instance, argues that it is possible to project to a common source in Indo-European several metrical patterns of European poetic traditions, leading to what he calls “a historical poetics of European literature.”

⁷As is the case with linguistic relations, on the level of philological relations too certain features may be the result of borrowing and other such influence or of parallel development. Classical philologists do show interest in this type of relation, trying to trace influences from other neighbouring traditions upon certain aspects of classical philology. An example of such an investigation is West (1997), in which the author traces the influence from Mesopotamian, Assyrian, and other Anatolian traditions on archaic Greek poetry. Similar efforts have been made for various aspects of oriental influences on Greek culture by many other scholars, e.g. Cyrus Gordon, Walter Burkert, Saul Levin, Sarah Morris, Bruce Loudon and others. Again, the fundamental prerequisite for fair and adequate treatment of such matters is the strict observance of the principles of the comparative method. Although this kind of relation is also of interest for comparativists, it will not be dealt with in this study.

(amply illustrated by Watkins 1995).

A number of justified questions could be raised in this respect, among them the following: What are the gains for classical philology from such a comparison with other alleged cognate traditions? How is this comparison to be carried on on the level of philology? Are the methodological tools used in linguistic comparison compatible and applicable? How far and how wide can the comparison be taken? What are the requirements or the qualifications on the part of the researcher for such a project? Finally, what is the method to be applied here? All these questions amount to the formulation of a theory which will support the practical aspects of the comparison of philological traditions and the recovery (i.e. reconstruction) of features of the philological prototype.⁸

The rest of the study will deal with these questions, revolving around the central axis of the relation between historical linguistics and classical philology. The comparative stance purports to highlight some of the main features of the 'linguistics *cum* philology' method that is developed here.⁹

⁸A more practical problem is to devise criteria according to which all these questions can be treated adequately and effectively in the academic world. The whole issue becomes even more complicated by the very nature of the approach adopted, which is interdisciplinary, a fact that requires some type of coordinated and combined effort not only on the level of research but mainly and foremost on that of teaching. The situation today in the institutions of higher education is telling a different story: the extreme fragmentation and compartmentalization of knowledge, as a result of overspecialization, despite the avowed calls for interdisciplinary collaborations, disfavours such an effort. This 'modern' trend is also reflected in the structure of programs of study and the structure of the old Schools of Humanities, where each individual field of study, irrespective of size, is represented by independent and autonomous departmental arrangements. This tendency has been more pronounced in the 1960's and the subsequent decades, in particular in the United States which tends to set the pace and/or the model of development of the modern University. In Europe, these changes resulted in the collapse of the traditional structure of the Schools of Humanities and their split into separate departments, a fact that led to even greater isolationism. On the other hand, there are signs of reversal of this expansionist-isolationist phase and its development into a more compact and combinatorial (hopefully also interdisciplinary) system, similar but not identical to the older one. All these are evident in the reorganization activity observed during the last few years in academia, perhaps a positive development, but again time will judge whether all this leads to a happy end.

⁹As was alluded to earlier, the range of the possible collaboration of historical linguistics and philology is much wider than the one which is described in the present study. Here we list some more of these areas (for a fuller picture, see

First, we will address the issue of etymology.

Etymology

Etymology is part of lexicology, more specifically of historical lexicology, but has many peculiarities and idiosyncracies of its own that require a special approach on the part of the etymologist. In etymological work the principle that the part is older than the whole seems to have a general application. This means that etymology, as the investigation of words' origins, is an operation of *ana-lysis* and *dis-crimination* of the particular constituents of the word. As such and in an extended sense, etymology is also part of the *critical* study of the texts.¹⁰ On the other hand, the parts (i.e., the morphemes) are functional elements of the whole, and this leads to a sort of a bifid and bidirectional process of analysis-and-synthesis. Etymology is a process that evolves as part of comparative and historical grammar, and is thus based on the notion of the genetic relationship of languages. In this sense, it is both a diachronic and a comparative subdiscipline, and among its basic operations is establishing systematic correspondences on the phonetic and morphological levels, as well as explaining the semantics of the items investigated. The first two are formal components, whereas meaning links etymology to the outside world, and is based on the concept of language as a system of signs that express the world of experience and of the spiritual activity of the linguistic

the topics dealt with in Fisiak 1990): textual analysis and reconstruction, text edition, phonetics, metrics, the role of punctuation, the history of writing, the decipherment of unknown scripts, poetics, the study of dialects, translation, language instruction, the relationship of linguistics with other fields of study such as archaeology, myth, and ethnography of speech, and many more (see also the essays in Bartsch and Vennemann 1975).

¹⁰Cf. the meaning of the Greek verb *κρίνω* as "choose, pick out; separate; decide", from which the English word *critical* derives. According to the *Grammar* (*τέχνη γραμματική*) of Dionysius Thrax, etymology (*ἐτυμολογία*) is one of the six parts of the grammatical study of language, and its critical study (*κρίσις ποιημάτων*) is characterized as the noblest of all. See Dionysius' definition of grammar as translated by Robins (1979: 31): "Grammar is the practical knowledge of the general usages of poets and prose writers. It has six parts: first, accurate reading (aloud) with due regard to the prosodies; second, explanation of the literary expressions in the works; third, the provision of notes on phraseology and subject matter; fourth, the discovery of etymologies; fifth, the working out of analogical regularities; sixth, the appreciation of literary compositions, which is the noblest part of grammar."

community. Consideration of the socio-historical and cultural context of language use plays a crucial role in the etymological enterprise (see the essays in Maher 1977 and Malkiel 1968). Therefore, etymology is nothing but a disciplined and strictly controlled exercise in historical reconstruction, but is more of an analytic than a synthetic process.

Let us take our first example that illustrates the etymological practice. Here we will briefly analyze a number of items that derive from the Indo-European root **h₂aǵ-* “lead”.

a. Up until recently the Greek word ἄναξ has been marked as of unknown or obscure etymology.¹¹ However, a recent suggestion by Hajnal (1998: 60-69) fulfils all the criteria for a plausible etymology of the word, i.e. the phonological and morphological (i.e., internal) criteria as required by the system of the language, the semantic criterion, as well as the external (i.e., comparative) criterion of the word’s genetic relations. In addition, an important criterion for any sound etymological and historical explanation, namely the existence of (typologically) parallel cases from the same and/or from cognate languages, is also met, making thus the proposed etymology even stronger.¹²

According to Hajnal, the word ἄναξ (or better **φανακτ-s*, with initial digamma *ϕ-* and a stem in *-t-* as seen in the inflectional paradigm of the word, e.g. gen. *φανακτος*, etc.), morphologically is of the same type as the word λαγέτης, Doric λαγέτᾱς “leader of (military) people”, which is also attested in the Mycenaean documents (ra-wa-ke-ta = /lāwāgetās/). This word is analyzed as **λαφο-αγέτης-*, i.e. *λαφος* “military people”, the verbal root *ἀγ-* (i.e., IE **h₂aǵ-* “lead”, see verb ἄγω), and the common derivational suffix *-(ε)τ-*,¹³ plus the inflectional suffix *-ης/-ας* (in Indo-European terms: **lah₂wo-h₂aǵ-t-*). Now the word ἄναξ also has Mycenaean attestation (e.g. wa-na-ka = /wanaks/, wa-na-ka-te, etc.)¹⁴, and follows a similar formative

¹¹See the etymological dictionaries of Ancient Greek by Frisk s.v., and Chantraine s.v.

¹²On the requirement of parallels in etymological work, see Anttila (2000 and 2002).

¹³For the prehistory of this suffix, see Leukart (1994: 262ff.).

¹⁴According to the Linear B script convention, word-final consonant clusters are simplified by the omission of all but a single consonant. In our case, wa-na-

path, and we have a proto-form $*w\eta\text{-}h_2a\hat{g}\text{-}t\text{-}s$, in other words: the zero-grade $*w\eta\text{-}$ of the root $*wen\text{-}$ “profit”, the verbal root $*h_2a\hat{g}\text{-}$ (as before), followed by the same derivational ($-t$) and inflectional ($-s$) suffixes.¹⁵

The parallel morphophonological pattern is also supported by the fact that the two words constitute significant items of the sociocultural, military, and political structure of the Mycenaean social system: both items refer to important institutions and belong to the same semantic field, that of ‘power and government’.

The external and comparative evidence to support this connection comes from Sanskrit, and more specifically from the word *vaníj-* “merchant”. The Sanskrit word is etymologized as deriving from a proto-type $*wen\text{-}h_2\hat{g}\text{-}$, literally “leader/provider of gain/profit”, while it is also used with reference to the god Indra in the meaning “leader or protector god of goods” (e.g., AV 3.15.1, and elsewhere; cf. Hajnal 1998: 68).¹⁶

It seems that this analysis of Greek $\acute{\alpha}\nu\alpha\xi$ satisfies all the criteria set earlier so as to be a plausible and acceptable etymology. This is a small, albeit characteristic, example of how historical and comparative linguistics can illumine a problem that is also a concern of classical philology. The systematic and refining comparative work of the linguist coupled with the philological documentation results into a plausible solution to a very difficult and thorny problem. And since philology

ka represents original $*wanakts$ where the last two consonants have been omitted in the writing convention; compare also o-nu-ka or o-nu ($\acute{o}\nu\kappa\acute{\alpha}$), to-ra-ka or to-ru ($\theta\acute{\omega}\rho\alpha\kappa\acute{\alpha}$), a₃-ti-j_o-q_o ($\text{A}\acute{\iota}\theta\acute{\iota}\omicron\psi$), etc. See Bartoněk (2003: 111).

¹⁵To be sure, several scholars have suggested a similar etymology, but deriving the first part of the word from the root $*wen\text{-}$ “tribe, kin”, and thus $*wen\text{-}h_2ag\text{-}t$ meaning “leader of the tribe, kin”. See among them Szemerényi (1979: 217). For an overview of the etymological issue, see Papanastasiou (2001: 280ff.). For a general discussion but not of the etymology, see Benveniste (1969 II: 23ff.).

¹⁶Hajnal (1998: 65) also discusses an interesting collocation of two terms in a Phrygian inscription from the grave of king Midas. The text runs as follows (the two words in case are underlined): *ates : arkieavais : akenanogavos : midai : lavagtaei : vanaktaei : edaes* “Ates built <the grave> of Midas, the lawagetas and wanaks” (M-01a). Hajnal argues against a Greek loan here, giving further evidence of this formation in Phrygian proper names like $\text{O}\nu\alpha\nu\alpha\xi\omicron\varsigma$, $\text{O}\nu\alpha\nu\alpha\xi\omega\nu$ or $\text{O}\nu\alpha\nu\alpha\xi\iota\omega\nu$, etc., all based on a noun $*vanak(t)s$, an interesting Greco-Phrygian isogloss (?). However, the possibility of Greek loans in these instances is to my mind quite strong.

concerns itself with the study of culture through texts, thanks to comparative linguistics an important cultural item of Ancient Greek philology finds its natural place within the cognate Indo-European languages. Thus, if interpretation is the final aim of philology, etymology has much to contribute to this end.

b. In an exemplary study, with rich documentation from Indo-European but also with parallels from other, non-Indo-European languages, Anttila (2000) applies a method similar to our ‘linguistics *cum* philology’ approach in his analysis of a large body of terms deriving from the Indo-European root **h₂aǵ-*. Anttila sees etymology as an exercise on sociocultural and linguistic reconstruction. This approach follows the spirit of the philological tradition, as a background and framework, and is supported by the analytic tools of the linguistic method; it is what we would term ‘socio-linguistic etymological paleontology’ or what Diebold (1987: 52) calls ‘interpretive etymology’.¹⁷ According to this approach, the researcher is not content in simply drawing etymological correspondences but goes beyond form and aims at establishing language’s connections to the general sociocultural and historical context, making inferences about the social prehistory of the linguistic community. In his research Anttila takes an interdisciplinary stance, opting for a holistic approach and utilizing the methodological procedures of contiguous fields, such as history, philology, linguistics, semiology and hermeneutics. The final purpose of this procedure is what Anttila calls ‘hermeneutic empathy’, i.e. the effort “[...] to show that as contemporary interpreters we actually extend the speech communities of the past to us, we become fellow members [...]” (2000: 9). In this way, it is possible for modern reader to become both interpreter and sharer of the past, and this is, at least in theory, the task of

¹⁷Diebold (1987: 52) gives the following description of this procedure: “Basically the procedure examines a set of established cognates taken from the lexica of genetically related languages in order to ascertain if their shared prehistoric etymon has a reconstructible meaning from which it is possible to deduce or to infer anything revealing about the physical and sociocultural environments of the prehistoric speech communities of the protolanguage.” We would add that this procedure also has similarities with other procedures that have been applied in the past with success and profit, such as *Wörter und Sachen*, the technique of *semantic fields*, and that of *linguistic paleontology*.

philology.¹⁸

Anttila's study deals with a large number of derivatives from the Indo-European root **h₂aǵ-*. In the following brief discussion we will concentrate on a couple of these lexical items as a way of illustration of the merits of the collaborative procedure of historical linguistics, classical philology and social history.

The first of these words is Greek ἀγών "athletic competition". According to Anttila, this word is originally a plural of an unattested neuter noun **αγα* (from **h₂aǵ-ŋ-*). The singular is seen in the adverb ἀγα- "very, highly", e.g. ἀγακλυτός "very famous, of high renown", and many other similar formations. The formative model seems to be an analogical pattern of the type χεῖμων : χεῖμα = ἀγών : **αγα*. It is not unlikely that prehellenic **αγα* may have had the meanings "leading" and "military unit", the head of which is the ἀγός. As is known, of course, of the same etymon is also the verb ἄγω "lead", as well as a long list of cognates both from Greek and from other Indo-European languages. We have to say that the above etymology is ingenious, albeit difficult, but Anttila makes a very good case for it.

The second word to be examined is Greek ἀγαθός, which reflects IE **h₂aǵ-ŋ-dh₁-o-s*, in other words, the noun **αγα* and the zero grade of the root **dheh₁-* "put, place; make". Therefore, the meaning of ἀγαθός is "the leader or the upholder of the **αγα*", a meaning that is supported by the word's usage in Homeric poetry, where the ἀγαθοί form a distinct class of social and military leaders of the **αγα* and are protectors of heroic values.¹⁹ In a heroic society like Indo-European and Homeric society, one of the prime concerns for the leader was to ensure the means of survival and wellbeing

¹⁸This approach reminds us of Boeckh's idea of philology as 'the knowledge of what is known', or Collingwood's 're-enactment of the past' way of approaching historical knowledge. Gadamer's definition of philology as the art of understanding with the help of the context (for instance, see 2004: 182 and *passim*) is also in line with these approaches but viewing the text from the viewpoint of the hermeneutic circle.

¹⁹For the diachronic development of the meaning of the word ἀγαθός in Ancient Greece, along with many other related terms, see Adkins (1960 and 1972).

of his social unit, primarily through the success in war raids, and especially the acquisition and protection of bovines.²⁰

Within this sociocultural framework it is also easy to understand the metaphorical semantic shift of the cognate Greek word ἀγέλη from meaning “lord of cows” to that of “unit of youngsters” (Sparta, Crete). The etymological meaning of the word must be “the leading of the *αγα”, its formation being from *αγα + ἐλάω or ἐλαύνω “lead” (said of animals or of military units, e.g. ships, chariots, etc.).²¹

An interesting feature of the derivatives of the root *h₂aǵ- is that they all belong to the semantic fields of herding, of social and military organization, and of religious terminology. Among the long list of these words are the following: ἄγω, ἀγαθός, ἀγών, ἀγός, ἀγήνωρ, -αγρος (e.g. the proper name Μελέαγρος and the verb ἀγρέω “hunt”), ἄγαν, ἀγα-, ἄγμα, ἀγή, ἀγέλη, ἀγρός, ἀγέρωχος, ἀγανός, ἄνωγα, ἄγε (particle), ἀγάπη²², ἀγαπάζω, ἄγος, ἄγνος, ἄγαμαι, ἄγη, ἀγανός, ἀγάλλω, ἀγανακτέω, and many others. Since the investigation is etymological, the comparative evidence is very rich, as is also the evidence of typological parallels from both Indo-European and non-Indo-European languages.

²⁰The significance of bovine and other large domesticated animals for the wellbeing and the prosperity of Indo-European society is an established fact. This is also reflected in the semantic development of vocabulary from original meaning “bovine” to the derived meaning “wealth” and the like, e.g. from IE *pekú- “domestic animal, (large) mammal, cow”, as in Lat. *pecu, pecus*, to the semantic development of *pecūnia* “money, wealth”, or *pecūlium* “property”, OHG *fihu*, ON *fǣ*, OE *feoh* (> Mod. Eng. *fee*), Go. *faihu*, in all languages “bovine; movable property, money”. A similar semantic shift is also seen with Gk. *πρόβατον* which is related to *πρόβασις* (Hom.+), with the meaning “movable wealth, property” and “sheep”, in contradistinction to the unmovable wealth (cf. *κειμήλια, κτήματα*, etc.). For all this see Benveniste (1969 I: 37-61) and Mallory and Adams (1997: 23).

²¹However, the direction of the development could have been the opposite as well, i.e. from the reference to the unit of young people, especially of young soldiers, to that of cow-herd.

²²According to Anttila (2000: 82-94), the word reflects IE *h₂aǵh₂-ā, where -ph₂- is the zero grade of the root *pā(s)-/*pā(y)-/*pī- “guard, watch, protect”, and refers to the task of the sole son towards his family and his community. Being the only heir, he also has the assignment to represent worthily his contingent (family or the extended community under his jurisdiction: *αγα) in its associations with other groups, to advocate their interests, and to demonstrate effective leadership (being both ἀγαθός and ἀγαπητός).

c. The first step of the comparative method is phonetic and semantic similarity, which with strict and clear criteria will turn surface similarities into a regular correspondence. This process requires a justification of every single step taken, and an explanation not so much of the similarities but primarily of the deviations and the exceptions.²³ The concept of ‘correspondence’ is the paramount and most central principle for any comparison of worth; external similarities may be our first guide but are potentially risky and misleading. Regular correspondences are the necessary prerequisite for plausible explanations in etymological work. Antoine Meillet describes this procedure in a clear and pithy way, saying: “Whatever language is concerned, an etymology can be considered as proved only if a set of precise agreements establishes that the similarities of the words compared cannot be due to chance” (1967: 54). The next example is a good illustration of this point.

Starting with the phonetic and the semantic similarity the etymological association of Gk. *θεός* and Lat. *deus* should at first look to be an easy task. However, the ease is restricted only to this first impression. For, as soon as a closer and more systematic examination of the two words begins, the first doubts start to appear. The basic difficulty lies in explaining the initial consonant of the words. The historical grammar of the two languages teaches that the initial *d-* of the Latin word goes back to IE **d*, and the initial *θ-* of the Greek word to IE **dh*, a fact established by many similar cases from the two languages. IE **dh-* would develop in this position into Latin *f-*, cf. *facio* that corresponds to Gk. *θη-* as in the verb *τίθημι* (both from IE **dheh₁-*). IE **d*, on the other hand, would be reflected in Latin *d-* and in Greek *δ-* (/d/), but not in *θ-* (/t^h/). These are the lessons of historical and comparative grammar for the development of the Indo-European consonants in the two languages, a fact that is beyond doubt, since they form regular correspondences. Therefore, our initial ‘conviction’ turns into a strong doubt, if not complete change of mind. The etymon

²³As a rule, in historical and comparative linguistics reconstruction is based on exceptions rather than on similarities. This is because exceptions usually point to archaisms, that is they preserve features that are closer to the protolanguage. On this point, see also Meillet (1967: 41).

of the Latin word is IE **dieu-*, also reflected in Gk. Ζεύς, Διός (gen.), Skt. *dyāus*,²⁴ *divás* (gen.), etc., whereas that of Gk. θεός may be **dheh₁-s-os* (i.e. the IE root **dheh₁-* “put, place; make”).²⁵

What on the surface looks a perfect etymological match turns out to be a trap: surface similarities do not always constitute etymological cognates; these similarities may be the result of phonetic changes that mask the underlying difference, or, on the other hand, unlike forms may ultimately turn out to be related etymologically (as in the next example). Only the systematic comparison by means of well established principles is the indispensable tool for sound etymological work.

d. The preceding example is a good illustration of how slippery the way to etymology is: what one sees is not always true, or, conversely, dissimilarity on the surface may hide an underlying common base. The next example is a case in point.

Antoine Meillet (1967: 49-50) discusses the etymology of the Armenian numeral *erku* “two”. We will add to the etymological game the Greek equivalent δύο, in order to make the point clearer.²⁶ The two words demonstrate no phonetic similarity, but ultimately they have the same etymon. The original phonetic similarity has been effaced as a result of a long centrifugal development in the two languages which each took its own way and by its own terms and rules of development through time. However, the close and systematic comparison of the two languages reveals a regular correspondence on the phonological level, and this is illustrated by the comparative procedure. Both words go back to IE **duwo-/*duo*, the etymon of similar derivatives in many Indo-European languages, such as Lat. *duo*, Skt. *dvā(u)*, Pers. *do*, OCS *dŭva*, Russ. *dva*, Lith. *dù*, Alb. *dy*, Goth. *twai*, OIrish *da*, OE *twa*, Toch. A *wu*, etc.²⁷ Our knowledge of the history of

²⁴The vowel length in the Sanskrit word is secondary and due to analogy from the acc. sg. form *dyām* (from ***dieum*); see Sihler (1995: 337).

²⁵Other cognates include Gk. θεσμός, θέμις, Skt. *dhāman* “established order”, etc. See Burkert (1985: 271-272), and Giannakis (1997: 105-106).

²⁶In fact, Meillet compares the Armenian word with Russian *dva* “two”.

²⁷Due to their high degree of retention, numerals are among the best evidence for comparative purposes, a well known fact among historical linguists.

the two (and of the rest of the) languages tells us that the development of IE **d(u)u-* is *δv-* for Greek and *erk-* for Armenian, a regular correspondence established by many other relevant examples, e.g. Gk. *δηρός/δᾶρός*, Arm. *erkar* “long”, from IE **duāro-*; Gk. *δεῖδω*, Arm. *erkñim* “be afraid”, from IE **dweĩ-*, and many other examples. Therefore, the establishment of the phonetic correspondence between Greek and Armenian here is proven and is beyond doubt, as is also the etymological connection of the two words in question.

The last two examples that we discussed demonstrate the illusory character of surface similarities or dissimilarities as far as genetic relations are concerned. The comparisons are valid only to the degree that they follow strict rules and well founded principles: the less strict the rules the larger the chances to make irrelevant comparisons and draw arbitrary and unsupported conclusions.

e. An important criterion that often constitutes the key to the solution of an etymological problem is structural, i.e. it concerns structural details of the items in question. Such is the case of the aorist of the Greek verb *εἶπον* “said”. Based on inner-Greek formative rules it would be extremely difficult, if not impossible, to explain the form. Analogical formation to some known model would also be difficult, e.g. to that of the aorist *εἶδον* “saw”, or some other form.²⁸ Therefore, a solution must be sought elsewhere. The verb is based on the IE root **wek^w-/*wok^w-*, seen for instance in the noun (*φ*)έπος “speech; word”, Lat. *voc-is* (gen. of *vox* “voice”), and Skt. *vācas* “voice, speech”, among others. Another fact is that this aorist is of the reduplicative type, a type which is characterized by specific formative details, such as the zero-grade root. These two formative features are crucial for explaining the Greek form,²⁹

²⁸The difficulty in this analogy lies in the presence of the initial *εἰ-* of *εἶπον* also in non indicative forms of the verb, e.g. impv. *εἰπέ*, ptcl. *εἰπών*, infinitive *εἰπεῖν*, etc., whereas with the verb *εἶδον* the initial *εἰ-* of the indicative is reduced to *ἰ-* in these forms, e.g. impv. *ἰδέ*, ptcl. *ἰδών*, infinitive *ἰδεῖν*, etc. This fact is a first indication for the difference in the formative pattern of the two forms.

²⁹This type of aorist is also seen with other verbs, e.g. *ἤγαγον* from pres. *ἄγω* “lead” (IE **h₂aǵ-*), *πέφνε* from root *φεν-* “kill” (IE **g^hen-*), *πεπιθεῖν* (infinitive) from pres. *πείθω* “persuade” (IE **bheidh-*), etc. The overall

so that we can trace a process like the following: $*(e)\text{-}we\text{-}wk^w\text{-}o\text{-}m$, where $-wk^w\text{-}$ represents the zero grade of the root $*wek^w\text{-}$, $we\text{-}$ is the reduplicative syllable, $-o\text{-}$ is the thematic vowel, and $-m$ the first singular secondary ending, and $(e)\text{-}$ the augment which is optional. All these amount to a process in Greek of the type $*\text{f}\epsilon\text{-}\text{f}\pi\text{-}ov > \text{f}\epsilon\text{-}\iota\pi\text{-}ov >$ (by dissimilation of the second digamma [labial]) $> \epsilon\iota\pi\text{-}ov$ (loss of the first digamma).³⁰ Even if one adds the augment $\acute{\epsilon}\text{-}$, the resultant form would still be the same.

Exactly the same formative details are seen in the similar aorist form of the Sanskrit verb *(a)vocam* “said” (from $*(e)\text{-}we\text{-}wk^w\text{-}o\text{-}m$), and this provides the comparative testimony that proves the etymology.³¹

Etymology is said to deal with the true origin of words. If science aims at discovering truth, then etymology cannot but be a scientific field. In this respect, etymology is for both historical linguistics and philology one of their basic assignments, especially seen from the vantage point of history. We have to agree with Friedrich Schlegel’s pithy dictum that “der Zweck der Philologie ist die Historie”, and history is also the vehicle through which explanation, i.e. hermeneutics, passes. As change is the essence of historical development, so is also the essence of language and its study.

The syntagmatic level

The proposed method of study for a historical and comparative Indo-European philology goes beyond the reconstruction of simple lexical items and enters the area of reconstruction of larger units, e.g. lexical syntagms, and it even attempts textual reconstruction.³² Till now the best

(comparative) evidence points to Indo-European provenience for this type of aorist form (see also Szemerényi 1996: 281).

³⁰See also Sihler (1995: 56 and 561-562).

³¹That the Sanskrit form has *voc-* and Greek $\epsilon\iota\pi\text{-}$ concerns the phonological history of each language. In the Sanskrit word the $-o\text{-}$ is the result of the combination of IE $-e\text{-}$ and $-w\text{-}$ (= u). The main point is that the formative processes are in both languages the same, and this alone is sufficient evidence to clinch the cognacy of the forms in question.

³²This is the most difficult and the most speculative part of all types of reconstructive work, at least for Indo-European. The first such effort was made in 1868 by Schleicher, who composed the short tale titled “*avis akvasas ka*” (“the sheep and the horses”) which, despite the negative reaction it caused, also triggered the interest of comparatists, as we can judge from the

studied lexical combinations are the formulae, that is to say fragments of text that demonstrate special formal, semantic and/or functional features, such that guaranteed their survival in the languages of the historical period. These lexical units form part of the traditional poetic language (*Dichtersprache*), an area of study that reveals important linguistic and cultural aspects of the societies concerned.³³

The oldest poetic compositions of Indo-European are the product of mainly anonymous (at times also eponymous) oral composers. The oral character of these works follows certain rules and mnemonic devices prescribed by the technique of oral tradition that aim at facilitating the memorization and reproduction of long texts. Among these devices are the formulae, the typical scenes, the traditional epithets, the meter, and others. Of particular interest are the formulae since, beside their function as mnemonic devices, they also testify to the ideological, social and cultural beliefs and values of their prehistoric users. By studying these formulaic expressions one gets, by means of reconstruction, a glimpse to the way of the mind of the speakers and their overall *Weltanschauung* for a time much prior to the linguistic testimonies themselves. Watkins (1995: 17) characterizes the formula as the surface structure and expression of thematics, i.e., of the conceptual, the notional, and the semantic themes and motifs of the poetic language. Formulae are archaic relics, both in form and content, of language structure of an older time, and in this respect they constitute important evidence for the study of the prehistory of language. They also

reeditions of Schleicher's text by Hirt in 1939, Lehmann and Zgusta in 1979, and Peters in 1985. The repeated editions by various scholars also reflect the progress that our knowledge has made for the reconstruction of the Indo-European protolanguage. A more recent attempt was made by a number of scholars for the composition of a short story with the title "*rēks deīwos-k^we*" ("the king and the god"), which was published in 1994 in the *Journal of Indo-European Studies* under the editorial care of Subhadra Kumar Sen. However, the first real effort to establish criteria and formulate a theory of textual reconstruction of Indo-European is Matasović (1996).

³³The first comparison of such traditional syntagmatic combinations was Gk. κλέος ἄφθιτον and Skt. *śrávas ákṣitam*, in both languages "unquenched fame", made by Adalbert Kuhn in 1853. Since then the collection of such lexical syntagms has been enriched, and the poetic language has proved an extremely productive field of study. The culmination of this effort is Schmitt (1967) and Watkins (1995). For a recent, partly annotated, bibliography, see Costa (1998).

constitute capsules of textual structures, providing an important help in the reconstructive effort as a whole.

When we speak of poetic language we refer to marked types of speech: the language and its use are characterized by such means and/or mechanisms that can express marked linguistic facts, as well as highlight and underline the message. Roman Jakobson says that the linguistic means are produced “on the base of equivalence, similarity and dissimilarity, synonymity and antonymity, while the combination, the build up of the sequence, is based on contiguity” (1960: 358). His definition of the poetic function of language is that “the poetic function projects the principle of equivalence from the axis of selection into the axis of combination” (358). Equivalence is a key term in the Jakobsonian theory of poetic language, and this principle is described by him in the following way: “Equivalence is promoted to the constitutive device of the sequence. In poetry one syllable is equalized with any other syllable of the same sequence; word stress is assumed to equal word stress, as unstress equals unstress; prosodic long is matched with long, and short with short; word boundary equals word boundary, no boundary equals no boundary; syntactic pause equals syntactic pause, no pause equals no pause. Syllables are converted into units of measure, and so are morae and stresses” (358).

Thus, poetic language exhibits such formal and technical features that one is justified to speak of *poetic grammar* as a distinct level of linguistic description. Jakobson refers to poetics as that branch of linguistic inquiry that deals with the question “what makes a verbal message a work of art?” (1960: 350).³⁴

³⁴Jakobson developed his thesis on various occasions, but primarily in his pioneering studies “The poetry of grammar and the grammar of poetry”, and “Closing statement: Linguistics and poetics”, both published in 1960. See further Watkins (1995: 28-49).

The choice of the poetic devices is such that special phonaesthetic effects are most of the time embedded in poetic function. Paul Valéry defined the poetic work as an ambivalence between sound and sense, meaning with this cryptic phrase that in a poetic work the phonetic means are always bound up with the meaning conveyed by the lexical means, an idea also echoed in Alexander Pope’s dictum that in poetry sound must be like an echo of meaning. Wellek and Warren (1956: 241) put the whole matter in the following manner: “Instead of dichotomizing ‘form-content’, we should think of matter and then of ‘form’, that which aesthetically organizes its ‘matter’. In a successful work of art, the materials are completely assimilated into the

The reconstruction of cultural and mythological features of Indo-European society is a purely semantic procedure which can be independent of lexical reconstruction. Yet, as a rule, these cultural features are traditionally reconstructed by means of etymologically related lexical items or lexical combinations as are attested in older texts.³⁵ The cognacy of the linguistic means also testifies to the common origin of their semantic content, i.e. their Indo-European provenience.

Next we will briefly study such a traditional fixed phrase which was used in name giving contexts, perhaps also reflecting a common institution of the Indo-Europeans.

In many Indo-European languages there is evidence for an institution of Indo-European antiquity. The lexical syntagm of Greek ὄνομα τίθεσθαι finds etymological and semantic correspondences in many other languages. In some of them there is a partial lexical replacement of the verb expressing the idea of making/placing a name. Thus we have Skt. *nāma dhā-* “put/place a name”, the compound nouns *nāmadheya-* and *nāmakaraṇa-* “name-putting/making”, as well as the syntagm *nāma dā-* where the verb *dā-* “give” is used instead; Hitt. *laman*

form: what was ‘world’ has become ‘language’. The ‘materials’ of a literary work of art are, on one level, words, on another level, human behaviour experience, and on another, human ideas and attitudes. All of these, including language, exist outside the work of art, in other modes; but in a successful poem or novel they are pulled into polyphonic relations by the dynamics of aesthetic purpose.” Such a common phonaesthetic device in Indo-European poetic language are the anagrams. An anagram is the arrangement of the sounds of a word or a phrase in such a way as to allude to messages hidden in them, and is meant to be decoded only by the expert eye. See, among others, Starobinski (1971) and Bader (1993).

³⁵An interesting source for such cultural reconstruction is provided by compound nouns and proper names, especially anthroponyms, since they often map cultural beliefs and values of the speakers of ancient (and modern) societies. As a rule, personal names are disyllabic and of the type head + determinative, and are highly symbolic of the heroic character of social values. Such lexemes are like the following (illustrative examples here come from Greek, but similar things happen throughout Indo-European): *-κλεφος* “fame, renown”, *-μενος* “mind, spirit”, *-λαφος* “military people”, *-ανηρ* “man, military person”, *-αγω/-ος* “lead(er)”, *-αρχος* “leader”, *-ιππος* “horse”, *-λυκος* “wolf”, *-διος* “godly, godlike”, cf. names like *Ἀγαμέμνων*, *Ἀχιλλεύς*, *Ἀλέξανδρος*, *Ἀρχέλαος*, *Ἡρακλῆς*, *Λυκοῦργος*, *Φίλιππος*; Germ. *Beowulf* (cf. also *Wolf*, *Wulf* etc.), *Wolfgang*; Irish *Cú Chulainn*; Slavic *Jaroslav*; Sanskrit *Suśrávas*, etc. The classic work on Indo-European onomastics is still Solmsen (1922); see also Pulgram (1947, 1960), Schramm (1957), and Kazansky (1995).

dai-, Lat. *nomen facio* and *nomen in-do*, Welsh *dodi enw*, although the verb *dodi* may reflect either IE **dheh₁-* “put, place” or IE **doh₃-* “give”; in Welsh we also find the combination of the noun *enw* with the verb *rodi*, in Cornish with the verb *ry*, both from IE **doh₃-*. Likewise in Germanic we have the replacement of the verb with some other verb meaning “make, set, place”, e.g. Go. *satjan*, OE *settan* and *scyppan* (cf. Mod. English *shape*). However, this fact points to the conclusion that in the effort to reconstruct an institution exact etymological correspondences are welcome but not always possible, making thus necessary to use also semantically contiguous lexical combinations that express identical concepts. Form is the least resistant to change, but institutions can survive vested in a new formal outfit. This point is an important methodological detail that needs to be considered seriously by the comparatist.³⁶

Now based on the above evidence,³⁷ it is easy to reconstruct an Indo-European protoform for the traditional formula **h₃nomn̥_ḡ dheh₁-*, and this must be part of the traditional poetic language of Indo-European. This formulaic syntagm also reflects an old institution with Indo-European roots, an institution that consists in special formal (linguistic) elements, a high symbolism of the ritual acts involved in its execution, and significant allusions to the traditional heroic-code values.

In archaic societies the name was considered an essential part of the person carrying it and in a way was identical with it (see also Gonda 1970: 7ff.). Giving a name to a child was and still is an act of creation. In many cultures one is not considered a ‘full person’ until acquiring a name identifying oneself. There is also a widely held belief that the nameless child is exposed to many threats and dangers, against which a strong antidote is a fitting name.³⁸ For Indo-European society

³⁶For a similar thesis, see Campanile (1993) and Watkins (1995: 15). To be sure, there are also other ways and expressions for naming or calling someone by a name, especially the use of verbs of naming, calling, and the like. See, for instance, Gk. *ονομάζω*, *ονομαίνω*, *καλέω*, Lat. *nomino*, *voco*, Hitt. *halzai*, *lamaniya*, etc. The significance of the lexical combinations of the former type lies in their formulaic, therefore old, status, a fact that points to their traditional character.

³⁷See also Hahn (1969), Ivanov (1981), and Pinault (1982). For full textual documentation, see Giannakis (1993 and 1997: 105-116).

³⁸For instance, in Ancient India this belief is expressed explicitly in ritual literature, e.g. ŚB 6.1.3.9 (after Gonda 1970: 35) where we read: “One should

we have strong evidence that similar ideas about personal and family name were held in high esteem. Of revealing importance are the well-known expressions of the type of Gk. ὀνομακλυτός, Skt. *nāmaśruta-*, or Old Irish *animgnaid*, all meaning “of famous name, renowned”; cf. also the Tocharian A compound *n̄om-klyu-* “famous (lit. name-fame)”. Furthermore, traditional expressions like ‘imperishable fame’ as in Gk. κλέος ἄφθιτου and Skt. *śrávas ākṣitam*, and others like these are indicators of the significance of values like fame, reputation, good name, family tradition and the like for the Indo-Europeans. It is easy to understand why the formula discussed earlier survived in so many Indo-European languages: it carries such an important semantic load that its extinction would amount to abandonment by the Indo-Europeans of an extremely significant part of the traditional heroic-code values. Therefore, one keeps the *signifié* along with the *signifiant*, both meaning and form. In the case considered here this idea is encapsulated in the (mytho)poetic formula **h₃nom̄_h dheh₁-* and its various reflections throughout Indo-European.

What we did here is to take the comparison one step further and seek the wider perspective of language use in real societal and cultural contexts. The result is breaking the often hard shell of form and look into the social aspect of language use. This procedure is impossible without the assistance of philology. Philology provides the frame and the canvas, linguistics adds the individual brush strokes, and the picture becomes complete. This kind of linguistics coincides with Watkins’ definition of philology as “the art of reading slowly”, i.e. the close and careful reading of the text in such a way that its soul is opened up in front of us revealing what is hidden underneath form.³⁹

give a name to the boy who is born, for thereby one frees him from evil [...]”; also 6.1.3.20 : “To Agni (the great place for the ritual fire) when built up one gives a name; thereby one keeps away evil from him (it).”

³⁹This concept has a long tradition, as also noted by Watkins (1990: 25): “What, then, is philology? Let me conclude with the definition of philology that my teacher Roman Jakobson gave (who got it from his teacher, who got it from his): ‘Philology is the art of reading slowly.’”

On the other hand, Hjelmslev (1961: 127) puts the same thing in the following emphatic manner: “Linguistic theory is led by an inner necessity to recognize not merely the linguistic system, in its schema and in its usage, in its totality and in its individuality, but also man and human society behind language, and all man’s sphere of knowledge through language. At that point

The concept of interdisciplinarity

The comparison of prehistoric languages leads to the comparison of prehistoric social conventions. Through the reconstruction of the semantic and conceptual lexicon of the protolanguage we create a general picture of the historical presence and the civilization of the speakers of the language in place and time. The technique of 'linguistic paleontology' was developed during the second half of the nineteenth century, and is a way of looking into prehistoric social and cultural conventions by means of analyzing and comparing the lexicon of related languages. This technique, which was introduced by Pictet (1859-63), and later on was further refined by Hehn (1870), Schrader (1906-7 and 1917-29), and others, has produced some of the best and most enduring works in Indo-European studies.⁴⁰ Linguistic paleontology is an interdisciplinary approach that utilizes data and information from many related fields, and enables us to form a picture with the main features of the Indo-European society. These features are described by Gimbutas (1974: 293) as follows:

'Kurgan' is a name for a tradition and like many other names does not refer to one feature but to the sum of elements. Among these: a patriarchal society, a class system, the existence of small tribal units ruled by powerful chieftains, a predominantly pastoral economy including horse breeding and plant cultivation, architectural features such as small subterranean or above-ground rectangular huts of timber uprights, small villages and massive hillforts, crude unpainted pottery decorated with impressions or stabbing, religious elements indicating a Sky/Sun god and Thunder god, horse sacrifices and fire cults.⁴¹

linguistic theory has reached its prescribed goal: *humanitas et universitas*." The last three words of the quotation encapsulate the essence of the dialog between linguistics and philology.

⁴⁰In a similar vein moves the series *Wörter und Sachen*, initiated by Meringer in 1909, in which were published vols. 1-18 (1909-28), and in the New Series vols. 1-5 (1937-43).

⁴¹The term 'kurgan' is a Russian word that refers to the characteristic tumuli which are associated with early Indo-European burial practices, and was used by Gimbutas as a cover term for early Indo-European culture.

These are only some, perhaps the main cultural features of the Indo-European community that characterize more or less all Indo-European

As is also noted by Watkins (1992: 319), this description of Indo-European culture is matched in every detail by a securely reconstructible common Indo-European lexical item. The linguistic data lead to the inference that the Indo-European society must have had, to a greater or lesser extent, all these features. This inference has been made possible by the application of the comparative method, in collaboration with related disciplines such as linguistics, archaeology, philology, ethnology, mythology, etc.

Despite its limitations, the technique of linguistic paleontology can still be used effectively in interdisciplinary approaches to the linguistic and cultural study of prehistoric societies. In a sense, this technique is part of our 'linguistics *cum* philology' method put forth in this study.

Along with history, archaeology has been the closest ally of classical philology and historical linguistics (and in general of Indo-European philology). Archaeology provides the material evidence that comes to supplement and/or verify the philological and linguistic evidence. Perhaps the best area where archaeology has shown its potentials in this respect is the issue of the Proto-Indo-European homeland: this issue is not only a linguistic problem, nor is it a philological problem alone; it is mainly and foremost an interdisciplinary problem where archaeology plays the primary role.⁴²

In humanistic sciences there is a close interrelationship

subgroups. Elaboration on these general points over the last two centuries by a host of scholars gives a relatively accurate picture for a number of details with regard to the cultural and institutional life of the Indo-Europeans. Among others, see Schrader (1906-7 and 1917-29), Benveniste (1969), Sergent (1995), and Mallory and Adams (1997 and 2006).

⁴²This issue has a long history in Indo-European studies. For a brief overview of earlier efforts, see Thieme (1953) and the essays in Scherer (1968); for the best synthesis see Mallory (1989), and for the most recent of these approaches see Anthony (2007). A good treatise on the matter from the linguistic point of view is Meid (1989), where both benefits and limitations of the combined linguistic and archaeological approach are discussed. Another such problem is the question of Troy and the Trojan War: the details of this problem, i.e. date, protagonists, etc., have been a source of controversy that still triggers heated debates. On the basis of recent discoveries by the German archaeologist Manfred Korfmann, see the discussions by Latacz (2004) from the side of classical philology, and Hajnal (2003) from the linguistic point of view. In a forthcoming monograph a detailed discussion is given of all these and many other issues that concern the relation between historical linguistics and classical philology.

among the various fields of study, and each subfield stands in an associative and complementary relation to the rest. This means that advances in one subfield automatically have repercussions on all the others. The specialist then cannot ignore or bypass what is happening in related fields. Although a return to the universal man of the Renaissance is neither possible nor desired, his charm is still a thing to wonder and admire. However, this does not cancel the idea of the *hypallelia* (Gk. ὑπαλληλία) of the sciences propounded by the scholastic philosophers of the Middle Ages, i.e. of the interconnection and interdependence among all human sciences. The basic principle of *hypallelia* of the sciences holds that it is impossible for one science to reach a full state of evolution without the prior full evolution of all the others that are its prerequisites. Although this principle, at least in its original form, may not have a universal application, yet it serves to underline the necessity for collaboration of the different fields of study. Despite the more or less well defined territory of each science, there still is certain fluidity amongst their boundaries, and this is the common ground we must recognize and exploit to the benefit of all related fields. This common ground creates the space of what is commonly understood as interdisciplinarity. If we agree that history is the most complex and composite of all humanistic sciences, it is easy to discern the fundamental role of all the others in the historical method, i.e. of philology, linguistics, archaeology, ethnology, law, sociology, political science, economics, etc. Perhaps, today the courses run criss-crosswise and not as a concatenation and a strict hierarchy of the sciences. This arrangement respects the autonomy of each scientific field but does not exclude interinfluences among them. And, I believe, this is the essence of interdisciplinarity (cf. also Boeckh's encyclopedia/Einheitstheorie mentioned earlier).

As we have already stated, philology is an interdisciplinary field where language, archaeological finds, ethnological material, cultural and other similar data form a rich and colourful mosaic and lead to the best possible interpretation. The concept of interdisciplinarity is a dynamic concept and expresses an open, multilateral, and multilevel coarticulation of language and its surrounding world, be it historical, social or cultural. Furthermore, interdisciplinarity is the common ground where all the above meet, coalesce, and generate; it is

also the process of interdependence, of mutual transfusion and exchange of ideas, methods, and techniques that the human spirit has thus far achieved. This meeting place is represented in the best possible way by philology, especially so when crosscut by historical and comparative linguistics.

The field of historical linguistics has produced some of the best interdisciplinary works, and continues to produce still more. From the point of view of the Indo-European philological tradition and by way of illustration the following works are mentioned:

a. The inspired if to some extent provocative work by Gamkrelidze and Ivanov, *Indo-European and the Indo-Europeans* (1995, first published in Russian in 1984), a work that combines the theoretical advances of modern linguistic theory with the traditional historical/comparative linguistic and philological perspective within the general frame of the Indo-European languages, but also with much wider repercussions especially on typological studies. The most relevant part of this book for the 'linguistics *cum* philology' approach advanced here is Part Two, where the semantic dictionary of the protolanguage and the reconstruction of the proto-culture are discussed, a real thesaurus for both Indo-European linguists and philologists.⁴³

b. The second book is Mallory and Adams, *Encyclopedia of Indo-European Culture* (1997), arranged according to an old tradition in Indo-European studies by conceptual fields (e.g. Buck 1949).⁴⁴ This encyclopedia is executed on the model of the classic –and still useful– work by Schrader and Nehring, *Reallexikon der indogermanischen Altertumskunde* (1917-29). Along similar lines also moves the authors' latest synthesis (2006).⁴⁵

c. Perhaps, the best illustration of the approach adopted in this study is the classic work by Benveniste, *Le vocabulaire*

⁴³Perhaps the only mishap of this work, that might discourage the non-specialist or the non-believer, is the peculiar notation system which is in line with the 'Glottalic theory' put forth by the authors. See also Gippert (1998).

⁴⁴As with the previous work, the orthography of some of the contributors, especially with respect to the laryngeal notation, may look to some as a (minor) defect of the book, but as a whole this is no major problem. For a critical review, see Zimmer (1999).

⁴⁵A similar treatment, though less complete in terms of the conceptual fields covered, is Onians (1951).

des institutions indo-européennes (1969). In this work the author brings together into a marvellous synthesis the results of a long research experience on various Indo-European languages with respect to the vocabulary relating to important Indo-European institutions. Applying the method of so-called 'historical ethnosemantics', Benveniste succeeds to a large extent in penetrating the institutional life of a prehistoric people, bringing to light unknown aspects of its cultural, social, legal, and religious life. Despite its deficiencies with regard to some interpretations, the book remains a classic of its kind, and will be difficult to supersede.⁴⁶

d. Watkins' book *How to kill a dragon. Aspects of Indo-European poetics* (1995) is an illustrious example of how historical linguistics and classical philology can join forces and reach wondrous results. Exploiting finds and using methodological tools of structural linguistics, mainly the advances made by the linguists of the Prague School, and especially the work by Jakobson on poetics and poetic grammar, Watkins develops a theory of Indo-European poetic grammar, its various subparts and its methodology, and then applies it to the 'dragon slaying' theme, which, according to him, is a central theme for Indo-European culture. His motto that 'philology is the art of reading slowly' is his leading guide, meaning by this that every progress in reconstructing the prehistoric past of language and culture goes through the close and careful reading of the texts, the main, and often the sole, source of information. I think that in the case of this book the principle that history is both explanans and explanandum applies most adequately, and this is one of the great merits of the particular work and of its method.⁴⁷

e. Although not strictly linguistic or philological, M.L. West's recent book *Indo-European poetry and myth* (2007) is a good example for the kind of relations proposed in this study. The study of myth is tightly connected with the study of the texts of classical antiquity, and the comparative framework of Indo-European can offer the necessary basis for analyzing and

⁴⁶Benveniste's work represents the "French School" of thought which is in line with structural and cultural anthropology. Many scholars have expressed serious reservations with respect to many of Benveniste's interpretations. The skepticism is stronger among German scholars who charge Benveniste with oversimplifications and naive solutions to very complex problems. For a comprehensive criticism, see Schmitt (1969).

⁴⁷For appraisals of this book, see Bader (1998) and Schlerath (2000).

interpreting a number of recurring themes in the classical languages. This comparative framework, as ably described and amply illustrated by West, offers a holistic answer to many problems of the philological and mythological issues of the individual branches, freeing classics from the kind of introversive attitude that Jäger referred to in the next section, and widening the interpretive perspective. West explains that his method is not just another view but rather a vista to the research that he and other researchers have presented. He says: "Vista is the better word, because the object of perception is not something at a fixed distance like a line of hills on the horizon. Vistas have depth. [...] the elements of shared inheritance that can be abstracted from the extant Indo-European literatures cannot all be followed back to proto-Indo-European. Much the greater number lie in the foreground or the middle distance, corresponding to pools of common tradition that must have extended over wide areas of Europe or Eurasia in the later Bronze or early Iron Age. Perhaps they reach further back, but we cannot see; the mists come and go" (2007: vi). It is sure that within these mists lie many elements of what we could call 'capsules of Indo-European proto-philology', and this method aims at teasing out from among the mist as much of this common inheritance as possible.⁴⁸

These works should be seen not as a complete list of all the works in the spirit put forth here, but only as a small token out of a long catalog of similar works spanning over a period of a two-hundred-year interdisciplinary research. However, they do present the main trends and tenets in the field of comparative Indo-European philology, not just linguistics. Thus, the concept of interdisciplinarity promotes a holistic examination of the area studied, with coverage of all sides of the research object: linguistic, textual, cultural, historical, archaeological, geophysical, and with close consideration of the total context. Such an approach does not disregard the part, nor does it fail to note the particularity of the detail, but tries to produce a new synthesis out of all parts involved. And this is its main attraction. And it is precisely this point that makes the acquaintance with these works by all linguists and philologists necessary. Were that to happen, at least classical philology would have been seen in a much clearer, perhaps

⁴⁸For a short appraisal of West's book, see Schmitt (2008).

even more optimistic, light. In this way, when one of the subdisciplines engaged is utilized, all others snap into alignment, and the result is a panoramic view of the total picture. This total picture creates the best possible conditions for plausible solutions, i.e. for the interpretation of the data.

‘The future of the past’⁴⁹

For a long time the term ‘comparative philology’ has been used for comparative linguistics, especially for the comparative study of the Indo-European languages, a fact signifying the close relationship between (classical) philology and historical linguistics. In our view, the comparative dimension is equally necessary for both fields. Civilizations may have a local and an ‘ethnic’ identity, but they are also historical products; they have roots, relations and influences from and upon other civilizations. Nothing exists in an absolute vacuum, nor is it born out of complete nothingness.

Some deplore a certain ‘crisis’ that seems to plague classical studies in the last few decades (see, for instance, Hanson and Heath 1998). I am not sure whether one can speak of a crisis or just another phase that classical and in general humanistic studies undergo nowadays. Besides, the appearance of new fields and of new philologies occupied part of the space that was traditionally the exclusive territory of classical philology. All these are an understandable and to a certain extent a just and positive development. The issue is that crucial questions like “what is classical philology today?”, “why classical philology?”, “classical or modern philology?”, and the like are recurrent and are persistently and urgently begging an answer. We cannot (in fact, should not) bypass them with general aphorisms and other such axiomatic statements. In the preceding pages we attempted to suggest a partial answer to these questions, but many other issues remain untouched.

Perhaps the most crucial of all these issues is the relevance of classical philology to modern man. Many specialists and other thinkers rightly cast the stone of the blame for the crisis upon the servants of classical philology, not philology itself. The failure to make philology’s message clear to modern man is the responsibility of classical philologists, and this may hide the key to the way out of the stalemate.

⁴⁹For the forerunner of the title of this section, see Adkins (1969).

Gerhard Jäger puts the issue in the following way:

Classical philology must, therefore, answer to a double intermediary role: it has to be ready and capable to assist us to understand the classical texts and their intellectual content, and at the same time to initiate a dialog with modern man. Hermeneutics as the nucleus of philological work should be conceived as part of the communicative process whereby the historical dimension is to be understood and communicated to the present (1975: 31).

Jäger's statement comes as the result of his position that the problem with classical philology is that the philologists fail to communicate with or meet the expectations and the needs of modern man, and thus classical philology:

[...] has to account for its untimely character, or better for its departure from reality as well as for some kind of introversion, such as a tendency to didacticism, instead of manumission, and an adaptation to all sorts of ideological trends. The indifference towards philology is partly due to the relativization of its subject matter by historicism, a fact that leads to estrangement and alienation. A historical approach inevitably detaches the research subject from the familiar surroundings and from modern concerns, exiling it onto a strange context. On the part of the public, there is also a widely held *a-historical* treatment of the present (1975: 29).

And a little later Jäger points to the 'guilty part' for this situation, saying that "[...] classical philology as a scientific field should not be held in any way whatsoever responsible for this. The decisive question is whether its practitioners adopt an unrealistic approach, which is accountable for the above held responsibilities..." (p. 29), and he concludes with the emphatic statement that "[...] our slogan should not be 'antiquity *or* modern world' but 'antiquity *and* modern world'" (p. 231).⁵⁰ The resolution of the above pseudo-dilemma is made of the same stuff as the other pseudo-dilemma that we faced earlier, namely 'linguistics *or* philology?' and which we

⁵⁰See also his 1987 study. Similar concerns were expressed by Hanson and Heath (1998).

resolved with the conjunctive synthesis 'linguistics *cum* philology'.

In our approach special emphasis has been placed upon the diachronic and the comparative aspects of the problems addressed, two features that transcend and imbue the 'linguistics *cum* philology' method as a whole. Considering the nature and the character of both philology and historical linguistics as described in the paper, it is evident that one needs to possess a general theory for language change, as well as a general theory of social and historical change, since the scientific method is not meant as the simple description of things but one that seeks their interpretation and, if possible, their explanation. Agreeing with Traugott (1982: 463-64) in her concluding remarks on the Panel on Historical Linguistics and Philology, the 'sociolinguistic enterprise', as she calls it, consists of the textual analysis, the reconstruction of the sociocultural setting, and the theory-construction. Text, context, and theory are fundamental prerequisites of either philological or (historical) linguistic operation, or of both of them combined.

The first gain for classical philology from its collaboration with historical and comparative linguistics is the widening of its spatial range and the extension of its comparative and diachronic horizons. As with linguistics, so also with philology, certain things that are the philologist's concern can be projected back into the past and up to their distant origins. And as with linguistics, so also with philology, the comparison with cognate traditions can shed light on otherwise dark or unknown aspects of the classical texts. The results of the research assume a wider and longer perspective, and ultimately a higher degree of plausibility. The comparative perspective will also help to overcome the limits and the limitations imposed by the individual researcher's (especially the philologist's) range of experience and knowledge, and give to the investigation greater universality. The conjunctive method of diachrony and comparison may ultimately lead to what one would call 'proto-philological' prototypes or primes, both as regards linguistic and other such expressive means but also with regard to generic, thematic, or other aspects of the tradition of classical philology. Such a proto-philology could contain common cultural features, such as myth, institutions, ideas, genres (e.g. epic poetry, sacral poetry, legal codes, etc.).

The tradition of Indo-European poetic language has made good advances in the area of formal organization of such features in language (e.g. formulae and other expressive devices). On the level of thematics comparative mythology has also produced some promising results. Using language as its vehicle, philology too can try its luck in the area of Indo-European traditions. The comparative apparatus creates more favourable conditions for the method to penetrate deeper into the prehistory and illustrate more effectively common origins, as well as the variations in individual philological traditions, see what may be of universal character, what is inherited from Indo-European, and finally what could be an innovation of one branch alone.

One clarification is perhaps in order here. Unlike the reconstruction of protolanguages, which is the end-result of the comparative method applied in linguistics, it would be vain to seek such a result in philology. In other words, above the level of short syntagms like the formulae or similar lexical combinations it is impossible to reconstruct proto-texts. Philological reconstructions must be confined to the level of what we termed 'thematics', i.e. general motifs and themes that are reconstructed for the common proto-philological source. Such a reconstruction is possible only through the close reading of the available texts from the various languages.⁵¹ Watkins describes this procedure as follows:

"Philology is the art of reading slowly." My methodology throughout has been a combination of extremely close reading of text passages in the original [...] with the traditional Comparative Method. It is my claim that what may be legitimately if tendentiously termed the "genetic intertextuality" of all the versions of certain particular formulas and themes, varying in time, place and language, constitutes a background without which one cannot fully apprehend, understand and appreciate the traditional elements in a given poetic text in an early

⁵¹By 'texts' is meant not only texts of the old literary tradition, but also various texts of the oral tradition that have been survived either by their recording in writing (e.g. the Homeric epics and many similar products from other traditions) or came down to our days in different ways of oral transmission (e.g. all sorts of oral stories, heroic songs, riddles, fables, etc.). However, it goes without saying that the prior screening and sieving by means of the comparative method of all these types of texts in order to appraise their value for the reconstructive procedure are a basic prerequisite.

Indo-European language. In this sense we may speak of a genetic Indo-European comparative literature (1995: vii).⁵²

Closer to historical linguistics, we would agree with the idea of reconstruction as the *re-enactment* of the past. The comparative method is at the same time anamnestic and proleptic, reconstructing and interpreting the past but also looking into the future by way of making inferences for possible future developments. The concept of historical investigation as re-enactment of the past is as old as man's effort to interpret his past, but was developed into a full-blown methodological procedure in the composite idea of *Altertumswissenschaft* of the nineteenth-century German philology and history.⁵³ Anttila (1989: 285) explains this idea in the following way:

Reconstruction thus means piecing together a possible chain of events, a state of affairs, i.e. inferring the case. The inference involved is abduction (and induction [...]), not deduction, and the frame is classical hermeneutic anamnesis (re-enactment through interpretation and understanding), not natural science. What we are doing here is interpreting circumstantial evidence in the manner of hunters, sailors, physicians, and particularly detectives. It is important to note that such various contexts have called forth sundry names for

⁵²Although it is implicitly understood in Watkins' statement, we would make it explicit by adding in the first sentence the phrase 'and in context' and read as follows: "Philology is the art of reading slowly *and in context*." And this principle applies to both philology and historical linguistics.

⁵³See further Collingwood (1946: 218) who gives the following comprehensive definition of this matter: "Historical knowledge is the knowledge of what mind has done in the past, and at the same time it is the redoing of this, the perpetuation of past acts in the present. Its object is therefore not a mere object, something outside the mind which knows it; it is an activity of thought, which can be known only in so far as the knowing mind re-enacts it and knows itself as so doing. To the historian, the activities whose history he is studying are not spectacles to be watched, but experiences to be lived through in his own mind; they are objective, or known to him, only because they are also subjective, or activities of his own." And to complement the historian's view with a linguistic one, Lass (1997: 24) adds: "The past is not after all anything very special; it's simply a present that doesn't exist any more." Therefore, the historian's task is to re-make this past and bring it to the present by making it as relevant to the present as possible.

the indexes involved: *sign* (track, trace), *symptom*, *syndrome*, *clue*...⁵⁴

The past is alien, and its reading intends to make it familiar again to the interpreter through its resemanticization as required by the interpreter's experience. In this sense, then, the reading of the past by means of reconstruction is like the historians' task to decipher the hieroglyphs of history (von Ranke). The clues that lead the historian in this struggle are precisely the signs, the symptoms and other such traces that he locates and interprets during the course of his investigation.

Conclusion

Summarizing our methodological procedure, we underline the main features of the 'linguistics *cum* philology' approach. This method is interdisciplinary and combines a number of 'paleosciences', i.e. sciences that deal with prehistory; the leading fields are of course historical linguistics and classical philology. The method is also comparative, comprising many languages, texts, genres, themes, etc. The comparison takes place on various levels, e.g. language per se, etymology, syntagmatics, poetic language, textual and intertextual, myth, themes, etc.; it can also be applied both in terms of geographical areas and on the entirety of the linguistic family. It is important to keep the comparison within reasonable limits and conduct it with care, moderation and frugality.⁵⁵ Since our approach is also historical and the target is the remote past, the method is also reflective, aiming at the reconstruction and the interpretation of this past. Thus, the aim of interpretation is not simply the knowledge but rather the re-enactment of the past, an act that legitimates the engagement of modern reality as well. It always involves a mediating between the

⁵⁴But see also Lass (1980: 45ff. and 1997: 21ff., 332ff. and *passim*).

⁵⁵The comparative method is not a panacea, and cannot be applied indiscriminately to all sorts of cases or data. The great danger that derives from overenthusiasm about or from the overconfidence in the merits of comparison lies in that it may give legitimacy to superficial and arbitrary reflection. This is the reason why the most crucial step (perhaps, the most difficult as well) for the adequate application of the method is the choice of the things to be compared, as well as to determine the limits of the comparison: comparison and reconstruction cannot be conducted *ad infinitum*.

text's ideas and the ideas of the interpreter, what Gadamer calls 'fusion' of two horizons, that of the text and that of the interpreter. In other words, the historian, in the broad sense of the term as the interpreting mind, has to re-live the past and thus to understand by recreating it through reconstruction, but at the same time he must bring this past up to his time and make it relevant to today's concerns. And this can be done only by remoulding this past according to today's weights and measures. Despite their objective worth only thus can the value of classics be meaningful to modern man: this value must constantly and continually be re-interpreted and re-evaluated.

History is the overall teacher that illustrates many otherwise obscure, ambiguous or unexplained aspects of our endeavour, or, to put it in Gadamer's words, "[...] what makes sense can be understood at sight, and what does not can be understood 'historically'" (2004: 182).⁵⁶ Since our sources are primarily textual, the critical editions of these texts are significant, and this is both a philological and a linguistic operation. Holistic methods lead to holistic constructs. Our plea is for more linguistics in philology and, conversely, for more philology in (historical) linguistics. This helps classical philology to reunite with its progenitors, its many siblings, as well as with many of its offspring. This reunion adds to our analysis the necessary elements of width and depth and to the interpretation a higher degree of plausibility and conviction, and it may ultimately regain for the field of classical studies some of its lost optimism.

References

Adkins, A. W. H.

- 1960 *Merit and responsibility. A study in Greek values.* Oxford: Oxford University Press.
 1969 Classical studies: has the past a future? *Didascalos* 3, 19-35.

⁵⁶Seen from the real-life vantage point, where hermeneutics is grounded and whence it springs, Gadamer, commenting on Dilthey's idea of hermeneutics, notes: "Life itself, flowing temporality (i.e., history - G.K.G.), is ordered toward the formation of enduring units of significance. Life interprets itself. Life itself has a hermeneutical structure. Thus life constitutes the real ground of the human sciences" (2004: 220-221).

- 1972 *Moral values and political behaviour in ancient Greece from Homer to the end of the fifth century*. New York: W.W. Norton and Co. Inc.
- Ahlqvist, A. (ed.).
1982 *Papers from the 5th International Conference on Historical Linguistics*. Amsterdam: John Benjamins.
- Andersen, H.
1982 *Discussion* (on the Panel on Philology and Historical Linguistics). In Ahlqvist 1982, 457-459.
- Anthony, D. W.
2007 *The horse, the wheel and language. How Bronze-Age riders from the Eurasian steppes shaped the modern world*. Princeton and Oxford: Princeton University Press.
- Anttila, R.
1975 Linguistics and Philology. In: *Linguistics and neighboring disciplines*, Bartsch, R. and Th. Vennemann (eds.), 145-55. Amsterdam: North-Holland Publishing Company.
1989 *Historical and comparative linguistics*. Amsterdam and Philadelphia: John Benjamins.
2000 *Greek and Indo-European etymology in action. Proto-Indo-European *aǵ-*. Amsterdam and Philadelphia: John Benjamins.
2002 The role of parallels (in historical work). *Studies in Greek Linguistics* 22, 28-37.
- Arbuckle, J.
1970 August Schleicher and the linguistics/philology dichotomy: a chapter in the history of linguistics. *Word* 26, 17-31.
- Bader, Fr.
1993 *Anagrammes et allitérations*. Paris – Louvain: Peeters.
1998 Review of Watkins 1995. *BSL* 93/2, 116-130.
- Bartoněk, A.
2003 *Handbuch des mykenischen Griechisch*. Heidelberg: Winter.
- Benveniste, E.
1969 *Le vocabulaire des institutions indo-européennes*, 2 vols. Paris: Minuit.
- Beyer, K. and D. Cherubim.
1973 Linguistik und alten Sprachen: eine Polemik? *Gymnasium* 80, 251-279.
- Boeckh, A.
1968 *On interpretation and criticism*. Norman: University of Oklahoma Press. (German edition under the title *Enzyklopädie und Methodentehre der philologischen Wissenschaften*, Leipzig 1886).

- Bolling, G. M.
1929 Linguistics and philology. *Language* 5, 27-32.
- Bréal, M.
1878 Sur les rapports de la linguistique et de la philologie. *Revue de Philologie, de Littérature et d'Histoire ancienne* (2e série) 2, 1-10.
- Brugmann, K.
1885 Sprachwissenschaft und Philologie. In *Zum heutigen Stand der Sprachwissenschaft*, 1-41. Strassburg: Karl J. Trübner.
- Buck, C. D.
1949 *A dictionary of selected synonyms in the principal Indo-European languages*. Chicago: Chicago University Press.
- Campanile, E.
1993 Reflexions sur la reconstruction de la phraséologie poétique indoeuropéenne. *Diachronica* 10, 1-12.
- Cannadine, D. (ed.).
2002 *What is history now?* London: Palgrave Macmillan.
- Carr, E. H.
1987 *What is history?* (2nd ed.). London: Penguin.
- Carroll, J. B.
1955 *The study of language. A survey of linguistics and related disciplines in America*. Cambridge, MA: Harvard University Press.
- Chantraine, P.
1968-80 *Dictionnaire étymologique de la langue grecque. Histoire des mots*. Paris: Klincksieck.
- Collingwood, R. G.
1946 *The idea of history*. Oxford: Clarendon Press.
- Costa, G.
1998 *Le origini della lingua poetica indeuropea*. Firenze: Olschki.
- Curtius, G.
1845 *Die Sprachwissenschaft in ihrem Verhältnis zur klassischen Philologie*. Berlin: W. Besser.
1886 Philologie und Sprachwissenschaft. *Kleine Schriften I. Ausgewählte Reden und Vorträge*, E. Windisch (ed.), 132-150. Leipzig: Hirzel.
- Debrunner, A.
1930 Sprachwissenschaft und Klassische Philologie. *Indogermanische Forschungen* 48, 1-25.
- Diebold, R. A., Jr.
1987 Linguistic ways to prehistory. In *Proto-Indo-European: The*

archaeology of a linguistic problem. Studies in honor of Marija Gimbutas, S.N. Skomal and E.C. Polomé (eds.), 19-71. Washington, D.C.: Institute for the Study of Man.

Eichner, H. and H. Rix (eds.).

- 1990 *Sprachwissenschaft und Philologie. Jacob Wackernagel und die Indogermanistik heute*. (Kolloquium der Indogermanischen Gesellschaft 13.-15. Oktober 1989 in Basel). Wiesbaden: Reichert Verlag.

Finley, M. I.

- 1978 *The world of Odysseus*. New York: Viking Press.

Fisiak, J. (ed.).

- 1990 *Historical linguistics and philology*. Berlin and New York: Mouton de Gruyter.

Förster, K. G. J.

- 1851 *Gesetz der deutschen Sprachentwicklung, oder: Die Philologie und die Sprachwissenschaft in ihren Beziehungen zu einander und zum deutschen Geiste*. Berlin: Silivius Landsberger.

Frisk, H.

- 1960-1972. *Griechisches etymologisches Wörterbuch*. Heidelberg: Carl Winter.

Gadamer, H. -G.

- 2004 *Truth and method*. London – New York: Continuum.

Gamkrelidze, T. V. and V. V. Ivanov.

- 1995 *Indo-European and the Indo-Europeans. A reconstruction and historical analysis of a protolanguage and a proto-culture*. Berlin and New York: Mouton de Gruyter.

Gardiner, P.

- 1961 *The nature of historical explanation*. London – Oxford – New York: Oxford University Press.

Gasparov, M. L.

- 1996 *A history of European versification*. Oxford: Clarendon Press.

Giannakis, G. K.

- 1993 On the Indo-European mythopoetic formula **(H)nom̥ dh̥-* "put/make a name". *Papers from the 29th Regional Meeting of the Chicago Linguistic Society*, 187-198. Chicago: Chicago Linguistic Society.
- 1997 *Studies in the syntax and the semantics of the reduplicated presents of Homeric Greek and Indo-European*. (Innsbrucker Beiträge zur Sprachwissenschaft, Band 90). Innsbruck: Institut für Sprachwissenschaft der Universität.
- 2000 Classical Greek studies on the verge of the millennium: a linguist's view. *Phasis (Greek and Roman Studies)* 2-3, 136-140.

- 2005 *The Indo-Europeans. Part I: Language and culture.* Athens: Institute of the Book - A. Kardamitsa (in Greek).
- 2005a Classical philology from the perspective of a historical linguist. *Dodoni: Annual Scientific Review of the Department of Philology of the University of Ioannina* 34, 239-267 (in Greek).
- 2008 The Indo-European poet and his craft. *Ἀλεξάνδρεια /Alessandria (Rivista di glottologia)* 2, 47-65.
- Gimbutas, M.
1974 An archaeologist's view of PIE in 1975. *Journal of Indo-European Studies* 2, 289-307.
- Gippert, J.
1998 Review of Gamkrelidze and Ivanov 1995. *Beiträge zu Namenforschung* 33, 39-54.
- Gonda, J.
1970 *Notes on names and the name of god in Ancient India.* Amsterdam and London: North-Holland.
- Hahn, A. E.
1969 *Naming-constructions in some Indo-European languages.* (Philological Monographs of the American Philological Association No. 27). Case Western Reserve University Press.
- Hajnal, I.
1998 *Mykenisches und homerisches Lexikon. Übereinstimmungen, Divergenzen und der Versuch einer Typologie.* (Innsbrucker Beiträge zur Sprachwissenschaft, Vorträge und Kleinere Schriften 69). Innsbruck: Institut für Sprachwissenschaft der Universität.
2003 *Troia aus sprachwissenschaftlicher Sicht. Die Struktur einer Argumentation.* (Innsbrucker Beiträge zur Sprachwissenschaft, Band 109). Innsbruck: Institut für Sprachwissenschaft der Universität.
- Hale, M.
2007 *Historical linguistics. Theory and method.* Oxford: Blackwell.
- Hanson, V. D. and J. Heath.
1998 *Who killed Homer? The demise of classical education and the recovery of Greek wisdom.* New York: Free Press.
- Hehn, V.
1976 [1870] *Cultivated plants and domesticated animals in their migration from Asia to Europe. Historico-linguistic studies.* Amsterdam and Philadelphia: John Benjamins.
- Hjelmslev, L.
1961 *Prolegomena to a theory of language.* Madison: The University of Wisconsin Press.

- Hildebrandt, R.
1975 Linguistik contra Sprachwissenschaft. In *Neuere Forschungen in Linguistik und Philologie: Aus dem Kreise seiner Schüler Ludwig Erich Schmitt zum 65. Geburtstag*, 1-6. Wiesbaden: Franz Steiner.
- Hofmann, D.
1973 Sprachimmanente Methodenorientierung – sprachtranszendente ‘Objektivierung’: Zum Unterschied zwischen Linguistik und Philologie. *Zeitschrift für Dialektologie und Linguistik* 40, 295-310.
- Ivanov, V. V.
1981 *Slavjanskii, Baltiiskii i rannebalkanskii glagol: indoeuropeiskie istoki*. Moscow: Izdatel'stvo "Nauka".
- Jäger, G.
1975 *Einführung in die Klassische Philologie*. Munich: C.H. Beck.
1987 Philologie und Linguistik. Historische Notizen zu einem gestörten Verhältnis. In *Geschichte der Sprachtheorie. I. Zur Theorie und Methode der Geschichtsschreibung der Linguistik*, ed. by P. Schmitter, 198-223, Tübingen: Narr.
- Jakobson, R.
1960 Closing statement: linguistics and poetics. In *Style in language*, ed. by T. A. Sebeok, 350-377. Cambridge, MA: MIT Press.
1987[1960] The poetry of grammar and the grammar of poetry. In *Language in literature*, 121-144. Cambridge, MA and London: Belknap - Harvard.
- Jankowsky, K. R.
1972 *The Neogrammarians. A re-evaluation of their place in the development of linguistic science*. The Hague – Paris: Mouton.
1973 Philologie – Linguistik – Literaturwissenschaft. *Lingua Posnaniensis* 17, 21-35.
- Kazansky, N. N.
1995 Indo-European onomastics as an historical source. *Journal of Indo-European Studies* 23, 157-177.
- Koerner, E. F. K.
1989 On the historical roots of the philology vs. linguistics controversy. In: *Practicing linguistic historiography. Selected essays*, 233-244. Amsterdam and Philadelphia: John Benjamins.
- Lass, R.
1980 *On explaining language change*. Cambridge: Cambridge University Press.
1997 *Historical linguistics and language change*. Cambridge: Cambridge University Press.

- Latacz, J.
Klassische Philologie und moderne Linguistik. *Gymnasium* 81, 67-89.
2004 *Troy and Homer: Toward a solution of an old mystery*. Oxford: Oxford University Press.
- Leukart, A.
1994 *Die frühgriechischen Nomina auf -tas und -as. Untersuchungen zu ihrer Herkunft und Ausbreitung (unter Vergleich mit den Nomina auf -eus)*. Wien: Österreichische Akademie der Wissenschaften (Phil.-Hist. Klasse, Sitzungsberichte 558).
- Lord, A. B.
1960 *The singer of tales*. Cambridge, MA: Harvard University Press.
- Maher, J. P.
1977 *Papers on language theory and history*. Amsterdam: John Benjamins.
- Malkiel, Y.
1968 *Essays on linguistic themes*. Berkeley – Los Angeles: University of California Press.
- Mallory, J. P.
1989 *In search of the Indo-Europeans: Language, archaeology and myth*. London: Thames and Hudson.
- Mallory, J. P. and D. Q. Adams
1997 *Encyclopedia of Indo-European culture*. London – Chicago: Fitzroy Dearborn.
2006 *The Oxford introduction to Proto-Indo-European and the Proto-Indo-European world*. Oxford – New York: Oxford University Press.
- Matasović, R.
1996 *A theory of textual reconstruction in Indo-European linguistics*. Frankfurt am Main: Peter Lang.
- Meid, W.
1989 *Archaeologie und Sprachwissenschaft. Kritisches zu neueren Hypothesen des Ausbreitung der Indogermanen*. (Innsbrucker Beiträge zur Sprachwissenschaft, Kleinere Schriften, Band 43). Innsbruck: Institut für Sprachwissenschaft der Universität.
- Meid, W. and H. Schmeja (eds.).
1983 *Philologie und Sprachwissenschaft. Akten der 10. Österreichischen Linguisten-Tagung, Innsbruck, 23.-26. Oktober 1982*. (Innsbrucker Beiträge zur Sprachwissenschaft, Band 43). Innsbruck: Institut für Sprachwissenschaft der Universität.
- Meillet, A.
1967 *The comparative method in historical linguistics*. Paris: Champion.

- Onians, R. B.
1951 *The origins of European thought about the body, the mind, the soul, the world, time, and fate*. Cambridge: Cambridge University Press.
- Papanastasiou, G. K.
2001 *Issues of Ancient Greek within Indo-European. Initial A*. University of Thessaloniki Ph.D. Dissertation (in Greek).
- Parry, M.
1971 *The making of the Homeric verse*. (Edited by A. Parry). New York: Oxford University Press.
- Pictet, A.
1877 [1859-63] *Les origines indo-européennes ou les Aryas primitifs. Essai de paléontologie linguistique*. Paris: Sandoz and Fischbacher.
- Pinault, G. J.
1982 L'expression indo-européenne de la nomination. *Études indo-européennes* 3, 15-36.
- Pulgram, E.
1947 Indo-European personal names. *Language* 23, 189-206.
1960 New evidence on Indo-European names. *Language* 36, 198-202.
- Reid, T. B. W.
1956 Linguistics, structuralism, and philology. *Archivum Linguisticum* 8, 28-37.
- Robinett, B. W., R. A. Hall, Jr., H. Kurath, H. M. Hoenigswald, H. L. Smith, Jr., W. F. Twaddell and C. C. Fries.
1952-53 Classics and linguistics. *Classical Weekly* 46, 97-100.
- Robins, R. H.
1979 *A short history of linguistics*. (2nd ed.). London – New York: Longman.
- Scherer, A. (ed.).
1968 *Die Urheimat der Indogermanen*. Darmstadt: Wissenschaftliche Bechgesellschaft.
- Schleicher, A.
1850 Linguistik und Philologie. In: *Die Sprachen Europas in systematischer Uebersicht*, 1-5. Bonn: H.B. König. (New edition by E.F.K. Koerner, Amsterdam – Philadelphia: John Benjamins, 1983).
- Schlerath, B.
2000 Review of Watkins 1995. *Kratylos* 45, 36-46.
- Schmitt, R.
1967 *Dichtung und Dichtersprache in indogermanischer Zeit*. Wiesbaden: Harrassowitz.

- 1969 Review of Benveniste 1969. *Kratylos* 14, 39-46.
2008 Review of West 2007. *Kratylos* 53, 62-71.

Schrader, O.

- 1906-7 *Sprachvergleichung und Urgeschichte*. Jena: Costenoble.
1917-29 *Reallexikon der indogermanischen Altertumskunde*, 2 vols. (hrsg. von A. Nehrung). Berlin – Leipzig: Walter de Gruyter.

Schramm, G.

- 1957 *Namenschatz und Dichtersprache*. Göttingen: Vandenhoeck and Ruprecht.

Schulze, W.

- 1966 *Kleine Schriften*. Göttingen: Vandenhoeck and Ruprecht.

Sergent, B.

- 1995 *Les indo-européens. Histoire, langues, mythes*. Paris: Payot and Rivages.

Solmsen, F.

- 1922 *Indogermanische Eigennamen als Spiegel der Kulturgeschichte*. Heidelberg: Carl Winter.

Starobinski, J.

- 1971 *Les mots sous les mots. Les anagrammes de Ferdinand de Saussure*. Paris: Gallimard.

Stechow, A. von.

- 1970 Sprachwissenschaft vs. Linguistik: Kritische Bemerkungen zu Leo Weisgerbers 'Hat das Wort "Muttersprache" ausgedient?'. *Muttersprache* 80, 396-399.

Stuart-Smith, J.

- 2004 *Phonetics and Philology. Sound change in Italic*. Oxford: Oxford University Press.

Sturtevant, E.H. and R.G. Kent.

- 1929 Linguistic science and classical philology. *Classical Weekly* 22, 9-13.

Szemerényi, O.

- 1979 Etyma Graeca IV (22-29): Homeric et Mycenaica. *Studi Micenei ed Egeo-Anatolici* 20, 207-226 (= *Scripta Minora III*, 1494-1513).
1996 *Introduction to Indo-European linguistics*. Oxford: Oxford University Press.

Thieme, P.

- 1953 *Die Heimat der indogermanischen Gemeinsprache*. Wiesbaden: Steiner.
1964 The comparative method for reconstruction in linguistics. In *Language in culture and society. A reader in linguistics and anthropology*, D. H. Hymes (ed.), 585-598. New York: Harper and Row.

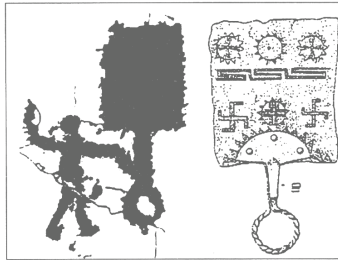
- Traugott, E. C.
1982 Concluding remarks. In Ahlqvist 1982, 460-466.
- Vendryes, J.
1951 Linguistique et philologie. *Revue des études slaves* (= *Mélanges André Mazon*) 27, 9-18.
- Watkins, C.
1962 *Indo-European origins of the Celtic verb. I. The sigmatic Aorist*. Dublin: The Dublin Institute for Advanced Studies.
1981 Language, culture, or history? *Papers from the Parasession on Language and Behavior*, 238-248. Chicago: Chicago Linguistic Society.
1989 New parameters in historical linguistics, philology, and culture history. *Language* 65, 783-799.
1990 What is philology? In Ziolkowski 1990, 21-25.
1992 Culture history and historical linguistics. In *International Encyclopedia of Linguistics*, W. Bright (ed), vol. I, 318-22. New York and Oxford: Oxford University Press.
1994 *Selected writings*, 2 vols. (Innsbrucker Beiträge zur Sprachwissenschaft, Band 80). Innsbruck: Institut für Sprachwissenschaft der Universität.
1995 *How to kill a dragon: Aspects of Indo-European poetics*. New York and Oxford: Oxford University Press.
- Wellek, R. and A. Warren.
1956 *Theory of literature*. New York: Harcourt, Brace and World, Inc.
- West, M. L.
1997 *The east face of Helicon. West Asiatic elements in Greek poetry and myth*. Oxford: Clarendon Press.
2007 *Indo-European poetry and myth*. Oxford: Oxford University Press.
- White, D. S.
1953-54 Classics and linguistics. *Classical Weekley* 47, 42-43.
- Zimmer, St.
1999 Comments on a great book: *The encyclopedia of Indo-European culture*, ed. by J.P. Mallory and D.Q. Adams. *Journal of Indo-European Studies* 27, 105-163.
- Ziolkowski, J. (ed.).
On philology. University Park and London: The Pennsylvania State University Press.

Departure from the Homeland: Indo-Europeans and Archaeology

*Selected Papers from the 12th European Association of Archaeologists
Annual Meeting, Krakow, Poland, 19th to 24th September 2006*

Journal of Indo-European Studies Monograph No. 56

Edited by Marc Vander Linden and Karlene Jones-Bley



*Indo-European Archaeology—what it is, and why it is important – Karlene Jones-Bley; Celts and Indo-Europeans: linguistic determinism? – John Collis; The dutch Group—IE *teuteH₂: The evolution of ethnic groups in north-western Europe – Raimund Karl; Word and figure: a lucky combination on the Valcamonica rocks for the study of Pre-Christian symbolism and religion – Adolfo Zavaroni; Bodily attributes and semantic expressions: knees in rock art and Indo-European symbolism – Åsa Fredell and Marco V. Garcia Quintela; Proto-Indo-European Languages and Institutions: An Archaeological Approach – Kristian Kristiansen; Drinking from the Horn of Plenty: On the use of historical data for prehistoric analogical reasoning – Marc Vander Linden; The Costume of Iranian Peoples of Classical Antiquity and the Homeland of Indo-Iranians – Sergey Yatsenko.*

ISBN 978-0-941694-80-3 Hardback 2009, Pages 185 \$78.00
ISBN 978-0-941694-27-8 Paperback 2009, Pages 185 \$48.00

The JIES Monograph Series

1133 13th St. NW, #C-2, Washington DC 20005
WWW.JIES.ORG, icjournal@aol.com, T (202) 371-2700, F (202) 371-1523
VISA/MC, US dollar cheque or M.O. accepted

Semantic-pragmatic functions of *râ* in Persian: a diachronic and synchronic study

Jalal Rahimian and Farrokh Hajiani
Department of Foreign Languages and Linguistics
Shiraz University
Islamic Republic of Iran

After a brief look at the history of *râ*, and an overview of contemporary studies on it, this paper aims at showing that *râ* may appear with noun phrases having one of the features such as definiteness, specificity, genericity. However, it is not an exclusive maker of any of the above. The main argument of the present research is that in the realm of Pragmatics, any phrase obligatorily followed by *râ* is necessarily of a *high degree of reference* as discussed in the body of the paper. With structures similar in terms of any of the concepts conveying the above features, but differing only in presence or absence of *râ*, the form accompanied by *râ* reflects a higher degree of reference to the entity in question compared to the one without *râ*. The paper also discusses adjuncts represented by NPs accompanied by *râ*. Finally, prepositional phrases accompanied by *râ* along with their pragmatic functions are discussed.

1. Introduction

Almost all natural languages undergo drastic changes in the course of centuries in different respects, including phonology, syntax and meaning. Persian is among the languages which have changed greatly through its three diachronic periods, namely, Old, Middle and Modern Persian, especially in terms of syntax and phonology. About 2500 years ago when Iranians spoke Old Persian besides adjectives and verbs nouns were inflected in reflecting cases such as accusative, dative, ablative, etc. However, in Modern Persian no noun is inflected for such cases. Instead, different prepositions such as *be* 'to' *az* 'from, of', *bâ* 'with, by', etc., and a postposition called *râ* are used in expressing the different cases of the NPs. This paper aims at a diachronic as well as a synchronic study of *râ*. First, we start with its origin and evolution, then will analyze and discuss its function(s) in today's Persian.

Persian Phrasal categories have been extensively scrutinized from different perspectives by different scholars, including Browne (1970), Peterson (1974), Lazard (1982), Samiiian (1983), Karimi (1989, 1990), Dabir-Moghaddam (1990), Mahootian (1997), Ghomeshi (1996) and Darzi (2005). How NPs are marked for different syntactic or semantic-pragmatic properties forms a main part of linguistic studies on the NP. In the domain of this category, definiteness, genericity and specificity have brought about considerable debate.

A number of functions of dependents in marking the NP for a certain feature are crystal-clear. In the following, for instance, the NP is formally marked for definiteness by the determiner *in* 'this':

- 1) *in ketâb jadid-e-ø*
 this book new-be.NPS-3SG
 This book is new

However, in numerous other cases, there may be disagreement upon the way different syntactic-semantic features are marked. Moreover, sometimes, the NP is accompanied by no formal marker while, depending on the context, it is open into definite or indefinite interpretations. In the following, for example, depending on prosodic features of the sentence, *sib* 'apple' would be interpreted as definite or indefinite:

- 2) *Sib xarid-i?*
 apple buy.PS-2SG
 a. Have you bought apples?
 b. Have you bought the apples?

Question (2a) conveys the first interpretation of the Persian version. It would be used in a context where a wife notes that her husband arriving home is carrying a bag full of apples which she had not ordered at all. Question (2b) reflects the second interpretation of the Persian version. It would be used in a context where a wife sees her husband arriving at home carrying a bag of apples which she had asked him to buy when leaving home in the morning. Here, *sib* is interpreted as definite because the husband knows what apples his wife means.

Each element used with the head of a phrase is normally

expected to play at least a syntactic, semantic or pragmatic role. However, some elements are so elusive that make it extremely difficult for scholars to identify their functions. The most fascinating of these is *râ*. There are also two colloquial allomorphs, namely, *-o* and *-ro* for *râ*. Among different studies on Persian syntax, Karimi (1989 & 1990) takes *râ* as the marker of specific NPs under certain conditions.

Claiming that the occurrence of *râ* depends on different factors, Lazard (1982) holds that each sentence contains three poles, namely, the subject, object and verb, and *râ* functions in the domain of the object. He further divides objects into polarized and depolarized ones. The two types differ in that the former normally take *râ* whereas the latter do not. According to him, objects form a spectrum with three zones. The zones (1-3) belong to definite objects, specific indefinite objects and generic nouns respectively. While zone one witnesses the most frequent occurrences of *râ*, zone three is normally without *râ*. Zone two, however, occasionally takes *râ*.

The present research reveals a new dimension of *râ* and argues for it as a constant marker of a special type of emphasis in any phrase with which it appears. This does not mean that all phrases which are object of emphasis are necessarily followed by *râ*. However, any phrase followed by *râ* conveys a kind of emphasis.

2. The origin of *râ*

In Old Persian a root noun like *martiya* 'man' took over four different case markers. Each marker indicated at least one syntactic function (cf. Khanlari 1987, 1, 93-4 and 184-188):

3)	Noun	meaning	case
	<i>martiya^h</i>	man	[Nominative]
	<i>martiya-a=martiyâ</i>	o man, with man,	[Vocative]
	<i>martiya-hyâ</i>	of man	[Genitive]
	<i>martiya-m</i>	man	[accusative]

Consider (4-6) where *martiya* appears in nominative, vocative and accusative forms respectively:

- 4) *aivah martiya^h maguš a-ah-a-t Gaumâta nâma* [Kent 1953:117, 120]
 one man-NOM Magian IMPF-be.PS-3SG Gaumata name
 There was one man, a Magian, Gaumata by name

- 5) *martiya-a hyâ ahuramazdâhâ framânâ hauvtaiy gastâ mâ θad-aya-θ*
 [kent, 1953:137-8]
 man-VOC which Ahuramazda command it-you repugnant not
 seem.NPS-2SG
 O'man, that which is the command of Ahuramazda, let this
 not seem repugnant to you
- 6) *aivah martiya-m maθištam a-kunau-š* [Kent 1953:126-7]
 One man-ACCU chief IMPF-make.PS-3SG
 He had made one man their chief

As shown in (6), *-m* in *martiya-m* is an accusative case marker in Old Persian and there is no evidence of *râ* as an accusative marker in that period. According to Kent (1953:205), in Old Persian the postposition *râdiy* was used in expressing concepts like cause or reason. Consider the following:

- [Kent 1953: 116-119]
- 7) *avahya-râdiy vayam Haxâmanišiyâ θah-ya-amahy*
 For-this-reason we Achaemenids call-PASS-NPS.1PL
 For this reason we are called Achaemenids

In written records left from Middle Persian, *râd/rây* represented a fairly wide range of functions. According to Rastorgueva (1966), translated by Shadan (1968: 199), *râd* was used in expressing concepts such as purpose, reason, cause, possession and direct objects. For instance, consider the following where *râd* marks *ardaxšēr* as the direct object of the verb *frestâd* 'sent':

- 8) *u-š ardaxšēr râd ō âx^var i stōrân frestâd*
 and-s/he Ardeshir COMP Stable LINK animals send. PS.3SG
 And he sent Ardeshir to the stable of animals

Bruner (1977:152-4) says that in Middle Persian *rây* was used as a direct object marker for the first time. He adds that this marker also marked indirect objects including phrasal categories representing beneficiaries. In the following, for instance, *rây* marks the direct object :

- 9) *šav-θ šagrân rây beōzan-θ* [Bruner 1977:154]
 go.NPS-IMPVE lions COMP slay.NPS-IMPVE
 Go and slay the lions

According to Rezaee Baghbidi (2006:109), in the Arsacid Pahlavi language, *râð* is a postposition meaning 'for':

- 10) *u-š ēð râð hâmcîhrag nē xrōšt*
 And-s/he this for of-same-race not call. PS-3SG
 And for this reason he was not called his fellow creature

As Dabir-Moghaddam (1990:32) notes, in early Modern Persian, *râ* marked direct and indirect objects, object complements as well as beneficiary objects. Numerous examples of the above functions can be found in Bahar (1968, vol 1).

Comparing and contrasting different uses of *râ* in Middle Persian with those in Modern Persian, Dabir-Moghaddam comes to the conclusion that significant changes occurred in the uses of this postposition. He adds that beneficiary objects followed by *râd/râ* in Middle Persian and early Modern Persian have been replaced by dative subjects without *râ* in Modern Persian. Consider (11) and compare it to (12):

- 11) *pâpak râd pus-ē hast-ø* [Middle Persian]
 Babak COMP son-INDEF be.NPS-3SG
 A son belongs to Babak

- 12) *Bâbak pesar-i dâr-ad* [Modern Persian]
 Babak son-INDEF have.NPS-3SG
 Babak has a son

In (11) *pâpak* is followed by *râd* and functions as a dative object. However, in today's Persian the same meaning is most commonly expressed by (12) where Babak is the subject of the sentence.

Dabir-Moghaddam is also of the view that many beneficiary objects which were followed by *rây* in Middle Persian, and by *râ* in early Modern Persian, appeared in the form of NPs preceded by different prepositions in Modern Persian:

- 13) *Mâ u râ pul dâd-im* [early Modern Persian]
 We s/he COMP money give.PS-1PL
 We gave him/her money

- 14) *Mâ be u pul dâd-im* [Modern Persian]
 We to s/he money give.PS-1PL
 We gave money to him/her

Both of the above sentences express the same meaning. However, in (13) *pul* 'money' is followed by *râ* whereas in the second *pul* is preceded by the preposition *be* 'to'.

According to Dabir-Moghaddam, all changes in the uses of this postposition from Old Persian to Modern Persian led to a unified syntactic role for *râ* as a direct object marker. Based on his discussion all changes in the functions of *râ* from Old Persian to Modern Persian are summarized as follows:

Old Persian	Middle Persian
Complement object → object, dative object, direct object →	Complement object, indirect object →

Early Modern Persian
 Complement object, indirect object, dative object, direct object →

Modern Persian (today's Persian)
 Direct object

2. Technical terms and *râ*

In the following section, we clarify our position with regard to three technical terms 'definiteness', 'specificity', and 'genericity' and how they relate to *râ*.

2.1 Definite vs indefinite

In English, any NP preceded by *the* is called definite. However, *the* is not an exclusive marker of definiteness, because different elements including demonstratives and possessives, etc., also make the NP definite. By contrast, when the speaker does not assume that the hearer can identify the referent, NPs are indefinite. In English, an NP which is accompanied by the article *a* is indefinite. Again, however, indefiniteness is not always marked by *a*; there are other elements such as *some*, *each*, *zero*, etc. which mark indefiniteness [cf. Foley and Van Valin (1985:283)]. The NPs headed by *girl* and *prize* are definite in (15i) and indefinite in (15ii):

- 15) i. The girl won the prize
 ii. A girl won a prize

The above definitions are applicable to Persian and account for the difference between the definite (16i) and the indefinite (16ii):

- 16) i. *rânande mâšîn-o xarid-ø*
 driver car-COMP buy.PS-3SG
 The driver bought the car
 ii. *yek rânande yek mâšîn xarid-ø*
 one driver one car buy.PS-3SG
 A driver bought a car

(16i) would be used in a context where both the speaker and the hearer identify the driver and the car. (16ii) would, by contrast, be used in a context where the hearer has no information about whatever driver and car the speaker is talking about. Here, the NPs headed by *rânande* ‘driver’ and *mâšîn* ‘car’ are called indefinite. Following Hawkins (1994: 840), we raise a similar question that, while there are many drivers and cars in the world, how is that the driver and the car are identified by the speaker and hearer? As discussed by Hawkins, it is the pragmatic sets that define the parameters and make the speaker and hearer able to refer to the driver and the car unambiguously. In (16i), for example, either by virtue of the immediate situation of the utterance or by the shared knowledge of the speaker and the hearer, the uniqueness of the entities is established.

In Persian definiteness is not fully marked in the form of the NP itself, though elements such as demonstratives, when used with NPs, indicate that they are definite. Some scholars, including Comrie (1981:124), claim that *râ* indicates definite direct objects. Windfuhr (1979:48-9) also notes that traditional grammars regard *râ* as a (definite) direct object marker. However, *râ* does not necessarily mark a direct object for definiteness, because it is not uncommon to use definite direct objects without *râ*. Consider the following, for example:

- 17) *Ketâb-i ke xâst-i bar-ât xarid-am*
 Book-PREL. CLSUB want.PS-2SG for-you buy.PS-1SG
 I bought the book you ordered

In (17), *ketâb* which is the direct object of the verb *xarid-an* is definite because the sentence would be used in a context where the addressee knows which book the speaker means.

The following further supports the view that *râ* is not necessarily definite direct object marker:

- 18) *belaxare xune sâxt-i?*
 finally house build.PS-1SG
 Finally, did you built the house?

Depending on the context, the direct object *xune* ‘house’ would be open to different interpretations. For instance, the above would be used in a context where the addressee knows what house the speaker is talking about possibly because prior to the speech time the addressee promised to build a house someday, and now the speaker would like to know if the house is built.

In short, we regard an NP as definite if its referent is identified by both the speaker and the hearer. By contrast, if the hearer is not able to identify the referent of the NP, it will be referred to as indefinite. As far as the form is concerned, there is no exclusive marker of definiteness and indefiniteness in Persian. However, the postposition *râ* and determiners such as *in* ‘this’, *ân*, ‘that’, *inhâ* ‘these’, etc. appear with definite NPs, while forms such as *yek* ‘one/a’ (as in (16ii)), can mark the NP as indefinite. As shown in (2), the same NP can be used as either definite or indefinite without any formal marker. According to the present discussion, one can claim that neither definite NPs nor indefinite ones are exclusively marked by *râ*. In other words, *râ* seems not to mark definite NPs.

2.2 Specific vs non-specific

Huddleston (1988:91) states: “The contrast between definite and indefinite is not to be confused with that between *specific* and *non-specific*.” For him, an NP is specific if there is a *certain* entity as the referent of the NP the speaker is talking about. In other words, an NP is interpreted as specific when it indicates the existence of some actual entity it denotes, whereas non-specific does not imply the existence of any particular entity. Consider the following pair:

- 19) i *The police found a car which had been stolen from my son*
 ii *I am looking for a car which consumes less petrol*

While in both instances of (19), the NP headed by *car* is indefinite, (19i) implies the existence of a certain car, whereas (19ii) does not. Accordingly, in the latter the car is called non-specific and in the former it is regarded as specific. It should be noted that specificity is generally not formally marked in English.¹ There are, however, certain determiners or pronouns which are inherently non-specific: *neither*, *no* and *any* are, for example, always non-specific, while *a* is neutral because it can occur with either a specific or non-specific interpretation, as seen in (19).

Such a distinction as the above is equally applicable to Persian. Consider the following pair:

- 20) i *hasan emruz ye xune-ye arzun-i ejâre kard-ø*
 Hasan today one house-LINK cheap-INDEF renting do.PS-3SG
 Today Hasan rented a cheap house
- ii *yek xune-ye arzun-i ejâre kon-ø*
 one house-LINK cheap-INDEF renting do.NPS-IMPVE.2SG
 Rent a cheap house

Here although the bold NPs are the same in many respects, including indefiniteness, they are significantly different. The main contrast between (20i) and (20ii) is that in the former there must be a certain house that Hasan rented, whereas in the latter there is no certain house that I'm telling you to rent. The NP in (20i) implies a particular entity in the world, i.e. a certain house. However, the NP in (20ii) does not imply any particular entity. Accordingly, the NPs in (20i) and (20ii) are called specific and non-specific respectively.

Leonetti (2004: 35) argues that “. . . in natural languages the grammatical system does not encode features like specificity, . . .”. In the context of investigating the semantics of case marking in Turkish, Kiliçaslan (2006), also argues that the specificity status of the referent of an NP is not a determining factor for that NP to carry case morphology. This means that specificity is not syntactically marked in Turkish. In Persian, specific direct objects are not necessarily followed by *râ*. In the following, for instance, both *yek ketâb-e jadid* and *yek ketâb-e jadid-o* are specific NPs because both would be used in a context where I am talking of a certain book that my father

¹For more information regarding specificity, one can refer to Huddleston and Pullum (2002).

gave me:²

- 21) i *bâbâ yek ketâb-e jadid be man dâd-ø* [specific object NP without *râ*]
 father one book-LINK new to I give.PS-3SG
 My father gave me a new book
 ii. *bâbâ yek ketâb-e jadid-o be man dâd-ø* [specific object NP with *râ*]
 father one book-LINK new-COMP to I give.PS-3SG
 My father gave me a new book

So, ‘specificity’, which is basically defined in semantic-pragmatic terms, has to do with whether or not the speaker has a certain entity, as the referent of the related NP in mind. It implies that specificity is heavily context dependent. When the speaker is able to identify a certain entity as the referent of the NP s/he is using, then that NP is referred to as specific; otherwise, the NP will be non-specific.

Browne (1970:362) argues that *râ* marks *specific* objects rather than definite objects. Peterson (1974) believes that *specificity* is a necessary and sufficient condition for the occurrence of *râ*. Karimi (1989), in her PhD dissertation written in the framework of Government and Binding Theory, argues that in any NP where the concepts of *specificity* and obliqueness are relevant the presence of *râ* is necessary. However, Dabir-Moghaddam (1990) through his extensive and insightful paper questions the credibility of this view.

Karimi (1991) fails in making a distinction between *generic* and *specific* NPs. Consider the following examples quoted from Phillott (1919: 455 & 459):

- 22) i. ‘*serke šir râ mi-bor-ad*’
 vinegar milk COMP IMPF-cut.NPS-3SG
 [Vinegar curdles milk]
 ii. ‘*mi-dân-id četor gusefand râ mi-koš-and*’
 IMPF-know.NPS-2PL how sheep COMP IMPF-kill.NPS-3PL
 Do you know how sheep are slaughtered?

For Karimi (1991: 36), *šir* and *gusefand* are examples of specific NPs, while both are generic NPs, because in each case we mean an unlimited class of individuals rather than a specific instance.

²The reader may ask how (9i) differs from (9ii) then. This is a question I must answer where discussing the main function of *râ* in this paper.

Karimi (1990: 140) regards *sib* as generic in the following examples:

- 23) i. 'diruz ru miz yek sib gozâšt-am'
 yesterday on table one apple put. PS-1SG
 I put an apple on the table yesterday
 ii. 'emruz ru miz yek sib mi-zâr-am'
 today on table one apple IMPF-put.NPS-1SG
 I will put an apple on the table today

However, in neither of the above is *sib* generic, because in neither does the speaker mean a whole unlimited class of apples. Based on our discussion in (2.2), *sib* in (23i) is specific because there existed a certain apple the speaker put on the table. However, *sib* in (23ii) is open to two interpretations, depending on the speaker and the context. If there is a certain apple the speaker is going to put on the table, then *sib* will be specific. Otherwise, it will be referred to as non-specific. As seen, in (23i) *sib* is not followed by *râ*.

For Dabir-Moghaddam (1990) an NP for which the speaker does not indicate any referent is indefinite and non-specific. He goes on to say that NPs which take *râ* are semantically either definite, or generic, or specific. In fact, Dabir-Moghaddam thinks that any NP for which the speaker does not identify any referent is non-specific. However, as implied in the following, it is possible for an NP to be specific while no referent is shown for it:

- 24) *hasan yek bačče az bačče-hâ-šo be xârej ferestâd-φ*
 Hasan one child of child-PL-he-COMP to out send.PS-3SG
 Hasan sent one of his children abroad

In the above, by using *bačče* 'child', the speaker does not mean 'any child'; therefore, it indicates a specific NP. Yet, since in one interpretation the speaker does not have a particular child in mind, one can say no referent is shown for it. Again, here the specific NP appears without *râ*.

Comrie (1978) discusses a significant relationship between elements like *yek bačče* and *bačče-hâ-šo*. For him, the former is a subset of the latter which is a definite superset. According to him, this superset can help the reader identify the referent of the indefinite subset. However, this claim seems too strong because one cannot uniquely identify the

referent of *yek bačče* just on the grounds that one is a subset of a superset. What the superset does here is to make *yek bačče* more specific than cases where such a superset is not present.

Now consider the following where the NP *ketâb-e digar-i* is specific, but not followed by *râ*. It is specific because there exists a certain book the speaker is talking about:

- 25) *ketâb-e digar-i be amânat gereft-am*
 Book-LINK else-INDEF to loan take.PS-1SG
 I borrowed another book

As far as specificity is concerned, *ketâb-e digar-i râ* in (26) is also specific:

- (26) *ketâb-e digar-i râ be amânat gereft-am*
 Book-LINK else-INDEF COMP to loan take.PS-1SG
 I borrowed another book

One may then pose the question what the role of *râ* is, if both in (25) and (26) the NPs are specific. This question will be answered in the next section.

Accordingly, we claim that specificity in Persian is basically context dependent and is not formally marked. Consider the following:

- 27) *baxš yek ostâd estexdâm mi-kon-e*
 Department one professor employing IMPF-do.NPS-3SG
 The department is going to employ a professor

The above would be used at least in two different situations. First, it would be used in a context where the department needs a professor but has not yet decided on any certain one. In this interpretation, the NP *ostâd*, ‘professor’ is interpreted as *non-specific*, because there is no certain professor the department decides to employ. It would also be used in another context where the department considers employing a professor, say, Professor Majidi. Here, the NP *ostâd* is interpreted as specific because the department has already decided on a certain professor. Accordingly, one can claim that it’s the context that defines an NP as specific or non-specific.

Now, consider the following:

- 28) *belaxare baxš yek ostâd estexdâm kard-ø*
 Finally department one professor employing do.PS-3SG
 Finally, the department employed a professor

The above would be used in a context where the NP *ostâd* is bound to be interpreted as specific, because the speaker is talking about a certain professor that the department employed. It should be noted that no interpretation other than specific is applied to the NP *ostâd* in the above context. Based on the above discussion, one can claim that *râ* is not an exclusive marker of specificity.

2.4 Generic vs non-generic

In this subsection we clarify what we mean by generic NPs. Huddleston and Pullum (2002: 406) say, “*Generic* interpretations arise with NPs that are within the scope of expressions denoting the situation type we call *unlimited states*.” In the context of generic sentences, Hurford and Heasley (1983:56) also note that whenever we refer to ‘a whole unrestricted class of individuals, as opposed to any particular individual’ in fact we deal with a generic case.

Generic NPs, as Foley and Van Valin (1985:284) suggests, are not referential. Consider the following:

- 29) i ‘*The wombat is a marsupial*’
 ii ‘*A wombat is a marsupial*’
 iii ‘*Wombats are marsupial[s]*’

Since by using the above subjects, the speaker does not identify any particular entity, one can say that all are used non-referentially. In fact, here, the NPs imply the **whole class of a species**, thus one can say that they are **generic**.

Similar instances of generic nouns are found in Persian. In the following, for example, the subjects are generic:

- 30) i **gorg** heivân-e xatarnâk-i-ye
 Wolf animal-LINK dangerous-INDEF-be.NPS-3SG
 The wolf is a dangerous animal
 ii **yek sarbâz** bâyard šojâ ø-bâš-e
 one soldier MUST courageous NIN-be.NPS-3SG
 A soldier must be courageous
 iii **naqqâš-â** âdam-â-ye darungerâ-i-an
 painter-PL person-PL-LINK introvert-INDEF-be.NPS-3PL
 Painters are introverted

In English, as shown in (30i-iii), a generic NP may be a singular NP preceded by *the* or *a* or a plural NP without any article. This implies that in English there is no formal marker for generic nouns and thus the context indicates whether the NP is generic or not. Similarly, in Persian, there is no marker for generic nouns and the context distinguishes between the generic and non-generic use of the NP. In fact, the same form of an NP may indicate either member of the following pairs:

- (a) Generic or definite (singular)
- (b) Generic or indefinite, and
- (c) Generic or definite (plural).

In (30i-iii), the subjects are generic, while in some other context, each can be used as a definite, indefinite and definite (plural) non-generic respectively. The following are examples of these three cases respectively:

- 31) i *šir bâ tir košt-e šod-ø*
 lion with bullet kill.PS-PTCPL PASS.PS-3SG
 The lion was killed by bullets
- ii *yek sarbâz az kenâr-e man obur kard-ø*
 one soldier from side-LINK I passing do.PS-3SG
 A soldier passed by me
- iii *naqqâš-hâ diruz kêr na-kard-an*
 painter-PL yesterday working NEG-do.PS-3PL
 The painters didn't work yesterday

In (31i) and (31iii), based on the immediate situation and the shared knowledge of the situation that the speaker and the hearer have, *šir* and *naqqâš-hâ* are regarded as definite. However, in (31ii), the NP headed by *sarbâz* is indefinite by virtue of *yek*. The same rule is applicable to mass nouns in Persian; in (32), for example, the word *qazâ* 'food' is generic in (i), and definite in (ii):

- 32) i *ensân-hâ be qazâ niyâz dâr-an*
 human-PL to food need have.NPS-PL
 Human beings need food
- ii *qazâ sard šod-ø*
 food cool become.PS-3SG
 The food turned cool

In Persian mass nouns can take a plural marker. However, there is a significant difference between a plural mass noun and a plural count noun. As we have already seen, the plural of a count noun may be used generically, while a plural mass noun may not. In the following, for example, the only interpretation that *qazâ-ha* has is that it indicates different foods:

- 33) *qazâ-hâ sard šod-ø*
 food-PL cool become.PS-3SG
 The foods turned cold

In short, whenever an NP denotes an unrestricted class of entities, then the NP is referred to as generic. There is no certain marker for generic NPs in Persian. Even generic object NPs may or may not be followed by *râ*. Accordingly, non one can claim that *râ* is a marker of genericity:

- 34)i *injâ nušâbe bâ sândeвиč mi-feruš-and* [generic object NP without *râ*]
 Here coke with sandwich IMPF-sell.NPS-3PL
 Here, cokes are sold with sandwiches
 ii. *injâ nušâbe râ bâ sândeвиč mi-feruš-and* [generic object NP with *râ*]
 Here coke COMP with sandwich ide-IMPF-sell.NPS-3PL
 Here, cokes are sold with sandwiches

5. *râ* and its semantic pragmatic function

In pragmatic terms, it was already argued that *râ* was not an exclusive marker of any definite, indefinite, specific, non-specific, generic or non-generic NPs. What is the pragmatic function of *râ* then? Investigating the contrastive uses of *râ* seems a key to the problem. Contrastive uses are not limited to direct object NPs. Adjunct NPs and PPs can also be compatible with this post-position.

As shown before, a definite NP may appear with or without *râ*. Consider example (1) in its second interpretation, repeated in (35), and compare it with (36):

- 35) *Sib xarid-i?*
 apple buy.PS-2SG
 Have you bought the apples?

- 36) *Sib-o xarid-i?*
 Apple-COMP buy.PS-2SG
 Have you bought the (very) apples?

Sentence (36) would be used in a context where both the speaker and the addressee know what apples they are talking about, accordingly *Sib* is definite. *Sib* in (35) is also definite with regard to the context discussed as the second interpretation for (1). Then how do the two NPs differ? A pair whose members only differ with respect to the presence or absence of *râ*, we regard the version with *râ* as the marked and the one without it as the unmarked. The difference between the two is justified in terms of degree of reference. By degree of reference we mean that the act of referring to any entity as the referent of a linguistic form, including an NP, is relative rather than absolute. This means that you can refer to an entity with different degrees of concern about that entity depending on different factors, including the context. The more you are concerned about or attentive to the entity in question, the higher the degree of reference would be. Examining numerous sentences in recent years, I found *râ* the most common means in expressing a high degree of reference. First, consider the following:

- 37) I bought *a new car* yesterday. I like *it*

In the above, *a new car* and *it* refer to the same entity, i.e., a certain vehicle. Thus both are referring expressions. However, the speaker does not convey the same degree of reference each time. Using the pro-form *it*, s/he refers to the car for the second time but this time s/he implies a higher degree of concern about the car compared to the first time. In a Persian translation of the above, one is obliged to use *râ* not because it is definite or specific but because it conveys a high degree of referentiality:

- 38) *diruz yek mâšîn-e now xarid-am. Un-o dus dâr-am*
 Yesterday one car-LINK new buy.PS-2SG. It-COMP liking have.NPS-
 2SG
 I bought a new car yesterday. I like it

Interestingly, *un* 'it' in (38) is intrinsically definite and specific by nature, yet it is obligatorily followed by *râ*:

- 39) *diruz yek mâšîn-e now xarid-am.*Un dus dêr-am*
 Yesterday one car-LINK new buy.PS-2SG. It liking have.NPS-2SG
 I bought a car yesterday. . . .

A more or less similar interpretation is applicable to a pair of sentences carrying specific NPs, one with and the other without *râ*. Consider (21i-ii), repeated in (40i-ii). Here the NP followed by *-o* conveys a higher degree of reference compared to the one without *-o*:

- 40) i. *bâbâ yek ketâb-e jadid be man dâd-∅* [specific object NP without *râ*]
 father one book-LINK new to I give.PS-3SG
 My father gave me a new book
 ii. *bâbâ yek ketâb-e jadid-o be man dâd-∅* [specific object NP with *râ*]
 father one book-LINK new-COMP to I give.PS-3SG
 My father gave me a new book

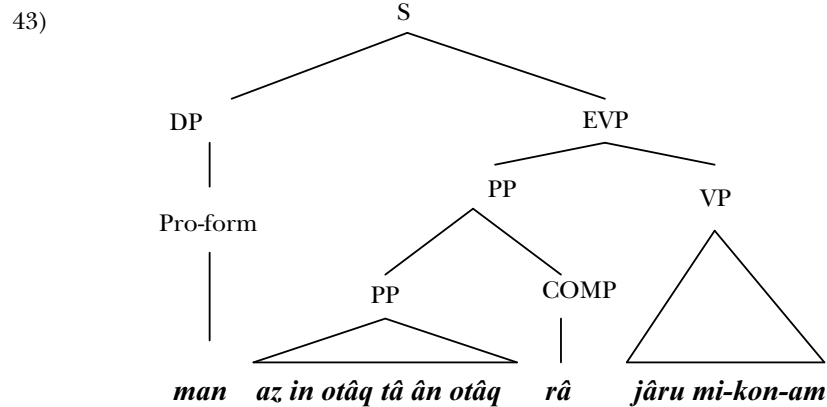
A similar interpretation is applicable to *râ*-less generic NPs in contrast to those accompanied by *râ*. Consider (34i-ii) above, for instance.

Râ also appears optionally with NPs functioning as adjuncts. Consider (41i), for instance, and compare it with (41ii). In the former, *in hafte ro* indicates a higher degree of reference compared to *in hafte* in the latter. In (41ii), the speaker uses the adjunct in a quite usual and ordinary way to express the period of stay. In (41i), however, by using *ro*, s/he refers to the adjunct with a kind of special attention or emphasis and this implies a higher degree of reference:

- 41) i. *in hafte ro esterâhat mi-kon-am*
 This week COMP resting do.NPS-2SG
 As for this week, I will rest
 ii. *in hafte esterâhat mi-kon-am*
 This week COMP resting do.NPS-2SG
 I will rest this week

Râ sometimes appears obligatorily as the property of a PP functioning as the complement of the verb. Consider the following followed by its tree diagram:

- 42) *man az in otâq tâ ân otâq râ jâru mi-kon-am*
 I from this room to that room COMP sweeping do.NPS-1SG
 I will sweep from this room up to that room



The above would be used in a context where the speaker commits himself/herself to clean two rooms completely. Here *râ* is obligatory not because *otâq* is definite and/or specific, but because it reflects a high degree of reference of the PP *az in otâq tâ ân otâq*.

Even indefinite and/or non-specific NPs take *râ* obligatorily in contexts such the following:

- 44) *unâ az ebtedâ tâ entehâ-ye yek divâr-o rang mi-kon-an*
 They from beginning to end-LINK one wall COMP painting do.NPS-1PL
 They will paint from the beginning to the end of a wall

The above would be used in a context where the speaker does not know which wall is going to be painted, so it is indefinite and non-specific. What is of importance for the speaker in this context is not the kind of wall but a wall of any sort as the subject of painting. In fact, by using *râ*, the speaker reflects his high degree of reference to the indefinite and non-specific *divâr*.

The speaker may or may not use *râ* with generic NPs, depending on the degree of reference to them:

- 45) *ne-mi-dun-am ketâb az kojâ be-xar-am*
 NEG-IMPF-know.NPS.1SG book from where NIN-buy.NPS-1SG
 I don't know where to buy books

The above would be used in a context where the speaker uses *ketâb* to refer to a whole unlimited class of books and accordingly it is regarded generic. The generic NP can also be accompanied by *râ*:

- 46) *ne-mi-dun-am ketâb-o az kojâ be-xar-am*
 NEG-IMPF-know.NPS.ISG book COMP from where NIN-buy.NPS-1SG
 I don't know where to buy books

The above is open to two interpretations. In one context, both the speaker and the addressee know what book they are talking about; here, *ketâb-o* is definite and non-generic. It would also be used in a context where the speaker refers to *ketâb* as a whole unlimited class of books. Here it is interpreted as generic. Now, how does (45) differ from (46) in its generic interpretation? As a clear answer, one can say that in the version with *râ* the speaker is more concerned with books than the time *râ* is absent. In fact, *râ* is an appropriate means for the speaker to make a special reference to *ketâb*.

6. Conclusion

In Old Persian *râdiy* was used with adverbial phrases and expressed meanings such as 'reason' and 'cause'. In Middle Persian this postposition appeared in the form of *rây* and marked direct and indirect objects as well as dative and ablative cases. In the Parthian language, it appeared as a postposition expressing concepts such as 'for' and 'reason'.

In today's Persian, as far as syntax is concerned *râ* is a direct object marker. However, in the domain of pragmatics, this post-position is not an exclusive marker of any definite, indefinite, specific, non-specific, generic or non-generic NPs as any of them may or may not appear with or without *râ*. Pragmatically, any phrase obligatorily followed by *râ* is necessarily of a high degree of reference as we discussed what is meant by the term. With structures which are similar in terms of any of the concepts such as being definite/indefinite, specific/non-specific or generic/non-generic, differing only in presence or absence of *râ*, the version with *râ* reflects a higher degree of reference to the entity in question.

Symbols and notational conventions

1. The first line of each example represents the transcribed form of the Persian sentence. In the second line (the gloss line), two types of components are represented: lexical items, and grammatical items. A hyphen separates two components of a single word. A full stop indicates that they do not correspond to distinct segmental units of the Persian: two items separated by a full stop thus corresponds to a single item in the Persian citation. The symbols used to gloss grammatical items are as follows:

ACCU	=	accusative marker
CLSUB	=	subordinate clause marker
COMP	=	complement marker
EVP	=	extended verb phrase
IMPF	=	imperfective marker
IMPVE	=	imperative
INDEF	=	indefinite marker
LINK	=	subordinator <i>e</i>
NEG	=	negative marker
NIN	=	non-indicative marker
NOM	=	nominative marker
NPS	=	non-past marker
PL	=	plural marker
PREL	=	pre-relative <i>i</i>
POSS	=	possessive marker
PASS	=	passive auxiliary
PROG	=	progressive auxiliary
PS	=	past marker
PTCPL	=	participle
SG	=	singular
VOC	=	vocative marker

2. * asterisk indicates that what follows is ungrammatical/unacceptable

References

- Browne, W.
 1970 More on definiteness markers: interrogatives in Persian, *Linguistic Inquiry* 1, 359-363.
- Bahar, M. T.
 1990 *Sabkšenâsi* (Stylistics). Vol 1. Tehran: Amir Kabir Publications.

- Bruner, C. B.
1977 *A Syntax of Western Middle Persian*. Delmar: Caravan Books.
- Comrie, B.
1978 Definite direct objects and referent identification. *Pragmatics* 3.1: 1-19
1981 *Language Universals and Language Typology*. Oxford: Blackwell.
- Dabir-Moghaddam, M.
1990 Piramun-e '*râ*' dar zaban-e fârsi. ["About '*râ*' in Persian"] *Iranian Journal of Linguistics* 1, 2-60.
- Darzi, A.
2005 *Syntactic Argumentation*. Tehran: SAMT.
- Fakas, D.
2002 Specificity distinctions. *Journal of Semantics* 19, 1-31.
- Foley, W. A. and Van Valin, R. D.
1985 Information packing in the clause. In Shopen, T. (ed.) *Language Typology and Syntactic Description*. Vol. 1) Cambridge: Cambridge University Press, 282-364.
- Ghomeshi, J.
1997 Topics in Persian VPs. *Lingua* 102, 133-167.
- Hawkins, J. A.
1994 Definite versus indefinite articles. In Asher, R. E. (ed.), *The Encyclopedia of language and Linguistics*. (Vol. 2), Oxford: Pergamon Press.
- Huddleston, R. D.
1988 *English Grammar: an Outline*. Cambridge: Cambridge University Press.
- Huddleston, R. D. and G. K. Pullum
2002 *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press.
- Hurford, J. R. and B. Heasley
1983, 1996 *Semantics: a Course Book*. Cambridge: Cambridge University Press.
- Karimi, S.
1989 *Aspects of Persian Syntax, Specificity, and the Theory of Grammar*. PhD dissertation, University of Washington.
- Karimi, S.
1990 Obliqueness, specificity, and discourse functions: *Râ* in Persian. *Linguistic Analysis* 20. 3-4:139-191.

- Karimi, S.
 1991 Naqdi bar maqâle-ye `piramun-e 'râ dar zabân-e fârsi. ["A critique of the article 'about 'râ in Persian."]. *Iranian Journal of Linguistics* 1-2, 3-41.
 1996 Case and specificity: Persian Râ revisited. *Linguistic Analysis* 26, 174-194.
 1999 A note on parasitic gaps and specificity. *Linguistic inquiry* 30, 704-713.
- Kent, R. G.
 1953 *Old Persian: Grammar, Texts, Lexicon*. New Haven: American Oriental Society.
- Khanlar, N. P.
 1987 *Persian History*. Vol. 1. 3rd Ed. Tehran: Now Publications.
- Lazard, G.
 1982 Le morpheme ra en Persan et les relations actanceilles. *Bulletin de la Societe de Linguistique de Paris*, 73, 1: 177-208.
- Leonetti, M.
 2004 Specificity and differential object marking in Spanish. *Catalan Journal of Linguistics* 3, 75-114.
- Peterson, D.
 1974 *Noun Phrase Specificity*, Unpublished PhD Dissertation, University of Michigan.
- Phillott, D. C.
 1919 *Higher Persian Grammar for the Use of the Calcutta University, Showing Differences between Afghan and Modern Persian with Notes on Rhetoric*. Calcutta: The University Press.
- Rastorgueva, V. S.
 1966 *Middle Persian Grammar* [translated by Shadan (1968)]. Tehran: Iranian Cultural Foundation.
- Rezaee, B. H.
 2006 *A Manual of Parthian*. Tehran: Aognus Publications.
- Samiian, V.
 1989 *Structure of Phrasal Categories in Persian: An X-Bar Analysis*. PhD dissertation, University of California, Los Angeles.
- Windfuhr, G. L.
 1979 *Persian Grammar: History and State of its Study*. New York: Mouton.
- Yilmaz Kiliçaslan
 2006 A situation-theoretic approach to case marking semantics in Turkish. *Lingua* 116, 112-144.

Palaic *fulāsinanza*: One Anatolian Suffix, Two Possible Explanations*

Miguel Valério
New University of Lisbon

The aim of the following article is to discuss two possible interpretations for the Palaic word *fulāsinanza* while shedding new light on the obscure fragment where it occurs, which seems to be the remainder of an invocation to the god Hilanzifa. The word *fulāsina-* denotes a kind of ritual bread but its most startling feature is its suffix *-ant-s* which could be either a cognate of ergative case markers in other Indo-European Anatolian languages (Hittite, Luvian and Lycian) or a denominal adjective built on *-ant-*.

Introduction

Of the three Indo-European Anatolian languages written in the cuneiform script during the Bronze Age, Hittite, Luvian and Palaic, the last is the most poorly understood, being attested in only a dozen fragmentary ritual texts from the archives of Boğazköy (Melchert 2008: 40). One unexplained Palaic fragment is the joint KBo 19.152 + 27.77 Vs.II 7-10:

	Transliteration	Normalization
7.	nu-ú-ku ^d Hi-i-la-an-zi-w[a _a -?	<i>nū=ku</i> ^d <i>Hilanzif</i> [<i>a</i> -?
8.	wu _i -la-a-š[i-]na-an-za x[<i>fulāsinanza</i> x[
9.	ú-i-iš-ta ša-x[<i>wista sa-x</i> [
10.	ú-i-iš-ta[(-)	<i>wista</i> [(-)

Albeit extremely damaged, this small excerpt can with all security be classified as an instance of Palaic due to the occurrence of 1) the typical introductory formula *nū=ku* (with *scriptio plena*); 2) of the special *wV_v*-signs reflecting a fricative

*I am greatly indebted to Craig Melchert (University of California in Los Angeles), who first heard of the idea here presented and encouraged the writing of this article. I am also thankful for the suggestions, references, corrections and comments made by the latter scholar and Ilya Yakubovich (University of Chicago). The views expressed here are nevertheless my sole responsibility.

/f/ (occasionally represented by graphic *p*-) that does not exist in Hittite and Luvian and is utilized for Hattic loanwords like *fulāsina*- ‘(a kind of) bread’¹ (see Carruba 1970: 39-40 and Melchert 1994: 195); and 3) the divine name Hilanzifa itself².

What I wish to bring forward and analyze here is the occurrence in the excerpt of *fulāsinanza*, a derived form of *fulāsina*-. This form is striking because of its special ending -*anza*, unattested elsewhere in Palaic. Since this language did not assibilate **ti* into /*ts*/ (cf. 3Pl. Pres. -*ānti* < **-énti* in *ahuwānti* ‘they drink’), -*anza* must be the outcome of /-*Vnts*/ and cannot represent the ablative case. As a result, two possible explanations emerge: -*anza* may be a direct cognate of the Hittite ergative marker -*anza* /-*ants*/ (pl. -*antes*) < -*ant*- as well as of Luvian -*antis* (pl. -*antinzi*) and Lycian -*ēti* (pl.); alternatively, *fulāsinanza* could be a denominal adjective in -*ant*-.

I. An “animating” suffix?

Let us start by exploring the first possibility. In Hittite, Luvian and Lycian the ergative case marker is added to a grammatically neuter noun in those situations where the latter acts as subject of a transitive verb, as inferred from these Hittite examples (see Melchert forthcoming, after Garrett 1990):

- (1) *kāsa=kan kī tuppī kuedani UD-ti parā nehun*
‘On the day in which I sent you this tablet’
- (2) *mahhan=ta kās tuppianza anda wemiyazzi*
‘When this tablet reaches you’

¹The broken ^{NINDA}*pul[a...*] may be an instance of *fulāsina* in Hittite (CHD, P: 374). While the latter is usually taken to be a type of bread (coexisting with other words modified by NINDA), the Chicago Hittite Dictionary cites Laroche, RHA XIII/57:76f and Kammenhuber, OLZ 50:364 n. 1, according to whom this is the actual Hattic word for ‘bread’. Thus ^{NINDA}*zippulasni* has been interpreted as ‘thick bread’, possibly a Hattic endocentric compound with **zip*- ‘thick’ modifying the head **fulasni*. On this topic see also more recently Soysal (2004: 303).

²^d*Hilanzifa* matches a category of Hittite nouns (often theonyms) ending in -*sepa*- ~ -*zipa*- (see Laroche 1947: 67f), seen in compounds like *daganzipa*- ‘earth’ (< *tekan* ~ *dagan* ‘earth’), ^d*Hantasepa* (< *hant*- ‘forehead’), ^d*Išpanzašepa* (< *išpant*- ‘night’), ^d*Miyantanzipa* (< *miyata*- ‘fruitfulness’, ^(d)*askasepa* (< *aska*- ‘gate’), and *tarsanzipa*- ‘platform’ (Hoffner Jr. and Melchert 2008: 61-62). As seen in these examples, the variant -*zipa*- is due to the emergence of *z* after sonorant *n* (< *n+sepa*) (see Melchert 1994: 194).

Regarding Palaic, the poor state of preservation of the fragment in question makes it impossible to know what the verb and its relationship to *fulāsinanza* was. One likely possibility is that the bread was meant to ‘feed’ the god i.e. *fulāsinanza* is the subject of a transitive verb and Hilanzifa the object. Its ending *-anza* could certainly be the ergative case marker, but since it has been long demonstrated (see Laroche 1962, Garrett 1990 and Melchert forthcoming) that in Hittite, Luvian and Lycian only neuter nouns can take the ergative case, this hypothesis would be contradicted by the fact that *fulāsina-* is an animate noun. Noteworthy to this respect is the following text:

- (3) KUB 25.165 Obv. 15 (Invocation to Zaparfa) (Carruba 1970: 14)
kuisa tū fu[la]sinās kārti a=ti=apan azziki
 ‘Whichever bread pleases you, eat that one!’

If we follow Carruba’s translation, we wind up with *fulāsina-* acting as subject of a transitive verb but with no marker at all. I, however, follow Melchert (1984: 29) in translating the passage as ‘Whichever *w.*-bread is to your liking, eat that one!’ I view Palaic *kārti* not as a 3Sg. Pres. verb but as a noun matching Hittite *karti* ‘heart (dat.-loc.)’; if *kārti* were indeed a verbal form one would be left with a verbal root *kār-* after segmentation of the 3Sg Pres. ending *-ti* (cf. *wer-ti* ‘he calls’). An unlikely verb meaning ‘to please’ formed from **kārd-* ‘heart’ (typologically, this would be unparalleled in Anatolian; and one may compare Latin *crēdere* ‘to trust, believe’ a verb derived from the same PIE root but with different semantics) expectedly would originate **kārtti* with gemination. On the other hand, the use of a noun meaning ‘heart’ as ‘desire, wish’ is a common metaphor, suitably attested in Hittite:

- (4) KBo 3.7 i.25-26 (Tale of the Storm-god and Illuyanka)
ma=wa katti=ti ses-m[i nu=w]a uwami / kardiyas=tas iyami
 ‘If I may sleep with you, I will come (and) fulfil your desire (lit. that of your heart).’

Inevitably, the interpretation of (3) here followed also needs to account for the Palaic independent personal pronoun *tū* (dat.-acc.). Hittite once again yields important typological parallels of the use of the dative to mark possession:

- (5) KUB 1.1 i 59-60
 LÚ.KÚR.ME.EŠ=*mu=kán* ^{LÚ.ME.EŠ} *arsanatalus* ^dIŠTAR GAŠAN=YA
 ŠU-*i dāis*
 ‘Ishtar My Lady put the enemies (and) enviers into my hand.’
- (6) KBo 4.12 Ro 6-7
nu=mu=kán ABU=YA ANA ^m*Middanna-A.A GAL DUB.SAR.MEŠ*
 ŠU-*i dāis*
 ‘My father put me into the hand of Middannamuwa, the Chief Scribe.’

In both these instances Hittite makes use of the dative together with the common phrase ŠU-*i dāis* ‘put in the hand’. The first example shows an enclitic personal pronoun and the second a full noun phrase. We can be assured that an accented personal pronoun could also be used in this way. Similarly, in German one may find the following formulation: *Es liegt mir am Herzen* ‘It pleases me’ (lit. ‘It pleases to me on the heart’). More analogous to Palaic is the Russian construction *Это мне по сердцу* ‘This to me on the heart’ without a finite verb. Hence I find it reasonable to translate Palaic *kuisa tū fu[la]sinās kār̄ti* as ‘Whichever bread (is) to you in the heart’ i.e. ‘Whichever bread pleases you’. For similar constructions with a possessive dative and an absent verb ‘to be’ one may compare yet again Hittite:

- (7) KUB 21.38 i 15
 ANA ŠEŠ-YA NU.ĜÁL *kuitki*
 ‘My brother has nothing’ (lit. ‘To my brother [there is] not something’)

I hope this brief discussion has shed new light on the Palaic passage in question, demonstrating at the same time that in (3) *fulāsinas* is not the subject of a transitive verb. Regarding our main argument, it remains nonetheless problematic that the word is an animate noun while elsewhere in Anatolian, as mentioned above, only inanimate nouns take the ergative suffix.

Incidentally, according to the present prevailing view this limitation is probably not original. In the Anatolian languages exhibiting this feature we find compelling evidence from “irregular” formations that end up contradicting the “ergative rule”, i.e. the restriction of Hittite and Luvian ergative markers to neuter nouns. Thus Hittite *linkiyantes*, the personified oath-

deities, derive their designation from animate *lingāi-* ‘oath’ (see Melchert forthcoming) and Luvian has the form *tiyammantis*, despite the fact that *tiyamm(i)-* ‘earth’ is of animate gender³.

Melchert (forthcoming) demonstrated that Hittite neuter nouns taking the ergative case remain neuter, contesting earlier assertions that the suffix in question shifted those nouns into animate forms. But while refuting claims that *-ant-* animates, personifies or imbeds with “active force” in those instances where it is attached to inanimate nouns, he admits that in the few occasional exceptions cited above it does animate/personify semantically a given animate noun, predominantly in ritual invocations or mythological narratives (what he calls “genuine personification”)⁴. Since *fūlāsinanza* – an animate noun with an inanimate referent (bread) – appears in such a text, we might be witnessing a similar construction.

Taking Palaic *-anza* as cognate of the Hittite, Luvian and Lycian ergative (and “animatizing”) suffix would increase the weight of arguments against Garrett’s (1990: 271-277) derivation of it from an ablative-instrumental in **-anti*. Were the latter true, the Palaic ending would be precisely ***-anti* rather than *-anza*, since we have seen that this language did not assibilate **i*. Moreover, Garrett’s reconstruction had the advantage of accounting for Luvian *-anti-s* (pl. *-anti-nzi*), but the latter could well have been a secondary formation from **-ant-* as proven by Luvian words like *walanti-/ulanti- ~ walant-/ulant* ‘dead’, a participial adjective in *-ant-* (see Melchert 1993: 250). Lycian *-ēti* from **ant-s* is also regular: cf. the personal name *Masauwēti* < **mansa-want-* ‘connected with gods’ (Hajnal 1995: 245).

³However, *tiyammantis* may have been created for stylistic purposes under the influence of *tappisantis* (< *tappis* ‘heaven’, a neuter noun) in KUB 9.6+ ii 14-15 (Starke *KLtU*: 112-113): *as=sa=ti ilhadu tappasantis / tiyammantis tāin=ti=(y)ata aiyaru / malli=ti=(y)ata aiyaru* ‘Let heaven (and) earth wash their own mouth(s); let them become oil, let them become honey’.

⁴That the attribution of the *ant-* suffix was not primordially restricted to inanimate nouns (if not used solely with the animate gender) is betrayed by the fact that Hittite (for the sake of example; the situation is the same in C. Luvian) *-anza* /ants/ and *-antes* are inevitably the product of the addition of animate nominative endings *-s* (sg.) and *-es* (pl.) to the suffix *-ant-*. This matter cannot, however, be pursued here and must remain the subject of further studies.

II. A denominal adjective?

The second possible explanation argues that *fulāsinanza* is the nom. sg. of a denominal adjective built with *-ant-*, in a manner cognate with the formation of Hittite *kaninant-* ‘thirsty’ < *kanint-* ‘thirst’, *nadānt-* ‘having a drinking-straw’ < *nāda-* ‘reed, drinking-straw’, *perunant* ‘rocky’ < *peruna-* ‘rock’ (see Friedrich 1960: §48b 1 and Garrett 1990: 267 with reference to Oettinger 1981).

This hypothesis is more advantageous than the first one in that it is not just formally acceptable but also supportable by contextual evidence. There is in fact one other Palaic text that may shed light on the badly damaged KBo 19.152 + 27.77 Vs.II 7-10: the Invocation to the Sun-god. Its relevant part is preserved in two fragments that complement each other, KUB 35.165 Obv. 21-24 and KUB 32.17 11³-13³:

21. = I. [(nu-ku)] pa-aš-hu-ul-la-ša-aš ti-[ia-]az ta-ba-ar-ni LUGAL-i
pa-a-pa-az-ku-ar ti-i
22. = II [(a-an-na-)]az-ku-ar ti-i iš-ka[n]u-uš-ši-ia-am-pí ti-i a-ri nu-uš-
ši-ia-am-pí ti-i
23. = III [(a-ru-u-)]na-am-pí ti-i ú-i-te-ši [x?]a-an-ta-na-an ti-i ú-i-te-ši
24. = IV [(ki-i-a)]t [(wu-u-ú-l)]a-ši-ni-ke-eš wa-šu-ki-ni-eš ši-mi-ya-a-aš
ki-i-tar⁵
“Now, *Fashullassas Tiyaz*, to *tabarna* the king you are indeed
the father (and) the mother.
Anoint him, and exalt him now!
You will both see/build him high (and) see/build him
strong^{3?}.
Here lie the delicacies(?) made/consisting of bread (and)
the *šimīya*.
11. = V wa-a-šu ú-iš-ta-aš ša-a[(m-lu-wa-aš wu-u-la-ši-na-aš ki-i-ta-ar)]
12. = VI [(w)]a-a-šu ú-iš-ta-aš ma-l[(i-ta-an-na-aš wu-u-la-ši-na-aš ki-i-ta-
ar)]
13. = VII [(ku)]-i-ša t]u-ú wu-u-la-ši-n[(a-aš ka-a-ar-ti a-ti-a-pa-an az-zi-
ki-i)]
The goodies, the *wista*-(bread) (and) the apple bread are
laid out,
The goodies, the *wista*-(bread) (and) the honey-bread are
laid out.
Whichever bread pleases your heart, eat that one!

The translation presented is based on the recent reanalysis of earlier studies (Carruba 1972: 29-30; Starke 1990:

⁵KUB 35.165 reads [(ki-i-a)]t [(wu-u-ú-l)]a-ši-ni-ke-eš wa-šu-ki-ni-eš ši-mi-ya-a-aš ki-i-tar KL.MIN, where the final KL.MIN = ‘ditto’ substitutes the typical description of offerings that follows.

73) on the Invocation by Yakubovich (2005: 107-122). This is not of significance for what I wish to advocate here since, as Yakubovich himself observed in his work, the last four lines represent a formula typical of Palaic invocatory texts, containing the description of the offering of various breads prepared for the ritual meal, and there has been a consensus over their general meaning since Carruba. It is precisely those four lines, apart from the introductory ones, that I wish to compare to our fragment:

Invocation(?) to Hilanzifa	Invocation to the Sun-god
7. <i>nū=ku</i> ^d <i>Hilanzif</i> [<i>a</i> ?	I. <i>nu=ku Fashullasas Tiyaz (...)</i>
8. <i>fulāsinanza</i> x[V. <i>kiyat fūlasinikes wasukiniyes simiyās kītar</i>
9. <i>wista sa-x</i> [VI. <i>wāsu wistas samluwas fulasinas kītar</i>
10. <i>wista</i> [(-)	VII. <i>wāsu wistas malidannas fulasinas kītar</i>

Once we observe that the fragment appears to be an invocation to Hilanzifa and that in compositions of this nature the descriptions of offerings follow a conventional order, it seems reasonable to equate *fulāsinanza* to *fūlasinikes*. The latter form was rendered by Carruba (1972: 30) as ‘brotlichen’ and by Starke (1990: 73) as “Gebäckartiges” (as suggested in the translation above) – these scholars regarded the word as plural. Indeed *fūlasinikes* seems to be an adjective qualifying *wasukiniyes*, a presumable noun. In analyzing it, Carruba posited an adjective suffix **-ika-*, cognate to Greek *-iko-*, whereas Melchert proposed *-ik-* (cp. Latin *-ex* [eks] / *-icis*, e.g. in *uertex* ~ *uortex* ‘whirl, eddy; top’) and noted that **-iko-* could well be built on it (see Melchert 1984: 37, fn. 31, with references). This takes us back to the idea of *fulāsinanza* as a denominal adjective in *-ant-* because in that case its meaning would be precisely ‘having/containing *f*.-bread’, i.e. it could name something made of *f*.-bread.⁶

There are, however, some problems to this solution. The nouns referring to the different types of bread do occur in the same order in both texts but the verses in the broken text do

⁶There is in Hittite the collective divine name ^d*Ilaliyantes*, certainly related to C. Luvian ^d*Ilalis* (sg.) and to Palaic ^d*Ilaliyantikes* (see Carruba 1970: 57; Melchert 1993: 87). The latter demonstrates that Palaic used *-ant-* and *-ik-* with the same adjectival function, adding more sense to the equation *fulāsinanza* ~ *fūlasinikes*.

not exhibit at their beginning the exact same words found in its counterpart – namely the deictic *kiyat* and the presumed noun *wāsu*. Furthermore, *wista* does not seem to agree in case with *wistas*, the form found in other texts. Of course, the reasons for these differences might become clearer only if we possessed the broken part of the fragment.

Ultimately, the idea of *fulāsinanza* as an “animated” or “personified” form, while morphologically possible, would require a context in which that particular kind of bread would be performing an action, e.g. feeding the god Hilanzifa, thus justifying that grammatical construction. But even though consumption is the ultimate purpose of these ritualistic offerings, the fact is that in no other Palaic liturgical text we find such a formula. On the contrary, the fixed and stereotypical nature of the lists of ritual meals in invocations favors the second interpretation and the comparison above shows that once we put the Hilanzifa fragment side by side with one of those lists the result is a good match in the order of the different types of ceremonial pastry.

It is, however, still possible that Palaic had a suffix cognate with the ergative and “animating” markers in its sister languages. Subsequent investigation is needed and I thus offer the thoughts and conclusions of this brief discussion to specialists in Indo-European Anatolian languages.

References:

Alp, Sedat

- 1991 *Hethitische Keilschrifttafeln aus Maşat-Höyük* (Atatürk Kültür, Dil ve Tarih Yüksek Kurumu, TTKYayın VI/ 34), Ankara.

Carruba, Onofrio

- 1970 *Das Palaische: Texte, Grammatik, Lexicon*. StBoT 10. Wiesbaden: Harrassowitz.
1972 *Beiträge zum Palaischen*. Istanbul: Nederlands Historisch-Archaeologisch Instituut.

Friedrich, Johannes

- 1960 *Hethitisches Elementarbuch I*. Heidelberg: Winter.

Garrett, Andrew

- 1990 The origins of NP Split Ergativity. *Language* 66, 261-296.

Hajnal, Ivo

- 1995 *Der lykische Vokalismus*. Graz: Leykem.

The Journal of Indo-European Studies

- Hoffner Jr., Harry A., and Melchert, Craig H.
 2008 *A grammar of the Hittite language. Languages of the Ancient Near East*, vol. 1, Winona Lake, Ind.: Eisenbrauns.
- Laroche, Emmanuel
 1947 *Recherches sur les noms des dieux hittites* (= RHA VII 1947). Paris : Maisonneuve.
 1962 Un 'ergative' indo-européen d'Asie Mineure. *BSL* 57, 23-43.
- Melchert, Craig H.
 1984 Notes on Palaic. *Zeitschrift für Vergleichende Sprachforschung* 98, 22-43.
 1993 *Cuneiform Luwian Lexicon*, Chapel Hill, NC: Self-published.
 1994 *Anatolian Historical Phonology*, Amsterdam: Rodopi.
 2008 Palaic. In: Roger D. Woodward (ed.). *The Ancient Languages of Asia Minor*. Cambridge: University Press, 40-45.
 Forthcoming. The problem of the Ergative Case in Hittite. In: M. Mazoyer & M. Fruty (eds.) *Variations, concurrence et evolution des cas dans divers domaines linguistiques*.
- Oettinger, Norbert
 1981 Hethitisch *ganenant* 'gebeugt, durstig'. *Münchener Studien zur Sprachwissenschaft* 40, 143-153.
- Soysal, Oğuz.
 2004 *Hattischer Wortschatz in hethitischer Textüberlieferung*. Brill: Leiden/Boston.
- Starke, Frank
 1990 *Untersuchungen zur Stammbildung des keilschrift-luwischen Nomens*. StBoT 31, Wiesbaden: Harrassowitz.
- Yakubovich, Ilya
 2005 Were Hittite kings divinely anointed? *Journal of Ancient Near Eastern Religions* 5, 107-137.

The Saussure Effect in Lithuanian^{*}

Yoko Yamazaki[†]

Kyoto University

The so-called “Saussure effect” describes the phenomenon of laryngeal loss in the following environments: **#HRo-* and **.oRHC-*. The fact that the effect is observed in several Indo-European branches suggests that it took place at the stage of Proto-Indo-European. In this paper, characteristic examples of the phenomenon in Lithuanian are presented, and an attempt is made to provide a consistent morphological explanation of the reason why no traces of the Saussure effect are observed in several seeming counterexamples where its operation is expected.

1 Introduction

The “Saussure effect” is a phenomenon where a laryngeal is lost without any trace in specific environments in the vicinity of the vowel **/o/*. Although not many examples are found, it is observed in Greek, Anatolian, Italic, Sanskrit, and Armenian. This fact suggests that the Saussure effect took place at the stage of Proto-Indo-European. Recent studies on the Saussure effect include a survey of the examples of this phenomenon in Latin and Italic in Nussbaum (1997), an investigation and a summary of the phenomenon in Greek in Beekes (1969: 74–75, 238–242), as well as in Anatolian in Melchert (1994: 49–51).¹ For Balto-Slavic, the main study of this phenomenon is by Rasmussen (1989), who provides examples of the phenomenon from Balto-Slavic in order to explain the unexpected circumflex

^{*}This paper is a revised edition of my master’s thesis submitted in 2007. I wish to thank the members of my thesis committee — Kazuhiko Yoshida, Yukinori Takubo, Yutaka Yoshida, and Satoko Shirai — as well as the students of the linguistics department of Kyoto University. Special thanks are due to my supervisor Kazuhiko Yoshida and Brent Vine for their insightful comments and advise, and to Aurelijus Vjunas for inspiring me to examine this interesting topic. I also wish to thank Toshikazu Inoue for providing me with valuable advice and materials on Baltic, Kanehiro Nishimura for his invaluable help, and Alexander Hadjiivanov and Adam Catt for checking my English. Needless to say, any remaining mistakes are exclusively mine.

[†]anaconite@ling.bun.kyoto-u.ac.jp

¹The phenomenon was originally described in Saussure (1905: 511ff.).

tones of some forms. Unfortunately, however, the evidence for the Saussure effect in Baltic does not seem to have received the attention it deserves.

In this paper, I will examine certain examples and counterexamples of the Saussure effect in Lithuanian, thus refining the results obtained by Rasmussen (1989). Since as yet there are no good collections of Proto-Indo-European nominal roots, the data presented here in regard to the Saussure effect are largely based on the collection of Proto-Indo-European verbal roots in *LIV*. Furthermore, I will attempt to clarify the relationship between the Saussure effect and each of the seeming counterexamples. Most of these counterexamples are assumed to have been affected by legitimate analogical processes which restored the lost laryngeals.

1.1 The Saussure Effect

The Saussure effect constitutes the loss of a laryngeal in the environments indicated in (1) below:

- (1) a. **#HRo-* > **#Ro-*
 b. **-oRHC-* > **-oRC-*

The examples in (2) and (3), which are examined in Beekes (1969: 74–75, 238–242), show that laryngeals in Greek were not vocalized in the environments indicated in (1):²

- (2) Failure of vocalization of laryngeals in the environment of **# Ro-*:

- a. **h₃loig-o-* > *λοιγός* ‘decimation’: cf. **h₃lig-* > *ὀλίγ-* ‘few, small’
 b. **h₃moiǵ^h-o-* > *μοιχός* ‘adulterer’: cf. **h₃meiǵ^h-* > *ὀμείχω* ‘to urinate’
 c. **h₂nōr-* > *νωρεῖν* ‘to be active’ (Hesychius): cf. **h₂ner-* > *ἀνήρ* ‘man’
 d. **h₂uors-* > *οὐρέω* ‘urinate’, *οὐρον* ‘urine’: cf. **h₂uers-* > *ἄερσαν*, *ἄερσην* ‘dew’

- (3) Failure of vocalization of laryngeals in the environment of **-oRC-*:

²(2) and (3) are based on the summaries in Nussbaum (1997: 181–182).

- a. **torh₁mo-* > τóρμος ‘hole’: cf. **terh₁-* > τερέτρον
‘gimlet’
- b. **porh₂neh₂* > πόρνη ‘prostitute’: cf. **perh₂-* > πέρνημι,
πέρασα
‘to sell’
- c. **tolh₂meh₂* > τόλμα ‘hardiness’: cf. **t_hh₂-* > τλήναι
‘to endure’
- d. **solh₂uo-* > ὅλος, οὖλος ‘whole’: cf. **s_hh₂i-* >
CLuv. *šalhitti-*
‘growth’
- e. **(h₁)ouHd^h-* > οὔθαρ ‘udder’: cf. **(h₁)uHd^h-* > Skt. *údhar*
‘udder’
- f. (**polh₁u-* →) **polu₁ia-* > πολλή
‘many’
- g. thematic optatives: **-oih₁(-t)* > *-oi*,³ e.g., ἄγροι
‘(s)he would lead’, ἴδοι ‘(s)he would see’ etc.

The examples from Latin in (4) below were examined in Nussbaum (1997):

- (4) a. **solh₂no-* > **solno-* > *sollo-* ‘whole, all’: cf. **s_hh₂uo-* >
**sal₁uo-* > **saluo-* > *salvus* or **s_hh₂euo-* > **sal₁uo-* > **saluo-*
> *salvus*
‘safe and sound’⁴
- b. **tolHu-* > **tolu-* > **toll-* → *meditullium* ‘the interior,
inland part of a country’: cf. **t_hlH-tos* > **tlā-tos* > Lat.

³For a detailed discussion of the examples from thematic optatives, see Nussbaum (1997: 182¹³).

⁴According to Meiser (1998: 108–109), Proto-Indo European syllabic resonants developed in Latin as follows: PIE **CRHC* > Lat. *CRā C*, e.g., **ǵ_hh₁tó-* > (*g*)*natus* ‘born’; PIE **C_hHC* > Lat. *CaRaC*, e.g., **p_hh₂meh₂-* > **palama* > *palma* ‘palm’. On the other hand, Schrijver (1991: 193–197) argues that it is unnecessary to set up a phonological rule **C_hHC* > *CaRaC* and shows that most examples of the alleged change *CaRaC* < **C_hHC* can be explained in different ways. **CRHeC* is proposed by him as one of the possible sources of Latin *CaRaC* sequences: *palma* < **p_hh₂em-*; *calamitās* ‘calamity’ < **k_hH-em-*. Therefore, the former change from **s_hh₂uo-* to Lat. *salvus* can be regarded as possible if we accept the development **C_hHC* > *CaRaC* mentioned in Meiser (1998: 108). At the same time, the latter change from **s_hh₂euo-* to Lat. *salvus* is possible. As a result, **C_hHC* > *CaRaC* is rejected and an alternative explanation is provided by Schrijver (1991: 193–197). However, since it is essentially irrelevant whether the preform of Lat. *salvus* is **s_hh₂uo-* or **s_hh₂euo-*, this problem will not be discussed further here.

- lātus* ‘broad, wide’; **tol(H)u-* > OPru. *talus* ‘floor’;
**tol(H)u-* or **telHu-* > Skt. *tālu*
 ‘palate’ (< ‘*roof of the mouth’)
 c. **kolH-ni-* > **kolni-* > *collis* ‘hill’: cf. **kelH-tei* > Lith. *kėlti*,
 Latv. *celt*
 ‘to lift’
 ; without the laryngeal loss, the expected Latin form
 would be **colnis* or **culnis* < **kolani-* < **kolH-ni-*.
 d. **k^wolHso-*⁵ > **k^wolso-* > *collus* / *collum* ‘neck’⁶: cf.
 Ved. *tuvi-kurmí(n)-*
 ‘moving strongly’ < **k^wlH-mi-*, Gk. *πλήμυη* ‘nave of a
 wheel’ < **k^wlh₁-* or **k^wlh₂-*.

Melchert (1994: 49–51) gives examples from Hittite in (5) as evidence of the laryngeal loss.

⁵ While the reconstruction of **k^wolHso-* (Nussbaum 1997: 196) is phonologically sufficient, it raises a morphological question concerning the suffix **-so-*. **k^wolHso-* seems to have a morphological boundary between **k^wolH-* and **-so-*, since a root of the shape of **k^wolH-* and a suffix **-so-* can be recognized on the basis of Gk. *πέλομαι* ‘to turn (into), to be (come)’ and Skt. *cáрати* ‘to travel, to wander’ (< **k^welH-e/o-*), and so on.

However, the reconstruction of the suffix **-so-* is problematic, at least for an early stage of Proto-Indo-European, since there is no clear evidence for it. Brugmann (1906: 538ff.) showed that the suffix **-so-* is an extension of **-s-* or **-es-* by **-o-*, analogous to **-no-* as the extension of **-en-* and **-on-* by **-o-*, etc. Furthermore, even though a *so-*formation shares the same suffix and the same root, the difference in the ablaut of the root usually indicates that a shift of old *s*-stems to *o*-stems occurred in the daughter languages, e.g., Skt. *rukṣá-* ‘shining’ with zero grade and OIcel. *lióss* ‘light’ with *e*-grade suggest an old *s*-stem. There are a fair number of examples of this kind. Also, Chantraine (1933: 433–436) classifies Greek words with *-σος* into three groups: (i) loan words, (ii) expressive adjectives and action nouns, each of which can be explained as a root with a desiderative suffix, and (iii) hypocoristics. As a result, he avoids the reconstruction of the suffix for Proto-Indo-European.

Although it is clear that further research regarding this issue is needed, it is beyond the scope of the present paper. The examples of the Saussure effect with the suffix **-so-* as identified by previous studies are cited below, with the exception of the forms in **-so-* in my own examples.

⁶ However, Nussbaum (1997: 196) mentions that the possibility cannot be excluded that *collus/collum* reflects the following change: **k^wolHso-* > **k^wolaso-* > **k^wolso-* > **k^wollo-* > *collus/collum*. One of the anonymous referees suggested that the following place-name and its corresponding adjective could be counterexamples to the above-mentioned sound change since the expected assimilation of sonants following syncope does not seem to have occurred in them: *Falerii* < **Falrior* < **Falesioi*, (adj.) *Falernus* < **Falrinos* < *Falesinos*. The investigation of these two forms will be reserved for a future time.

- (5) a. **h₂wórso-* > **wórso-* > *warša-* ‘mist steam’: cf. **h₂wers-* ‘to rain’ > Gk. ἀέριση ‘dew’
 b. **h₂worg-* ‘turn, twist’ > (reduplicated) **worg-* → *wawarkima-* ‘door - hinge’: cf. **h₂wrg-* > *hurki* ‘wheel’
 c. **kólh₂mo-ro-* > *kalmara-* ‘ray, beam’: cf. **k_lh₂mo-* ‘stalk’ > Gk. καλάμη, **kólh₂mo-* ‘stalk’ > Latv. *salms* ‘stubble’
 d. **pólh₂ueh₂-* → *palwa(i)-* ‘to clap’: cf. Lat. *palma* ‘palm’ < **p_lh₂meh₂-* or **p_lh₂em⁷-*; without the laryngeal loss, Hitt. **palhwa(i)-* would be expected.

In addition to the examples listed in (2) – (5) above, there are some examples from other languages, which are provided in Nussbaum (1997: 183), such as the ones in (6) below.

- (6) Examples from other languages
 a. **sólh₂o-* > Skt. *sárva-* ‘whole, all’: cf. (3d)
 b. **k_uH-lo-* > Arm. *soyl* ‘cavity’: cf. **k_uH-* > Av. *sūra-* ‘hole’, Skt. *súna-* ‘lack, absence’

As shown above, examples of the Saussure effect are observed in several Indo-European daughter languages. In the next section, I present possible traces of the Saussure effect in Lithuanian.

1.2 Expected traces of the Saussure Effect in Lithuanian

Although laryngeals do not have segmental reflexes in Lithuanian, it is well known that they have reflexes as tonal accents,⁸ as in (7) and (8) below.

- (7) a. **VRHC* > *ṼRC* [acute intonation (falling tone)]
 b. **VRC* > *V̄RC* [circumflex intonation (rising tone)]
 (8) a. **ǵéh₁to-* > *žéntas* ‘son-in-law’, **b^hérHǵ-* > *béržas* ‘birch’
 b. **ǵóm^hos* > *žam̃bas* ‘sharp edge’, **u_lk^wos* > *viikas* ‘wolf’

Accordingly, the intonation of **oRHC-* sequences, which have also undergone the Saussure effect, is expected to be

⁷See footnote for the two competing possible preforms.

⁸Lithuanian long vowels, diphthongs, and mixed diphthongs (vowel + sonorant between consonants) have two kinds of intonations when they are accented:

- a. acute intonation (*Ṽ*): falling tone
 b. circumflex intonation (*V̄*): rising tone

circumflex in Lithuanian: **-oRHC-* > **-oRC-* [via the Saussure effect] > *-aR̃C-* (7b). Based on this, Rasmussen (1989: 181 – 184) gives the forms which seem to have undergone the Saussure effect.⁹ Some of these examples, which I consider plausible, are given in (9).¹⁰

(9) Examples from Lithuanian

- a. (PIE **korH-neh₂*) PB-S. **karna* > *karnà* (4)¹¹ ‘bast’: cf.
**kérH-on-s* > *kérH-ōn* → *kŕH-ōn* > Lat. *caro* ‘meat’
- b. (PIE **sphorH-teh₂*) PB-S. **spartā* > *špartà* (4) ‘speed’: cf.
 Ved. *má apa spharīṣ* (RV 6.61.14) ‘do not spurn [us]!’ <
**spherH-* ‘to kick’
- c. (PIE **kouH-no-*) PB-S. *ćaunas* > *šaiūnas*, *šaiūnùs* (4)
 ‘brave’¹²

⁹The purpose of the analysis in Rasmussen (1989) is to utilize the Saussure effect to account for certain forms which exhibit unexpected circumflex tones but which cannot have undergone *métatonie douce* since they do not appear in the well-known environments necessary for its occurrence.

¹⁰However, since (9d) and (9e) are affected by the problem already mentioned in footnote 7, they are less plausible in comparison to the other three.

¹¹Lithuanian nominals are classified into four “accentual paradigms (AP)” according to the pattern of the stress alternation between the stem and the ending throughout the nominal paradigm. Regarding nouns with a monosyllabic stem, the tone of the stem is connected to the AP to which the noun belongs. AP1 denotes a barytone paradigm with the acute accent on the root, while AP2 is a historically barytone paradigm where the root is non-acute and the stress alternation between the stem and the ending is caused by Saussure’s law and other morphological factors. AP3 comprises mobile paradigms with the acute root, whereas AP4 denotes a mobile paradigm with the non-acute root where further stress alternation has been brought about by Saussure’s law and other morphological factors.

¹²While Rasmussen (1989: 182) considers *šaiūnas* to be related to *šauti* ‘to shoot’, which is a descendant of the Proto-Indo-European root **keuH-* ‘to throw, push to move’ (*LIV* 330), it could also be related to Skt. *śūna-* ‘lack’, *śūśvar* (perfect form of the root *śavī* ‘to swell’: Mayrhofer 1986–96: II, 623–624) and Gk. *κυέω* ‘to bear in the womb’ as suggested in *IEW* (592–594). The Greek form suggests the existence of **h₁* in the root for ‘swell’ since it can be interpreted as a reflection of a causative form **k₁uh₁-éjē-*. However, from those zero grade forms, two kinds of full grade forms, namely **keuh₁-* (following Mayrhofer 1986–1996: II, 624) and **k₁ueh₁-* (after *LIV* 339), can be reconstructed. It is difficult to judge which of the two forms represents the older shape of the root, and this problem remains open.

In addition, following the analysis of Mayrhofer, the root on which the protoform of *šaiūnas* is based is a *set* root in the case of both **keuH-* ‘to throw’ and **keuh₁-* (or **k₁ueh₁-*) ‘to swell’. Therefore, *šaiūnas* is a fine example of the Saussure effect.

- d. (PIE **norH-seh₂*, -so-) PB-S. **narsa*, -sas > *narsà*, *nařsas* (4) ‘courage’: cf. OCS *po-nrětb* ‘buried’, Lith. *nėrti* ‘to dive’ < **nerH-* ‘to dive’
- e. (PIE **b^holH-so-*) PB-S. **bàlsas* > *bařsas* (4) ‘voice’: cf. Lith. *bilti* ‘to begin speaking’ < **b^hlH-tei*, OE *bellan* ‘to ring’ < **b^helH-e-* ‘to sound’

2 Problems with the Lithuanian Examples of the Saussure Effect

Following §1.2, the examples of the Saussure effect in Lithuanian should be forms which have a circumflex accent on their respective root syllables, and whose preforms are considered to have contained **-oRHC-* sequences. However, these two criteria are not sufficient for the proper identification of the effect since there are additional factors which need to be taken into account. Therefore, I believe that some forms presented in Rasmussen (1989: 181–184) and cited below should be excluded from the list of probable examples of the Saussure effect for reasons which I will discuss in the following sections.

2.1 Uncertain reconstruction of laryngeals

For some roots, it is difficult to decide whether a root-final laryngeal can be safely reconstructed. Some researchers consider the following forms to have been derived from *set* roots, while others consider them to have been derived from *anit* roots.

2.1.1 **kor(H)meh₂* > *řarmà* (4) ‘frost’

Rasmussen (1989: 181) regards Lith. *řarmà* as one of the cognates of OE, OSax. *hrim* ‘frost’, and reconstructs PIE **kerH-*i**-. He considers that the Germanic forms reflect the zero-grade form **kriH-*, and that their long vowels provide evidence for the existence of a laryngeal. However, OE, OSax. *hrim* is related to **krei-* ‘to touch something, contact’ together with Lith. *krėnà* (4) ‘cream’ by *IEW* (618), which is modified as **KreiH-* ‘to touch’ in *LIV* (368). Yet, two problems arise from these reconstructions. The first concerns the question of whether the initial consonant of the target root was a plain velar or a palatovelar, since these two consonants have different outcomes in Lithuanian, namely *ř* (< **k̑*) and *k* (< **k*). Another problem is which shape of the root is the original, **k/kreiH-* or **k/kreH(i)-*, for only zero-grade reflexes are shown

outside of the Balto-Slavic cognates, making it difficult to determine the original shape of the root.

Furthermore, there are uncertainties regarding Lith. *šármas* and its related forms. Derksen (1996: 88–89) reconstructs a Proto-Baltic acute root for this form on the ground of the accentual correspondences between Lithuanian [*šármas* (1/3) ‘hoarfrost, lye’, *sarmà* (3) ‘id.’, *šárma* (1) ‘hoarfrost’] and Latvian forms [*sārms* ‘lye’, *sārma* ‘hoarfrost’, *sērma* ‘id.’]. He regards the accentuation of *šármas* (4) and *šarmà* (4) as the result of the analogical spread of AP4. He also discusses its cognates with a zero-grade (*šīrmas* (3) ‘grey, dapple-grey’, Latv. *siřmas* ‘grey’), which exhibit the original acute. For these reasons, he thinks the acute accent in the cognates with a **-no-* suffix (*šérnas* (3) ‘wild boar’) and with *-v-* (*šīrvas* (3) ‘grey, dapple grey’) show the original acute accent, while *šērknas* ‘hoarfrost’ and Latv. *sērnis* ‘hoarfrost’ do not show any trace of the old acute. In contrast to this, Illich-Svitych (1978: 119) reconstructs an *aniř* form **kernom* ‘hoar-frost’ since some of the Slavic cognates, such as Ru. *serěn* ‘crust over snow’ and Ukr. *serén* ‘frozen hard snow’, point to a non-acute root, while he relates Lith. *šárma* (1) to a *seř* root (**kerH-*) in PIE. Derksen states that if Illich-Svitych is right, there seem to be two almost identical roots (**ker-* and **kerH-*) in Balto-Slavic.

Thus, if we postulate that all the forms quoted above are derived from the same root in PIE, it is extremely difficult to determine whether the original root in PIE was an *aniř* or a *seř* root, since some cognates (*šármas* (1/3), Latv. *sārms*, *šīrmas*, Latv. *siřms*, etc.) suggest an original acute, or a *seř* root, while others (*šērknas*, Latv. *sērnis*, Ru. *serěn*, Ukr. *serén*, Slk. *sriěň*) imply a non-acute, or an *aniř* root. For this reason, the problems surrounding the root **ker(H)-* should be reserved for a later research.

2.1.2 **moī(H)neh₂, -os > maīnas*, dial. *mainà* (4) ‘exchange’

Rasmussen (1989: 199) reconstructs a *seř* root **meīH-* on the grounds of Latv. *mīt* ‘to exchange’ and Ved. *máyate* ‘to exchange’. The Latvian correspondences to Lith. *maīnas* are *maīņa*, *maīna*, and *maīna* ‘change’, which exhibit acute accentuation.¹³ However, the cognates of Lith. *maīnas* include

¹³Būga (1923/1924: 272) thinks that Lith. *maīnas* would have been formed beside **maīna* on the analogy of *vaīnas* : *vārna*, on which the denominative

Ved. *apa-mitya-* (< *-mi-) ‘charges’, which suggests an *aniṭ* root **mei-* in Proto-Indo-European (Mayrhofer 1986–1996: II, 314–315). SCr. *mijèna* ‘change (of the moon)’ also points to an *aniṭ* root. Consequently, although the intonation of Latvian forms certainly presents a problem, it is nonetheless clear that the root itself is of the *aniṭ* type.

2.1.3 **uor(H)tā* → *vaṛtai* (2) ‘gate’

An *aniṭ* root **uer-* ‘to ward off’ is reconstructed in *LIV* (684), while Rasmussen (1989: 183) reconstructs a *seṭ* root **uerH-* beside the *aniṭ* form (**uer-mṇ*). Rasmussen (1989: 82) assumes two more structures for the root, namely **uerHu-m⁰* and **uruH-m⁰*, where the former produced ἔρυμα ‘cover’, whereas the latter gave rise to ῥύμα ‘cover’.

The cognates of this root include Gk. ἔρυμαί < **uer-u-* ‘to check (from doing something)’ (*LIV*684), Ved. *vr̥tá-* ‘enclosed’ < **ur̥-tó-*, *var̥tár-* ‘inhibitor’ < *ver-tór-*, *-vr̥t-* (e.g. *ar̥no-vr̥t-* ‘obstructing the flood’) and *varū⁰* (e.g. *varutár-* ‘defender’, *várutha-* ‘umbrella, protection’) (Mayrhofer 1986–1996: II, 512–513). Mayrhofer (1986–1996: II, 513) thinks that *varū⁰* does not necessarily indicate a *seṭ* root since Ved. *vr̥tá-*, *var̥tár-*, and *-vr̥t-* suggest an *aniṭ* root, contrary to the assumption of **uerH-* proposed in Rasmussen (1989).

As briefly surveyed, there are a number of forms which suggest an *aniṭ* root **uer-* for PIE. For this reason, this form will be excluded from my discussion.

2.1.4 *pol(H)uos* > *paĩvas* (4) ‘pale’

Rasmussen (1989: 184, 306) reconstructs an unspecified laryngeal for the root **pelH-* ‘pale’. On the other hand, Nussbaum provides a discussion on the root relevant to Lith. *paĩvas*. He distinguishes between the two forms (i) PIt. **pallo-* (< **pal-uo-*), identical in formation to Gmc. *falwa-* ‘pale’ (OIcel. *fólvr*, OHG *falo*) and with Lith. *paĩvas*, and (ii) PIt. **pollo-* ‘dark, gray’, which is continued by Lat. *pullus* ‘dark, gray’. These two

mainyti (*maĩno* [3p.]) was formed. Thus, he regards the acute intonation as original for the Baltic words meaning ‘exchange.’ On the other hand, Derksen (1996: 266) proposes an alternative idea that the *métatonie rude* in *a*-stem agent nouns in Baltic was analogical to the derivation of nomina agentis from iterative (or intensive or durative) verbs with the suffix *-a-. Later, this type of derivation became productive and *a*-stems with fixed stress on an acute root were derived from verbal roots even if there were no such verbs. Although *maĩna*, *maĩna*, and *maĩna* ‘change’ are not agent but abstract nouns, they might be the result of the derivation mentioned above.

reconstructed forms could be descendants of one and the same stem, although there are difficulties regarding this assumption: “one is that **pal-* and **pol-* are not easily reconciled (**ph₂e/ol-* being excluded by Gk. *πελιός* ‘gray’ etc. and **polH-/ *pl̥H-* by e.g. OIr. *líath* ‘gray’ < **pl-ei-* and not **pl̥H-ei-*)” (Nussbaum 1997: 191⁶²); the other is that **pallo-* denotes a pale color while **pollo-* denotes a dark color. Considering these points, Lith. *paĩvas* seems to be semantically and morphologically akin to a group of words which have descended from **pallo-* (< **pal-uo-*) ‘a pale color’ rather than from **pollo-* ‘a dark color’. Furthermore, following the view of Nussbaum that the sequence **-ll-* in **pallo-* is more likely to reflect **-lu-* than a syncopated **-l̥u-*, **pallo-* is not likely to show the vocalized root-final laryngeal, and the shape of its ancestral root would be **ph₂e/ol-*, without a root-final laryngeal. However, there remains a complicated etymological problem, namely whether there is a proper way to reconstruct one PIE root reconciling **pal-* and **pol-*, which Lith. *paĩvas* should be based on, as well. This is why *paĩvas* is omitted from the following discussion.

2.2 Etymological problems

The forms listed in the following sections face etymological problems in the sense that there are competing etymologies, one of which allows the reconstruction of a root-final laryngeal, while the other one does not.

2.2.1 *spaĩnas* (4) ‘wing’

Rasmussen (1989: 182) regards Lith. *spaĩnas* as connected with Lith. *spĩrti*, Latv. *speĩt* ‘to kick’, which are cognate with Ved. *sphuráti* ‘to push, to kick away’ [< **sp^h̥tH-é-* (LIV 585)]. However, at the same time, there is another possibility, namely **(s)per-* ‘to traverse’ [**spor-no-* > *spaĩnas*], which is related to Skt. *parṇá-* ‘wing’, OHG *farn*, and OE *fearn* ‘fern’ in *IEW* (850).¹⁴

¹⁴According to *IEW* (850), the origin of the initial *s* in the Lithuanian form could be the verbal root **sp^(h)erH-*. I further note that both Illich-Svitych (1963 [1979]: 38) and Southern (1999: 36) mention Lithuanian *spaĩnas* as a variant with *s*-mobile, although they set up **(s)pern-* for the Proto-Indo-European root. Since “*(s)*+ plain voiceless stops” is the “home territory” of *s*-mobile, as described in Southern (1999: 20–21), the view of Illich-Svitych (1963 [1979]: 38) and Southern (1999: 36) is not implausible.

Both of the possible root etymologies work well with Lith. *spařnas*, while the one based on **per-* is preferred in respect to Skt. *parṇá* since the root with aspiration, i.e., **sp^(h)erH-* (> *spharⁱ-* ‘to kick away’) and the other without, i.e., **per-* (> *par-* ‘to bring through, pass’), are clearly distinguished in Sanskrit. So, if **sp^(h)erH-* is adopted as the root etymology of *spařnas*, it should not be derived from **(s)per-*, which allegedly gave rise to the rest of the forms, namely Skt. *parṇá*-, OHG *farn* ‘fern’ etc. However, it might be difficult to suppose that *spařnas* is not etymologically related to Skt. *parṇá*-, OHG *farn* ‘fern’ etc., since both their phonological shapes and their meanings are closely related. As further discussion on the etymology of *spařnas* is beyond the scope of this paper, this case will be left aside.

2.2.2 *tařnas* (2 > 4) ‘servant’

On the one hand, Rasmussen (1989: 183) reconstructs **terHu-* ‘young, delicate’ as the root on which the protoform of Lith. *tařnas* is based. He further notes that **terHu-* is not necessarily identical to **terh₁u-* ‘to wear away’, but does not explicitly show any evidence for a root-final laryngeal. On the other hand, according to *IEW* (1070), *tařnas* is derived from an adjectival *aniř* root **ter-* ‘delicate, weak’. It is not certain that a morphological procedure for building a *no*-formation on the basis of an adjectival root existed at an early stage of Proto-Indo-European. Consequently, this form will be excluded from the source list for the discussion below.

2.3 A form derived from an *s*-stem

The form in question is **tom(H)seh₂* > *tamsà* (4) ‘darkness’, which is derived from Proto-Indo-European **temH-* ‘to become dark’. We also have an adjective *tamsùs* ‘dark’ in Lithuanian. According to *IEW* (1063), there is a Vedic cognate of this word, namely *támas-* ‘darkness’. Mayrhofer (1986–96: I, 626) reconstructs an *s*-stem paradigm **témH-es/*témH-s-* for the protoform of Ved. *támas-* and Lat. *temere* ‘at random, by chance’ (< ‘in darkness’ = Ved. *támas-i* [loc.sg.]), which clearly points to an *e*-grade in the protolanguage, as well as OHG *demar* ‘dim’ (< **temHsó-*). Thus, these materials suggest an *s*-stem paradigm containing an *e*-grade. Furthermore, except for a few examples (Gk. *ὄχος* ‘a chariot’, Lat. *pondus* ‘a weight’, *foedus* ‘foul, ugly’, OCS *kolo* ‘a chariot’), *s*-stems usually do not have an *o*-grade in

their roots (Schindler 1975: 265). Therefore, it does not seem likely that the *o*-grade in the Lithuanian forms is primary. At the same time, there are examples, including several ones outside Balto-Slavic, of *u*-stem adjectives built on *s*-stems with an *o*-grade, which is completely parallel to *tamsùs* (< **tomH-s-u*-), such as Gk. ὀξύς ‘sharp’, whose protoform can be reconstructed as **h₂ok-s-u*-. This suggests that there might have already existed a morphological process where *s*-stems changed the *e*-grade of the root vowel to an *o*-grade in the protolanguage. However, since the age of this reformation is not certain, this example should also be left aside.

2.4 Forms which Underwent Metatony

2.4.1 Metatony

Metatony refers to the replacement of one intonation with another in Baltic languages, for example, in the case of *u*-stem adjectives: *saldùs* (3) [Daukša’s Postilė (1599)¹⁵] (cf. Latv. *sa lds*) → *saldùs* (4) ‘sweet’, which took place in the relatively recent history of Lithuanian (Stang 1966: 160). Also, some groups of words containing certain morphological suffixes frequently underwent metatony, for example, *púodas* (1) ‘pot’ → *puōdžius* (2) ‘pottery’ [nominal suffix with *-iū-*], *sveīkas* (4) ‘healthy’ → *svėikinti* ‘to greet’ [verbal suffix *-inti*]. As shown, metatony obfuscates the original tone. Metatony is classified into two classes in accordance with the resulting intonation. *Métatonie rude* refers to a change from circumflex to acute intonation, and *métatonie douce* refers to a change from acute to circumflex intonation. Compared to *métatonie rude*, *métatonie douce* is much more frequent, especially in forms with suffixes containing **-i-* (e.g., *u*-stems in *-ius*, *io*-stems, etc.).¹⁶ Thus, it is clear that forms with suffixes containing **-i-*, such as

¹⁵The accentuation of the words in Daukša is adopted from Skardzius (1935).

¹⁶According to Stang (1966: 145–147), **-iūs* (> *-ius*), **-iōs* (> *-is* [*io*-stem]) or **-iā* [or **-iē*] (> *ē*) shifted the ictus on *-i-* to the immediately preceding syllable at an early stage of Proto-Baltic. If the syllable which received the ictus had a long vowel or a diphthong, it received a circumflex intonation. Derksen (1996: 375) concluded that this retraction of stress took place at the East Baltic stage. This view of accent retraction, which brought about *métatonie douce*, seems to have been accepted as a standard: “...the sequence **-i-* in medial stressed position lost its ictus to the preceding syllable. This caused the syllable to change an original acute tone into a circumflex, i.e., the retraction caused *métatonie douce* on a preceding syllable. This rule has been accepted as a major source of Baltic metatony” (Larsson 2004: 162).

baĩnis (2) ‘quarrel’ (PIE **b^herH-* ‘to work on something with a sharp tool’), *kraĩtis* (2, 4) ‘dowry’ (PIE **k^wreih₂-* ‘to exchange’), *kaĩnius* (2) ‘mountaineer’ (PIE **kelH-* ‘to raise’), etc., should be excluded from the list of proper examples. However, the situation is not so simple with nominals of other stems. Since *mētatonie douce* in other forms, such as *o*-stems and *a*-stems, is not regular, it is necessary to examine whether a circumflex intonation in a particular stem is original or the result of *mētatonie douce*.

2.4.2 Distinguishing between original and secondary intonation Endzelĩns (1899: 263ff.) observed a correspondence between Lithuanian accentual paradigms and Latvian intonation patterns in word-initial syllables. The correspondence is as follows:

- Lith. acute (AP1) ~ Latv. sustained tone (\tilde{V})
 e.g. Lith. *výras* ‘man’ ~ Latv. *viĩs* ‘id.,’ Lith. *dúona* ‘bread’ ~
 Latv. *duõna* ‘id.,’
 Lith. circumflex (AP2) ~ Latv. falling tone (\hat{V})
 e.g. Lith. *rankà* (*raĩka* [sg.acc.]) ‘arm’ ~ Latv. *riõka* ‘id.,’
 Lith. *iẽšmas* ‘spit’ ~ Latv. *iesms* ‘id.’
 Lith. acute (AP3) ~ Latv. broken tone (\hat{V})
 e.g. Lith. *núogas* ‘naked’ ~ Latv. *nuõgs* ‘id.,’ Lith. *širdis*
 ‘heart’ ~ Latv. *siĩds* ‘id.’
 Lith. circumflex (AP4) ~ Latv. falling tone (\hat{V})
 e.g. Lith. *baĩsas* ‘voice’ ‘id.,’ ~ Latv. *bãlss*, Lith. *draũgas*
 ‘friend’ ~ Latv. *drãugs* ‘id.’

Also, Illich-Svitych (1963 [1979]: 52–53) presents the following argument regarding the chronological relationship between Lithuanian and Latvian accentuations:

The process of accent retraction to the initial syllable in Latvian took place at an early date: it is a proto-Latvian process, (...) the tone contrast of $\tilde{}$ and $\hat{}$ in initial syllables in Latvian reflects an older distribution of nominals by accent class than does modern Lithuanian (...)

Thus, Lith. *ieva* ‘bird-cherry’ (< PIE **õiuā* or **ẽiuā*) occurs in AP1, 2, and 4, while Latv. *iẽva* ‘id.’ preserves the original accentuation, and Lith. *jėgà* ‘thought, mind, wit’ (< PIE **iẽg^uā*) occurs only in the secondary accentuation AP4, while Latv. *jėga* exhibits the original accentuation (Illich-Svitych 1963 [1979]: 53). The studies by Endzelĩns (1899) and

Illich-Svitych (1963 [1979]) show the importance of the intonation of Latvian forms which correspond to Lithuanian ones, since it preserves the older accentual patterns. Consequently, the following examples in (10) should be excluded from the possible examples but included in the counterexamples, since the accentuation of the Latvian correspondences points to the original acute.

- (10) a. (PIE **kólH-neh₂>*) PB-S. **ćalna > šalnà* (4) ‘frost’ :
 PIE **kélH-* ‘to be cold’
 cf. Latv. *sa^ˆlna*
- b. (PIE **kolH-eh₂>*) PB-S. **kalva > kalvà* (4) ‘hill’ : PIE
**kélH-* ‘to be elevated’
 cf. Latv. *ka^ˆīva*

(10a) and (10b) will be discussed in §4.

3 Possible Examples of the Saussure Effect

The problems with some of the examples of the Saussure effect provided in Rasmussen (1989) were briefly discussed in the previous section. The following three points have emerged from this discussion:

- Ensure the reconstruction of a root-final laryngeal and the etymology of each root is reliable and clear.
- Ensure the original *o*-grade can be reconstructed for Proto-Indo-European. (for example, an *o*-grade of a reflex derived from an old *s*-stem should be excluded since the age of its formation is not certain as already discussed in §2.3).
- Ensure the intonation of the form in question is the original one.

Taking these points into consideration, I present some possible examples in this section in addition to those listed in (9) after Rasmussen (1989). Most of them have environments which allow for the shape of the form to be derived on the basis of either the Saussure effect or another rule for laryngeal loss with equal possibility. As we will see in the following sections, the rule **CH.CC > *C.CC* discussed in Hackstein (2002) could share the same environment as that which triggered the Saussure effect if the sequence occurred in the environment **oRH.CC* (where the context of the Saussure effect **-oRH.C-* is

followed by another consonant). Also, Pinault's law [$*H > \emptyset$ in internal syllables before yod (Pinault 1982: 268–269)] is a rule that could share the environment with the Saussure effect when it operated on the sequence $*-oRH_i-$ (where the consonant following the laryngeal is a yod in the sequence of the Saussure effect). For this reason, the possible examples listed below fall short of being certain. The intonation of the Latvian forms is based on Mūlenbachs (1923–32) and Endzelīns (1934–46), whereas the accentual paradigms of the Lithuanian forms are based on LKŽ.

3.1 *gaudūs* (4) 'sonorous'

gaudūs (4) 'sonorous': $*geuh_2-$
'to call' (cf. LIV 189) $\rightarrow *gouh_2d^h h_1- > *gou-d^h h_1- > gaudūs$

The cognates of Lith. *gaudūs* include Gk. $\gamma\acute{o}\omega$ 'I wail' and OHG *kūma*. The long vowel in *kūma* ($< *guh_2-mo-$) indicates the existence of a root-final laryngeal, and $\gamma\acute{o}\omega$ ($< *gouh_2-éie-$) is suggestive of a root-final $*h_2$. The accentuation of the corresponding Latvian form *gāuds* 'miserable' shows that the circumflex intonation of Lith. *gaudūs* is the original intonation rather than a secondary intonation derived by *métatonie douce*. Here, it is necessary to assume that the laryngeal in $*gouh_2-d^{(h)}$ -disappeared at the Proto-East-Baltic stage at the latest.

However, there still remains the problem with the *o*-grade in *gaudūs*, since *u*-stem adjectives are known to be of the proterokinetic type (Pinault 2003: 162ff.), where *o*-grade roots do not appear. In order to explain this *o*-grade in *gaudūs*, a verbal form related to *gaudūs*, namely Lith. *gaudžiù*, *gaūsti* 'to resound', can be taken into consideration. The present paradigm of the verb can be interpreted as being built on the stem $*gouh_2-d^h h_1-i\acute{o}-$, which is extended by two suffixes, i.e., $*-d^h(e)h_1$ ¹⁷ and $*-ie/o-$, just as in Ved. *yá-dh-ya-te* '(he) fights' and Lith. *sker-d-žiù* 'I slaughter' (Brugmann 1892: 1103). Since $*-d^h(e)h_1-$ can be added to a root of any grade, as in the case of Lat. *verbum* ($< *uerh_1-d^h h_1-o-$) 'word', Lith. *vardas* ($< *uorh_1-d^h h_1-o-$) 'name' and Goth. *waurd* ($< *urh_1-d^h h_1-o-$) 'word', the *o*-grade of $*gouh_2-d^h h_1-$ is morphologically compatible. Also, as the suffix $*-ie/o-$ was added directly to nominal stems to

¹⁷Following Brugmann (1892: 1045ff.; 1906: 467), the $*-d^{(h)}$ -element could be a suffix $*-d^h(e)h_1-$, which originated from a verbal root $*d^h eh_1-$ 'to put, do'.

derive denominative verbs, as in Gk. $\delta\nu\omicron\mu\alpha\acute{\iota}\nu\omega$ (< $*h_1nh_3m\eta\text{-}ie/o\text{-}$ ‘to name’¹⁸), $*gouh_2\text{-}d^h h_1\text{-}$ can be interpreted as a nominal stem. In Lithuanian, *u*-stem adjectives are productive (Skardžius 1943: 55ff.) and can be secondarily formed on the basis of *o*-stem nouns, for example, *godūs* ‘covetous’ : *gōdas* ‘covetousness’ ; *draugūs* ‘friendly’ : *draūgas* ‘friend’. This suggests that the adjective might have been formed on the basis of a nominal stem $*gouh_2\text{-}d^h h_1\text{-}o\text{-}$, although it is not attested as a noun. Consequently, $*gouh_2\text{-}d^h h_1\text{-}$, the protoform on which *gaudūs* is based, can be interpreted as satisfying the condition of both environments of the Saussure effect ($*oRH.C > *oR.C$) and $*CH.CC > *C.CC$. Accordingly, there are two possible causes for the laryngeal loss. Since it is difficult to set up a relative chronology for these two rules, the possibility cannot be excluded that $*gouh_2\text{-}d^h h_1\text{-}$ might have undergone the rule $*CH.CC > *C.CC$. For this reason, it should be regarded as a possible example.

3.2 *garbē* (4) ‘honor’

garbē (4) ‘honor’ : $*g^w erH\text{-}$ ‘to express one’s approval’ (cf.

LIV 210–211) $\rightarrow *gorH\text{-}b^h (h_2)\text{-} > *gor\text{-}b^h (h_2)\text{-} > garbē$ ¹⁹

The root-final laryngeal is reconstructed on the basis of Ved. *gūrtá-* ‘blessed’, Lat. *grātus* ‘id.’ < $*g^w rH\text{-}t^o\text{-}$. Although there is no information regarding the accent in Latvian, there is accentual information in Daukša’s “Postilē where most of the instances appear with AP4. Following this, Derksen (1996: 208) reconstructs another form $*g^w er\text{-}b^h\text{-}$ for *garbē* (4) in addition to $*g^w erH\text{-}$ (> Lith. *girti*, Latv. *dziirt* ‘to praise’ and Ved. *gūrti-* ‘praise’). However, assuming the Saussure effect, the reconstruction of a separate root is not necessary. In fact, if the

¹⁸Although the Proto-Indo-European paradigm of ‘name’ has been disputed, here I follow the suggestion presented in Kim (2002: 29) that Gk. $\delta\nu\omicron\mu\alpha$ is derived from the generalized weak stem of a proterokinetic paradigm $*h_1n\acute{e}h_3m\eta\text{-}/*h_1nh_3m\text{-}\acute{e}n$ remade from the original acrostatic paradigm $*h_1n\acute{e}h_3m\text{-}\eta\text{-}/*h_1n\acute{e}h_3m\text{-}n\text{-}$ because of phonetic resemblance to *nomina actionis* in $*m\eta\text{-}/*m\acute{e}n\text{-}$.

¹⁹According to Brugmann (1906: 386), $*bho\text{-}$ possibly belongs to Skt. *bhati* ‘to shine’, whereupon Ved. *ṛṣa –bhá-* ‘bull’, which is now reconstructed as $b^h eh_2\text{-}$ (LIV 68–9) on the basis of Gk. $\acute{\phi}\acute{\alpha}\nu\tau\alpha\text{:}\ \acute{\lambda}\acute{\alpha}\mu\pi\omicron\nu\tau\alpha$ (*Hesychius*) ‘aglow’, etc. Later, Bessemerger (1973: 131¹⁰) suggested that this suffix belongs to a PIE root $*bh\acute{u}\text{-}$ ($b^h ueh_2\text{-}$ ‘to be’). However, Hyllstead (2008) presents a counterargument which is discussed in the following part of this section.

Saussure effect is not considered, then it is necessary to propose two almost identical roots, namely **gerH-* and **ger-*, with the same meaning.

On the other hand, the etymology of the suffix **-b^ho-/-eh₂-* should be taken into account here in order to examine the plausibility of *garbe15* as an example of the Saussure effect. The suffix **-b^ho-* was first identified with a PIE root **b^heh₂-* ‘to shine’ in Brugmann (1906: 386), and has been widely accepted since then. This suffix occurs in a considerable number of abstract nouns and adjectives without any connection to colors or animals. Hyllested (2008) considers the original function of this suffix to be to form verbal nouns. Furthermore, he expresses doubt over the traditional identification of the suffix with the root **b^heh₂-* ‘to shine’ inasmuch as the phonetic similarity between the suffix and the root is limited to a single, very frequent consonant and the modifying effect of **-b^ho-* should lie in the modifying nature of derivation itself. What follows is that the suffix **-b^ho-* might not necessarily be connected to the PIE root **b^heh₂-*.

However, if the possibility of the suffix **-b^ho-* going back to the root **b^heh₂-* cannot completely be denied, the laryngeal loss could be caused by the sound change **CH.CC > *C.CC*, making this form short of being certain.

3.3 *tárpas* (1) ‘hole’

tárpas (1) ‘hole’ : **terh₁-* ‘to bore, drill, rub’ (cf. LIV 632–633) → **torh₁-p-* > **tor-p-* > *taĩpas* *tárpas*

Evidence for the root-final laryngeal includes the Greek form *τέρετρον* ‘gimlet’ < **terh₁-tro-*. The accentual correspondence between Latv. *tàrps* ‘worm (as a creature boring a hole)’ and dial. Lith. *taĩpas* (4/2) ‘hole’ suggests that the acute intonation in *tárpas* must be secondary, where originally it must have had a circumflex intonation. Therefore, it is possible that this form is the result of the Saussure effect.

3.4 *kraūjas* (4) ‘blood’

kraūjas (4) ‘blood’ : **kreu_h₂-* ‘clot, bloody flesh’ → **krou_h₂-jo-* > **krou-jo-* > *kraūjas*

An important piece of evidence for the specified root-final laryngeal is provided by Gk. *κρέας* ‘flesh’ < **kreu_h₂-s-*. According to Fraenkel (1962–65: I, 290), the Latvian word corresponding to Lith. *krajas* is **kraujš* ‘blood’. However, it disappeared for two

reasons.²⁰ One point is that this form constituted a homonym with Latv. *krāujš* ‘steep, steep edge of shore’. As a result, **kraujš* for ‘blood’ might have been replaced with another item. The second reason is that the “other item” which replaced **kraujš* actually existed. This item is Latv. *asins*, which is a cognate of Skt. *ásrj-*, Hitt. *ešhar*, and Gk. *ῥαρ, ἔαρ* (*Hesychius*) ‘blood’. *asins* would have accelerated the shift from **kraujš* to *asins* for ‘blood’. Therefore, the accentuation of Latv. *krāujš* could provide circumstantial evidence which suggests that the circumflex accent of the Lithuanian form is original.

The intonation of the Lithuanian form reflecting an *aniṭ* root is explainable in terms of both the Saussure effect and Pinault’s law since **krouh₂-iō-* meets the structural description of both of these rules. Interestingly, Ved. *kravyá-* (< **kreuṭiō-* < **kreuh₂-iō-*), which is an *e*-grade cognate of Lith. *kraũjas*, does not show a reflex of the laryngeal either, which is best explained by Pinault’s law. Nevertheless, it might be interesting to mention *kraũjas* since the environment meets both of the two rules regarding laryngeal loss.

3.5 *kaĩdas* (4) ‘echo’

kaĩdas (4) ‘echo’ (cf. LIV 353) : **kerH-* ‘to admire’ →
**korH-d^(h)-* > **kor-d^(h)-* > *kaĩdas*

The root-final laryngeal is reconstructed on the basis of Ved. *kĩrti-* ‘fame’ < **k_rH-ti-*, ON *hrōðr* ‘fame’ < **kroH-tro-*. Unfortunately, there is no corresponding form in Latvian, which is why this example falls short of being certain. However, since there is no evidence for *métatonie douce* in Lith. *kaĩdas*, the circumflex intonation of this form could be the result of the Saussure effect.

4 Potential Counterexamples and Their Analysis

In this section, I present some seeming counterexamples of the Saussure effect and explain why these examples do not show any reflexes of the Saussure effect in environments where it is expected to occur. There is no clear distinction in phonological environment between the examples which show the Saussure effect and the ones which do not. This has led me

²⁰A more detailed discussion can be found in Endzelins (1921) *Filologu bierdribas raksti*. However, since I was unable to obtain a copy of this work, the discussion here is based on the citations in Fraenkel (1962–65: I, 290).

to think that it is more feasible to seek a morphological explanation than to set up a new criterion for the Saussure effect, since many of the examples which do not show the Saussure effect are derived from *to-* or *no-* formations with an *o*-grade, as shown below.

I also discuss the fate of the original forms and their paradigms in Proto-Indo-European from which the forms in §4 descended. There are two main possibilities for the original type of the paradigms of the counterexamples, one of which is the thematic type, and the other is the athematic type. In the following sections, both cases will be discussed in this order.

4.1 Forms derived from thematic stems

First, I will provide an explanation for each thematic counterexample. Interestingly, cognate forms that escaped the operation of the Saussure effect are found for each of them. The cognate form is either a verb or, less often, a noun. The discussions below include those cognate forms. Since there is an etymological problem in general with sets of words with different vowel grades which share the same root, as in the case of **suep-no-/*suop-no-/sup-no-* ‘sleep’, **uēs-no-/*uos-no-* (/ **ues-no-*²¹) ‘purchase’, and **ueĝ-no-/*uoĝ-no-/*uĝ-no-* ‘wagon’, the explanations given here are provisional.

4.1.1 *káltas* (1) ‘chisel’ : *kálti* ‘to forge’

káltas (1) ‘chisel’ : **kelh₂* ‘to beat, hit’ (cf. LIV 350)

**kolh₂-to-* > *káltas*

Possible support for the specified root-final laryngeal includes the Greek form: *κλᾶ-* ‘break’ < **k_lh₂*. There is a Latvian form corresponding to Lith. *káltas*, namely *káltas* ‘chisel’. The sustained tone in the Latvian form suggests that the acute accent in *káltas* (1) must be the original tone. No trace of the Saussure effect is found in this form.

Apparently, *káltas* is a *to-* formation with an *o*-grade built on a verbal root **kelh₂*.²² Therefore, it is helpful to look into the

²¹Ved. *vasná-* m. ‘purchase price’, n. ‘fee, pay’ could be from the *e*-grade or the *o*-grade.

²²Since *to-* formations with an *o*-grade, for example, Gk. *νόστος* ‘return’, *χόρτος* ‘enclosure’, Lat. *hortus* ‘garden’, are known as abstract nouns, or at least requiring this function as nouns (Brugmann 1906: 420, Risch 1937: 22, Schwyzler 1953: I, 501), the instrumental meaning of *káltas* calls for a semantic explanation.

verbal paradigm derived from the root **kelh₂-*. Jasanoff (2003) has proposed a new type of present verbal paradigm in Proto-Indo-European, the so-called “*molō*-type”, which allegedly had the *o*-grade in strong forms and the *e*-grade in weak forms as well as perfect-like endings. Verbs in daughter languages which have present forms either with persistent *e*-grade or with persistent *o*-grade belong to this type; for example, **molh₂-/*melh₂-* ‘to grind’ [Hitt. *mall(a)i-*, Lith. *málti*, Goth. *malan* < **molh₂-* in contrast to OIr. *melid*, OCS *meljo* < **melh₂-* (Jasanoff 2003: 64)]. Furthermore, Jasanoff (2003: 76) argues that the verbs which can be ascribed to the *molō*-presents show ‘evidence for an *o*-grade present in more than one language, but no unambiguous reflex of the *e*-grade weak stem.’ Following this assumption, **kelh₂-* is included in this type on the basis of Lith. *kalù*, *kálti* and OCS *koljo*, *klati*. The following paradigm can be reconstructed for **kelh₂-*; cf. Jasanoff (2003: 71ff).

1sg. <i>*kólh₂-h₂e</i>	1pl. <i>*kélh₂-meH</i> (?) ²³
2 <i>*kólh₂-th₂e</i>	2 <i>*kélh₂-(H)e</i> (? ?)
3 <i>*kólh₂-e</i>	3 <i>*kélh₂-(s)</i>

In the 1st person singular, **kólh₂-h₂e* is phonologically in one of the two environments of the Saussure effect. Consequently, the root-final laryngeal might have been lost due to the Saussure effect. Likewise, 2sg. **kólh₂-th₂e* might have lost the root-final laryngeal as a result of the Saussure effect.²⁴

A semantic parallel to the case of *káltas* is found in Balto-Slavic, that is, **dōlb-to-* ‘chisel, pointed iron’ (< **d^holb^h-to-* ← PIE **d^helb^h-* ‘to burrow, dig’). The reflexes of this form have instrumental meaning, as in OPruss. *dalptan* ‘a pointed tool to burrow with’, Bulg. *dlató* ‘chisel’ (Derksen 2008: 112). Also, Gk. *κοῖτος* ‘bed, couch, a going to bed, sleep’ (cf. *κεῖμαι*) could be regarded as a semantic parallel to the case discussed here, for one of its meanings ‘bed’ is suggestive of the development of the original meaning as an abstract noun (‘sleep’) into a secondary meaning ‘bed’. Therefore, the semantic change from an abstract to an instrumental meaning can be presupposed also for the meaning of *káltas*.

²³These question marks are given by Jasanoff (2003: 32) due to the fact that the situation with the endings in the plural is less clear.

²⁴Although it might seem conceivable that the laryngeal was lost due to another sound law **CH.CC* > **C.CC*, the accent in this case falls on the preceding vowel. Since this sound law operated when the accent was on the following vowel (Hackstein 2002: 2), its operation in this environment would have been impossible.

Since the 3rd person singular form and the plural forms are not in the environment of any rules for laryngeal loss, they would not have lost their root-final laryngeals theoretically.

strong forms: (1, 2sg.) $*kolh_2-C > *kol-C$
 (3sg.) $*kolh_2-e > *kolh_2-e$ [vacuous operation]
 weak forms: $*kelh_2-C > *kelh_2-C$ [vacuous operation]

Thus, in this case the paradigm would have comprised both stems, one with a root-final laryngeal ($*kólh_2-$ / $*kélh_2-$) and the other without a root-final laryngeal ($*kól-$). Then, a theoretically possible morphological interaction between them might have occurred, producing the following results:

phonological results: (i) $*kol-$, (ii) $*kelh_2-$, (iii) $*kolh_2-(e)$
 analogical results: (iv) $*kolh_2-(C)$, (v) $*kel-$

It is not inconceivable that one of the above forms was subsequently generalized in each of the daughter languages. Thus, Lithuanian generalized the stem $*kólh_2-$ as $kálti$, on the basis of which $*kólh_2-to-$ would have been formed. As Russ. *kolótb* ‘to break, crush’ also points to a Proto-Slavic acute accent, the generalization of $*kolh_2-$ must have occurred at an early stage which involved both Baltic and Slavic. This is why $káltas$ does not seem to show any trace of the Saussure effect. Therefore, $káltas$, which can receive a morphological account, is not a counterexample of the phenomenon.

4.1.2 *šáltas* (3) and *šalnà* (4) : *šálti* ‘to be cold’

šalnà (4) ‘chill of early morning, hoarfrost’ : $*kelH-$ ‘to become cold’ (cf. LIV 323) $\rightarrow *kolH-n- > *šalnà$ (3) $\rightarrow šalnà$ (4) *šáltas* (3) ‘cold’ : $*kelH-$ ‘to become cold’ $\rightarrow *kolH-to- > šáltas$

These two forms are cognates, and therefore they are treated together here. A laryngeal is reconstructed on the ground of the accents of the Baltic cognates, for example, Latv. *saĺna* ‘frost’, *saĺt* ‘to be frozen’, Lith. *šálti* ‘to be cold’, etc., and Skt. *śśira-* ‘early spring, cold season of the year’ $< *k̑i-k̑l̑H-o-$. The broken tone of Latv. *saĺna* corresponds to Lithuanian AP 3. This suggests that the accentuation of Lith. *šalnà* (4) is not primary but secondary, and that this form has undergone *métatonie douce*, thereby not showing the expected trace of the Saussure effect. Lith. *šáltas* is a cognate of *šalnà* above, and its

corresponding form in Latvian is *saĻts* ‘cold’. The broken tone of this Latvian cognate suggests that the accentuation of *šāĻtas* (3) is not the result of *métatonie rude* but is rather the original accent. No trace of the Saussure effect is found here either.

As shown above, *šāĻtas* and *šāĻnā* do not show any trace of the Saussure effect, even though their preform had an *o*-grade. In order to see how these forms are related to the Saussure effect in their prehistory, it would be informative to look into the problem surrounding the root **kelH-*, which is mentioned in Derksen (1996: 84). The problem concerns the fact that some reflexes of **kelH-* mean ‘warm’, such as Lat. *calēre* ‘to be warm’ (< **kelH-eh₁-*), OIcel. *hlær*, OHG *lāo* ‘tepid’ (< **kleh₁-o-*), etc., while others mean ‘cold’, as in the case of Lith. *šāĻtas*. For this reason, Schrijver (1991: 206–207) suggests that there was an *aniĥ* variant of **kelH-*, whereas LIV (323) reconstructs **kelH-* ‘to become cold’ and **kel-* ‘to become warm’. The case can be summarized as follows²⁵ :

reflexes of <i>set</i> root			<i>aniĥ</i> root
Lith.	<i>šāĻti</i> ‘to be cold’	<i>šāĻtas</i> ‘cold’	<i>šāĻnā</i> ‘hoar-frost’
Latv.	<i>saĻt</i> ‘id.’	<i>saĻts</i> ‘id.’	<i>sana</i> ‘id.’
Skt.	<i>śśīra-</i> ‘early spring’		
Lat.		<i>calēre</i> ‘to be warm’	
Wel.			<i>chyd</i> (?) ²⁶ ‘id.’ (< <i>*kel-tō-</i>)
Gmc.		OIcel. <i>hlær</i> , OHG <i>lāo</i> ‘tepid’ (< <i>*kleh₁uo-</i>)	

The table above shows a contrast between Baltic forms in *o*-grade for ‘cold’ and forms in zero-grade for ‘warm’. On the

²⁵ Although Lith. *šāĻti* ‘to become warm’ and Latv. *siĻt* ‘id.’ certainly belong here, these two verbs are excluded from the following table. Since both verbs occur with a *sta*-present, which often induces the acute intonation (*métatonie rude*; see Būga 1923/1924: 257; Derksen 1996: 84), a speculation regarding their original intonations can be made on the basis of the intonations of their respective adjectives (Lith. *šāĻtas* and Latv. *siltas*), although by themselves they do not constitute evidence for the existence of a root-final laryngeal.

²⁶ However, the homonymic root **kel-* ‘to bury, hide, cover’ draws attention, which is reconstructed for Proto-Indo-European on the basis of OE *helan* ‘to bury’ (LIV 322), OIr. *ceilid*, *-ceil* ‘to hide’ (Schumacher 2004: 394). Taking the homonym into consideration, Wel. *chyd* can be derived from **kel-tō-* ‘*covered (space) > warm’, hence the question mark in this table.

other hand, the fact that the forms for ‘warm’ (Lat. *calēre*, OIcel. *hlær*, OHG *lāo*, Lith. *šiltas*, Latv. *silts*, Wel. *clyd*) comprise both *aniṭ* and *seṭ* forms suggests that at an early stage of Proto-Indo-European there was a confusion between *aniṭ* and *seṭ* forms. A possible reason for this might be that the verbal paradigm based on **kelH-* had both the *o*-grade and the *e*-grade. In this case, the forms with the *o*-grade would have undergone the Saussure effect, while the forms with the *e*-grade would have retained the laryngeal. This, in turn, would have produced *aniṭ* and *seṭ* variants within a single paradigm. This speculation may allow one to assume a *molō*-type present paradigm for **kelH-* with *o/e* ablaut. If the verb **kelH-* belonged to the *molō*-type, the laryngeal of the *o*-grade forms, once lost by means of the Saussure effect, would have been restored under the morphological influence of the *e*-grade *seṭ* variant **kelH-*. Thus, Lith. *šáltas* and the preform of *šalnà* [**šalnà* (3)] can be regarded as the descendants of the restored *seṭ* root **kolH-*.

The view shown above suggests that the root for ‘warm’ originally may have been a *seṭ* root *kelH-*, which is identical with the root for ‘cold.’ What follows this is that *kelH-* may have been a common root for ‘cold’ and ‘hot’, and it must have undergone a semantic change from ‘cold’ to ‘warm’ in some languages, for example, Lat. *calēre* and OIcel. *hlær*, or from ‘warm’ to ‘cold’ in Baltic languages. Although this kind of semantic change in opposite directions is not very common, an instance can nevertheless be pointed out. While some reflexes of the root *meġ-h₂-* mean ‘great’ (Mayrhofer 1986–1996: II, 338) as in Gk. *μέγα-*, Ved. *máhi-*, the Baltic reflexes mean ‘small’ [for further details about their etymology, see Fraenkel (1962–65: I, 422–423) and Mülenbachs (1923–32: II, 574)], just as in the case of Lith. *māžas* and Latv. *mazs*.²⁷

This still raises semantic problems with regard to whether the original meaning of **kelH-* was ‘cold’ or ‘warm’, and of how the original meaning changed into the opposite one. Some cognates which mean seasons, or which are linked to the

²⁷One of the anonymous referees suggested that the opposite meaning of the Baltic forms can be explained if it is supposed that the root **meġ(-h₂-)* meant ‘to grow’ (cf. OIr. *mogaid* ‘to grow’), and that the Baltic forms underwent a semantic change from ‘still in growth’ to ‘not big enough, small’, while the cognates in other branches underwent a semantic change from ‘to grow’ to ‘grown fully, big.’ The following discussion in this section is also indebted to the insightful comments of the referee.

change of seasons, can provide clues for solving this problem. Some of the descendants of **kelH-* have meanings linked to seasons, viz. *śśira-* ‘early spring’, and OIcel. *hlána* ‘to thaw’ [*<* PGmc. **xlēwanōjanan* ← **xlēwaz* (Orel 2003: 176)]. OIcel. *hlána* can be linked to seasons, for ‘thaw’ is an event taking place in early spring, when the weather gradually becomes milder. Thus, both the Vedic and the Old Icelandic words indicate the season of the year when the weather becomes milder, although it is still rather cold. These items could lead one to establish the original meaning ‘to be(come) mild’ for the root **kelH-*. Although it seems the Germanic forms kept the meaning ‘mild,’ this original meaning might have contributed to the development of the meaning from ‘to become mild’ into ‘warm’ in Lith. *šiltas*, Latv. *silts*, Lat. *calēre*, while it developed from ‘to be(come) mild’ into ‘cold’ via ‘not warm enough’ in the rest of the forms. This is my present understanding of this semantic problem, although further discussion is necessary.

4.1.3 *kálnas* (3) ‘mountain’ : *kélti* ‘to raise’

kálnas (3) ‘mountain’ : **kelH-* ‘to soar’ (cf. LIV 349)

**kolH-no-* > *kálnas*

A root-final laryngeal is reconstructed since the intonations of some descendants of the root, namely Lith. *kélti* and Latv. *ceļt* ‘to lift’, suggest its existence. Since no decisive evidence points to a specific laryngeal, the coloring of the laryngeal in this case remains unknown.²⁸

The Latvian form *kaļns* ‘mountain’, which corresponds to Lith. *kálnas*, has a broken tone on the root vowel which corresponds to Lithuanian AP3. Hence, the acute accent on *kálnas* (3) must be primary, and it does not show the result of the Saussure effect.

At least two possibilities can be proposed for the morphological background of *kálnas*. First, it can be interpreted as a thematized *n*-stem. Neri (2003: 273⁹⁰⁴) proposed an amphikinetic *n*-stem paradigm **kélh₃-ō(n)/*k_lh₃-n-és/ *k_lh₃-ón ± i*

²⁸In this section, I provisionally follow the reconstruction of the unspecified laryngeal in LIV while I admit that the root-final laryngeal is most likely **h₃* as the Greek form *κωνός* ‘hill’ suggests. LIV (349¹) mentions that this is not decisive since vowel assimilation has often taken place in Greek, which indicates that the specification of the laryngeal needs further discussion. However, since it is not essentially relevant which kind of laryngeal could be reconstructed for this root, this problem will not be discussed further here.

on the basis of Gk. *κολώνη*, whereby two steps would be needed to derive **kolh₃-no-*: **k_lh₃-n-* **k_lh₃-n-o-* [via thematization] and **k_lh₃-n-o-* **kolh₃-n-o-* [with change of the grade of the root vowel]. Since there are no identical formations of **kolh₃-n-o-* outside the Baltic languages, these processes must have taken place in the inner history of the Baltic branch. Therefore, it is not likely that **kolh₃-n-o-* existed in the early stages of Proto-Indo-European, when the Saussure effect was still operating. Thus, this form is likely to be irrelevant to the present discussion. Furthermore, the *ad hoc* change of the grade of the root vowel assumed here presents a problem.

Second, **kolH-no-* can also be interpreted as a *no* formation with an *o*-grade, as Skardžius (1943: 217) notes. Assuming this, the acute intonation of *kálnas* can be explained by considering the influence of the verb *kéliti*, as suggested in Nussbaum (1997: 196). If this view is accepted, then the change must have taken place at an early stage, when it was still possible for speakers to combine the verbal paradigm with the nominal paradigm. Thus, this scenario is possible, although not certain since there might be another source of the morphological influence on **kolH-no-*, as will be mentioned below.

It is noteworthy that there is a debate regarding the set of words **suep-no-/ *suop-no-/ *sup-no-* ‘dream’, etc. Although little is known about this, it is possible that if **kelH-no-* or **k_lH-no-*²⁹ existed, it might have influenced **kolH-no-*. However, since no direct descendants of such forms are found, this possibility lacks convincing support.

The discussion above shows that so far the second view (**kolH-no-*) is more likely to be true than the first one (**kolH-n-o-*). However, even in the case of the second view, the prehistory of the form needs to be reexamined since the problem with the thematic formation still remains, as briefly mentioned above.

²⁹There might have been a descendant of **k_lH-no-* in Greek. Vine (2006: 510³⁸) suggests the possibility that Gk. *κολώνη* ‘hill’, as well as *κολωνός* ‘hill’ and *κλωμακ-* ‘pile of stones’, might have originally represented a contamination involving thematic stems, in other words, **k_lh₃-nó-/ *k_lh₃-mó-* and **kol[h₃]-no-*. Vine (p. c.) further notes that it can also be interpreted as a result of the morphological interaction between **κλω-νó-* (< **k_lh₃-nó-*) and *κόλων* (< **κέλων* < **kélh₃-ōn-*). In both cases, there might have existed a descendant of **k_lh₃-no-* in the prehistory of Greek.

4.2 Forms derived from acrostatic paradigms

In this section, I will discuss a possible scenario in which a seeming counterexample of the Saussure effect could be derived from an athematic paradigm, although, in fact, most of the counterexamples mentioned in § seem to have been derived from thematic formations. Such a scenario can be invoked as a parallel to the case which will be discussed in the next section.

If a counterexample of the phenomenon can be derived from an athematic paradigm, the ablaut type of the paradigm would most likely be acrostatic with *o/e* ablaut since the counterexamples of the Saussure effect naturally have the *o*-grade. In an acrostatic paradigm with *o/e* ablaut, the strong forms, which had *o*-grade roots, would have undergone the Saussure effect, while the weak forms with *e*-grade would have been exempt from it.

strong cases: *CoRH-C > *CoR-C
 weak cases: *CeRH-C > *CeR-C [vacuous operation]

As a result, the paradigm would have had both *aniṭ* and *seṭ* variants, which would have subsequently interacted with each other, and the theoretically possible forms would be as follows:

phonological: (i) *CoR-C (> Lith. CaṘC-), (ii) *CeRH-C (> Lith. CēRC-)
 analogical: (iii) *CoRH-C (> Lith. CāRC-), (iv) *CeR-C (> Lith. CēṘC-)

Eventually, one of these forms must have been generalized in the paradigm. In the case where the *o*-grade variant with the restored laryngeal is generalized, then a seeming counterexample is found. Note that it is necessary to assume a consequent thematization when the attested form has a thematic vowel.

4.3 An analysis of *kalvà* (4) ‘hill’

kalvà (4) ‘hill’ : *kelH- ‘to soar’ (cf. LIV 349) *kolH-u- > *kalva (1 (or 3?)) *kalvà* (4)

This form is derived from the the same root as Lat. *collis* in (4c) and *kálnas* in § 4.1.3 above. Lith. *kalvà* belongs to AP4 and has a circumflex accent on its root vowel (as in *kaĩva* [acc. sg.]), which seems to indicate that it has undergone a laryngeal loss in the environment *-oRHC- through the Saussure effect. However, the accentuation of the cognate Latvian form *kaĩva*

points to an original acute intonation. This suggests that the original accentuation of *kalvà* must have been acute, and that it has undergone *métatonie douce* in the prehistory of Lithuanian rather than the Saussure effect at the Proto-Indo-European stage. This possibility makes it plausible to regard *kalvà* as a counterexample of the Saussure effect.

There is a discussion regarding the etymology of the Germanic forms related to **kelH-* in Neri (2003: 273–275). He reconstructs a neuter acrostic paradigm **kólH-u-/*kélH-u-* for Proto-Indo-European on the basis of Proto-Gmc. **χalluz*. Considering this reconstruction, Lith. *kalvà* can also be related to the acrostic paradigm since its protoform **kolH-ueh₂* contained a **-u-*, which was a conditioned allophone of **-u-* in certain environments. Acrostic *u*-stems reconstructed in the protolanguage are well known as a neuter category. Therefore, the feminine Lith. *kalvà* must have been derived secondarily by adding the feminine suffix **-eh₂-*, while the neuter gender would have turned into masculine in Goth. *hallus* ‘rock’. Thus, Lith. *kalvà* might have been derived from this paradigm via (thematization and) feminization: **kolH-u-* (→ **kolH-o-*) → **kolH-eh₂*. A morphological parallel can be found in **dóru-/*déru- *deru-eh₂* (> Lith. *dervà* ‘resin’); **deru-o-* (> OCS *drěvo*, SCr. *drěvo* ‘wood’), **h₂óiu-/*h₂éiu-* → **h₂oíu-eh₂/*h₂eíu-eh₂* (> OHG *ēwa* ‘age, eternity’); **h₂oíu-o-/*h₂eíu-o-* (> Goth. *aiws* ‘id.’). A possible factor contributing to the formation of the feminine form can be a functional thematization. If the preform underwent a functional thematization, which created adjectival derivatives, then it certainly must have undergone feminization at the same time, for adjectives usually have feminine forms as well. Thus, the feminine form of the adjectival derivative should be the preform of *kalvà*.³⁰ Since the

³⁰The case of Gk. *ὅλος/ὅλλος* ‘whole’ [cf. (3d), also Lat. *salvus* ‘safe and sound’ (4a), Skt. *sárva-* ‘whole’ (6a)] might be a morphological parallel since Gk. *ὅλος/ὅλλος* and Skt. *sárva-* can be explained as a functionally thematized neuter *u*-stem [**sol(H)-uo- ← *solH-u-*], and Lat. *salvus*, as well as Lat. *salūs* ‘hail’, suggests an original *u*-stem paradigm [**s_lH-uo-* or **s_lH-uo- ← *selH-u-*]. Schrijver (1991: 196) notes that Lat. *salūs* is derived from a lost verbal stem **salue/o-*, which was probably based on a *u*-stem **salu- < *s_lHu-*. Considering this, an original *u*-stem paradigm **solH-u-/*selH-u-* can be reconstructed for Proto-Indo-European, from which **solH-uo-* (> Gk. *ὅλος/ὅλλος*, Skt. *sárva-*), **s_lH-u-* and **s_lH-uo-* (> Lat. *salūs*, *salvus*) were derived. For the derivational process of **selH-u- *slH-u-*, a change of acrostic ablaut to that of R (o) / R

process of functional thematization is rather old, and might have originated already at the Proto-Indo-European stage, the preform of *kalvā* might have undergone the Saussure effect as well. However, the Baltic items point to an original acute intonation, which means that the form prior to the Proto-Baltic stage would have had a long vowel in its root as a result of compensatory lengthening following the loss of the laryngeal. This discrepancy can be explained if the schema presented in the previous section is taken into account. As the original paradigm of **kolH-u-/*kelH-u-* had both *o*-grade and *e*-grade forms, there could have been a competition between two thematized forms, namely **kolH-uo-* and **kelH-uo-*.

thematized *o*-grade form: **kolH-uo-* > **kol-uo-*

thematized *e*-grade form: **kelH-uo-* > **kelH-uo-* [vacuous operation]

As mentioned previously, a morphological interaction between *set* and *anit* variants might have restored the lost laryngeal in the *o*-grade form, where the Saussure effect operated regularly. This would explain why the Baltic forms point to an original acute intonation.³¹

5 Conclusion

While the investigation presented in this paper cannot be considered exhaustive, § and § show that there are at least a few examples and counterexamples of the Saussure effect in Lithuanian. However, as there are no clear phonological differences between the environments of the examples and the counterexamples, we cannot set up a new criterion for the operation of the Saussure effect.

(Ø) [for example, Ved. (**dóru* >) *dāru* / (**dér-u-* **dr-éu-s* >) *dróh* ‘wood’] can be recalled.

³¹The suffix **(e)h₂-* can be regarded as a collective suffix as well. This assumption provides a semantic explanation of the original meaning of **kol[H]-ueh₂* (‘*a pile of rocks’), which later came to mean ‘a hill’. As the collective suffix is observed in several branches [cf. Hitt. *alpaš* ‘cloud’, *alpeš* ‘clouds’, *alpa* ‘group of clouds’; Gk. *μηρός* ‘thigh’, *μηροί* ‘thigh-pieces’, *μήρα* ‘group of thigh-pieces’; Lat. *locus* ‘place’, plural *loci* and collective *loca*], the collective formation is regarded as old. Consequently, at the stage of Proto-Indo-European, the paradigm of **kolH-u-/*kelH-u-* could have had variants, namely **kolH-u-* (> **kolu-*) for collective forms (**kolH-u-eh₂*, etc.) and **kelH-u-* for oblique forms, for only strong cases had collective forms. The explanation involving the restoration of the laryngeal in **kol[H]-ueh₂* as provided above can also be applied in this case.

Nevertheless, for most of the counterexamples, it is possible to provide morphological explanations as to why they do not show any traces of the Saussure effect in Lithuanian. In most cases, morphological factors can be assumed to have triggered the restoration of the lost laryngeal.

These explanations suggest the possibility that although originally the Saussure effect itself was a regular sound change, the traces of its operation became unrecognizable in many cases due to the various morphological changes that occurred between the early stages of Proto-Indo-European and Lithuanian. This can be considered quite natural if the long span of time between the early Proto-Indo-European stage and the period of the earliest Lithuanian attestation (16C AD) is taken into account.

References

- Bammesberger, A.
1973 *Abstraktbildungen in den baltischen Sprachen*. Göttingen: Vandenhoeck and Ruprecht.
- Beekes, R. S. P.
1969 *The Development of the Proto-Indo-European Laryngeals in Greek*. Hague and Paris: Mouton.
- Brugmann, K.
1892 *Grundriss der vergleichenden Grammatik der indogermanischen Sprachen*. Vol. II/2. Strassburg: Karl J. Trübner.
1906 *Vergleichende Laut-, Stammbildungs- und Flexionslehre nebst Lehre vom Gebrauch der Wortformen der indogermanischen Sprachen*. Vol. II/1. Strassburg: Karl J. Trübner.
- Būga, K.
1923/1924 "Die Metatonie im Litauisch und Lettischen" *Zeitschrift für vergleichende Sprachforschung* 51, 109–142; 52, 250–302.
- Chantraine, P.
1933 *La formation des noms en Grec ancien*. Paris: Ancienne Honoré Champion.
- Derksen, R.
1996 *Metatony in Baltic*. Amsterdam and Atlanta: Rodopi.
2008 *Etymological Dictionary of the Slavic Inherited lexicon*. Leiden and Boston: Brill.

- Endzelins, J.
1899 Über den lettischen Silbenakzent. *Beiträge zur Kunde der indogermanischen Sprachen* 25: 259–274.
- Endzelins, J. & Hausenberga, E.
1934–46 *Ergänzungen und Berichtigungen zu K. Mülenbachs lettisch-deutschem Wörterbuch*. Riga: Kultūras fonda izdevums.
- Fraenkel, E.
1962–65 *Litauisches etymologisches Wörterbuch*, Vol. I, II. Heidelberg: Carl Winter.
- Hackstein, O.
2002 Uridg. *CH.CC > *C.CC. *Historische Sprachforschung* 115 (1): 1–22.
- Hyllested, A.
2008 PIE *-bʰ- in Nouns and Verbs: Distribution, Function, Origin. In: *The Indo-Uralic connection – remote kinship and early contacts*, 29–44. MA thesis, University of Copenhagen.
- IEW= Pokorny, J.
1959 *Indogermanisches etymologisches Wörterbuch*, Vol I, II. Bern and München: Francke Verlag.
- Illich-Svitych, V. M.
1963 *Imennaja akcentuacija v baltijskom i slavjanskom*. Moscow: Institute Slavjanovedenija, Akadamiija Nauka SSSR.
1963 [1979] *Nominal accentuation in Baltic and Slavic*. Cambridge and Massachusetts and London: The MIT press. (English translation of Illich-Svitych (1963) by Richard L. Leed and Ronald F. Feldstein.)
- Jasanoff, J.
2003 *Hittite and the Indo-European Verb*. New York and Oxford: Oxford University Press.
- Kim, R.
2002 *Topics in the Reconstructioin and Development of Indo-European Accent*. PhD. dissertation, University of Pennsylvania.
- Larsson, J.
2004 Length and *Métatonie douce* in Baltic Derivative Nouns. In: Clackson, J. and Olsen, B. A. (eds.), *Indo-European word formation*, 159–170. Copenhagen: Museum Tusulanum Press.
- LIV= Rix, H. & et al. (eds.)
2001 *Lexicon der indogermanischen Verben*. Wiesbaden: DR. Ludwig Reichert Verlag.

- LKŽ= Lietuvių kalbos institutas (ed.)
1968–87 *Lietuvių kalbos žodynas*. Vilnius: Mintis/Mokslas.
- Mayrhofer, M.
1986–96 *Etymologisches Wörterbuch des Altindischen*, Vol. I, II. Heidelberg: Carl Winter Universitätsverlag.
- Meiser, G.
1998 *Historische Laut- und Formenlehre der lateinischen Sprache*. Darmstadt: Wissenschaftliche Buchgesellschaft.
- Melchert, H. C.
1994 *Anatolian Historical Phonology*. Amsterdam and Atlanta: Rodopi.
- Mūlenbachs, K. & Endzelīns, J.
1923–32 *Latviešu valodas vārdnīca*, Vol. I, II, III, IV. Rīgā: Kultūras fonda isdevums
- Neri, S.
2003 *I sostantivi in -u del gotico: morfologia e preistoria*. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.
- Nussbaum, A. J.
1997 The “Saussure Effect” in Latin and Italic. In: Lubotsky, A. (ed.), *Sound Law and Analogy: Papers in honor of Robert S. P. Beekes on the occasion of his 60th birthday*, 181–203. Amsterdam and Atlanta: Rodopi.
- Orel, V.
2003 *A Handbook of Germanic Etymology*. Leiden and Boston: Brill.
- Pinault, G.-J.
1982 A Neglected Phonetic Law: the Reduction of the Indo-European Laryngeals in Internal Syllables before Yod. In: Ahlqvist, A. (ed.), *Papers from the 5th international conference on historical linguistics*, 265–272. Amsterdam: John Benjamins.
2003 Sur les thèmes indo-européens en *-u-: dérivation et étymologie. In: Tichy, E. et al. (eds.) *Indogermanisches Nomen: Derivation, Flexion und Ablaut*. Bremen: Hempfen Verlag.
- Rasmussen, J. E.
1989 *Studien zur Morphophonemik der indogermanischen Grundsprache*. Innsbruck: Institute für Sprachwissenschaft der Universität Innsbruck.
- Risch, E.
1937 *Wortbildung der homerischen Sprache*. 2nd edition. Berlin: de Gruyter.

- Saussure, F. de
 1905 D' ὠμήλυσσις à Τριπτόλεμος, remarques étymologiques. In: *Mélanges Nicole*, 503–514. Genève: W. Kündig & Fils.
- Schindler, J.
 1975 Zum Ablaut der neutralen s-Stämme des Indogermanischen. In: Rix, H. (ed.), *Flexions und Wortbildung*, 259–267. Wiesbaden: Dr. Ludwig Reichert Verlag.
- Schrijver, P.
 1991 *The Reflexes of the Proto-Indo-European Laryngeals in Latin*. Amsterdam and Atlanta: Rodopi.
- Schumacher, S.
 2004 *Die Keltischen primärverben: Ein vergleichendes, etymologisches und morphologisches Lexikon*. Innsbruck: Institut für Sprachen und Literaturen der Universität Innsbruck.
- Schwyzler, E.
 1953 *Griechische Grammatik*, Vol. I. Munich: Beck.
- Sihler, A. L.
 1995 *New Comparative Grammar of Greek and Latin*. New York and Oxford: Oxford University Press.
- Skardžius, P.
 1935 *Daukšos akcentologija*. Kaunas: Humanitariniu Mokslu Fakulteto leidinys.
 1943 *Lietuviu kalbos žodžiu daryba*. Vilnius: Lietuvos Mokslu Akademija.
- Southern, M. R. V.
 1999 *Sub-grammatical Survival : Indo-European S-mobile and its Regeneration in Germanic*. Washington, D.C.: Institute for the Study of Man.
- Stang, C. S.
 1966 *Vergleichende Grammatik der baltischen Sprachen*. Oslo: Universitetsforlaget.
- Vine, B.
 2006 Autour de sud-picénien qolofítúr: étymologie et poétique. In: Pinault, G.-J. & Petit, D. (eds.), *La langue poétique indo-européenne : actes du colloque de travail de la Société des études indo-européennes (Indogermanische Gesellschaft/Society for Indo-European Studies), Paris, 22-24 octobre 2003*. Leuven and Paris: Peeters.

The Germanic word for ‘sword’ and delocative derivation in Proto-Indo-European*

Alexander Nikolaev
Harvard University

There is no compelling etymology for the Germanic word for sword (OHG *swert*, OE *sweord*). This paper argues that this word is related to Cuneiform Luvian *šī(h)u_{al}* ‘dagger’: both words are derived from a stem **sh_{2/3}u-* ‘sharp’. Gmc. **suerða-*ⁿ goes back to a substantivized adjective **sh_{2/3}u-er-tó-* ‘sharp’ (with a loss of the laryngeal already in the protolanguage), derived from a locative **sh_{2/3}u-er* (compare **ǵ^heim-en-to-* ‘wintry’ from **ǵ^heim-en* ‘in winter’).

1. The problem

The reflexes of Gmc. **suerða-*ⁿ ‘sword’ are found in West and North Germanic: OHG *swert*, OS *swerd*, OE *sweord*, ON *sverð* (in Gothic this word was replaced by *hairus*). This word has no established etymology and the sad dictum of etymological dictionaries is usually “Herkunft unklar” (cf. Holthausen 1934: 335; Vennemann 1984: 109; Kluge-Seebold 2002: 834).

2. Previous scholarship

Previous attempts to explain this form have been few and unsatisfactory. In this section I will critically examine the more serious ones.

2.1 The handbooks usually contain a reference to Falk-Torp 1909 (=1979: 550), where a relationship between Gmc.

*In this paper I am using a special notational system: → stands for “internally derived from”, ⇒ stands for “externally derived from”, > denotes phonological development and >> stands for all kinds of *nicht lautgesetzlich* development (such as the leveling of ablaut grades within a paradigm). I am grateful to Jay Jasanoff, Craig Melchert, Sergio Neri, Alan Nussbaum, Martin Peters and Jeremy Rau for many helpful comments. I am also grateful to Anatoly Liberman, who kindly sent me a printout from his forthcoming bibliography of English etymology with entries for the word *sword*. Finally, I would like to thank two anonymous referees for careful comments on earlier version of this paper. The responsibility for all errors of fact and judgment is of course entirely mine.

**suerða-* and Gk. ("Achaean"¹) ἄορ 'sword' was assumed with a further connection with the verbal root of Gk. ἀείρω 'to lift' and Lith. *sveĩti* 'to weigh'. This idea has had an unfortunate *Nachleben* and persists in the literature (recently cf. Huld 1993: 225). To begin with, there is a semantic problem, since this etymology presupposes a reference to a weapon hanging at one's hip: a basic meaning 'Wehrgehänge' is not easy to parallel for a word of this meaning; in other words, hanging is simply not a pivotal function of a sword. The formal side of this etymology, too, rests on rather shaky ground: Myc. *a-o-ri-me-ne* shows that there never was an internal digamma in ἄορ and so a proto-form **sh₂uor-* is out of the question.² Lastly, there is an alternative etymology for ἄορ: it appears very plausible to trace this word back to **h₂nsr̥* or **h₂nsd̥r̥*, formed from the root of Lat. *ēnsis* (< **h₂nsi-* or **h₂ēnsi-*), Pal. *ḥašīran* 'dagger'³ and Ved. *así-* 'sacrificial knife, sword'.⁴ By adopting this alternative analysis of ἄορ we also get a better semantic solution: a word for 'sword' is connected to a well-established PIE lexical entry **h₂nsi-* of the same meaning.

2.2 While the connection to ἀείρω fails to account for the formal side of the etymology, other suggestions are equally uncertain, mostly for semantic reasons.

¹bT scholion *ad* ε 385: καὶ Ἀρκάδες καὶ Αἰτωλοὶ πᾶν ὄπλον ἄορ καλοῦσιν; the "Achaean" provenance is further confirmed by reliable γλώσσαι κατὰ πολεῖς.

²It should also be noted that the short /a/ in ἄορ speaks against **sm̥-suor* (long /a/ in the oblique forms ἄορι, ἄορα in Homer is due to a metrical lengthening). The Corcyrean form Ἀφοροί, mentioned by Minon (1999: 1379), is irrelevant: Corcyra is a Corinthian colony and hypercorrect use of digamma is well attested in Corinth, cf. the participles ἰζών, ἐζών (SEG XV, 389, 390), Gen.Sg. -αφο (also in Corcyrean Τλασίαφο IG IX I, 867, 1) or personal names Ποτεῖδαφονι, Διδαιφόν, Οριφόν.

³The Palaic word is a hapax in an unclear passage of the *Zaparwa* ritual (KBo 19.152 Vs. 1 12') and its relationship to PIE **h₂ensi-*, **h₂nsei-* (suggested in Eichner 1980: 127, Fn. 30) is unfortunately not assured, other options being available and the development of **ṇ* in Palaic being debatable. For an alternative solution (which is merely a possibility!) see Vine *apud* Melchert 2007: 257, Fn. 12.

⁴A relic of this *i*-stem is also possibly found in Myc. PN *a-i-qe-u* 'killing with a sword'; on the details of Greek phonology (restriction of Rix' Law before nasals) see Nikolaev 2005 (plus a note by Matasović 2007: 32-33); Nikolaev 2007: 164-165. The alleged Avestan *aṇhu-* 'sword' (Yt. 13, 46 *θaxtaiaat̥ parō aṇhūiāat̥*) is unreliable: the context suggests 'bowstring'.

2.2.1Lidén (1891) suggested a comparison to Lat. *sorbus*, f. ‘service tree’ which was enthusiastically supported by Pipping (1925: 38-39)⁵; however, the semantic pattern which Lidén sought to establish (names of trees as basis for designations of various kinds of weapons) while possible in case of bows and spears (Gk. *τόξον* and *αἰγανέη*, Lat. *ornus* and *fraxinus*) remains unfounded in the case of metal weaponry.⁶

2.2.2Krogmann (1932) assumed a relationship with a root **suer-* which he glossed as ‘stechen, schneiden’. His reasons for this reconstruction of the semantics are unclear, since the only meaning attested for the continuants of this root is ‘to ache, to suffer pain’: OHG *swero* m. ‘pain, ulcer’, *sweran* ‘to fester’, Slavic **xvorŭ* / **xyrŭ* ‘ailing’, YAv. *x^vara-* n. ‘wound’ (Y 57.10, etc.).⁷ Moreover, the morphology of the alleged **suer-ḍa-* ‘Gegenstand zum Stechen, Schneiden’ is less than assured: if **suer-ḍa-* goes back to **suer-tó-*, a full grade unaccented vowel in the root is not easy to account for.⁸ If **-ḍa-* is from PIE **-d^hh₁-o-*, the pre-Germanic place of accent is irrelevant, but the desired meaning of an agent noun (**suer-d^hh₁-o-* ‘pain-inflicter’⁹) is hardly compatible with what is otherwise known about PIE formations of this type.⁹

2.2.3Schrader (1917-1929: I,160) put forth a comparison to Slavic **svrŭdlŭ* ‘borer, drill’ (supported by Trubačev 1966); but given the nature of the tool, the alternative etymology

⁵Note also that Lat. *sorbus* finds a perfect comparandum in the Lithuanian name for currant *serbentā*.

⁶Sperber (1915: 39-40) suggested that **suerḍa-* originally referred to a weapon made of wood and advocated a relationship with Gmc. **suarḍu-* ‘flitch’; however, in my opinion, Sperber’s ethnographic parallels are not convincing, especially since the evidence for a putative semantic change from ‘a side of meat’ to ‘a side section of a piece of wood’ in this group of words is limited precisely to **suerḍa-* (none of the reflexes of Gmc. **suarḍu-* in mediaeval Germanic languages refers to wood).

⁷Modern Iranian cognates: Ossetic (Iron) *xæryn* ‘to itch’, Kurdish (Kurmanji) *xārin* ‘to scratch’, etc. Čop (1956: 111) has further compared Hittite *šarra-* (the stem of which should rather be set up as *šār-¹* / *šar-*) ‘to divide up, to split, to separate’, but the development of initial **su-* to *š-* is without support (compare *šuwānu-* ‘strong, weighty’ related to Lith. *svarius* ‘heavy’). OInd. *svar-* ‘to torment’ cited by Klein (1971: 736) is non-existent.

⁸If **suer-ḍa-* is analyzed as a substantivized **-to-* participle, one would expect an initial accent, compare **uērþa-* ‘price’ (Goth. *wairþ*) < **uértō-* derived from **uṛtō-*.

⁹For instance, **uer(h₁)-d^h(h₁)-o-* means ‘word’ (Lat. *uerbum*), not ‘speaker’ (importantly, Gmc. **suerḍa-* is a neuter noun).

proposed for the Slavic word by Hirt (1899: 253) and independently by Mladenov (1941: 573) is more likely (*svrūb-dlū- from PIE **k₂uerb-* 'to turn', OHG *werben* 'to turn', ON *hverfa* 'to turn round').¹⁰

2.2.4 Finally, Levickij (1998: 215) compared our word to the family of OE *sweard*, Modern High German *Schwarte*, despite his efforts to connect 'skin' and 'sword' it is hard to see any real connection between them and any similarity is certainly fortuitous.

2.3 Thus it appears that an alternative etymology for **suerða-* is desirable. Strictly speaking, archaeological findings do not allow positing the existence of metallic swords in PIE times (see Mallory 1991; Mallory–Adams 1997: 561), but a meaning like 'dagger' or '(sacrificial) knife', which for instance Ved. *así-* still has, can be securely assumed; therefore, a search for potential cognates with the same or similar meaning is methodologically warranted. I am going to employ the same simple method, the efficiency of which was demonstrated above on Gk. *ἄορ*, and look for more 'knives' and 'swords' in other Indo-European branches; furthermore I will use one of the recent additions to the armory of Indo-European morphologists, namely the theory of delocative derivation. In the following section an outline of this theory will be presented.

3. Delocative derivation in Proto-Indo-European

Briefly sketched in (Nussbaum 1986: 187, 235-238) and further elaborated in (Nussbaum 1998a), the model of delocative derivation is a part of a larger theory of decasulative derivation, which predicts the existence of adnominal stems, based on case forms (Loc., Instr., Gen.) with a suffix. Let us outline the essential points of the theory in question. Adnominal use of locative forms was arguably not allowed in the protolanguage, therefore some strategy other than a relative clause was required for structures like "X at/in Y is...".

¹⁰Note that this etymology is not compatible with the connection between Gmc. **hverfa-* and Tocharian AB *kārp-* 'to descend, to come down' endorsed in *LIV*² 393; however, the semantic link between the two has never been sufficiently explained and Adams (1999: 154) provides an alternative etymology for Tocharian *kārp-*, comparing it to ON *hrapa* 'to rush on, to fall' and Mr. *crib* 'quick', PIE **kerb-*.

Two such derivational strategies were in fact available: an external one (hypostasis) and an internal one.

3.1 External (suffixal) derivatives from locative case forms are well known; for instance, the wide-spread suffix $^{*-(i)io-}$ is (at least, partly) based on delocative hypostases:

$^{*h_x on-r} / -n-$, Loc. $^{*h_x on-er-i}$ ‘in a dream’
 \Rightarrow $^{*h_x on-er-io-}$ ‘what is in a dream’ > Gk. $\acute{\omicron}νειρος$ ‘vision’.¹¹

A similar derivational process accounts for the origin of thematic $v\ddot{r}ddhi$ -formations (J. Schindler’s term “proto- $v\ddot{r}ddhi$ ”):

$^{*po/ed-}$, Loc. $^{*p\acute{e}d}$ ‘at the bottom’
 (OIr. is ‘below, under’, Alb. $-posh$ in $p\acute{e}rposh$ ‘under’)
 \Rightarrow $^{*p\acute{e}d-o-}$ ‘what is at the bottom’ > Gk. $\pi\eta\delta\acute{o}\nu$ ‘oar end’
 (Nussbaum 2004: 1).

In such cases the resulting stem has an exocentric meaning vis-à-vis its basis.

3.2 Another possibility was to derive a secondary stem via internal derivation:

$^{*h_2\acute{e}us-\acute{o}s}$ ‘dawn’ (Ved. $us\acute{a}h$, Hom. $\eta\acute{\omega}s$)
 Loc. Sg. $^{*h_2us-s\acute{e}r(i)}$ (Ved. $usar-(b\acute{u}dh-)$, possibly Hom. $\eta\acute{\rho}\iota$)
 \Rightarrow $^{*h_2us-s\acute{e}r}$ ‘what is at dawn’ > Gk. $\acute{\alpha}\eta\rho$ ‘mist’.

This derivation is best exemplified by the family of the Indo-European designations of ‘man, earthling’ (* ‘he who is on the earth’) derived from $^{*d^h\acute{e}g^h\acute{o}m}$, $^{*d^h\acute{e}g^h m-es}$ ‘earth’:

Loc. $^{*d^h\acute{e}g^h\acute{e}m-en}$ is the source of OLat. $hem\acute{o}$;
 Loc. $^{*d^h\acute{e}g^h m-én}$ gave rise to OLith. $\acute{z}mu\acute{o}$.¹²

¹¹For the suffix see Balles 1997.

¹²Unless both the Lithuanian and the Old Latin form go back to $^{*(d^h)\acute{e}g^h\acute{m}(m)-om-}$, $hem\acute{o}$ being secondary and the first syllable of $hom\acute{o}$ being the expected reflex of a zero-grade $^{*\acute{e}g^h\acute{m}-}$ (see Vine 1993: 247 and Livingston 2004: 33-36; according to Nishimura 2004 an accented $^{*\acute{e}g^h\acute{m}V}$ gave $-omV$, while an unaccented $^{*\acute{e}g^h\acute{m}V-}$ resulted in $^{*\acute{e}mV-}$).

Note the same semantic model realized by external morphology in OIr. $duine$ < $^{*d^h\acute{e}g^h om-(i)io-}$ (based on Loc. $^{*d^h\acute{e}g^h\acute{e}m-i}$ > Skt. $kṣ\acute{a}mi$) and NPhryg. $\zeta\mu\epsilon\lambda\omega s$ from delocative $^{*d^h\acute{e}g^h\acute{e}m-el-o-}$.

Rau (2007) has added a new example:

**uét-/ ut-*, Loc. *uet-er* 'during the year'
 ⇒ **uet-ér* 'what is in/of the year' (whence 'yearling')
 > Indo-Iranian **vatár-* 'calf' (Ved. *savátárau* 'having
 the same calf')¹³

3.2.1 This process should be distinguished from the reinterpretation of locative formations with the suffixes *-*er*, *-*en* and *-*el*¹⁴ as endingless locatives of *-*r* or *-*n* stems, a process which results in a back-formed fully declined -*r*- or -*n*-stem that has the same meaning as its basis:

**k^wsep-* 'night' (Ved. *ksáp-*, Av. *xšap-*), Loc. Sg. **k^wsep-en*
 ⇒ **k^wsep-én*, **k^ws(e)p-n-és* > YAv. *xšapan-*, *xšafn-*, f. 'night';
 **h₂éusōs*, **h₂us-s-és* 'dawn', Loc. Sg. **h₂us-s-ér-[i]* 'dawn'
 ⇒ **h₂u(s)-s-ér*, **h₂u(s)-s-r-és* > Ved. *uṣar-/ uṣr-* m./f. 'dawn'.¹⁵

Another possible example of this process is Indo-Iranian **ad^huan-*, m. 'road, way':

**h₂o/end^h-u-* 'going, moving',¹⁶
 (⇒ **h₂o/end^h-u-ro-* > OIcel. *ondurr* 'ski')

¹³See also Nikolaev 2007: 165 for a similar analysis of Gk. ἀθήρ 'ear of (grain)' and ἀνθερεών 'chin' as delocalival formations ultimately based on a locative **h₂nd^h-er* 'in a projecting spot'.

¹⁴Differently from *-*er* and *-*en* locatives, locatives with a suffix *-*el* are not attested as such and their reconstruction is inferred from adnominal formations in *-*lo-* or *-*lā* that could in theory be subject to other explanations. Nevertheless, it seems very likely that (at least, some of) such formations should be viewed as locative (and not genitive) secondary derivatives. For instance, the semantics of Gk. χαμαλός 'low, close to the ground' clearly make a delocalival analysis preferable (Loc. **d^hg^h-m-el* 'on the ground'; χαμαλός < **k^ht^hamelo-* with a vowel assimilation); another important example is the Greek compound ἐνδείελος 'very clear, far seen' (an epithet of Ithaca), the second member of which can only be meaningfully explained if a locative allomorph **deiuel* from **diēu-s*, **diu-és* 'clear sky' is reconstructed (Peters 1997[2002]: 108-109). Explanatory benefits of this analysis of some formations in *-*lo-* seem to make it preferable to other analyses.

¹⁵Nussbaum 1986: 235-238.

¹⁶A deverbative *u*-stem abstract of the type Ved. *jásu-* 'exhaustion' or Gk. τέρυς 'ruination' (see Nussbaum 1997). The verbal root **h₂ned^h-* 'to move (out)' is that of Gk. perf. ἀνήνοθε *Il.* 11.266 (also *u.l.* ad *Od.* 17.270) and Doric and Arcadian aor. ἐνθείν (where the root vocalism is perhaps analogical to ἐλθείν; the root may also be reconstructed as **h₁ned^h-* if the perf. ἀνήνοθε is a result of a haplological simplification of **ἀνενήνοθε*). Adverbial OInd. *adhunā* 'now' may be a fossilized form of exactly such an acrostic *u*-stem as reconstructed

Loc. Sg. $*h_2nd^h u-en$ ‘in moving, on the move’ >> ‘on the way’¹⁷
 $\Rightarrow *h_2nd^h u-én, *h_2nd^h u-(e)n-és > \text{Ved. } \acute{a}dhvan-, \text{Av. } aduuan-$ ‘way’.

This model can be referred to as *reinterpretation*.¹⁸

3.3 The theory of delocalival derivation is thus able to account for some hitherto unexplained phenomena, both of form and meaning. On the one hand, the application of this derivational model results in a better semantic interpretation of the structure of a postulated preform: for instance, the semantic attractions of deriving the word for ‘human being’ from a locative with the meaning ‘on the earth’ (instead of an oblique stem ‘earth’) are hard to deny. On the other hand, there are cases which receive a better formal interpretation in the light of this theory. Therefore, before returning to Germanic ‘sword’, it might be appropriate to briefly address the potential contribution of the theory of delocalival derivation to the problems of formal reconstruction that will become relevant in this paper. The question is: what might be a formal token by which alleged delocalival derivatives can be recognized?

3.4 The major characteristic feature here is the *Schwebeablaut*, which was a distinctive property of archaic Indo-European locatives with suffixal **-en, *-er, *-el*. The only other place where one systematically finds *Schwebeablaut* are comparatives; outside these two morphological categories there is no evidence for regularly “misplaced” full grades in PIE athematic nouns.¹⁹ The prime example is of course Nom. $*\hat{g}^h(i)\acute{i}\acute{e}m$ vs. the

above (for the zero ablaut grade in the suffix compare Loc. Sg. $\acute{a}yuni$ ‘in lifetime’ or Dat. Sg. $mádhune$ ‘to sweetness’).

¹⁷Interestingly, Ved. $adhvará-$ ‘sacrifice’ and $adhvaryú-$, a title of a sacrificer, seem to offer evidence for $*adhvar-$ and, therefore, for an **-er* locative $*h_2nd^h u-er$ ‘en route (for the heavenly regions)’ (?).

¹⁸Rau (2007) uses this model to account for Proto-Gk. $*uet-ér$ ‘year’ (attested in compounds of the structure X-(ϵ) ϵ τ η ρ σ ‘having X years’): according to Rau, $*uet-ér$ is a hysterokinetic neuter back-formed to the loc. $*uet-er$ ‘during the year’ (see above in the main text).

¹⁹This is the reason why I cannot accept the arguments presented in the chapter V of Widmer 2004, where the author seeks to motivate *Schwebeablaut* in internal derivation: in my opinion, the majority of his arguments entail delocalival hypostases and therefore *Schwebeablaut* should be seen as a property of the derivational basis and not as a part of the morphological derivation (see Nikolaev 2008: 545-551).

locative $*\acute{g}^h\acute{e}i\acute{m}en$ 'in the winter' (as evidenced by Ved. *h́eman* (YV, TS, Br), which was studied in depth by Nussbaum (1986: 52, Fn. 11; 189); Nussbaum has shown that Gk. $\chi\acute{\epsilon}i\mu\alpha$ 'winter' and YAv. *zaiian-* 'id.' are indirect offshoots of this locative, based on its reinterpretation as the locative of a $*(me)n-$ stem noun. A similar example is, possibly, Toch. A *wše*, B *yšyge* 'night' which Hilmarsson (1989: 91) traced back to a hysterokinetic nominative $*h_2ues-\acute{e}n$.²⁰ This paradigm can have originated in a locative $*h_2ués-(s)-en$ 'at dawn' (i.e. 'time of twilight') by virtue of the mechanism just discussed; the locative $*h_2ués-s-en$ belonged to the paradigm $*h_2éus-\acute{o}s$, $*h_2us-s-és$ 'dawn' where it apparently coexisted with another locative with two full grades $*h_2ués-(s)-er$ 'at dawn' (Ved. *vasar-hán-* 'striking early', *básri* RV 1, 120, 12 < $*h_2ués-s-r-i$), see Nussbaum 1986: 190, 289-292.²¹

3.4.2A A well-known case is presented by the words for 'nub' and 'belly'. Belly is situated by the navel and following others I think that a delocalival analysis does the trick here, too²²: if the doubtful R̥gvedic form *nábh-* (RV 9, 74, 6) together with the *vṛddhi*-derivative $*h_3néb^h-o-$ evidenced by Arm. *aniw* 'wheel' suffice to set up a root noun $*h_3neb^h-$ (which seems to be a likely analysis anyway), then it is from this noun that a locative $*h_3enb^h-en$ was formed. From the form $*h_3enb^h-en$ an amphikinetic *n*-stem $*h_3enb^h-on-$ 'that what is at the nub' was internally derived (type II above, $\acute{\alpha}\eta\rho$), hence OS *ámbón* 'abdomina, belly' (Acc. Pl.). And if $*h_3enb^h-en$ was indeed a locative of a root noun, then it is much easier to take Gk. $\acute{\omicron}\mu\phi\alpha\lambda\acute{o}s$ 'navel, knob, boss of a shield' as an endocentric derivative of a co-existing locative form $*h_3enb^h-el^23$ (of the same type as $*d^h\acute{g}^h-\acute{e}m-el$, probably reflected by NPhryg. $\zeta\epsilon\mu\epsilon\lambda\omega s$ and Gk. $\chi\theta\alpha\mu\alpha\lambda\acute{o}s$).²⁴ There are more examples of secondary

²⁰See also Pinault 2008: 480.

²¹ $*h_2us-s-\acute{e}r > \acute{\alpha}\eta\rho$ 'mist' discussed above is yet another offshoot of the same paradigm.

²²Note, however, that the following scenario differs from the ones proposed by Nussbaum (1986: 191) and Widmer (2004: 110).

²³Note that if this solution is adopted, the word can no longer be used to support Rix's law before nasals in Greek, in fact, I believe that the law was only operative before liquids (see above Fn.5 and Vine 2005).

²⁴Another interesting case may be mentioned here, namely Arm. *getin* 'earth, Erdboden': the origin of this *n*-stem can be accounted for in two ways, both involving delocalival derivation, but differing as to the root connection. According to one view, the preform of *getin* is $*h_1uéd-en$ and one is dealing

amphi- and hysterokinetic *-n- and *-r- stems, created on the basis of locative formations and recognizable as such by the ablaut of the root and the meaning, that can be added to the dossier assembled by Nussbaum.²⁵ More work needs to be done in this direction, but we can be reasonably certain that the morphological process of creating secondary stems on the basis of locative case forms should be reconstructed for the proto-language.

4. Back to Germanic **suerða-*

Equipped with this knowledge we can return to Gmc. **suerða-* ‘sword’. I believe that the theoretical framework

with a locative of a root noun **h₁oud-*, **h₁ud-és* ‘ground, earth’ (Gk. *οὔδας, οὔδει*), reinterpreted as a locative of an *n*-stem (this etymological connection is pursued by Peters (1997 [2002]: 109, Fn. 23)); the Hittite word for ‘land’ *ut-ne-e, ut-ni-i-aš*, a textbook example of a hysterokinetic *i*-stem, can be related to this word via **h₁ud-n-é₂*, a collective of **h₁uo/ed-n-i-* (not **h₁uo/ed-en-i-*, since there is no evidence for syncope in this environment), internally derived abstract of a **h₁ued-en-o-*, itself an external derivative from **h₁uéd-en* (as Jeremy Rau points out to me, the failure of assimilation *-dn- > -nn-* can be accounted for, for instance, by analogy to a stem allomorph **h₁uéd-en-* elsewhere in the paradigm). A different root connection has been argued for by Oettinger (2000) who suggests starting with **uod₂*, **ued₂* ‘water’ (the morphological details are largely the same: Oettinger’s idea implies **ued-en-o-* ‘what is in the water’, hence **ud-(e)n-é₂* ‘wateriness’). The treatment of initial **h₂u-* vs. **u-* in Armenian being unclear, I refrain from any judgment on the etymology of *getin* (Arm. *garown* cannot be viewed as a decisive proof for **h₂u-* > *g-* in Armenian *pace* Widmer (2004: 117), whose reconstruction **h₂ués-ŕ/-n-* ‘Hellwerden’ with an initial **h₂* (Ved. *vasantá-*, OCor. *guaintoin*, OCS *vesna*, Lat. *uēr*, Gk. *ἔαρ* (Alcm. *ἦρ*), Lith. *vāsara*) is misleading since there is no proof that the word for ‘spring’ is derivationally related to the word for ‘dawn’ and there is no independent evidence in favor of an initial **h₂* in ‘spring’). What is important here is the existence of a *n*-stem side by side with a root noun, be it **h₁oud-* or **uod-* (Hittite *uid-*).

Regarding **h₁oud-*, the following remarks are in order. Whatever the precise analysis of *οὔδας* should be, the assumption of an old root noun is supported by the dative *οὔδει* which is disyllabic 11 times out of the whole of its 14 Homeric attestations: *-ει* is located either in arsis or in the thesis of the last foot and resolution is ruled out in || *πατρὸς ἐπ’ οὔδει* # (E 734, Θ 385), || *οὐ γὰρ ἐπ’ οὔδει* # (T 92), || *ἐν Διὸς οὔδει* # (Ω 527), |, *οὔδει τε πέλασσαι* # (Ψ 719). These statistics are not reconcilable with the usual behavior of *s*-stem datives: *ἀνθεῖ*, *Ἄργεῖ*, *ἔρχεῖ*, *ἔλκει*, *κάλλει*, *κύδει*, *πέυθει*, etc. are all dactylic (˘˘˘). Thus in this particular case *-ει* could represent not a contraction product from **-ee-* after intervocalic *-h-* (< **-s-*) is lost, but an old athematic dative ending **-e_i* (see Meister 1921: 133-134).

²⁵See Nikolaev 2005; 2007; *forthcoming*.

described above allows proposing a new etymology for this word.

4.1 I would like to suggest a comparison of **suerða-* with CLuv. ^(URUDU) *ši(h)ual-*, n. This word is attested four times; the variants include Nom.-Acc. Sg. *ši-ua-al* (KUB 44.4 Vo 26) with a characteristic Luvian loss of *h* before *u* (also *ši-ua-la-za-an* of unclear form found in KUB 44.4 Vo 28) and Nom.-Acc. Sg. *še-hu-ua-a-al* (KUB 35.145 iii 19). This comparison has not been made before and the reason is above all that the meaning of *ši(h)ual(a)-* is problematic: in an influential article Starke 1981(1982) argued that the meaning should be established as 'lamp' (pursuing a further connection with PIE **seh₂u₃*, Gen. Sg. **sh₂u₃éns* 'sun'). The crucial context is KUB 44.4 Vo 28 where *šiual* is construed with a verb *ta-šu-ua-ah-du* 'to make blind'. However, it is not very credible that a feeble Anatolian lamp in the 2 millenium BCE would have had enough wattage to blind a person. From another attestation we learn that *ši(h)ual* is heavy (*taššu*) and is made of bronze; moreover, this word is found side by side with 'axe'.²⁶ Thus *ši(h)ual* is likely to represent some kind of weapon.²⁷

4.2 The morphology of *ši(h)ual* can be interpreted in two ways:

- 1) it could continue a thematic noun (vṛddhi-derivative) **seh_{2/3}u₃ōl-* which was dethematized either by a common-Anatolian syncope in the final syllable (Melchert 1993b) or in analogy to other Luvian *nomina instrumenti* in *-al* (*hūpal* 'hunting net', ^{GIS} *niniyal* 'cradle', *winal* 'stick' to name a few);
- 2) if really archaic, *ši(h)ual* could be a reflex of an athematic **seh_{2/3}u₃ōl-*, a derivative in **-ol-* from a stem **seh_{2/3}u-*.

In either case, *ši(h)ual* has a stem **seh_{2/3}u-* in its derivational prehistory from which a stem **seh_{2/3}u₃ōl-* or **seh_{2/3}u₃ōl-* (with a further derivative **seh_{2/3}u₃ōl-*) was formed.²⁸ A morphological parallel can be found in CLuv. *ādduwal-* 'evil' (subst.) and its Hittite cognate *idālu-* (with further suffixation): the reconstruction of a PIE form **h₁ed-u-ōl* is

²⁶199/r + HFAC 13.10. See Beckman 1983: 196; Rieken 1999: 450.

²⁷Melchert (1993a: 194) suggests 'stiletto', Beckman (1983: 196) and Soysal (1989: 185) argue for 'dagger', while Rieken (1999: 449-451) is undecided.

²⁸An inner-Luvian derivation *ši(h)ua-* ⇒ *ši(h)ual-* cannot really be excluded. However, *ādduua-* ⇒ *ādduual-* would be the only parallel, and so there is some probability that in *ši(h)ual-* we are actually dealing with an inherited secondary stem in **-ol-*, based on a **-u-* stem.

supported by traces of the $*h_1o/ed-u-$, $*h_1ed-u-r$ and $*h_1ed-u-ōn$, studied by Schindler (1976), as well as by Toch. B *yolo* ‘evil’.²⁹

The stem $*sēh_{2/3}u-$ is indirectly reflected in Luvian by the thematic stem $šī(h)ua/i-$ ‘bitter, sour’ (with $-i-$ from $*ē$).³⁰ Under the assumption that $šī(h)ua/i-$ and $šī(h)ual$ are related, the basic meaning of the underlying root is likely to be ‘sharp’ and the adjective $šī(h)ua/i-$ shows a synaesthetic transfer ‘sharp’ > ‘sharp on the tongue’ > ‘bitter, sour’.³¹ CLuv. $šī(h)ua/i-$ is a derivative of the type $*ser-u-o-$ (Welsh *herw* ‘raid’): $*soru-$ (Hitt. *šāru* ‘booty’) or $*uet-s-o-$ (Skt. *vatsā* ‘calf’): $*uete/os-$ ‘year’ (Gk. *ἔτος*). This derivational model produces possessive formations; therefore, by glossing $*sēh_{2/3}uo-$ as ‘having sharpness’ (viz. ‘sharp’), we arrive at a reconstruction of an acrostatic u-stem $*sēh_{2/3}u-$ ‘sharpness’.³²

4.3 Now, how exactly will the comparison with Gmc. $*suerða-$ work? A workable scenario is provided within the framework of Nussbaum’s delocative derivation; as was mentioned above, in some cases when an $*-n-$ or $*-r-$ stem is back-formed to a locative form, the meaning of the resulting substantive is the same as that of the base ($*k^wsep-ēn-$ ‘night’, Ved. *uṣar-/uṣr-* ‘dawn’), but in some cases the locative form undergoes a kind of internal derivation and the new paradigm has an exocentric meaning ‘one at/in X’ vis-à-vis its basis ($(d^h)g^hemōn-$ ‘he who is on/of the earth’, $*h_2us(s)ēr-$ ‘that which is at/of dawn’). Now,

²⁹I am grateful to Craig Melchert who kindly reminded me about the Tocharian form.

³⁰Nom.-Acc. Pl. *še-e-ua* (KBo 13.260 iii 11) plus an $-iya-$ derivative Nom. Pl. comm. *šī-e-ḫu-ua-en-zi* (*ibid.*), see Starke 1987: 250, Fn. 26 and for morphology Melchert 1993a: 193. According to Starke, the name of a river-nymph ^{TUL}*šī-ua-an-na-aš* (KBo 2.13 rev. 23) may belong here, too. Starke further compared *šīḫua/i-* with problematic Hittite (Luvoid) *šī-ua-e-e[š]* (KBo 17.4 ii 17) which is (mis)construed with acc.pl. *ḫaršauš*, so the meaning is probably ‘sour thick-breads’, and *šī-ú-i-na* (KUB 31.110 3), but the exact meaning of the latter form remains a mystery.

³¹Compare similar semantic developments in Lat. *acidus* ‘having a sour, bitter flavor’ and *acūtus* ‘sharp; pointed’ and ‘acid’ (*ācer* ‘sharp’), in English *sharp* (cf. Chaucer *Prol.* 352 “Wo was his cook, but if his sauce were Poynaunt and sharp”) or in German *scharf* (as in “Das Essen ist mir zu scharf”, cf. Rückert, “Einführung in die Speisekammer”: “scharf ist gut im haus am essig, scharf allein nicht übermässig, dasz man ihn auch kosten darf”).

³²I leave open the question whether such acrostatic $*sēh_{2/3}u-$ ‘sharpness’ should be considered an adjective abstract (i.e. a neuter) of a proterokinetic adjective $*seh_{2/3}u-$ ‘sharp’, compare proterokinetic $*megh_2-$ ‘big’, neut. acrostatic $*moḡh_2 >$ Toch. B. *māka*, A *māk* (see Widmer 2004: 155-170).

as a locative of an acrostatic stem $*s\check{e}h_{2/3}u-$ different forms come to mind: $*s(e)h_{2/3}u-en$, $*s(e)h_{2/3}u-el$, $*s(e)h_{2/3}u-er$ and $*sh_{2/3}eu(-i)$.³³ As a parallel to this diverse picture recall once again the locatives from the Indo-European word for 'earth' $*d^h e\check{g}^h \check{o}m$, $*d^h \check{g}^h m-es$ ³⁴: $*(d^h)\check{g}^h m-er$ (YAv. *zəmar.gūz-*), $*d^h \check{g}^h -ém-i$ (Skt. *ksāmi*), $*d^h \check{g}^h -ém-en$ (if this should be the source of OLat. *hemō*, see note 12), $*d^h \check{g}^h -m-én$ 'on the earth' (the source of OLith. *žmuō*), $*d^h \check{g}^h -ém-el$ (the source of NPhryg. $\zeta\epsilon\mu\epsilon\lambda\omega\varsigma$ and probably Gk. $\chi\theta\alpha\mu\alpha\lambda\acute{o}\varsigma$ with vowel assimilation). The following developments can be sketched:

1) The locative $*s(e)h_{2/3}u-el$ (remade to $*s\check{e}h_{2/3}u-el$ with an analogical leveling of root ablaut throughout the paradigm) gives rise to a back-formed holokinetic paradigm with Nom.-Acc. $*s\check{e}h_{2/3}u-ōl$. No change of the meaning takes place apart from concretization of the abstract noun: 'sharpness' > 'a sharp thing'. A perfect parallel to this case is Gk. $\chi\epsilon\iota\mu\acute{\omega}\nu$, $\acute{\omega}\nu\omicron\varsigma$ 'winter', built to a *Scharnierform* Loc. $*\check{g}^h e\check{i}men$ 'in the winter' or $*nok^w tōr$ 'night' (Gk. adverb $\nu\acute{\upsilon}\kappa\tau\omega\rho$ 'by night'), built to a Loc. $*nok^w ter$ 'at night' from a *t*-stem $*no/ek^w t$.³⁵

2) The locative $*s(e)h_{2/3}u-er$ (type $*(d^h)\check{g}^h m-er$)³⁶ serves as a derivational base for a secondary *t*-stem $*s(h_{2/3})u-er-t$ 'that

³³That a locative of an abstract noun should be viewed as a real form employed by the speakers of the PIE and not as a mechanical construct can be inferred on the one hand from various infinitival formations that often continue locatives of verbal abstracts (e.g. Proto-Greek $*-eh-en$, Ved. $-san(i)$), on the other hand, from the so-called "Absenzbildungen" (recently studied by Forssman 1997), viz. adjectival possessive compounds with $*\eta$ as their first member, used in locative (or instrumental), such as Ved. *ananté* 'in endless (place)': this inherited model is best interpreted semantically as 'in/at X-lessness' where X is an abstract noun (Peters 2007: 165, Fn. 18).

³⁴For natural semantic reasons this word preserves a variety of locative forms.

³⁵A generalization of the \check{e} -grade in the root from the strong case forms throughout the paradigm of $*s\check{e}h_{2/3}u-$ is not a costly assumption, but in any event an alternative should be signaled: one could also operate with an inner Luvian endocentric derivation $\check{s}ih_{2/3}ua- \Rightarrow *\check{s}ih_{2/3}ua-la-$ (under assumption that Luv. $\check{s}i(h)ual-$ was originally thematic).

³⁶It seems possible that the locative $*sh_{2/3}u-er$ is further found in $*s(h_{2/3})u-er-uo-$ (with the suffix $*-uo-$ that we find in Myc. *peru-si-nu-wo* 'last year's', based on loc. $*per-uti$) reflected by OIr. *serb*, Welsh *chwerw* 'bitter'; the meaning of these forms matches nicely that of CLuvian $\check{s}ih_{2/3}ua/i$ 'bitter, sour, sharp'.

Less certain is the comparison with $*sh_{2/3}u-r-o > *suh_{2/3}r-o-$ (with a laryngeal metathesis) in Balto-Slavic $*sūro-$ 'sour' (Latv. *sūrs* 'salty, bitter', OPruss. *suris* 'cheese', OCS *syrŭ* m. 'id.' and *syrŭ* adj. 'moist') and Gmc. $*sūrā-$ 'id.' (ON *surr*, Modern High German *sauer*). Alternatively, these words have been compared to Hitt. *sēhur* 'urine' (cf. OIsl. *saurr* 'male semen, impurity,

which is in/of sharpness' (subst.)³⁷; from the latter an adjectival **s(h_{2/3})u-er-t-ó-* 'sharp' is further derived which is lastly substantivized via a transfer to neuter gender giving Gmc. **suerða-*, n. 'sword'. Again, the words for 'winter' provide parallels for each step of this derivation: consider the classic couple Ved. *hemantá-* vs. Hitt. *gimmant-* 'winter':

Loc. **ġ^heimen* 'in winter'³⁸
 ⇒ **ġ^himen-t-* 'what is in winter' (Hitt. *gimmant*)³⁹
 ⇒ **ġ^heimen-t-o-* 'wintry' (> Ved. *hemantá-* 'winter').⁴⁰

moist earth'); for this etymology see Sturtevant 1936: 184 and recently le Feuvre 2007 (I am grateful to Craig Melchert for the latter reference). Smoczyński 2006: 160 prefers to connect the Balto-Slavic and Germanic words with the root **suh_ɣ-* in Gk. *ῥέει* 'rains', Hitt. *šuh_haⁱ* 'scatters, pours', Toch. AB *su-/ swās-* 'rains' (but the meaning 'bitter' remains unexplained). It seems that among the reflexes of **suh_{2/3}r-o-* we need to distinguish two groups of words: on the one hand, the words for 'wet' where a connection to Hitt. *šēhur* 'urine' and OIsl. *saurr* is not only semantically plausible (compare Gk *οὐρέω*, *οὐρῶν* 'urine' and OInd. *váry-* 'to rain', Hitt. *uarša-* 'shower rain' or Latin *urina* 'urine' and OInd. *vár* 'water', Luvian *wa-a-ar(-ša)* 'id.'), but also supported by formulaic equations studied by le Feuvre 2007; on the other hand, a distinct **suh_{2/3}r-o-* 'sour' related to the root studied in this paper (in other words, 'wet' and 'sour' do not have to belong together).

³⁷On the use of the suffix **(e/o)t-* in derivational models that produce substantives see Nussbaum 2004.

³⁸Ved. *hēman* (YV, TS, Br), indirect offshoots Gk. *χέιμα* 'winter', YAv. *zaiian-* 'id.'.

³⁹See Nussbaum 2004. Another example of a delocalative **-en-t-* stem is Hitt. *išpant-* 'night' from **k^wsp-en-t-* (derived from **k^wsep-*, Loc. Sg. **k^wsep-en*, see above). The gemination in Hitt. *gimmant-* (attested from OS onwards) remains, however, troubling and an inner-Hittite analysis in terms of an "inviduating" suffix *-ant-* may need to be preferred (unless the geminate was imported from the coexisting stem in **-men-* / **-mn-*).

⁴⁰Another example of delocalative **-to-* stem, cited by Nussbaum (2004), is Vedic Instr. Sg. (adv.) *sasvántā* (RV 7, 58, 5), derived from *sasvár* 'secretly' (= YAv. *haṃ^vharə*); however there is no evidence for a putative **so/esu-* 'sleeping' from the verbal root **ses-*. Note that both *sasvántā* and *hemantá-* in theory also allow analysis in terms of delocalative derivation with **-to-*.

One may also want to recall Nussbaum's (1998a) interpretation of Gk. *δάμαρ(τ)-*, which he traces back to **dm_her-t* 'the one in the house' from a locative **dm_her* 'in the house'; and yet this extremely attractive analysis is slightly problematic for those, who believe, as I do, that the Indo-European verbal root 'to build' was *aniṭ* (Nikolaev 2006).

Thus both $*s(h_{2/3})u-er-tó^{-n}$ and $*sēh_{2/3}uǫl$ (transponates) mean the same and are both based on locative forms of an $*-u$ -stem with the meaning 'sharpness'.

5. Loss of the laryngeal

There is a phonological issue involved which requires clarification, namely the loss of the laryngeal between initial $*s$ - and the following $*-u$ -, a development that is needed to explain the Germanic form since this dialect normally shows a vocalic reflex of PIE "schwa" in the initial syllable.⁴¹ A brief sketch of this sound change will be in order, since the fate of a laryngeal after initial $*s$ remains a controversial issue. Bypassing the part of the problem concerning $*sH_xV$ -sequences⁴², I want to turn to the presumed loss of the laryngeal after s -mobile before a non-syllabic.⁴³

5.1 There are a few reliable examples that support the rule in question. These examples (some of which have been assembled by Southern (1999: 107-113)) are pairs of cognates displaying an alternation $\#H_xC$ - vs. $\#sC$ -. This alternation is best interpreted as a result of an earlier $\#H_xC$ - ~ $\#sH_xC$ - (the latter with s -mobile as an optional onset of a laryngeal-initial root), where the laryngeal is lost after $*s$ -.⁴⁴

⁴¹If OIr. *serb* and Welsh *chwerw* 'bitter' belong to the same root (see above, Fn. 36), the development of $*sh_{2/3}u-er-uo-$ in Celtic presents the same problem.

⁴²See Hoenigswald 1952 and Hoenigswald 1992; Beekes 1969: 82-86.

⁴³Originally suggested by Nikitina (1962). See also Mayrhofer 1986: 150 (Mayrhofer refers to Peters 1980: 172, Fn. 124, where 71, Fn. 34 is to be consulted as well); García-Ramón 1992: 190-191; Southern 1999: 93. I am disregarding the word-internal position although the familiar equation between Ved. *asnáh* and Hitt. *ēsnaš* 'blood' (Gen. Sg.) is a very strong piece of evidence in favor of a general loss of laryngeal between $*s$ and a resonant. It is unclear at present whether this sound change should be extended to all contexts where a sequence $*sH_x$ was followed by a consonant (the presence of laryngeal reflexes in $*-to$ - derivatives from laryngeal final roots, such as $*sh_2to$ - 'tied' > Ved. *sitá*-, Av. *hitá*- or $*sh_2to$ - 'satiated' > Goth. *saps*, Gk. *ἄ-ατος*, does not disprove this assumption, since in these cases the final consonant of the root may have been analogically restored). This question lies outside the scope of the present paper, since the chief interest here is specifically the development of the sequence $*sH_xu$ -.

⁴⁴Predictably, allomorphs with initial $\#H_xC$ - are reconstructed mostly based on evidence from Greek. It must be noted in this connection that none of the Greek examples, cited by Southern, shows any trace of an initial structure of the type $*éR$ -/ $*áR$ -/ $*óR$ - (with aspiration resulting from $*s$ -), thus rendering the presence of an initial $*s > h$ before a laryngeal improbable.

Let us cite two examples in which the sequence $*sH_xu-$ gives $*su-$ as in our case:

- 1) $*h_2uer-$ vs. $*suer-$: Gk. ἀείρω ‘lift’ ($*\acute{a}φείρω$, cf. ἀνηρομέναι Alc. 1.63 (Davies)⁴⁵ vs. Modern High German *schwer*, Pal. *šuwaru* (KUB 32.18 i 5’), Hitt. (Pal.?) *šuwaru*, Lith. *svarūs* ‘heavy’, *sveĩti* ‘to weigh’ and Alb. *vjer* ‘to lift’⁴⁶.
- 2) $*h_2uel-$ vs. $*suel-$: Hsch. ἀέλιοι· οἱ ἀδελφὰς γυναικάς ἐσχηκότες (< PGk. $*aueliio-$) vs. ἐιλίονες ‘id.’ Pollux 3, 32 (< PGk. $*hueliion-$)⁴⁷, ON pl. *svilar* ‘brothers in law whose wives are sisters’.⁴⁸

Based on these examples, it may be concluded that if a root with an initial $*H_xu-$ had an allomorph with an *s*-mobile, a special rule deleted the laryngeal trapped between $*s-$ and $*-u-$. Although I am not aware of examples of a sequence $*sH_xu-$ where initial $*s-$ is not an *s*-mobile, it is not unreasonable to assume that a syllable onset $*sH_xu-$ (of whatever origin) was generally disallowed in Proto-Indo-European.⁴⁹

5.2 The evidence of Anatolian, which could shed some light on the outcome of PIE initial $*sH_xC-$, is, however, hard to evaluate. According to Oettinger (1976: 93-97) Hitt. *išhunauuar* goes back to $*sh_2nóuŕ$ with laryngeal between $*s-$

⁴⁵P. Louvre E. 3320/R 56 ἀνειρομέναι – late Laconian spelling.

⁴⁶If initial $*su-$ > Alb. *v-* (as, for instance, in *vjehërrë* ‘father-in-law’ < $*suesuro-$); now that *diell* ‘sun’ has been explained away (from $*ǵ^h el-uo-$ ‘tawny, yellow’, Lith. *žėivas*, according to Orel 2000: 81), the main piece of evidence for $*su-$ > *d-* remains *dirsë* ‘sweat’ which Pedersen (1900: 286) traced back to $*suidrotiā$.

⁴⁷Pollux labels the word as poetic (παρὰ τοῖς ποιηταῖς), in which case initial *ei-* is likely to be a result of a metrical lengthening.

⁴⁸Note, however, that the initial *á-* of ἀέλιοι may also be a reflex of $*sm-$ and since we are not informed about the length of this vowel (no information about the dialect is provided and the word does not have to be Attic or Ionic), it may be the case that ἀέλιοι actually continues $*sm-sueliio-$ (with a compensatory lengthening $*-Vsũ- > *-Vhũ- > *-V̄ũ-$ of the preceding vowel). For the comparison between the Greek and the Germanic words see Hermann (1918: 222) and Polomé (1986: 192).

⁴⁹An important case not discussed by Southern is the Indo-European word for ‘sun’ $*seh_2uŕ$, $*sh_2uens$. In my opinion, the most economical way to account for the notorious disyllabicity of OAv. $x^wəng$, (Y)Av. *hū* < $*huuánh$ would be to derive these forms from a Lindeman variant $*suuen-$ after a regular loss of laryngeal in a proto-form $*sh_2uen-$ (this solution eliminates the need to assume an otherwise poorly supported development of Indo-Iranian $*ə$ (from $*h_{1/2/3} / C_C$) into $*-u-$ and not $*-i-$ in the vicinity of $*u$).

and another consonant still in place; Isebaert 1982-83, however, argues against this reconstruction, by showing that this form means 'upper arm' (and not 'string of a bow') and claiming that *išhunauuar* is a secondary nonce formation back-formed to the *au*-stem Gen.Sg. *išhunauuas*.⁵⁰ Gk. *νευρά*, Arm. *neard*, Toch. B *šñor*, *šñaura* thus cannot be used as a piece of evidence for an *h*-loss between *s and consonant. As to Hitt. *šuuaiš* 'bird'⁵¹ (KBo 26.34 rev. i 15'), a likely Anatolian cognate of Lat. *avis*, Gk. *αἰετός*, Arm. *haw* (**h₂uei-*), it seems best to regard it as an outcome of **suois* (not a Lindeman variant, since otherwise a †*šumaiš* would have been expected) with a laryngeal loss due to Saussure's Law (**sh₂uois* > **suois*)⁵¹; under these circumstances the word cannot be used as evidence for the sound change discussed.

5.3 Summing up, there is conclusive (if meager) evidence for a laryngeal loss between *s and a consonant, particularly in the position between an initial *s- and a *-u-, and a similar loss can be assumed in the preform **sh_{2/3}u-er-tó*⁵¹ to give Gmc. **suerða-*.

6. The prehistory of **sēh_{2/3}u-*

Now it is time to attempt a more principled account of the derivational basis **sēh_{2/3}u-* posited above. As we have seen, it is possible to gloss **sēh_{2/3}u-* as 'sharp(ness)', hence 'sour(ness)'⁵², posit a root **seh_ɣ* or **seh_ɣ* and stop at this point. Nevertheless, one question remains: is there a relationship between this *u*-stem and the PIE word for 'sun'? I would like briefly to offer, in this last part, a few speculative suggestions on this subject.

The PIE word for 'sun' is currently reconstructed as a proterokinetic stem **séh₂u_ḡ*, Gen. Sg. **sh₂uéns*, n. with two holokinetic animate derivatives **séh₂uōl* and **séh₂uōn*.⁵³ Can we make any more detailed guess about just how a *u*-stem **sēh₂u-* might be related to the heteroclitic stem **séh₂u_ḡ/-n-*? Such an analysis presupposes rather vague semantics of the sort 'to be hot, to burn' for the base root and the details of the semantic

⁵⁰Isebaert suggests an etymological relationship with Skt. *sānu-* 'back' (see also Rieken 1999: 360-361), but the origin of the medial /u/ in *išhunau-* remains unclear (*išhunau-* can be mechanically reconstructed as **sh_{2/3}un-ou-*).

⁵¹See Melchert 1994: 49-51; on *šuuaiš* cf. Rößle (2004) who is skeptical as to its Indo-European origin.

⁵²See above on the semantic development of CLuv. *šū(h)ua-* and especially Fn. 36 for indirect evidence for a locative **sh_{2/3}u-er*.

⁵³See Nikolaev *forthcoming*.

evolution remain a matter of speculation (1. ‘hot’ > ‘hot on the tongue’, hence ‘sour, acid’⁵⁴, and independently 2. ‘hot’ > ‘sharp’).

Nevertheless, a nice parallel is furnished by the descendants of the PIE root **g^{wh}er-* (English *warm*, Greek *θερμός*): while the primary meaning of this root is ‘to be hot, to burn’⁵⁵ and some of the cognates — quite expectedly — refer to the sun (OIr. *grían*, Gen.Sg. *gréine* ‘sun’⁵⁶, OInd. *ghraṁsáh* ‘heat of the sun’⁵⁷), Old Irish adjective *goirt* has a wide range of meanings including ‘bitter, sour, salty’ (cf. the compound *goirtbíad* ‘salt food’), but also ‘sharp’!⁵⁹ Consider the following examples: *tene derg duaibsech lemnech letarthach langoirt* ‘red, dreadful, agile, wounding, fully piercing fire’ (IT i 191.13), *saigti gera goirti* ‘keen, sharp arrows’ (Cog. 158.17) or *is iat nemnecha faeburgoirti* ‘deadly sharp blades’ (LL 189b17). Lastly, OCS *gorikŭ* ‘bitter’ comes from the same root. Thus among the descendants of the same root we find both semantic developments that we need: ‘hot’ > ‘sharp’ (OIr. *goirt*) and ‘hot’ > ‘bitter’ (OCS *gorikŭ*).⁶⁰

⁵⁴For the semantic change ‘hot’ > ‘sour’ or ‘bitter’ compare Skt. *śuktá-*, Dard. *śut* and Khot. *suttā* ‘sour’ that continue Indo-Iranian **ćuk-ta-* from the root **ćauk-* ‘to burn’ (Skt. *śoc-*). Another parallel to this semantic development can be found in Bulgarian *kisel*, Polish *kisty* ‘sour’ from the root of OInd. *kváthati* ‘boils’, Latv. *kūsāt* ‘to boil’ (Mallory–Adams 1997: 199 gloss PIE **k_uat(h)₂-* as ‘ferment’).

⁵⁵OIr. *guirid* ‘warms, burns’, *fo-geir* ‘heats’, OCS *goritŭ* ‘burns’.

⁵⁶Even if *grían* < **ghreínā* does not belong to the root **g^{wh}er-* (see Meid 1970: 96 for different options), one may still cite OIr. *grís* ‘heat, fire, embers’ (< **g^{wh}rēnsā*) which is used of the sun’s heat, e.g. *7-o-gríis imurcrach na-gréine* ‘and from the excessive heat of the sun’ (see Mac Mathúna 1990: 286).

⁵⁷E.g. RV 5.34.3 *yó asmai ghraṁsá utá vā yá údhani sómaṁ sunóti* ‘wer ihm bei Sonnenglut oder wer bei Nachtkühle Soma presst’ (trans. Geldner).

⁵⁸Another parallel to the semantic development ‘hot’ or ‘burn’ > ‘sun’ (pointed out to me by the anonymous reviewer) is Toch. B *kaum* ‘sun’ which likely goes back to the root **keh₂u-* of Gk. *καίω*, aor. *ἔκρηα* ‘burn’ (Adams 1999: 211).

⁵⁹Rieken 1999: 451 cites OIr. *goirt* in the meaning ‘bitter, sour’ in order to support the development ‘hot’ > ‘acid’, but she leaves the meaning ‘sharp’ out of the picture.

⁶⁰According to Gerasimov (2005), a trace of an allomorph of the word for ‘sun’ that does not contain either of the heteroclitic formants can be found in Welsh *huan* ‘sun, sunlight’. This word may go back either to **souono-* (Vendryes 1974: 202) or to **suono-* (Schrijver 1995: 334); under the latter analysis the proto-form may be revised as **suh₂-ono-*, where **suh₂-* is a zero-grade allomorph of a *u*-stem **seh₂u-*. However, this analysis is extremely uncertain. As far as I can see, an alternative would be to assume that **suono-* is

More importantly, an analysis that brings together **sēh₂u-* 'sharpness' and **sēh₂u_{l̥}/-n-* 'sun' seems to be possible from the formal point of view; again, the theory of delocative derivation does the trick.

There is evidence in favor of a derivational process, by which stems with heteroclitite stem alternation could be derived from (or built to) locative case forms in exactly the same way as it was shown above for the simple *-n-* and *-r-* stems. To my knowledge, this evidence has not figured in the literature. For illustration purposes I will briefly discuss one interesting case. A starting point for Lat. *femur*, *feminis/femoris* 'thigh' will be a *u*-stem **d^ho/emu-* 'thickness', an internal derivative of which can be reconstructed as **d^hému-*, **d^hméu-s* on the evidence of the Greek adjective *θαμύς* 'thick' (Hom. Nom. Pl. *θαμέες*).⁶¹ The locative of this *u*-stem had the shape **d^hμηέν* 'in thickness' and when reinterpreted as a locative of an **-r/-n-* stem it gave rise to proterokinetic **d^hemur/-n-* 'thick muscle, thigh', whence Lat. *femur*.⁶² For a semantic parallel compare another designation of a body part, namely Greek (Aeolic⁶³) *ἄμφην* 'neck' (Theocr. 30, 28), *ἀρχήν*, *-ένος* in other Greek dialects⁶⁴, which is cognate with Arm. *awjik* 'περιστόμιον,

a thematized version of an animate amphikinetic **s(h₂)uōn* 'having sunlight' (Lindeman variant **suōn* after the loss of the laryngeal), an internal derivative of **sēh₂u_{l̥}*, Gen. Sg. **sh₂uéns* (compare Latin *sōl* from **sh₂uōl* > **suōl*).

⁶¹When the idea of a comparison between Gk. *θαμύς** and Lat. *femur* first occurred to me I was surprised not to find it in any of the handbooks; however, Alan Nussbaum mentioned this connection to me once in a private conversation.

⁶²Another possibility would be to regard **d^hemur/-n-* as a Caland substitute for a **-s-* stem **θάμος*, but there is no evidence for the latter; moreover, the complex suffix **-ur/-n-* makes this assumption even less plausible.

Lat. *femen* Paul. Fest. 92 could in theory be a neuter *n*-stem back-formed to the locative **d^hμηέν*, but this form is unreliable.

⁶³This is one of Theocritus' idylls written in Aeolic meters and in an imitation of Aeolic dialect (note the place of the accent in *ἄμφην*); the "Aeolic" form *ἀφέννα* (Jo. Gramm. *Comp.* III.16) is a grammarian's fiction.

⁶⁴The Armenian form goes back to a proto-form **an^wg^hu-iiā* which (just as Greek *ἀρχήν*) shows a curious anticipation of the labial feature before a labiovelar (another instance of the same phenomenon is found in Toch. B *auk* m., Pl. Obl. *aukām* 'kind of snake' < **an^wg^{wh}i-* < **h₂eng^{wh}i-* and its Armenian cognate *awj* 'id.'). No mention of this sound change is in the handbooks and an investigation of these and other cases (such as **-Vns* > *-Vus* in Acc. Pl. ending in Cypr. *ki-yo-na-u-se*) is a desideratum.

collar' (Plurale tantum) and further with PIE adjective 'narrow' (Ved. *aṃhū-* (*bhēdi-*), Go. *aggwu-*).^{65 66}

Similar derivational histories can be suggested for other cases which cannot be discussed here in sufficient detail.⁶⁷ Instances of *-r /-n- as an exocentric derivational formant in Indo-European are exceedingly rare⁶⁸; I would like to propose, rather, that at some stage of the protolanguage *-r/-n- and

⁶⁵See Nikolaev 2005: 47.

⁶⁶Indo-Iranian **d^hánuṣ*, **d^hanuáns* 'bow' may well go back to the same paradigm **d^hemuṣ/-n-*; prerequisites are 1) a dissimilation of labials (**d^hánuṣ* < **d^hámuṣ*) and 2) a semantic change of 'thigh' > 'something bent' (*quasi* 'tournure') > 'bow' (a connection of this Indo-Iranian word with Lat. *femur* was put forth by D. Steinbauer *apud* Mayrhofer 1992-1996, Bd. I: 774; a different treatment in Janda 1998).

⁶⁷For instance, a comparable prehistory may be envisaged for the Indo-European word for 'well, fountain' which is reconstructible as **b^hrēu-ḡ/-n-* or **b^hreh₁u-ḡ/-n-* on the basis of Gk. *φρέαρ*, Nom. Pl. *φρήατα* (Φ 197, *mss.* *φρέιατα*), Arm. *abbiwr* and Go. *brunna*, m. No further analysis of these words is presented in the literature, although a highly compelling comparandum was noticed long ago, namely the "root" **b^herw-* 'to boil, to flutter', attested in Lat. *fervō*, *fervere* 'to be boiling hot, to boil, ferment, glow' (which is used of water, e.g.: *feruit aqua*, Lucil. ap. Quint. 1, 6, 8; *omne! excitat turbo ingenti sonitu mare, fervere cogens*, Lucr. 6, 442) and *dēfrūtum*, -i, n. 'what must be boiled down', as well as in Welsh *berw*. The semantic attractions of this comparison are obvious, but from the formal point of view it is all but easy to reconcile the root shapes **b^herh₁u-* and **b^hreh₁u-* and account for the *u*-extension. And yet I believe that it is possible to pursue this connection within the framework of the delocal analysis. There is evidence for a nominal stem in **u-* with acrostic apophony in the root which has to my knowledge hitherto passed unnoticed: in Hesychius one finds a gloss *φόρυς· δακτύλιος ὁ κατὰ τὴν ἔδραν* (unless the gloss is Pamphylian, this word is a *-u*-stem with an added *-s*) and the same *o*-grade is found in denominative verbs *φορύνω*, *φορύσσω* 'to spoil, defile'. The form and the meaning, especially that of the substantive, suggest or at least do not contradict a reconstruction of a verbal abstract **b^ho/erh₁u-* 'flowing, gushing' from the root **b^herh₁-* (which may have formed a *u*-present). Assuming that this stem had a locative **b^hreh₁u-er/-en* with *Schwebeablaut* as discussed above one could stipulate that an **-r /-n-* stem **b^hreh₁u-ḡ*, **b^hrh₁u-en-s* was built to it. Thus it becomes possible to tie up the loose ends and to subsume Italo-Celtic verbs meaning 'to boil' (*fervō*, *berw-*) and the PIE word for 'well, fountain' under a common denominator **b^herh₁u-*. (Note that Italic and Celtic forms are compatible with this reconstruction: (1) *fervere* may go back to **b^herh₁u-* > **ferau-* with an early syncope of *Ǟ / L₁u* after a light preceding syllable (as in *salvus*, *corvus*); (2) Lat. *dēfrutum* is found at Pl. *Pseud.* 741 with a long *-ū-* (*frū-* < **b^hruh₁*); (3) the short vowel in OIr. *bruth* 'Hitze, Wut' (as well as in ON *broð*, n. 'Brühe') can be explained as a *super-zero-grade* generated by a proportional analogy to other proterokinetic **-tu-* stems (for OIr. cf. *guth* 'voice' from **ḡueh₂*)).

⁶⁸See Nussbaum 1998b: 535.

*-l/-n- stems could also be produced as back-formations, based on the locatives in *-er, -el, and *-en. That there is some relationship between the heteroclitics and the locative formants has been surmised long ago, but now it is possible to give a more principled account of what is going on.⁶⁹

It is thus possible that a *u*-stem **sēh₂u-* could in fact have served as a derivational basis for **sēh₂u₃*, Gen. Sg. **sh₂u₃éns* 'sun'.

7. Conclusion

In this paper I have argued that Gmc. **s₁uerða-*ⁿ 'sword' is cognate with CLuv. *šī(h)ual* 'dagger' via a derivational chain which involves delocative derivation:

$$\begin{aligned} & *sēh_2u- \text{ 'sharp(ness)', Loc. } *sh_2u-er \\ & \Rightarrow *s(h_2)u-er-t \\ & \Rightarrow *s(h_2)u-er-tó- \text{ (adj.)} \\ & \Rightarrow *s(h_2)u-er-tó-^n \text{ (subst.)} > *s₁uerða-, n. \end{aligned}$$

Another locative from the same stem, **s(e)h₂u-el* gives rise to a back-formed holokinetic paradigm with Nom.-Acc. **sēh₂u-ōl* which is the source of CLuv. *šī(h)ual*.

The phonological side of this analysis becomes possible under the assumption that a laryngeal between an initial **s*- and a following **u* was lost already in Proto-Indo-European. A study of the mechanism of delocative derivation undertaken in this paper has shown that *-r/-n- and *-l/-n- stems with an exocentric meaning could have been back formed to locative case forms in exactly the same way *-r- and *-n- stems could.

Since the delocative theory is to a large extent a new terrain, these suggestions will inevitably seem risky; they are open to revisions and doubts. These results have to be evaluated against the accumulated formal and semasiological benefits they bring. It is important to emphasize that in

⁶⁹In this connection one wonders whether PIE **uo/ed-γ/-n-* 'water', the flagship example of a heteroclitic noun, is in any sort of derivational relationship with the root noun **uo/ed-* 'water' (Hitt. *uid-*, Gk. *ῥδελ* Hes. *Op.* 61 (with the old dative ending *-ελ*), indirectly supported by OIcel. *vátr* 'wet' < **uédō-* that had both **ud-en* and **ud-er* as its locatives (Ved. *udán* RV I, 104, 3, *udán-*; **ud-ró-* > Ved. *udrá-*, Gk. *ῥδρος*, OHG *ottar*). Space limitations prevent pursuing this idea here any further.

addition to new etymologies and morphological analyses brought by the tool of delocative derivation a part of the gain is something which is not always considered important by the Indo-Europeanists, namely, a possibility to unveil the “inner form” of PIE words, their structure and relations in the lexicon.

Abbreviations

- Cog.* Todd, James Henthorn (ed.). *Cogadh Gaedhel re Gallaibh: The War of the Gaedhil with the Gaill, or the invasions of Ireland by the Danes and other Norsemen*. London: Longmans, Green, Reader, and Dyer, 1867.
- IT* Stokes, Whitley, and Ernst Windisch. *Irische Texte : mit Übersetzungen und Wörterbuch*. Bd. 1-4. Leipzig: Hirzel, 1880-1909.
- LL* Atkinson, Robert (ed.). *The Book of Leinster, sometime called the Book of Glendalough*. Dublin: Royal Irish Academy, 1880.

References

- Adams, Douglas Q.
1999 *A Dictionary of Tocharian B*. Amsterdam; Atlanta: Rodopi. (Leiden Studies in Indo-European 10).
- Balles, Irene
1997 Reduktionserscheinungen in langen Wortformen als Ursprung morphologischer Doppelformen im Urindogermanischen: die Suffixformen **-iō-* und **-iio-*. *Die Sprache* 39/2: 147-167.
- Beckman, Gary M.
1983 *Hittite Birth Rituals*. Wiesbaden: Harrasowitz.
- Ćop, Bojan
1956 Notes d'étymologie et de grammaire Hittites 3. *Linguistica* 2: 19-40.
- Eichner, Heiner
1980 Phonetik und Lautgesetze des Hethitischen — Wege zur Entschlüsselung. In: Mayrhofer, Manfred, Martin Peters and Oskar Pfeiffer (eds.) *Lautgeschichte und Etymologie. Akten der VI. Fachtagung der Indogermanischen Gesellschaft*, 120-165. Wiesbaden: Ludwig Reichert Verlag.
- Falk, Hjalmar and Alf Torp
1979 *Wortschatz der germanischen Spracheinheit*. 5., unveränderte Aufl. Göttingen: Vandenhoeck und Ruprecht.

The Journal of Indo-European Studies

Forssman, Bernhard

- 1997 Eine besondere Gebrauchsweise der indogermanischen Privativa. In: Crespo, Emilio, and José Luis García Ramón (eds.) *Berthold Delbrück y la sintaxis indoeuropea hoy. Actas del Coloquio de la Indogermanische Gesellschaft Madrid, 21-24 de septiembre de 1994*, 85-111. Wiesbaden: Ludwig Reichert Verlag and Madrid: Ediciones de la UAM.

García Ramón, Jose Luis

- 1992 Griechisch *ιερός* und seine Varianten, vedisch *īśirá-*. In: Beekes, Robert, Alexander Lubotsky and Jos Weitenberg (eds.) *Rekonstruktion und Relative Chronologie. Akten der VIII. Fachtagung der Indogermanischen Gesellschaft*, 183-205. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.

Gerasimov, Ivan A.

- 2005 K voprosu o refleksakh i-e. 'solnca'. In: Kazansky, Nikolai, Evgenia R. Krychkova, Alexander S. Nikolaev and Andrei V. Shatskov (eds.) *Hyđá mánasā: Studies Presented to Professor Leonard G. Herzenberg on the Occasion of his 70-Birthday*, 176-184. St.-Petersburg: Nauka.

Hermann, Eduard

- 1918 Sachliches und sprachliches zur indogermanischen Großfamilie. In: *Nachrichten der Gesellschaft der Wissenschaften zu Göttingen, philol.-hist. Klasse*, 204-232. Göttingen.

Hilmarsson, Jörundur

- 1989 *The Dual Forms of Nouns and Pronouns in Tocharian*. Reykjavík: [s. n.].

Hirt, Hermann

- 1899 Zur lösung der gutturalfrage im Indogermanischen. *Beiträge zur kunde der indogermanischen sprachen* 24: 218-290.

Hoenigswald, Henry M.

- 1952 Laryngeals and s-movable. *Language* 28: 182-185.
1992 On Indo-European laryngeals after word-initial s-. In: Brogyani, Bela and Reiner Lipp (eds.) *Comparative-historical linguistics: Indo-European and Finno-Ugric*, 119-122. Amsterdam; Philadelphia: J. Benjamins.

Holthausen, Ferdinand

- 1934 *Altenglisches etymologisches Wörterbuch*. Heidelberg: Carl Winter.

Huld, Martin E.

- 1993 Early Indo-European weapons terminology. *Word* 44/2: 223-234.

Isebaert, Lambert

- 1982-83 A propos de Hittite *išhunau* 'arrière-bras'. *Zeitschrift für vergleichende Sprachforschung (KZ)* 96: 59-60.

- Janda, Michael
1998 Die hohle und die geschlossene Hand im Urindogermanischen. *Die Sprache* 40/1: 1-25.
- Klein, Ernest
1971 *Klein's Comprehensive Etymological Dictionary of the English Language*. Amsterdam; New York: Elsevier.
- Kluge, Friedrich
2002 *Etymologisches Wörterbuch der deutschen Sprache*. 24., durchgesehene und erw. Aufl. bearbeitet von Elmar Seebold. Berlin and New York: W. de Gruyter.
- Krogmann, Willy
1932 Germ. **swerða*- "Schwert". *Zeitschrift für vergleichende Sprachforschung (KZ)* 59: 204.
- Levickij, Viktor V.
1998 Zur deutschen Etymologie: 1. Indoeuropäische Wurzel *seH- 'Sehne' und ihre Reflexe in den germanischen Sprachen. 2. Ablautentgleisungen im Germanischen. *Indogermanische Forschungen* 103: 210-226.
- Lidén, Evald
1891 Etymologien. *Paul und Braunes Beiträge zur Geschichte der deutschen Sprache und Literatur* 15: 507-522.
- Livingston, Ivy
2004 *A linguistic commentary on Livius Andronicus*. Routledge.
- Mac Mathúna, Liam
1990 On the semantics of Irish words derived from IE **g^hher*- 'hot'. *Celtica* 21: 273-290.
- Mallory, James Patrick
1991 The Proto-Indo-European "sword"? *Orpheus* 1: 99-101.
- Mallory, James Patrick and Douglas Q. Adams
1997 *Encyclopedia of Indo-European Culture*. London and Chicago: Fitzroy Dearborn.
- Matasović, Ranko
2007 Rec. ad. op.: Kazansky, Nikolai N., Evgenia R. Krychkova, Alexander S. Nikolaev and Andrei V. Shatskov (eds.) *Hydá mánasā. Studies presented to professor Leonard G. Herzenberg on the occasion of his 70th birthday*. St.-Petersburg: Nauka, 2005. *Kratylos* 52: 31-38.
- Mayrhofer, Manfred
1986 *Indogermanische Grammatik*. Bd. I/2: *Lautlehre: Segmentale Phonologie des Indogermanischen*. Heidelberg: C. Winter.

1992–96 *Etymologisches Wörterbuch des Altindoarischen. Erster Teil: Ältere Sprache*. 2 Bde. Heidelberg: C. Winter.

Meid, Wolfgang

1970 *Die Romanze von Froech und Findabair*. Táin Bó Froíoch. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.

Meister, Karl

1921 *Die homerische Kunstsprache*. Leipzig: B. G. Teubner.

Melchert, H. Craig

1993a *Cuneiform Luvian lexicon*. Chapel Hill (self-published).

1993b A New Anatolian "Law of Finals". *Journal of Ancient Civilizations* 8: 105-113.

1994 *Anatolian historical phonology*. Amsterdam; Atlanta: Rodopi.

2007 PIE **h₂esp-* 'to cut'. In: Nussbaum, Alan J. (ed.) *Verba Docenti. Studies in Historical and Indo-European Linguistics Presented to Jay H. Jasanoff by Students, Colleagues, and Friends*, 253-258. Ann Arbor and New York.

Minon, Sophie

1999 *ἀορ*. In: Blanc, Alain, Charles de Lamberterie, Jean-Louis Perpillou (eds.) *Supplément au: P. Chantraine. Dictionnaire étymologique de la langue grecque. Histoire de mots*, 2^e ed., 1371-1447. Paris: Klincksieck.

Mladenov, Stefan

1941 *Etimologičeski i pravopisen rečnik na bŭlgarskija knižhoven ezik*. Sofija: G. Danov.

Nikitina, F. A.

1962 Protetičeskie glasnye drevnegrečeskogo jazyka kak refleksy indoevropskikh ščelevykh. *Voprosy jazykoznanija* 1962/1: 1-83.

Nikolaev, Alexander S.

2005 K dejstvu zakona Riksa v drevnegrečeskom jazyke. In: Kazansky, Nikolai N., Evgenia R. Krychkova, Alexander S. Nikolaev and Andrei V. Shatskov (eds.) *Hṛdā mānasā. Studies presented to professor Leonard G. Herzenberg on the occasion of his 70th birthday*, 38-72. St.-Petersburg: Nauka.

2006 Indo-European **dem(h₂)-* 'to build: set or aniṭ? Paper presented at the 18th Annual Indo-European Conference, University of California, Los-Angeles, November 2006.

2007 The name of Achilles. *Cambridge Classical Journal. Proceedings of the Cambridge Philological Society*. Supplementary volume 32 (George, Coulter, Matthew McCullagh, Benedicte Nielsen, Antonia Ruppel and Olga Tribulato (eds.) *Greek and Latin from an Indo-European Perspective*): 162-173.

2008 Gedanken über ein neues Buch (Review of: Widmer 2004). *Acta Linguistica Petropolitana* 4: 541-570.

(forthcoming) Homeric ἀάπος : etymology and poetics. *Die Sprache*.

- Nishimura, Kanehiro
 2004 Development of the prevocalic **m* in Latin. *Glotta* 80: 231-250.
- Nussbaum, Alan J.
 1986 *Head and horn in Indo-European*. Berlin and New York: W. de Gruyter.
 1997 A Note on Hesychian *τέρυ* and *τέρυας*. In: Adams, Douglas Q. (ed.) *Festschrift for Eric P. Hamp*, 110-119. Washington D.C.: Institute for the Study of Man.
 1998a More on “decasuative” nominal stems in Indo-European. Paper presented at the 17-th East Coast Indo-European Conference, University of North Carolina, Chapel Hill, 1998.
 1998b Severe Problems. In: Jasanoff, Jay, H. Craig Melchert and Lisi Oliver (eds.) *Mir Curad, Studies in Honor of Calvert Watkins*, 521-538. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.
 2004 A -*t*-Party: Various IE nominal stems in **(o/e)t*. Paper presented at the 23-th East Coast Indo-European Conference, University of California, Los-Angeles, November 2004.
- Oettinger, Norbert
 1976 Indogermanisch **s(h₂)neur/n* ‘Sehne’ und **(s)men* ‘gering sein’. *Münchener Studien zur Sprachwissenschaft* 35: 93-105.
 2000 Heth. *udnē*, armen. *getin* und lyk. *wedre/i*. In: Hintze, Almut and Eva Tichy (eds.) *Anusantatyai: Festschrift für Johanna Narten zum 70. Geburtstag*, 181-187. Dettelbach: Röll.
- Orel, Vladimir E.
 2000 *A concise historical grammar of the Albanian language. Reconstruction of Proto-Albanian*. Leiden, Boston and Köln: Brill.
- Pedersen, Holger
 1900 Die Gutturale im Albanesischen. *Zeitschrift für vergleichende Sprachforschung (KZ)* 36: 277-340.
- Peters, Martin
 1980 *Untersuchungen zur Vertretung der indogermanischen Laryngale im Griechischen*. Wien: Verlag der Österreichischen Akademie der Wissenschaften.
 1997 [2002] Indogermanische Chronik 35. Teil III. *Die Sprache* 39/3: 94-129.
 2007 *οὐκ ἀπίθησε* und *πιθήσας*. In: Nussbaum, Alan J. (ed.) *Verba Docenti. Studies in Historical and Indo-European Linguistics Presented to Jay H. Jasanoff by Students, Colleagues, and Friends*, 263-270. Ann Arbor and New York: Beech Stave Press.
- Pinault, Georges-Jean
 2008 *Chrestomathie tokharienne. Textes et grammaire*. Leuven; Paris: Peeters.

- Pipping, Hugo
1925 *Eddastudier I*. Helsinki: Svenska litteratursällskapet i Finland. (*Studier i nordisk filologi* 16/2).
- Polomé, Edgar
1986 Some Comments on Germano-Hellenic Lexical Correspondences. In: *Aspects of Language: Studies in Honour of Mario Alinei. Papers presented to Mario Alinei by his friends and colleagues of the Atlas Linguarum Europae on the occasion of his 60th birthday*, Vol. 1, 171-198. Amsterdam: Rodopi.
- Puhvel, Jaan
1981 "Spider" and "mole" in Hittite. In: Arbeitman, Yoël L. and Alan R. Bomhard (eds.) *Bono homini donum. Essays in historical linguistics in memory of J. Alexander Kerns*, Pt. 1, 237-242. Amsterdam: J. Benjamins.
- Rau, Jeremy
2007 The Derivational History of Proto-Germanic **wepru-* 'lamb'. In: Nussbaum, Alan J. (ed.) *Verba Docenti. Studies in Historical and Indo-European Linguistics Presented to Jay H. Jasanoff by Students, Colleagues, and Friends*, 281-292. Ann Arbor and New York: Beech Stave Press.
- Rieken, Elisabeth
1999 *Untersuchungen zur nominalen Stammbildung des Hethitischen*. Wiesbaden: Harrasowitz.
- Rix, Helmut, Martin Kümmel, Thomas Zehnder, Reiner Lipp and Brigitta Schirmer
2001 *Lexikon der indogermanischen Verben. Die Wurzeln und ihre Primärstammbildungen*. 2., erweiterte und verbesserte Auflage. Wiesbaden: L. Reichert (= *LIV*²).
- Röbke, Sylvester
2004 *šu-ua-iš* (ein bestimmter Vogelname)[?], 'Vogel'[?] < idg. *(s)*h₂uói-*? oder Vom Wunsch als Vater des Gedankens. In: Groddek, Detlev and Sylvester Röbke (eds.) *Šarnikzel: Hethitologische Studien zum Gedenken an Emil Orgetorix Forrer (19.02.1894-10.01.1986)*, 545-556. Dresden: Verlag der technischen Universität Dresden.
- Schindler, Jochem
1976 Armenisch *erkn*, Griechisch *ὄρνις*, Irisch *idu*. *Zeitschrift für vergleichende Sprachforschung (KZ)* 89: 53-65.
- Schrader, Otto
1917-29 *Reallexikon der indogermanischen Altertumskunde; Grundzüge einer Kultur- und Völkergeschichte Alteuropas*. 2. verm. und umgearb. Aufl. herausgegeben von Alfons Nehring. Berlin and Leipzig: W. de Gruyter.

- Smoczyński, Wojciech
2006 *Laringalų teorija ir lietuvių kalba*. Vilnius: Lietuvių kalbos institutas.
- Southern, Mark
1999 *Sub-Grammatical Survival: Indo-European s-mobile and its regeneration in Germanic*. Washington D.C: Institute for the Study of Man.
- Soysal, Oguz
1989 Der Apfel möge die Zähne nehmen! *Orientalia* 58 (N.S.): 171-192.
- Sperber, Hans
1915 Beiträge zur germanischen Wortkunde. *Wörter und Sachen* 6: 14-57.
- Starke, Frank
1981 (1982) Die keilschrift-luwischen Wörter für "Insel" und "Lampe". *Zeitschrift für vergleichende Sprachforschung (KZ)* 95:141-157.
1987 Die Vertretung von uridg. **d^hugh₂ter*- "Tochter" in den luwischen Sprachen und ihre Stammbildung. *Zeitschrift für vergleichende Sprachforschung (KZ)* 100: 243-269.
- Sturtevant, Edgar H.
1936 Some Hittite Etymologies. *Language* 12/3: 181-187.
- Trubačev, Oleg Nikolaevič
1966 *Remeslennaja terminologija v slavjanskikh jazykakh (Ėtimologija i opyt gruppovoj rekonstrukcii)*. Moscow: Nauka.
- Vennemann gen. Nierfeld, Theo
1984 Bemerkung zum frühgermanischen Wortschatz. In: Eroms, Hans-Werner, Bernhard Gajek and Herbert Kolb (eds.) *Studia linguistica et philologica. Festschrift für Klaus Matzel*, 105-119. Heidelberg: Carl Winter Universitätsverlag.
- Vine, Brent
1993 *Studies in Archaic Latin Inscriptions*. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.
2005 Remarks on Rix's Law in Greek. *Journal of Indo-European Studies* 33: 247-290.
- Widmer, Paul
2004 *Das Korn des weiten Feldes. Interne Derivation, Derivationskette und Flexionsklassenhierarchie: Aspekte der nominalen Wortbildung im Urindogermanischen*. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.

Review Article

Early Rome and Indo-European Comparison: Dominique Briquel on Two Crises

Nick Allen
University of Oxford

Two recent books by Dominique Briquel examine from a Dumézilian viewpoint the ancient accounts of the birth of the Roman Republic and of the Gaulish siege. They present a number of trifunctional analyses, many of them new, and interpret both stories in the light of Dumézil's eschatological reading of the *Mahābhārata*. The present article explores the same material in the light of the theory that Indo-European ideology was fundamentally pentadic rather than triadic, and proposes some additional comparisons with the Sanskrit epic.

According to tradition, early Rome experienced two sieges. Following the expulsion of the Tarquins the nascent Republic was besieged by the Etruscan king Porsenna, who planned to restore the ousted dynasty (traditional date 508 BC); and much later, following a successful ten-year war against Veii, Rome was besieged again, by the Gauls under Brennus (*ca.* 390 BC). In the final volume of his *Mythe et épopée* (1973) Dumézil presented a substantial analysis of Camillus, the Roman leader who defeated both Veiians and Gauls, and he also wrote briefly about the events of 508 BC (30 pages on 'La geste de Publicola'). Building on Dumézil, Briquel has now published two substantial monographs on these crises. *Mythe et révolution* (2007, henceforth *MR*) in fact covers the birth of the Republic as a whole, and *La Prise de Rome par les Gaulois* (2008, henceforth *PR*) includes brief treatment of the Veiiian war. Although *PR* was not conceived until *MR* was finished, it relates closely enough to its predecessor for the two to be viewed as a single body of work.

Dominique Briquel, born 1946, is a well-established classicist (Sorbonne, EPHE), who has consistently championed Dumézil's approach to Indo-European comparison. A specialist in early Rome (including the Etruscans) and a prolific

researcher (he cites more than fifty of his own publications), he is excellently equipped to assemble and compare the numerous sources, both primary and secondary, that relate directly to these parts of the tradition. As a Dumézilian he looks at early Roman material primarily with a view to finding in it the survival and adaptation of Rome's Indo-European cultural heritage of ideology and myth, while at the same time taking account of the limited information provided by archaeology.

At the start of *Mythe et épopée* (1968), Dumézil compared the great battle at the heart of the *Mahābhārata* with the final cosmic battle that, according to Norse and Iranian myth, will bring our current era to a close, and concluded that the Sanskrit poets had humanized and historicized what was originally an eschatological conflict followed by a rebirth. At the end of the trilogy, he extended the comparison to cover the Republic's first war and Publicola's success in dealing with Porsenna, and invited the reader to carry the comparison further. *MR* takes up this challenge, developing Dumézil's views, and occasionally criticizing them. In interpreting the Gaulish siege as yet another eschatological conflict, *PR* makes considerable use of *MR*, arguing for instance that accounts of the second siege were influenced by already existing accounts of the first.

In two senses Briquel's approach is relatively conservative. Much of the fascination in studying early Rome lies in the perennial problem of navigating between hypercriticism ('virtually nothing in the annalists' accounts really happened') and a literal-minded credulity ('somehow or other a basically oral culture preserved over several centuries a remarkably accurate account of what really happened'). While recognizing that scholars such as Jacques Poucet are more sceptical (*MR* 11 n20), Briquel often argues for the historicity of particular events or circumstances, relying either on archaeology or on judgments of intrinsic plausibility. Secondly, Briquel's criticisms of his guru are mainly limited to details in the Roman material, and avoid questioning the comparative framework. But one can be an enthusiastic admirer of Dumézil and would-be continuator of his approach, but still reject or doubt his theory of the minor sovereigns, his definition of the first function and his limitation of the classificatory ideology to three functions. References to revisionist literature based on these

doubts are relegated to very rare footnotes.¹

Nevertheless, these volumes represent a substantial advance for Indo-European cultural comparison. The various Roman historians, and the occasional poet, who describe the events in question, seldom give identical accounts, and simply to assemble and organize the material is to perform a useful service. As for the wider comparison, it proceeds along two lines. Firstly, as in his previous work, Briquel proposes a number of new trifunctional analyses, of which the majority seem convincing. More innovative is his use of the notion of eschatological battle. In practice this means the application to Roman struggles – Rome versus Tarquins/Porsenna, Rome versus Gauls – of the results of comparing three other battles: Pāṇḍavas versus Kauravas in the *Mahābhārata*, gods versus demons in Ragnarök, and Greeks versus Trojans. Despite possible objections, all the cases can reasonably be understood as Goodies versus Baddies.² The undertaking certainly needs to be attempted, and although I shall express some reservations, the basic inspiration of the two books, and the stimulus they offer, put them alongside such major contributions to Dumézil-style comparison as Grisward 1981, Vielle 1996 or Woodard 2006.

Porsenna's War

MR starts with the story of Porsenna's war, the second half of what may be called the *Birth of the Republic*. The siege proper is marked by three Roman exploits which, synthesizing and simplifying, one can summarize as follows:

After an initial defeat by the Etruscans, the Romans flee back to the city. While they are destroying the wooden bridge over the Tiber, the valiant Horatius Cocles holds the enemy at bay, then, when the bridge is broken, swims back to safety. Secondly, as the siege tightens, agents who have been sent south in search of grain are successful: one moonless night Larcus and Herminius bring back supplies from the Pomptine Plain. Thirdly, Mucius Scaevola, with the Senate's approval, infiltrates

¹The references could also have included O'Brien 1997 (his earlier and longer paper is used); the early work of Hildebeitel (esp. 1976, the chapter on 'Epic eschatology'); and Jamison (e.g. 1994, cf. *PR* 61).

²But I am uncertain whether the proto-narrative situated the battle in the future rather than the past.

Porsenna's camp intending to assassinate him, but in error kills his secretary. Summoned before the king, he issues a mendacious threat about a group of sworn would-be assassins and demonstrates his courage and determination by plunging his hand into a sacrificial fire. Porsenna is sufficiently impressed to open negotiations, and not long afterwards he brings the siege to an end.

Horatius' feat is clearly military (second-functional or F2); Larcus and Herminius are concerned with food for the masses (third-functional or F3, as their pairing and relatively humble status also suggest); Mucius' sacrifice of his right hand – the one used in oaths – represents F1.

Briquel's trifunctional interpretation is cogent, and would surely have been accepted long ago but for Dumézil's broader theories. Already in 1940 Dumézil compared Horatius and Mucius in Rome with Odin and Tyr in Norse tradition, being struck by the matching deformations or mutilations. The cognomen Cocles implies 'one-eyed', and Odin too sacrificed an eye. Scaevola means 'left-handed' and Tyr sacrificed his right hand in service to the gods when he lied to the monstrous wolf Fenrir. The interpretation of Mucius and Tyr as cognate first-functional figures is persuasive, but Briquel rightly casts doubt on the Odin-Cocles comparison.³ More precisely (*MR* 88f), what he does is push it back into a barely relevant prehistory.

This effective rejection is an improvement — compare Dumézil's complicated and awkward schema (1973: 288) with Briquel's neat one (*MR* 116 – the schema at *MR* 167 has a misprint in the allocation of functions). But the change has wider implications. While he recognized the difficulties, Dumézil persisted in retaining a comparison that fitted so well with his conception of the first function. In some contexts the trifunctional schema will only work acceptably if the first function is viewed as split into two aspects, which Dumézil named after the paired Vedic deities Varuṇa (the distant) and Mitra (the close).⁴ Instances of such double-aspect first-

³He is not alone: 'Although Dumézil frequently returned to this analysis, it is among his least satisfying' (Allen 1993: 124). Mutilations may merit restudy in the light of what happened at Dakṣa's sacrifice: Bhaga lost his eyes (F1), Savitṛ his arms or hands (F2), and Pūṣan his teeth (F3) – see Allen (2007: 199-201).

⁴Analytically it is best to ignore the order in which the names are

function pairings are Odin-Tyr, Jupiter-Dius Fidius, Romulus-Numa; and Cocles-Scaevola was conceived as another. But such pairs, drawn from contexts outside Indo-Iranian theology, do not share the particularly intimate union of the Vedic pair. Do Romulus the divinized founder and Numa the human priest-king really belong together under a single sovereign function with a unitary definition? Here is one of the points at which revisionist doubts can begin to infiltrate.

Expressed briefly, the revision I support is as follows. The definition of F1 is narrowed by removing sovereignty and transferring it to a new top-of-hierarchy category. In other words the inter-aspect divide within F1 is replaced by an inter-function divide. Thus Romulus, and similar 'transcendent' entities, will fall under what can be called F4+. Simultaneously, one recognizes a bottom-of-hierarchy category, F4-, to accommodate such devalued entities as slaves, demons, enemies, death and catastrophes, which stand outside the trifunctional model. In Rome's king-list this category is represented by the Etruscan triad, and in the Republic's first war it is represented by the ousted tyrants and their allies. In this way, far from being rejected, the triadic scheme is subsumed within a pentadic one.

One analytical advantage is that five-element structures conforming to the definitions of the functions are less likely to arise by chance than are three-element ones; they are more likely to express classificatory intentions of early narrators, as distinct from ingenious combinations made by analysts. Moreover, if successful, the resulting analyses will not only be neater but also embrace more narrative material. Thus in Briquel's schema (*MR* 116) the three Roman exploits linked with the traditional functions are bracketed by two other events that belong to Porsenna's war. Hostilities open with a disastrous battle at the foot of the Janiculum: the Roman army is put to flight, and both Publicola and the other consul suffer serious wounds (Plutarch). The final engagement, it is argued (*MR* 101-2), occurs when the consuls return to the field and win a considerable victory against Porsenna's pillagers. So the story of the war falls into five episodes, of which only three are accommodated by the trifunctional model. But the catastrophe at the start qualifies as F4-, while the final success,

compounded in Sanskrit and think of the former and higher-ranking deity first.

representing the outcome of the war *as a whole*, qualifies as F4+. Despite their remoteness on a linear hierarchy, the two aspects of the fourth function quite often share features (this being one reason for retaining a unitary 'outsider' function, rather than proposing an F5);⁵ and in this case, as Briquel acutely notes, the consuls, so prominently involved in the bracketing episodes, scarcely appear in the core ones.

The pentadic model suggests one further step in the analysis. If the provisioners episode preceded that of Horatius, the war would manifest the model in a regular ascending hierarchy from F4- to F4+. The analysis of Larcus and Herminius as third-functional provisioners rests mostly on Dionysius who, as Briquel argues, preserved an older, recognisably trifunctional tradition, whose elements were redistributed in the version narrated by Livy. But although Livy does not connect the two Roman names with those sent south to seek grain, he does mention the expedition, and he places it before the Horatius episode. Livy's *ordering* of episodes may represent the more conservative version. If so, in spite of Dionysius, the original sequence of the exploits was F3-2-1.⁶

The hostilities are followed by a peace agreement. Despite the annalists' claims of a Roman victory, Rome is obliged to give hostages. Among them is one Cloelia (father not recorded). This young woman is usually said to have attained celebrity by swimming back across the Tiber, leading a band of *virgines* through a hail of missiles. However, to avoid violating the agreement, the hostages have to return to Porsenna's camp and, just as they arrive, Tarquin fails in a violent attempt to abduct them. Porsenna is so impressed by Cloelia's courage that he begins to transfer his friendship from the Tarquins to the Romans. In the city itself, Cloelia's feat is rewarded and her memory preserved by an equestrian statue.

Briquel sees in Cloelia the confluence of two traditions. On the one hand, drawing on archaeology, he sees her as an adaptation to republican circumstances of the mounted

⁵Another example is the well recognised similarity between Romulus (F4+) and Servius, the 'Slave King' (F4), both of whom are regarded as Founders of Rome (*MR* 285 n101).

⁶Briquel cites Livy's notice (*MR* 98) but examines it in terms of historical plausibility. Although history is our ultimate concern, studies of early Rome should probably press narrative comparison as far as it will go *before* complicating the picture with more or less subjective judgments of historicity.

tutelary goddess of the later Roman kings (*MR* 135-7, 158). On the other, following Dumézil, he sees her as cognate with Draupadī, the common wife shared by the five Pāṇḍava brothers. The basic narrative rapprochement is between two *relationships*: Draupadī-Dhṛtarāṣṭra and Cloelia-Porsenna. Dhṛtarāṣṭra is the father of the Kauravas and usually supports the machinations of his eldest son, the arch-Baddy Duryodhana. But when Draupadī's husbands are reduced to slavery by the first dice game, the firmness she shows in her humiliating and pathetic situation induces the king to annul the game and (temporarily) free the Pāṇḍavas.⁷ Moreover, after the death of his sons in the Great Battle, once his initial anger and grief are assuaged, Dhṛtarāṣṭra becomes a friendly and respected associate of the victorious Pāṇḍavas. Similarly, Porsenna starts off as a supporter of the Tarquins (the ousted king and his family), and Cloelia represents a decisive turning point in his 'conversion'.

The Draupadī-Cloelia rapprochement can be supported in other ways. Draupadī is likened to a boat that carries the Pāṇḍavas across the ocean in which they are drowning (Dumézil 1973: 289; *MR* 140, 150-2; *Mbh* 1.64.3, 5.81.39 etc); Cloelia swims the river and ultimately effects the release of the hostages. After the Great War Draupadī the queen has to mime copulation with a horse in the *āsvamedha* ritual; after Porsenna's war Cloelia – iconographically at least – has close bodily contact with the horse she rides.

The Dhṛtarāṣṭra-Porsenna rapprochement can be strengthened by going beyond *MR* and comparing two pro-peace interventions, each made by a royal prince. In the dicing hall Vikarṇa, alone among the hundred sons of Dhṛtarāṣṭra, speaks up in favour of Draupadī. After the Mucius episode, Arruns son of Porsenna advises making peace with Rome (*MR* 126). In both traditions the speeches cause a stir – a loud outcry (*Mbh* 2.61.25), general wonderment (DH 5.30.2). Despite their pacific leanings both princes die fighting for their fathers, Vikarṇa in the Great War, Arruns at Aricia (continuing the campaign that brought Porsenna south to Rome).

The comparisons made so far can be thought of as linking two complexes of relationships or two sets of features (places,

⁷Menstruating and semi-naked, she suffers an attempt (foiled miraculously by deities) to disrobe her completely. Some sources mention the nakedness of Cloelia and her friends as they swim the Tiber (*MR* 124).

events, attributes, attitudes...), but for mnemonic purposes the following format seems most helpful (we need not list the global rapprochements: Hāstinapura ~ Rome, Pāṇḍavas ~ Romans/Goodies, and Kauravas ~ anti-Romans/Baddies):

1. *Draupadī* ~ *Cloelia*, Heroic Goody Female.
2. *Dhṛtarāṣṭra* ~ *Porsenna*, Temporary Enemy.
3. *Duryodhana* ~ *Tarquin II*, Central Baddy.
4. *Vikarṇa* ~ *Arruns*, Pro-Peace Speechmaker.

Some of the comparisons proposed in *MR* are less persuasive. Being young, the hostages can be interpreted as representing the demographic future of Rome, and we know that their rescue at the end of Porsenna's war is ascribed to Cloelia (or sometimes to Publicola's daughter Valeria). At the very end of the Great War, the future of the Pāṇḍava line is threatened by a magical weapon that will kill all the descendants of the brothers, including babies yet to be born. The only grandson, Parikṣit, is accordingly still-born (around the time of the horse sacrifice), but Krishna miraculously resuscitates him and restores the line. Given the other Rome-India similarities, one hesitates to reject the comparison out of hand, but it is too abstract to attract total confidence (*MR* 148-50). Some of the rapprochements with the Ragnarök are problematic in the same way and might with advantage have been replaced by deeper comparison with the Sanskrit.

Before Porsenna

The annalists have plenty to say about the birth of the Republic before Porsenna's advance, but Dumézil's comments scarcely go beyond the rape of Lucretia and the plot to restore the Tarquins. The rape, carried out by Sextus Tarquinius, son of the last king, is presented as the last item (F3) in a trifunctional set of sins perpetrated by the dynasty. As for the plot, which involved Tarquin's agents and some Roman aristocrats, it is denounced to the Republic's leaders by the slave Vindicius, and sternly repressed. The Vindicius incident is important since it introduces the famous scene of a father, Brutus, presiding over the execution of his own sons for their involvement, and since it leads on to the resignation and exile

of Brutus' fellow consul, Tarquinius Collatinus, husband of Lucretia. In a single page (1973: 290, cf. also 265), Dumézil compares Vindicius with a particularly interesting figure from the *Mahābhārata*.

5. *Vidura ~ Vindicius*, Servile Informer. Early in the epic Vidura – disqualified from kingship because his mother was a slave (1.102.23) – informs the Pāṇḍavas about the Kaurava plot to have them burnt alive. In his single page Dumézil recalls the start of his trilogy where he analyzed (to pass from eldest to youngest) Dhṛtarāṣṭra, Pāṇḍu (father of the Pāṇḍavas) and Vidura; and he also presents a schema aligning three components of the Sanskrit story (Vidura; the five Pāṇḍavas and Draupadī; Dhṛtarāṣṭra) with three components from Rome (Vindicius; the Roman heroes and Cloelia; Porsenna). Briquel frequently calls on Dumézil's 1968 analysis, but he criticises the inclusion of the Vindicius story under *La geste de Publicola*. The latter is not yet a consul, and the incident belongs rather under *La geste de Brutus*, which constitutes the first half of *Birth of the Republic* (but the second half of *MR*). The analysis of Vidura is particularly complicated, but a couple of provisional comments are in order.

According to Dumézil, Pāṇḍu is an epic transposition of Varuṇa, while his elder half-brother transposes Vedic Bhaga and his younger one transposes Aryaman. Bhaga and Aryaman are viewed as 'Minor Sovereigns', that is, as first-functional deities more closely linked with Mitra than with Varuṇa. Dumézil is certainly right in viewing Yudhiṣṭhira, the eldest Pāṇḍava brother and an explicit incarnation of Dharma, as a first-functional figure akin to Mitra.⁸ However, the arguments linking Pāṇḍu with Varuṇa are weaker, and a reasonable case can be made for the interpretation Dhṛtarāṣṭra F3, Pāṇḍu F2, Vidura F1 (Allen in press a). Since the Minor Sovereigns theory was applied by Dumézil to Hödr (~ Bhaga) and Baldr (~ Aryaman) in the Ragnarök, doubts about the theory undermine some of Briquel's comparisons with the Norse.

Whatever one thinks about the Minor Sovereigns, the prominence of a slave at this important moment in Rome's

⁸The first -h- in Yudhiṣṭhira comes and goes in the pages of *MR* and *PR* (the root *yudh-* is the same as in Duryodhana). I noted some 20 other proof-reading lapses in *MR*, some 30 in *PR*. The decision to omit all diacritics may irritate some readers and can result in oddities: 'Sahnameh' hides the connection with *shah*.

pseudo-history calls for some explanation, and Dumézil's schema aligning Vidura and Vindicius is highly suggestive. One approach is via the rewards given by the state for the various services. Vindicius is rewarded by money, emancipation and citizenship (*MR* 174 n3): he is the first slave freed by a *vindicta* or 'manumission rod'. Horatius and Mucius receive plots of land. Cloelia is the first Roman woman to receive an equestrian statue, and Porsenna is sent an ivory throne and other objects such as had been the insignia of the kings. Only the humble provisioners are ignored in the distribution of rewards. A trifunctional analysis is suggested (*MR* 163): Mucius' reward (of which Horatius' is a copy) is land (F3); Cloelia's is a war-horse (F2); Porsenna's throne connotes sovereignty (F1 under the old definition, but not under the newer one). Vindicius is excluded from this analysis.

A pentadic analysis could focus not on the rewards but on their recipients. The most obvious hypothesis suggested by Dumézil's schema is Vindicius F4-; (Larcus and Herminius F3, no record of reward); Horatius F2; Mucius F1; Porsenna F4+. This omits the lone female, but raises an important theoretical point: in different contexts, a given element or set of elements can occur in different combinations. A case in point is the generation of the main protagonists in the *Mahābhārata* war, where the Pāṇḍavas occupy the four higher slots. In the context of the nuclear family the filler of the F4- slot is Karṇa, elder half-brother of Yudhiṣṭhira and a major Kaurava champion, but in the context of the whole conflict the filler is cousin Duryodhana, the Kaurava supremo (Allen 1999). Similarly, perhaps narrators had a choice between Vindicius and Cloelia, the slave or the woman, in the F4- slot.⁹

Furthermore, Publicola may belong among the recipients of rewards. After the battle of Arsia (in which his fellow consul dies), he receives the first triumph in the history of the Republic and (Plutarch) the first triumph in the history of Rome at which the successful general rides on a four-horse chariot (*MR* 199). Such a ritual approximates the *triumphator* to the gods and would justify interpreting him, in this context,

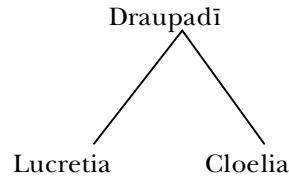
⁹I cannot here argue at length for a suggestion that may seem odd – Cloelia's courage is not devalued. Briefly, in contexts where the higher functions are held by males, the F4- position is sometimes held by a female, who is devalued simply because of her sex. Another question needing attention is how Vidura as F4- (link with slavery) relates to Vidura as F1 among his half-brothers.

as representing F4+. When narrators were thinking solely of Romans, Publicola could then replace Porsenna in the F4+ slot.

In any case, Dumézil's Draupadī-Cloelia rapprochement can only be part of the picture, and filling it out leads on to other rapprochements (MR 230-2).

6. *Draupadī ~ Lucretia*, Violated Female. Though she is not raped, Draupadī suffers comparable violence and humiliation: she is dragged by the hair into the public space of the dicing hall by Dhṛtarāṣṭra's second son Duḥśāsana, who then tries to strip her, and Duryodhana obscenely bares his left thigh to her. Briquel's comparison takes account of the early placement of the event (Draupadī suffers long before the Great War), the female's beauty and virtue, the blood (menstrual or from the suicidal stabbing), and the oaths of vengeance that result. One can add the Baddies' references to slavery: Draupadī is mocked as a slave and wife of slaves, while if Lucretia resists, Sextus threatens to kill both her and a slave, giving out that he found them making love.

When a single Sanskrit figure corresponds to two Roman ones, the relations can be diagrammed using an inverted V format:



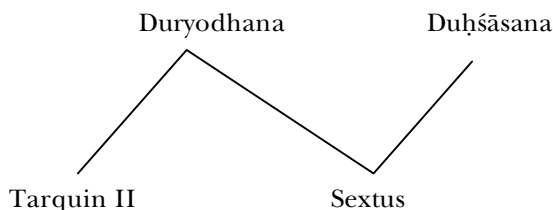
It is *as if* Draupadī has split to generate the two Roman heroines or, conversely, *as if* the latter have fused to produce Draupadī. Of course neither formulation is more than a mental short cut. In historical reality, the splitting or fusion would have affected the proto-narrative figures lying behind the attested ones. But to introduce reconstructed ('starred') figures is to complicate what is already complicated enough. At this stage a synchronic reading of the rapprochements suffices.

The rapprochement between the females carries with it two that involve males.

7. *Bhīma ~ Brutus*, Sworn Avenger. In the dicing hall Bhīma responds promptly to the outrageous treatment of Draupadī, vowing vengeance (oaths that he eventually fulfils).

As they leave, Bhīma repeats his oath and three of his brothers take similar oaths (2.68). Brutus vows vengeance immediately after Lucretia's suicide, and persuades three others to follow suit (Livy).

8a. *Duryodhana* ~ *Sextus*, and 8b, *Duḥśāsana* ~ *Sextus*, Sexual Aggressors. Taking account also of #3, we can diagram thus:



Briquel notes two features that might support a Bhīṣma ~ Brutus comparison (*MR* 282), but moves on quickly to argue that Brutus relates to Publicola as Varuṇa to Mitra. Following Dumézil, he is surely right to see that some account is needed of the Roman duality, of the relation between the two major founders of the Republic (the duality he uses to articulate *MR* into two *gestes*). Moreover, Yudhiṣṭhira certainly represents F1 (under any definition), and we can happily write:

9. *Yudhiṣṭhira* ~ *Publicola*, Ultimate Victor. For instance, Yudhiṣṭhira's procession back to Hāstinapura after the war (12.38.30ff) parallels Publicola's triumph after Arsia. The problem lies in the proposed Brutus ~ Varuṇa link, which depends on the theory of a split or bi-aspectual first function. But the duality could be explained in other ways – for example, as reflecting the two components of the Goodies in the Sanskrit: the primary allies of the Pāṇḍavas are the Pāñcālas, led by Draupadī's father Drupada. As for the functions, Brutus is probably too complex a figure to be allocated to a single category. It is true that he shows extraordinary severity in executing his own sons for participation in the plot and that in Vedic theology Varuṇa specializes in punishment; but a good instance of unreasonably harsh punishment occurs in the epic.

10. *Vidura/Dharma* ~ *Brutus*, Cruel Judge. Like many of the other Sanskrit characters Vidura incarnates a god, in his case Dharma ('Socio-cosmic Justice'). Dharma is born as Vidura in the womb of a slave because he was cursed by the sage

Māṇḍavya. The sage was angry at the excessive punishment – impalement – that the god had inflicted on him for a childhood sin (1.101), and chose this way to take his revenge. The parallel lies not in the sins of the youthful offenders (Māṇḍavya had speared insects with blades of grass), but in the unnatural severity shown towards them by the judge.¹⁰

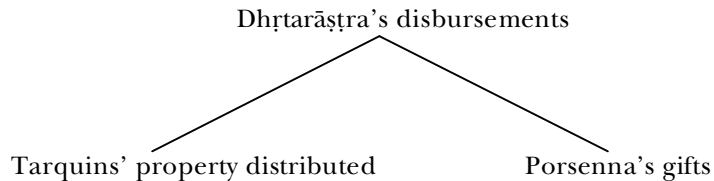
The last major chapter of *MR* discusses the hereditary wealth of the Tarquins and its appropriation by the Romans. Most of the wealth is made available ‘to all the citizens’ (DH), but on religious grounds the grain from one particular field is thrown into the Tiber, where it compacts and gives rise to an island. Interesting comparisons are proposed ranging outside the ‘eschatological’ narratives, but fuller use can be made of earlier rapprochements with the Sanskrit epic, esp. #3 and #7.

11. *Dhṛtarāṣṭra ~ Tarquin*, Ousted Wealthy King. The central Baddies, the Tarquins – the king and his sons – correspond to Duryodhana and the other ninety-nine sons of Dhṛtarāṣṭra. Had he not been killed by Bhīma at the end of the Great War, Duryodhana would have inherited the wealth of the Bhārata dynasty, but as it is, the wealth is mostly retained by his father. Several palaces are appropriated by the Pāṇḍavas soon after their victory (Bhīma taking Duryodhana’s, 12.44), but later Dhṛtarāṣṭra gives away his remaining fortune before retiring with his wife to a life of asceticism in the forest. Much is disbursed to Brahmins, but the distribution of food and drink extends to society as a whole (*sarvavarṇān*, 15.20.11). The next two shlokas talk of a ‘Dhṛtarāṣṭra Ocean’ deluging the world with valuables of all sorts. The texts vary in wording, but among the valuables many include real estate – villages and islands (*-dvīpa-*, 13a). The gift-giving and entertainment last for ten days, being intended, at least in part, to provide post-mortem benefit to the king’s descendants who died in the Great War.

The comparison is based on four features. Goodies receive the property of departing Baddies; reference is made to Goody society as a whole; the distribution is linked to bodies of water (metaphorical ocean ~ real river); the water is linked with islands. One might object that the Tarquins’ property is distributed against their wishes, while Dhṛtarāṣṭra is retiring

¹⁰Following Dumézil (one can cite his 1979: 297ff, on *La piété filiale*), Briquel interprets Brutus’ harshness by envisaging a Roman stereotype contrasting themselves with Etruscans (*MR* 290 n119).

voluntarily. But the annalists tell of another context in which property once held by Baddies is transferred amicably to Goodies. When Porsenna finally withdraws from Rome, he shows great generosity (cf. *MR* 155-7). He hands over his camp, well stocked with provisions and other valuables, and even gives the Romans money (DH 5.34.4). But Porsenna corresponds to Dhṛtarāṣṭra (#2, reinforced by this paragraph). The parallel can now be expressed in terms of events:



One of Briquel's comparisons with the Greek epic is promising: the three Greek goddesses compete as to beauty, the Roman officers compete as to their wives' virtue (*MR* 236-7). But several comparisons rely on the dangerous analytic tool of inversions, as does the table comparing Lucretia and Helen (*MR* 239). A problem with both books is that Briquel's Homeric comparisons scarcely go beyond the *Iliad*, while richer comparative material can often be found in the *Odyssey* (Allen 2009). For instance, the best parallels to the Roman provisioners are Eumaeus and Philoitius, and Helen needs to be seen alongside Penelope.

The Gaulish siege¹¹

Insofar as *PR* builds on Dumézil 1973, it is mainly on its four trifunctional analyses in the chapter called *La geste de Camille*; Dumézil's attempt to link Camillus with the mythology of dawn is curtly dismissed as unconvincing (*PR* 41 n59). The book usefully contrasts the mainstream annalists with Diodorus Siculus (who gives Camillus no role in relieving the siege), and struggles to elucidate the history both of narratives and events. Unlike *MR*, it offers few parallels with *Mahābhārata* individuals, but presents a good number of trifunctional sets. The interesting discussion of the Rome-Veii relationship comes at the end of *PR*, but since the Veii siege precedes the

¹¹Two grouses: the binding of *PR* is too tight for the book to lie open on a desk, and page numbers with running heads are printed beside the text rather than above it, impeding marginal annotation.

Gaulish one, I discuss it first.

I. Fall of Veii (schema at *PR* 361, not in Dumézil). As the siege draws towards a close (Livy), the senate discusses the distribution of booty, and Camillus promises a tithe to Apollo. The passage is all about wealth – F3. Having tunnelled under the walls as far as the citadel, the soldiers now burst through (interrupting a sacrifice by the Veiiian king), and start a massacre – F2. Next, an image of Juno is moved from Veii to the Aventine – F1. But the fall of Veii was foreshadowed by the ominous and much discussed rise of the Alban Lake. Without an appropriate response the omen would have spelled defeat or disaster for Rome, but in fact it is the enemy who suffer. A potential disaster for Rome qualifies as F4-, and the triumph that follows the victory fits under F4+.

Let us skip past two other analyses. *II. Complaints against Camillus* (schema at *PR* 112, cf. Dumézil 1973: 236) explores the reasons why the hero goes into exile at Ardea. *III. Faults of the Romans* (schema at *PR* 181, a radical and carefully argued revision of Dumézil) explores the alleged moral failures that led up to the Gaulish disaster. This brings us to a case that offers particularly strong support for pentadic theory.

IV. Fragmentation of Rome. As the Gauls approach, the population of the city divides into three components (schema at *PR* 181, following Dumézil). Elderly ex-magistrates and priests stay put, offering themselves to the Gauls as sacrificial victims – F1. The young and fit hold out on the Capitol – F2. The mass of plebeians, and a few others, disperse outside Rome – F3. So far so good: the core functions are manifested in the story. But the Roman people include two further components.

Before the Gauls reach Rome, on the last day of the year, an ill-led Roman army suffers a crushing defeat at Allia. Many fugitives are massacred or drown in the Tiber, and the survivors split up. A few flee to Rome with news of the disaster, but most reach Veii (now Roman property). In Rome nothing is known of the latter and they are mourned for, being ‘symbolically dead’ (*PR* 160, 309). Being marginal members of society, the dead qualify as F4-, and in some contexts the town they occupy falls under that half-function for independent reasons.¹²

The final component is of course Camillus. Alone of the

¹²Troy, Lavinium, Alba Longa, Rome, Veii form a well-ordered pentadic sequence (Allen in press b).

five, he is an individual, not a group, and when he is dictator, he represents Rome as a whole, as would a king. Described as an *être achevé* or *parfait* (PR 342f), he qualifies excellently as F4+. Moreover, as so often, links exist between the contrasting F4 representatives.¹³ Both take up residence outside Rome, respectively to the north and south, before the dispersal of the core components. Before the siege is lifted, both conduct nocturnal massacres of marauders in their area: Camillus leads the Ardeates against Gauls; a certain Caedicius leads the Veian refugees against Etruscans. The two components unite to relieve the garrison on the Capitol, which has effectively surrendered. The eventual fusion of the three military components of the population exemplifies the solidarity that sometimes unites even-numbered functions (counterposed to the odd-numbered ones).

IV. Siege of Capitol. As Dumézil saw, the siege is marked by three events. A priest crosses enemy lines to perform a ritual – F1; the warrior Manlius defeats a night attack by Gauls – F2; the defenders, pretending to be abundantly supplied (acting, as it were, in their capacity as consumers) throw bread from the Capitol – F3. But during the siege two events occur *outside* Rome: the massacres ascribed to Camillus (F4+) and to the ‘symbolic dead’ (F4-).

V. Restoration of Rome. According to Briquel (schema at PR 343), Camillus’ defeat of the Gauls on the Gabine road and the resulting triumph represent F2, his restoration of religious cult and shrines F1, and his rebuilding of Rome on its old site (as against the proposed move to Veii) F3. However this analysis is judged, the F1 entry repays closer attention (schema at PR 330). Of the five measures listed by Livy, Briquel explicitly excludes the first and last before analysing the middle three as follows: public hospitality for the Caeretans – F3; institution of Capitoline Games – F2; foundation of Aius Locutius cult – F1. But the first measure is the purification of temples that have been occupied – so, implicitly defiled – by the Gauls; and ritual pollution falls under F4-. The last measure ‘concerns the consecration of the ransom gold recovered from the Gauls and of the gold from the urban temples that had been stored on the Capitol for safety.’ Since the gold is

¹³Briquel himself wonders how to relate the two ‘outsider’ elements – those rejected *à l’extérieur* and apparently *hors-jeu* (PR 197, 208). He argues that they represent two competing versions of the story.

eventually given to the supreme god of the city, this measure 'stands apart from the others' (*occupe une place à part*) and 'belongs on a different level' (*ne se situe pas sur le même plan*, *PR* 323). It is one measure alongside others, yet somehow different. Such qualified heterogeneity is very typical of F4+ entities.¹⁴

That Camillus' restoration of Rome is almost a re-foundation is shown by the finding of Romulus' augural stick (*lituus*) amid the rubble left by the Gauls (*PR* 319, 339). This stick has a curious cognate in the Hindu Kush: a stick left by a god and recovered by the virtuous survivors of an earthquake that destroys a sinful village (Hussam-ul-Mulk 1974: 28, cf. Allen 2000: 293ff).

In Conclusion

Inevitably cursory, a review article cannot do justice to a body of work that could provoke book-length reactions. For instance, some might contest the exclusion of the Battle of Lake Regillus from the analysis of the *Birth of the Republic* (*MR* 243 n6, 251 n13). Pentadic theory would criticize interpretations of Bhīṣma or Tarquin as first-functional (*MR* 238 n100, *PR* 95). Some of the bolder comparisons do not convince. Apart from the brothers, only two men absent themselves from the Pāṇḍava camp and escape the nocturnal massacre, while three Kauravas survive the war (*MR* 253 n17); but this difference can hardly be cognate with the difference of one between the losses of the two sides at Arsia (difficulties include the analyst's exclusion of the brothers and the special status of Krishna, who is not a warrior in this context).

However, such objections are more than counterbalanced by good ideas, both micro and macro, even if some merit further development. For instance, at the micro end of the scale, one useful line of thought brings together Yudhiṣṭhira's lie to Droṇa, Mucius' lie to Porsenna and that of Publicola's supporters to Pulvillus (*MR* 55, 186f). Another good parallel is between the final scene of the Great War, when Aśvatthāman

¹⁴Regarded globally, the Romans on the Capitol represent F2, but there are also hints (cf. *PR* 184ff, 214) that they constitute Rome in miniature. The military youth (F2) are accompanied by able-bodied senators (F1) and some women and children (F3?). But these are not the only inhabitants and defenders of the hill. The humans are helped by gods (F4+) and, no less crucially, by sub-humans (F4+) – the sacred geese that wake Manlius.

launches his cosmic weapon, and the moment (just before Camillus arrives) when Brennus adds his sword to the scales weighing out the ransom Rome has conceded. Occurring at a climactic moment, the event shows the Baddies in the worst possible light (*PR* 278), but there is more to say. The scene combines the loosing of a weapon with a brief but impressive utterance: Sanskrit *apāṇḍavāya* (10.13.18) ‘for the annihilation of the Pāṇḍavas’ (with the negative *a-*) corresponds to *vae victis*. Both phrases use the dative and refer to the Goodies in their second element. Neither hits the mark: the dynasty survives, Rome triumphs.

On a larger scale, one appreciates the willingness to think about large blocks of narrative, both within Roman tradition and outside it, particularly those linked with cosmic destruction and regeneration. The former is seen in the near destruction of Rome by the Gauls, which in part replays its near defeat by Porsenna, and the latter in the birth of the Republic, which has parallels both earlier, in the birth of Rome itself (e.g. *MR* 290),¹⁵ and later in the rebirth under Camillus. So much work remains to be done that it seems premature to offer a global judgment on how successfully these grand comparative themes are handled here.

However, one other block of narrative – not the subject of these two books (though naturally they often refer back to it) – is worth mentioning as a source of extra support for Dumézil-style comparativism. Like the two great conflicts of the early Republic, the story of the monarchy, taken as a whole, has a parallel of sorts both in Sanskrit and Greek epic (Allen 2005, 2004: 34f): the Kaurava marshals, starting with Bhīṣma (F4+), can be compared with the Roman kings, starting with Romulus (also F4+). That Rome’s kings should correspond to the Indian Baddies may seem odd, since they are mostly presented as necessary and valued founder figures, who battle with and defeat aliens such as Veians or Latins. However, republican ideology abhorred monarchy as an institution. Moreover, if early Romans wanted their pseudo-history to begin with a king-list and were trying to find materials for it in an oral tradition resembling the central story of the *Mahābhārata*, it made sense to think of the Baddies with their succession of marshals – the Goodies show nothing

¹⁵Cf. Dumézil’s essay ‘Naissance de la Ville et naissance de la République’ (1975 : 284ff).

similar. This line of thought and Briquel's are mutually reinforcing. The study of early Rome cannot be reduced to a dialogue between archaeological and textual specialists of the area: drawing on India especially, Indo-European comparativists have much to contribute. The ancient texts emerge even richer and more fascinating.

References

- Allen, N.J.
 1993 Debating Dumézil: recent studies in comparative mythology. *JASO* 24/2: 119-131.
 1999 Arjuna and the second function: a Dumézilian crux. *J. Royal Asiatic Society, Series 3*, 9/3: 403-418.
 2000 Imra, pentads and catastrophes. *Ollodagos* 14: 278-308.
 2004 Dyaus and Bhīṣma, Zeus and Sarpedon: towards a history of the Indo-European sky god. *Gaia: Revue interdisciplinaire sur la Grèce archaïque* 8: 29-36.
 2005 Romulus et Bhishma : structures entrecroisées. *Anthropologie et sociétés* 29/2: 21-44.
 2007 Śiva and Indo-European ideology: one line of thought. *Int. J. of Hindu Studies* 11/2: 191-207.
 2009 L'Odysée comme amalgame : Ulysse en Ithaque et comparaisons sanscrites. *Gaia* 12: 79-102.
 in press a Bhārata genealogy: the close parental-generation males. In John Brockington (ed.) *Battles, Bards, Brahmans: Papers from the Epics Section of the 13th World Sanskrit Conference Edinburgh 10th-14th July 2006*.
 in press b Seven, five, three; or a tale of five cities. In Patrice Lajoye (ed.) [*Festschrift*]
- Briquel, Dominique
 2007 *Mythe et révolution. La fabrication d'un récit : la naissance de la république à Rome*. Brussels : Latomus.
 2008 *La prise de Rome par les Gaulois : Lecture mythique d'un événement historique*. Paris : PUPS.
- Dumézil, Georges
 1968 *Mythe et épopée I: l'idéologie des trois fonctions*. Paris: Gallimard.
 1973 *Mythe et épopée, vol. III : Histoires romaines*. Paris: Gallimard.
 1975 *Fêtes romaines d'été et d'automne*. Paris : Gallimard.
 1979 *Mariages indo-européens: Suivi de quinze questions romaines*. Paris: Payot.
- Grisward, Joël H.
 1981 *L'archéologie de l'épopée médiévale: structures trifonctionnelles et mythes indo-européens dans le cycle des Narbonnais*. Paris: Payot.

Hiltebeitel A.

- 1976 *The Ritual of Battle: Krishna in the Mahābhārata*. Ithaca, Cornell Univ. Press.

Hussam-ul-Mulk, Shahzada

- 1974 The cosmology of the Red Kafirs. In: K. Jettmar and L. Edelberg (eds) *Cultures of the Hindu Kush*, 26-30. Wiesbaden: Steiner.

Jamison, Stephanie W.

- 1994 Draupadī on the walls of Troy: *Iliad* 3 from an Indic perspective. *Classical Antiquity* 13: 5-16.

O'Brien, Steven T.

- 1997 Eschatology. In J.P. Mallory and D.Q. Adams (eds) *Encyclopaedia of Indo-European culture*, 180-183. London: Fitzroy Dearborn.

Vielle, Christophe

- 1996 *Le mytho-cycle héroïque dans l'aire indo-européenne: correspondances et transformations helléno-aryennes*. Louvain-la-Neuve: Institut Orientaliste.

Woodard, Roger

- 2006 *Indo-European sacred space: Roman and Vedic cult*. Urbana: University of Illinois Press.

JIES Reviews

Archaeology

Elena E. Kuz'mina, *The Origin of the Indo-Iranians*. J. P. Mallory (ed.). Leiden/Boston: Brill, 2007. 762 pages, 18 maps, 114 figures, and 2 appendices. \$218.00. Part of the Leiden Indo-European Etymological Dictionary Series.

Elena Kuz'mina has produced a remarkable work. It was first published in Russian in 1994 and completely revised with a great deal of new information for this English version. The book is profusely illustrated and provides 18 maps which are extremely helpful in locating sites and ecological zones. The Bibliography alone is 105 pages.

This massive book has 26 chapters divided into four parts. Part 1 (Chapters 1-14) gives us the Andronovo Cultural Entity, and begins with the History of Research on the Andronovo Culture and goes on to Methodological Aspects of Ethnocultural Reconstruction, where she lays out her methodology including her levels of interpretation. The following chapters, 3-14, give us Classification of the Sites and the Primary Features of Andronovo Unity in which the various groups such as Petrovka, Alakul' and Fedorovo are discussed. The next six chapters describe the material culture, including ceramics, architecture, mining and metallurgy, textiles, transport, and economy. Part 1 of the book takes up nearly half of the text and the detail is encyclopedic.

Part 2, (Chapters 15 to 22) describes "The Migrations of Tribes and their Cultures in Central Asia" including the area of Xinjiang. Part 3 (Chapters 23-25) gives us "The Genesis of the Different Branches of Indo-Iranians" with the bulk of the material exploring the Indo-Aryans and how the Andronovo culture relates to them. Part 4 (Chapter 26), "The Genesis of the Iranians," gives the history of the research of the Timber-grave culture and emphasizes the East Iranian Scythians and Saka. Each chapter is filled with extraordinary detail and fully documented.

The origin of the Indo-Iranians is a complex matter, and Kuz'mina lays out the situation fully. There may be more information on the subject but given the detail of this book, it hardly seems possible. The Introduction sets out the methodology of the work, the various Indo-Iranian theories including the two major theories for the origin of the Indo-Iranians (I-I): the first theory espoused by Gamkrelidze and Ivanov suggests an early view placing the homeland for Indo-Europeans in Asia Minor and the I-I homeland to the northern part of the Iranian plateau. The second theory puts the I-I homeland in Europe and connects the I-I with the Timber-grave and Andronovo cultures.

Kuz'mina subscribes to the second theory and in the Introduction sets the place and time for the Indo-Iranians, who are first heard of in the 16th-15th centuries BC in cuneiform texts: I-I gods are mentioned in Hittite and Hurrian oaths, and we have the famous missive by Kikkuli who uses I-I words for horse-breeding. By the mid 2nd millennium I-I is not only separate from IE but had formed separate dialects. Kuz'mina says the hypotheses that I-I is connected either with grey ware or Bactrian ceramics of the 2nd millennium BC has neither been proved nor generally accepted and that wheel made pottery "cannot be considered as a true ethnic indicator." She further states that "no single hypothesis from the competing linguistic and archaeological solutions to the location of the Indo-Iranian homeland has been proved at present" (xv). She believes that a thorough review of the linguistic and archaeological data is necessary and "an assessment of the ethnic attribution of the Andronovo culture" (xvi); that is what she sets out to do. To accomplish this, she looks 1) at all the linguistic and written I-I sources, 2) archaeological material relating to I-I with particular attention to the Andronovo culture, 3) reviews the Sarmatian and Saka archaeological material, 4) looks at ethnographic sources relating to both Iranian and Indian peoples, and 5) the anthropological sources.

The cultural sources of most interest for this work are from the earliest:

Poltavka, Catacomb (Novy Kumak) culture, Multi-roller, Abashevo, Sintashta, Petrovka, Alakul', and Fedorovo. However, the hypothesis that Catacomb and Abashevo were I-I "cannot be strictly proven...[but] probably took

part in the formation of the Andronovo and Timber-grave cultures to some extent, so providing them with a Proto-Indo-Iranian identity can hardly be excluded" (167-68).

In Chapter 3 she lays out an "archaeological data bank" according to her methodology from 100 sites from the Urals and Kazakhstan; twenty-five of these were her own excavations. She also lays out the differences and similarities of Andronovo Alakul' and Andronovo Fedorovo. She thinks Alakul' and Fedorovo are two genetically different groups that were independently developed, but they are "the product of integration and assimilation" (26) and each have their own variants. On a more general note she points out overlapping characteristics and variants within a type that allows us to see that sharp divisions cannot be made between groups. It is clear that not all sites are just A or B; they could be A/B and some C. There certainly was very little if any ethnic purity. This view would be useful for Western archaeologists who have difficulty seeing Steppe characteristics in Western burials; i.e., mound cemeteries in England.

In the following chapters she examines the archaeological evidence and again relates it to the textual, linguistic, and mythological evidence all the while building her case.

The chapter on the economy is of particular importance and shows how the Andronovo culture was most suitable for a mobile economy as there were no pigs, but a large percentage of sheep and horses. There were also innovations such as deep wells in the desert, light frame mobile houses, wheeled transport using bullocks and heavy horses, Bactrian camels, appearance of horsemen, cheese (food for the long term), and the proper use of seasonal steppe changes that allowed the transition to nomadism and made distant migration possible. By the 12-10th centuries there is evidence that the climate had become more severe and was thus contributing to a more nomadic lifestyle.

Other evidence ties the I-I to the *Rig Veda* and pastoralism. There are common IE words for cattle which means 'movable property' and 'war' meaning 'cattle stealing'. Indra (*Rig Veda* 3.31.4; 7.18.22) is called 'ruler of golden horses' among other epithets relating to cows and horses as wealth. In the Gāthas (Yasna 12) there is a call to reject pastoralism, and thus we can see a time for Zarathuštra (161).

Kuz'mina reviews what the *Rig Veda* and *Avesta* say about where Indo-Iranians lived. I-I has poorer agricultural terms than IE in general but cattle and horse breeding terms are numerous, I-I gods have epithets about the richness of horses and cattle and they were asked to give more cattle and horse.

Of particular interest to the Indo-Europeanist is her Chapter 8 on Transport. Here she looks not only at the actual wheels and vehicles but gives full descriptions of the various types of cheek-pieces. Table 5 classifies the shieldlike cheek-pieces and gives full descriptions of the other types. The detail of her cheek-piece discussion should not disappoint even the most interested student of the subject.

She also thoroughly reviews petroglyphs that show a variety of 4-wheeled covered and open wagons as well as "chariots." Her discussion of vehicles is lengthy, and she provides some less well-known information. She writes of the sledges known in the 4th millennium from Mesopotamia and the Tripol'ye culture, and also of Bactrian camels and specially bred horses as well as oxen which were used as draft animals. The discussion of camels is particularly interesting as they are seen in petroglyphs as well as horses. Furthermore, she tells us that in early Assyrian texts the Semitic term for dromedary, *gammālu*, is used but the texts also note the two humps of the Bactrian camel. This is another piece of evidence she uses to reject the Near Eastern hypothesis for IE. Petroglyphs indicate that the chariots were of great importance to Andronovo people, and despite the dating problem of petroglyphs a goodly number of images of chariots can be dated to the Bronze Age.

Kuz'mina constantly refers back to the early texts and compares what is found there to the archaeology. In the case of vehicles she points out that Aryan vehicles are reconstructed from Vedic texts and the *Mahābhārata*; later texts mention six types of vehicles. She takes up the question of where the chariot was invented and because we have primarily wheel imprints at Sintashta, she rightfully says "[w]e do not have enough evidence to reconstruct the chariot type" and "[s]uggested reconstructions [such as Anthony and Vinogradov 1995] have been justly criticized" by Littauer and Crouwel (1996:934-39) (110). Nevertheless, she says the evidence supports the hypothesis that the chariot was invented on the South Russian Steppe (135).

She rejects Gimbutas' idea of mounted warriors coming off the steppe to destroy European cultures in the Eneolithic, (later taken up by Anthony and others). Instead, she prefers the gradual penetration of groups of steppe people. She points out that the early texts only occasionally mention horse riding and that chariots were more prevalent. Only in a late Avestan text, Yasna 11.2, does *bāšar* 'horseman' replace 'chariot driver' *raθaeštar*. Further, Mycenaean refers to *hyppēús* 'chariot driver' and even Homeric fighters drove to battle in chariots (139). It was not until the 12th century BC that chariots gave way to mounted horsemen. She differentiates between pastoralist riding and warrior riding and reminds us that images of mounted riders are not found in the Near East until the end of the 2nd/beginning of the 1st millennium BC. Even though horses were known in the Near East in the 3rd millennium, they didn't play a large role.

She sees a need to distinguish I-I from IE and the Near East and points out a number of differences: 1) of all IE people virtually only the I-I did not raise pigs — Andronovo people did not raise pigs. 2) Only I-I raised Bactrian camels and had a cult of them along with horses. 3) In the Near East, only the dromedary was present but there was no cult. 4) Only in I-I is camel **uštra* and it is not a Semitic loan. 5) Andronovo social structure, ritual, and belief system corresponds to I-I (168).

Like other issues her review of burial rite is thorough and she believes in "elite dominance migration and then integration" which she sees in burials (454).

Chronology is a problem to which Kuz'mina attempts to bring order in her Appendix One. Appendix Two presents tables of the actual radiocarbon dates for the Andronovo culture and other groups pertinent to the study.

In previous reviews published in this journal, I have lamented the lack of interest by numerous archaeologists, (see for example Jones-Bley 2007) in dealing with the subject of Indo-European in general and the connection of archaeology and language in particular. This is not the case here. Kuz'mina believes "A common language is not only the main sign but also the main condition for forming and preserving a traditional culture" (11). She further says the manufacturing techniques of pots, forms, and decoration are "very important ethnic indicators and are used as the basis for defining cultures, stages, local variants and types" (18) — perhaps pots

do equal people.

A major problem with this book is not the content but the lack of a good copy editor. Brill is an excellent publisher but seems to have skimmed on the copy editing. A book that costs over \$200 should not have words hyphenated in the middle of the line, e.g., p.121 development and embroidered; inconsistency of quotation marks — straight in some places and curly in other, e.g., p. 30 and 214; works cited in the text but not found in the References, e.g. p.190, Della Volpe 1992. Fig. 10 is printed twice on facing pages, 618 and 619; references are made to plates that don't exist, pp. 275 and 282 refer to Pl. 10 and p. 287 refers the reader to Pl. IV, V; and spelling errors, e.g., 54 subterranean, 69 disappearance. This is by no means an exhaustive list. From a researcher's point of view a greater problem is the errors in the references and text when, for example, there is 1999a, 1999b, and 1999c. Sometimes the letters are there, sometimes not, and sometimes the letters are confused. While mistakes will always creep in, there are an excessive number in this book, and a good copy editor would have caught most of them.

To some this work may seem a bit old-fashioned because of its emphasis on data, but there is so much information that even if one would prefer a more theory driven work, this book has great value and will continue to have value long after the current theories are replaced by others.

References

- Anthony, D. and N.B. Vinogradov
1995 Birth of the Chariot. *Archaeology* 48(2):36-41.
- Jones-Bley, Karlene
2007 Review of Philip Kohl, *The Making of the Bronze Age in Eurasia*. *JIES* 35(3&4):371-87.
- Littauer, M.A., and J.H. Crouwel
1996 The origin of the true chariot. *Antiquity* 70:934-939.

Karlene Jones-Bley
UCLA

Culture

Anders Kaliff *Fire, Water, Heaven and Earth — Ritual practice and cosmology in ancient Scandinavia: an Indo-European perspective* (Riksanantikvarieämbetet, Stockholm, Sweden, 2007 and Oxbow Books, Oxford).

This book, the title of which accurately describes the contents, makes some interesting suggestions for the interpretation of prehistoric, mainly Bronze Age, ceremonial sites in Scandinavia which are similar to some broadly contemporary monuments in Ireland such as burnt mounds.¹ As Kaliff points out much archaeological thinking and expression is based on analogy and he argues that use of the rich evidence for the ritual and meaning of Vedic sacrifice as an analogy for interpretation of similar-looking remains in Scandinavia may be helpful. The book is focused on the analogies arising from the author's exploration of Vedic religion and could be amplified by reference to the early historic evidence for ritual and its interpretation in areas closer to Northern Europe, for example, in general works on Greek (Burkert 1983) and Roman (Dumézil 1996) religions. The book is clearly written, well researched and up to date: it does not attempt to impress or put off the reader with obscure jargon: it explains itself fully as it moves along. The book is divided into seventeen short chapters which I will selectively quote from in turn (I have added chapter numbers). I make brief comments at intervals and note some possible local instances of the features discussed.

In the introduction Kaliff points out that when he began studies of cosmological beliefs and rituals in ancient Scandinavia around 1990 there was widespread scepticism about research into ancient religion and cosmology. Secular interpretations of sites and features were considered more probable and relevant than interpretations that evoked the sacred. As leader of various projects his interest in aspects of the emerging archaeology was stimulated and in 1997 he completed a dissertation on aspects of the archaeological evidence for ritual with emphasis on the meaning of cremation. He points out that comparative study is essential for

¹This reviewer is based in Ireland and draws on familiar material for comparison.

proposing relevant interpretations: analogies can be used in several ways — as direct comparisons, as a catalyst for considering evidence in new ways and as a way of inspiring novel interpretations.

The book extends the methodology used in the dissertation with a focus on cosmological ideas in Scandinavian society in the Bronze Age and Early Iron Age, and how these might be expressed in ritual practice. A parallel approach would be to interpret the archaeological evidence that points to ritual activity and to see if it throws any light on the cosmological ideas of the people that created the evidence. The book sets out to “concentrate the discussion on interpretations of sacrifice and funeral rituals, and various connections between these, with special emphasis on the meaning of fire” (p11). In Chapter 1 “Religion as a force in the creation of culture — a revived research field” it is pointed out that we should be constantly aware of the difference between our present-day view of the world and the cosmology that was embraced by the ancient society we wish to study. “In Scandinavian Bronze Age society one can expect a basic cosmological outlook in which ideas that in our time are separated into sacred and profane were instead interwoven” (p21).

Chapter 2 deals with the significance of terminology for interpretation: cosmology, religion, ideology and iconography are defined. Often the same term is used both as a description and an interpretation. Grave is such a term: attempts to make something unknown comprehensible require a degree of change and simplification. A translation into the reality of our own culture is necessary if a study is to be meaningful, or even possible (pp27-28).

It is suggested that perhaps altar might be an equally valid term for some features normally called a grave (pp31-32). One could suggest, however, that changing the interpretation of a feature as a “grave” (at its simplest a hole in the ground containing human remains) to an “altar” — a place or thing used for sacrifice- requires an even more complex justification. Nevertheless, the point is well made that features, which we have almost by convention been content to describe and interpret as graves, could have had different or extended purposes, including use as altars.

Chapter 3 deals with analogies and phenomenology “...I think that comparative Indo-European studies can ... be valuable as analogies, regardless of whether there is any kinship between the traditions ... My fundamental stance ... is that the Indo-European religions also reflect a common background, with the different traditions being dialects in the same way as the Indo-European languages” (p33). Several questions are raised by this approach not all of which can readily be answered: what is the evidence that an Indo-European language was spoken in Scandinavia in the Bronze Age?² Are there any aspects of ancient religious practices accessible to archaeologists that enable us to interpret them as evidence that they were made by speakers of an Indo-European language?³ While Indo-European languages generally show only slight borrowings or influences from non-Indo-European languages is the same necessarily true for religious beliefs and ritual practices? How distinctly Indo-European and how homogeneous was their religion or religions? Is it correct to differentiate Indo-European languages only as dialects? Whatever the answers to these questions, however, I would agree that carefully considered ethnographic analogies for consistent patterns in archaeological evidence for ritual practices are valuable instruments for interpretation.

In Chapter 4, the Indo-European context, the possible processes of “Indo-Europeanisation”, its chronology and effects are reviewed. The works of scholars such as Kristian Kristiansen and Thomas B. Larsson (2005), Bruce Lincoln (1986, 1998), Georges Dumézil (1958, 1962), Jim Mallory (1989) and Colin Renfrew (1987) on the spread of Indo-European languages and its implications are discussed. The author concludes that the Indo-European languages and religion were spread by a process of exchange between neighbouring areas, probably also in conjunction with the physical migration of influential groups of people (p46).

²Apparently answered in the affirmative on p 40: “...cultural development in south Scandinavia in the Bronze Age suggests that contacts with distant areas were direct and frequent. I myself find it likely that it was as a part of this process that Indo-European languages...were established in Europe.”

³For one attempt see Lynn 2006 where it was suggested that the consistent phenomenon of depositing bronze objects in hoards practised widely in Europe, including Scandinavia and Ireland, might indicate the presence of a pan-European belief, possibly one characteristic of Indo-European speakers.

Chapter 5 begins with the observation that Indo-Iranian traditions are useful for the interpretation of Scandinavian evidence for prehistoric ritual and cosmology because they are well documented and because of “the general cosmological and mythological similarities, which in turn can be linked to a common Proto-Indo-European background” (p47). It is asserted that the Vedic and Iranian religions, together with Germanic, Celtic and ancient Greek and Roman religions are all variants developed against this background. Similarities between Scandinavia and other Indo-European traditions can be demonstrated in cosmology, the perception of death and the properties of certain divinities. The possibility that religious ideas relating to rituals originating as far back as the Bronze Age were preserved orally in Scandinavia to be written down in the Middle Ages is rehearsed (pp53-54). Here we could be more convinced by a demonstration of the existence of complex shared mythological constructs in different regions of Europe arguably having a common origin that might have contributed to the aetiology of ritual or vice versa.⁴

It is pointed out in Chapter 6 “The source material and the ancient Scandinavian conceptual world” that Scandinavian rock carvings are as close as we can get to written sources. They do not give a clear overall picture of a Bronze Age cosmology, but certain features have been identified that seem meaningful, possibly the passage of the sun across the sky and portrayals of figures that may be divine twins. The pictures in the rock carvings may have been linked to an elite with long-distance trading interests in bronze and hides. Apart from the rock carvings the source material is scanty: classical authors such as Tacitus mention the Roman equivalents of the gods worshipped by the Germans. The potential relevance of the Icelandic sagas for Bronze Age religion is questioned although some material derived from these sources is reviewed.

Chapter 7 deals with “Cosmology and ritual practice”: the Indo-European myth of the creation of the world and of human society by the sacrifice and dismemberment of the first man, Ymir, by his twin brother is explained, mainly on the basis of Bruce Lincoln’s *Myth, Cosmos and Society* (1986). The occurrence of pairs in the archaeological record, for example axes, horns (*lurer*), helmets or paired figures on rock carvings may have been an expression of these divine twins or of the

⁴One thinks of the “fire in water” motif discussed by Puhvel (1987, 277-283).

other twins known from Indo-European myth such as the Dioscuri or the Aśvins. The creation myth explains that different materials of the cosmos are related to specific parts of the primordial twin's body, for example, the matching of earth with flesh, hair with plants, rocks with stones, blood with water and thoughts with clouds. These relationships are repeated in Germanic, Roman, Vedic and Celtic myth and may provide one basis for interpreting the remains of sacrifices or rituals of reassembly that might be found in archaeological contexts. In one view of Indo-European religion sacrifice and dismemberment brought about a strengthening of the equivalent cosmological component. The symbolism of sacred fires in rituals is also summarised in anticipation of a review of the hypothesis that fire sacrifice was an important element in ancient Scandinavian society.

In Chapter 8 "Grave monuments and sacrificial altars" Kaliff discusses how archaeologists' analysis and interpretation of structures normally termed "graves" on account of the presence of human bones may be affected by our natural rush to categorization. "Both graves and altars were often built according to the same cosmological ideas, and in both cases the design symbolises the principles underlying existence" (citing Parker Pearson and Richards 1994). Although far removed from the Bronze Age there is an interesting section on Scandinavian folk beliefs, for example the offerings of buttermilk, beer and porridge made on a farm's burial ground in the 19th century.

In Chapter 9 "The cremation ritual and the ideas behind it" it is pointed out that the most frequently used methods for dealing with the disposal of the dead -inhumation, cremation and excarnation- have all been recorded in societies that spoke Indo-European languages. In Greek, Roman and Germanic traditions both inhumation and cremation were practised. We could, however, comment that the same rites were practised in societies that were definitely not Indo-European. The value of analogies in informing interpretation is again noted, but in terms of confidence it is still at the level of speculation. As Kaliff points out, however, without good analogies the interpretation would be even more speculative. I would agree, whether or not the people who left the remains were Indo-European speakers that analogies drawn from Indo-European sources are useful and on occasions, probably

unknown to us, may provide an insight into the religious beliefs that gave rise to a particular set of material remains.

The cremation of remains can be interpreted in positive or negative aspects: in one view the cremation (and crushing) of the bones was meant to transfer the deceased's life force to society: the design of the grave structure and the function of the funeral ritual were regarded as important for the survival of society. In the negative view, for example according to Zoroastrianism, the dead body was impure and had to be prevented from defiling fire and earth. Funeral rituals were intended to dispose of the corpse in such a way that the living were not harmed by its impurity and to ease the passage of the soul from this world to the next (p 93).

It is possible that rituals of a public nature could be expected to be more explicitly Indo-European, perhaps presided over by priestly specialists, whereas personal or family rituals might draw in part on a bigger or different body of beliefs perhaps inherited from local and pre Indo-European traditions?

Chapter 10 deals with "Traces of Scandinavian fire sacrifice". Burnt mounds, stone settings and cult houses are discussed in terms of possible analogies with complex Vedic rituals such as the *agnicayana* (101-102). The rectangular plan stone frame or "house of Broby type" named from the type site in Uppland is discussed (p104): they exhibit evidence of mortuary rituals: fire-cracked stones, hearths and layers of soot and charcoal are associated. In Scandinavia hearths are found grouped in systems and some forms of geometrically placed hearths, sometimes located in a row on ridges or beside wetlands, can be interpreted as ritual arrangements (p105).

There is an extensive and interesting discussion of the possible ritual significance of burnt mounds that were commonly constructed in Scandinavia in the Bronze Age (pp106-119). It should be noted, however, that there appear to be some differences in the composition and associated features of the burnt mounds in Scandinavia as compared to the analogous or even cognate monuments that are now becoming familiar from Bronze Age Ireland. Scandinavian burnt mounds are often associated with hearths, pits and stone settings and or buildings that are often found beside them. They are often found on cemeteries and settlement sites. It seems from variations in date and morphology that burnt

mounds may be open to a variety of interpretations, but in Kaliff's opinion some burnt mounds can be interpreted as complex altar structures. These are mostly built of burnt stone — material affected by fire — and they yield finds for which an obvious secular explanation cannot be provided. An analysis of 42 burnt mounds from the Stockholm area showed that 30% of the Bronze Age structures contained human bones. Some burnt mounds contained large amounts of fire-cracked stones, together with soot and charcoal and the more complex types often contained circles and foundations of stones and deposits of bones and artifacts. In many cases there are deposits of pottery, objects connected with metal production and especially burnt and unburnt bones of humans and animals. A widespread interpretation is that they are rubbish dumps from settlement sites. Some have been interpreted as butchering sites and places for treating hides and leather. One study of Scandinavian burnt mounds interpreted them as possibly representing a “communication between different spheres” and that they thereby represented life itself (p118). As the author points out that could also be a definition of an altar, which can in turn be a recreation of the cosmos. The burnt mounds are compared with the altars for burnt offerings that were used in ancient Greece. A suggestion is repeated that some fire sacrifices were “concave”, in pits, and were devoted to chthonic deities while “convex” sacrifices were heaps of burnt materials dedicated to celestial deities (p119).⁵ This is related to the possibility that the offering is consigned to different cosmic levels related to the nature of the sacrificed material.

Irish burnt mounds do not appear to display the same morphological range, though it must be admitted that most of those being excavated at present in the course of rescue excavations have been spread out in the past by agriculture and may be further truncated by mechanised topsoil stripping. Artifacts that may be in the topsoil — evidence for what the mound might have contained — in these cases have been removed before the archaeologist even knows that a burnt mound site exists below. In many cases we can only trace the extent of the “burnt mound spread”, which is often associated with a sub-rectangular “trough” (almost an expected

⁵In the book the words convex and concave are transposed: the ordering used here seems more appropriate.

component), which may have been lined with wood or fibre, and with a pit or pits. The emphasis here by necessity tends to be on the surviving sub-surface features (which are sometimes filled or part filled with burnt mound material), rather than on the structure and contents of the mound itself.

Kaliff points out in Chapter 11 “Fire sacrifice rituals and the elements” that in Scandinavia burnt mound materials are often found in contexts other than mounds, for example in pits where they are also given ritual explanations. In Scandinavia the burnt stones are usually seen as by-products of some other process (p121). Similarly prosaic interpretations are proposed for Irish burnt mound materials that have been interpreted as by-products, for example, of cooking, bathing or brewing. Kaliff suggests that it was the burnt stone that was itself the “product” — the fire-cracked stones could have been a visible sign that the fire was born from the stone, corresponding with the Vedic idea that Agni was born on the fire altar. Burnt mounds in Scandinavia are often associated with water; indeed this is also a characteristic of the Irish examples. It is suggested by Kaliff that the water was poured over the red-hot stones to crack them and to produce masses of steam. One of the key ideas may have been the dramatic demonstration of the transformative properties of fire.

In Chapter 12 “Death and grinding — the annihilation of the body” some of the ideas thought to underlie the rite of cremation are linked to the possibility that the body was destroyed in such a way that the different parts were returned to the cosmic elements of which they were believed to consist (p135). It could be pointed out that while the primordial being may have been described as contributing three bodily zones to three levels of society as laid out by Lincoln (1986, 1-40): head = priests (sky); arms and torso = warriors (land surface); waist and legs = farmers and providers (earth, water), an individual would thus be expected to be disposed of entirely to the cosmic realm appropriate to his or her class. Only kings (or their substitutes), who were regarded as embodying the qualities of all three groups, would be dismembered and each part disposed of to the appropriate realm. Much would also depend on whether a particular deity (primarily operating in one of the three cosmic levels) was being honoured. We also have to ask whether this could be considered a normal burial rite: dismemberment and disposal in a chosen cosmic zone

would be necessary only in a sacrificial context and human sacrifice would surely have been uncommon? Even if these ideas did influence sacrificial rituals they might not have been reflected in normal burial rites.⁶

Whereas bones may fragment to some extent during cremation and cooling the author believes that the cremated bones found in many graves were deliberately crushed.⁷ This crushing was part of the ritual destruction of the body. “Fragmentation...may have been combined with a distribution of the physical remains in agreement with the dismemberment of the cosmological sacrificial victim — the image of cremation” (p141). Querns and rubbing stones occupy a special position among grave finds from the Late Bronze Age and Early Iron Age, a fact that in Kaliff’s opinion has not been sufficiently considered. Querns are also common finds in Scandinavian burnt mounds. While they may have been deposited as symbols of agriculture, fertility and rebirth they could also have been used for ritual crushing of bones. It is noteworthy that one of very few finds to have come from a burnt mound in Ulster was a saddle quern found in a burnt mound excavated by Fred Carroll at Derrybrusk, Co. Fermanagh (www.excavations.ie, 1994). The same burnt mound also covered the remains of two log boats. Another possibly relevant site was excavated by D.P. Hurl in a small bog at Killymoon Demesne, Co Tyrone consisted of three mounds made up of a series of layers of baked clay and charcoal. Spreads of charcoal and charred barley lay on a deposit of ashy soil that emanated from the mounds. Associated finds included two gold ornaments, a bronze socketed axe, querns, pottery and human hair (www.excavations.ie 1995).

Chapter 13 deals with “Ritual dismemberment and deposition”. Early accounts of cosmogonic sacrifice are repeated in summary, for example, the Roman *Feriae Latinae*, and Tacitus’ description of the sacrifice of the Semnones. The dispersal of human remains over wide areas, for example by disposal in rivers, is noted and reminds us of the idea that

⁶It is worth noting that consistent patterns in the proportion of species of the bones of animals, and the parts from which they were obtained, found in ritual contexts could be significant.

⁷Two colleagues, P. Logue and L. McQuillan (pers comm), have an article in draft suggesting that the basin stones found in some Late Neolithic passage tombs in Ireland may have in part represented quern stones, used for or symbolising the grinding down of the cremated remains.

sacrifice could be seen in part as a process of making the victim larger, expanding the elements of a microcosm to cosmic dimensions (Lincoln 1986, 63-64).

In Chapter 14 “Everyday life and ritual — different expressions of the same cosmology” it is suggested that farming can be regarded as a system of “rituals” to improve and promote re-growth in nature. By cultivating the land people assist Mother Earth, or some other fertility divinity, to be fertilised: rituals performed for the dead are also believed to be important for agricultural fertility (p163). Religious beliefs and ritual customs can intervene or be present in activities that we now regard as purely functional. In a genuinely religious society, rituals can have an obvious purpose. Fire sacrifice conveys the sun as an element to the new life, creation, re-growth and re-birth: it is part of the same essence as the sun. “In the same way that a person’s new life begins with the destruction of the old body through fire, the new cultivation year begins with the bonfire [literally “bone fire”] on May Eve”...humans help the sun to revive the fields and to drive away winter and death (p166).

There is a discussion of different types of grave-goods and what they were intended to symbolise or achieve by reference to modern folk-belief and ethnographic comparisons. Finds of ore and metal waste in ritual contexts and the transformative quality of fire suggest analogies with the perceived effects of combustion on human remains (pp167-174).

Chapter 15 considers “stone as a medium and a cultic implement.” The hardness of stone and its apparent eternal quality in itself make it symbolically appropriate as material for graves and other monuments. At several cemetery sites in Sweden dating from the Late Bronze Age and Early Iron Age large amounts of stone were transported and piled up beside areas of rock in extensive layers (p177). Cup marks may have been regarded as doorways into the interior of the stone, paths of communication between the human world and the otherworld. “The cup-marks could have been used in rituals performed to give the deceased the energy needed for a rebirth, and the carving could have been intended to give the living some of the power of the stone and the place. This...dual meaning may also be a reason why cup marks are found not only at graves and cremation sites but also in fields and settlement sites” (p185). An Irish example of the latter is

the discovery of a cup- and-ring marked stone in Haughey's Fort, Co Armagh, a Bronze Age hill-fort (Aitchison 1998).

Chapter 16 reviews "Aspects of the dead as mythical beings" in folklore.

"...ostensibly contradicting features of burial ritual and practice may originally have reflected ideas that different aspects of the deceased had different destinies after death...It is interesting here to consider the various mythical beings associated in folk tradition with dead people" (p187). This material is interesting in itself, but it is the least satisfying in terms of evidence for what people might have been hoping to achieve when using apparently similar rituals in the Bronze Age.

I end this review with the following comments. The archaeological remains uncovered in ongoing development schemes in Ireland and elsewhere are samples from large tracts of countryside that reveal new types of sites, many of them dating from the Middle and Late Bronze Age. Burnt mound "spreads" and associated "troughs" and "pits" turn up frequently near streams and wet places. If we are to adequately attempt the necessary interpretation of these new data we have to be aware of the widest range of possibilities and then to identify those that best fit the data for the time being as the most likely interpretations. Anders Kaliff's book is a useful and relatively brief introduction to many of the possibilities that arise from considering analogies to inform archaeological speculation from the world of Vedic and Indo-European religion in general. But even if Indo-European languages were spoken in Scandinavia (and Ireland) in the Bronze Age that does not mean that Indo-European or Vedic-based interpretations are necessarily correct for ritual deposits of that date: Indo-European religious ideas were not expressed materially in such orthodox ways that their remains could be used to trace the spread of Indo-European speakers. There may, on one hand, have been variability in contemporary religious views while, on the other, similar beliefs might have been expressed ritually (and thus archaeologically) in a variety of ways at the same time. Indo-European speakers may have shared some religious beliefs and ritual expressions with speakers of other languages or may have inherited such rituals from the occupants of the regions into which an Indo-

European language may have spread. These indigenes were in most cases the direct ancestors of the speakers of the “new” Indo-European language.

Everyone experienced the same cosmos — sky, air, water — and the same cosmic materials — stones, earth, fire, plants and animals. With such a relatively restricted supply of building blocks it is likely that people with different beliefs could create similar-looking structures and archaeological traces of ritual. This may seem a despairing view, but we must be aware that if some religious construct, explained historically, seems to fit with anonymous prehistoric remains of ritual activity it does not necessarily follow that there was a genetic connection. Archaeologists, however, are not in a position to abandon interpretation as “too speculative”. In pursuit of a thoughtful study of archaeological material, Kaliff’s book is stimulating and forms one point of departure for further debate on the significance of the enigmatic remains of prehistoric rituals.⁸ It is worthwhile to bear in mind as many possibilities as can realistically be admitted to the debate so that a full range of appropriate questions and techniques can be applied to the data when they are dissected in the field and afterwards in the laboratory.

References

Aitchison, Nick

- 1998 Late Bronze Age ritual at Haughey’s Fort: the evidence of the deposited cup-and-ring marked stone. *Emania* 17, 31-40.

Burkert, Walter

- 1983 *Homo Necans: the anthropology of ancient Greek sacrificial ritual and myth*. Berkeley and London: University of California.

Dumézil, Georges

- 1958 La *Rígspula* et la structure sociale indo-européenne. *Revue de l’Histoire des Religions*, 154, 1-19. Paris.
- 1962 *De nordiska gudarna. En undersökning av den skandinaviska religionen*. Stockholm: Aldus/Bonniers.
- 1996 *Archaic Roman Religion*. Baltimore: The Johns Hopkins University Press (reprint).

⁸I am not yet entirely able to let go of the idea that burnt mounds may have some “practical” explanation, even if sometimes combined with an element of “ritual”.

- Kristiansen, Kristian and Thomas B. Larsson
 2005 *The Rise of Bronze Age Society. Travels, Transmissions and Transformations*. Cambridge: Cambridge University Press.
- Mallory, J. P.
 1989 *In Search of the Indo-Europeans. Language, Archaeology and Myth*. London: Thames and Hudson.
- Lincoln, Bruce
 1986 *Myth, Cosmos and Society. Indo-European Themes of Creation and Destruction*. Cambridge, Mass: Harvard University Press.
 1998 På spaning efter den germanska krigsguden: Georges Dumézil, politik och forskning under det sena 1930-talet. *Svensk religionshistorisk årskrift* 7.
- Lynn, Chris
 2006 Suggested archaeological and architectural examples of tripartite structures. *Journal of Indo-European Studies* 34, 111-141.
- Parker Pearson, M. and Richards, C.
 1994 Ordering the World. Perceptions of Architecture, Space and Time: in Parker Pearson, M. and Richards, C. (eds) *Architecture and Order: Approaches to Social Space*. London and New York: Routledge, 1-33.
- Puhvel, Jaan
 1987 *Comparative Mythology*. Baltimore and London: The Johns Hopkins University Press.
- Renfrew, Colin
 1987 *Archaeology and Language. The Puzzle of Indo-European Origins*. London: Jonathan Cape.

C. J. Lynn

Linguistics

Amalia E. Gnanadesikan, *The Writing Revolution. Cuneiform to the Internet*. The Language Library. Oxford: Wiley-Blackwell, 2009. XII + 310 pages, 21 figures, 9 plates. ISBN 978-1-4051-5406-2.

Gnanadesikan covers the world's major scripts and writing traditions from early cuneiform clay tablets to the World Wide Web. The forte of her presentation lies in its clear diction and conciseness, and the reviewer finds it defensible that the author omits some minor 'exotic' traditions such as Easter Island's rongo-rongo and the Anatolian hieroglyphs (xi), while Germanic runes are at least treated cursorily (243-245; on runic writing, see below). The fascinating story of the major

breakthroughs in deciphering ancient scripts such as hieroglyphic writing and the Maya glyphs are told in an insightful, yet vivid manner. So is the invention of various alphabets and their subsequent fate, e.g. King Njoya's logographically based efforts in Cameroon that had a sad ending (10). It is probably correct to state, as the author does, that "What kind of writing system a language uses is largely determined by the accidents of history and by the properties of the language itself" (10). Thus Gnanadesikan's basic aim is to show how writing developed historically, how it was applied and adapted in different socio-cultural settings, and last but not least how it impacted human culture and society from its early forms to the present stages:

The goal of this book is to shed light on how this remarkable technology actually works, where it came from, what it has done for us, and why it looks so different in different parts of the world. (2)

In chapters 2 through 5 the book illuminates ancient logographic systems — Mesopotamian cuneiform, Egyptian hieroglyphs, Chinese characters, and Maya script — along with their syllabic or consonantal basis (13-94). In what follows, Gnanadesikan discusses syllabaries, first the Bronze-Age Linear B used for Greek, then the two Japanese syllabaries, and finally the modern invention of the Cherokee script (95-142). The subsequent chapters deal with phonemic writing systems, i.e. consonantal alphabets (also known as *abjads*), *akṣara* systems or *alphasyllabaries*, and vowelized or 'true' alphabets (143-248). Compare figure 1.1 as to how different writing systems represent language (8). In the final part, "The alphabet meets the machine", several stages of the writing revolution are highlighted, hence the subtitle of the monograph *Cuneiform to the Internet* (249-272).

Early writing

As Gnanadesikan notes, early business records on proto-cuneiform tablets feature numerals; sixty of roughly eight hundred different signs are numerals. Sumerians used them with reference to what was being counted. Different number systems thus counted different things. In the author's opinion, "This was probably a holdover from the tally system of the preliterate period, when numerals that told you something

about what was being counted were an advantage rather than a cumbersome inconvenience” (15). It is noteworthy that German *Zahl* itself originally referred to the ‘notches’ or ‘scores’ which were cut as marks of number on pieces of wood etc. (Kluge 1995:902, under *Zahl*).⁹ The three basic functions of early writing pertain to three realms, viz. (1) administration and bureaucracy, (2) trade and commerce, and (3) religion. This accords with the fact that early writing is both utilitarian and ceremonial (see Postgate, Wang, and Wilkinson 1995). Literature in the modern sense, Gnanadesikan adds, is a ‘much later development’ which in some writing traditions never developed at all (2). From the reviewer’s point of view, it should be emphasized that ancient literacy is élitist which means that it runs counter to our modern conception of mass literacy:

The *intended* restricted uses of early writing provided a positive disincentive for devising less ambiguous writing systems. The kings and priests of ancient Sumer wanted writing to be used by professional scribes to record numbers of sheep owed in taxes, not by the masses to write poetry and hatch plots. As the anthropologist Claude Lévi-Strauss put it, ancient writing’s main function was “to facilitate the enslavement of other human beings.” Personal uses of writing by nonprofessionals came only much later, as writing systems grew simpler and more expressive. (Diamond 1997: 235, his emphasis)

Early writing systems, we are told, were all highly logographic (10). Later systems used far fewer logograms and operated on a (more or less strictly) phonological basis. The advantage of alphabets lies in their limitation in the number of signs which aids cognitive structuring and memory storage; cf. the Western alphabet and the fixed three-ætt structure of the Germanic *fupark*. It is sound to state, as Gnanadesikan does (10), that the choice of writing systems involves a factor of chance which means we are dealing with “accidents of history”. Still, a reservation to be made is that Modern English, for instance, although employing a voweled, hence in Gnanadesikan’s sense a ‘true’ alphabet, is *not* necessarily a truly phonemic

⁹Compare the Early Runic inscriptions of KJ 13a Nøvling clasp **bidawarjaz talgidai** and KJ 10 Vimose woodplane **talijo** [...] with the underlying verb **talg(i)jan-* ‘incise, carve’/**taljan-* ‘tell, recount’ (e.g. Oldcel. *telgja/telja*).

script, but rather a logographic or phonographic one.¹⁰ Compare Sampson (1985) on the issue of reforms:

Paradoxically it seems to be broadly true that those European nations with the most phonemic scripts are the most inclined to reform them. If your script is almost perfectly phonemic, then you see its graphemes as devices for representing sounds and you perceive the respect in which they fail to do so as striking and curable imperfections. An Englishman, on the other hand, does not see his orthography as a system deviating in certain limited respects from an essentially phonographic ideal — and rightly so, since modern English spelling has as much title to be called logographic as phonographic. (Sampson 1985: 207)

To conclude, the writing system itself does not determine its typological status alone, hence the diagnostic relevance of phoneme-grapheme links (including multifunctional graphemes and complex phoneme-grapheme relationships) in the given language context. Although Gnanadesikan seems aware of the problem addressed here, she does not discuss this issue, nor the notion of orthographic reforms as addressed in the above statement (cf. the index of her work, 297-310).

Oral traditions versus written culture

There is yet another weakness in the overall presentation. The critical reader might notice an overemphasis of written traditions with the neglect of oral traditions. What about the power of the spoken word and recitation practices in different cultural settings, both ancient and modern? The singer of tales was no scribe. The bias is evident already in the introduction where Gnanadesikan points to the ephemeral nature of the spoken word (4). By contrast, written texts are deemed to convey their message more precisely, giving way to the notion that writing is more valuable than speech (5).

The world we live in has been indelibly marked by the written word, shaped by the technology of writing over

¹⁰In this regard, I am afraid that figure 1.1 on page 8 is misleading as it uses the orthographic representation of the word <undesirable> instead of its phonetic (say IPA) representation: [ˌʌndɪˈzʌrəbəl]. As a consequence, the syllable count /un-de-si-ra-ble/ is at least imprecise, if not incorrect.

thousands of years. Ancient kings proclaimed their authority and promulgated their laws in writing. Scribes administered great empires by writing, their knowledge of recording and retrieving information essential to governing complex societies. Religious traditions were passed on through the generations, and spread to others, in writing. (1)

From the reviewer's point of view, Gnanadesikan underestimates the important role that oral traditions play in ancient and medieval society, both Eastern and Western. Law traditions in Scandinavia, for instance, have been basically oral until the early Middle Ages, and the rune ring from Forsa, roughly datable to the late 9th or 10th century, is probably our oldest written law text in a North Germanic language (see Brink 2008: 28-29: "The Forsa rune ring: The earliest law in Scandinavia"). Brink therefore highlights the importance of this runic artefact with reminiscences to oral texts, e.g. alliteration, oral-formulaic diction, paratactic rather than hypotactic construction:

This statement [on the Forsa ring; M.S.] is unique for Viking Age Scandinavia, to my knowledge, and it actually supports the statement by Snorri Sturluson, that different people had different laws in early Scandinavia. The Forsa ring must be looked upon as one of the most important artefacts of the early Viking Age, and for shedding light on early Scandinavian society. (Brink 2008: 29)

What is more, traditions of memorized verbatim recall did exist both in Eastern and Western culture — compare Indian Vedic texts and Old Norse skaldic verse (see Schulte 2008). The point is that these verbatim practices exceed oral-formulaic techniques and achieve rigid transmission of smaller and larger text units over long periods of time. This represents the exact opposite of Gnanadesikan's paradigm: "oral tradition maintains a text in extremely fixed form, whereas a purely written text is evanescent, and if it survives at all, will be subject to thorough changes in form" (Kiparsky 1976: 101; for detailed discussion, see Schulte 2008: 185-191, with canonical references). Under this focus, Vedic literacy can be construed as a counter-literacy challenging the current 'literacy hypothesis' with its marked focus on alphabet literacy (e.g. Havelock 1982).

To be honest, Gnanadesikan notices this issue when

discussing the unchallenged status of Sanskrit in relation to the diverging calligraphic traditions and writing systems in India:

This lax attitude toward scripts may have been due to the respect that continued to be accorded to the oral tradition and to oral performance of literary texts. [...] The continuing pre-eminence of the spoken word may also account for why there has never been a strong calligraphic tradition in India [...]. The script was merely a vehicle for the text, and a well-educated person was expected to read many scripts. (179)

According to Gnanadesikan, this is one factor that explains the absence of a standard writing system in ancient India and the emergence of today's Devanāgarī, Bengali, Gujarati, Gurmukhi (Punjabi), Oriya, Tibetan and minor scripts such as Meitei-Mayak from the northern form of Brāhmī (178-181). The diversity of regional scripts in southern Asia is diametrically opposed to the dominance of one written language, Sanskrit, while due to their lower status India's diverse languages went almost unrecorded and unwritten. Gnanadesikan stresses that modern languages such as Thai and Lao have chosen different trajectories: "Thai still feels the pull of the first-millennium, unified Sanskrit world, while Lao has chosen modernity, simplicity, and regional individuality" (187).

Acrophony and runic writing

Gnanadesikan highlights the 'acrophonic exercise' as a constitutional principle of Egyptian hieroglyphic and Semitic writing both of which were consonantal systems (39, 145-146). Here it would prove useful to include runic writing somewhat more extensively as the rune names rely on the acrophonic principle, e.g. the first rune \mathfrak{F} *f* stands for **fehu* 'cattle, wealth' (e.g. Polomé 1991, with references). The use of ideographs is attested for instance in the Blekinge inscriptions of what now belongs to Lister parish in Sweden (NB: The word spaces are introduced by the reviewer):

Gummarp, KJ 95: **hApuwolAfA sAte stAbA prią fff**
 'Hapuwolaf[R] set three staves: fff'
 (triple \mathfrak{F} = **fehu* n. 'cattle, wealth')
 Stentofen, KJ 96: [line III] **hApuwolAfR gAf j**
 'HapuwolafR gave good harvest (good year)'
 (old shape of the *j*-rune = \mathfrak{J} = **jāra* n. 'year')

This elucidates a crucial aspect of runic traditions. Rune names could be deliberately altered in the *scriptoria* (as with the Anglo-Frisian *futhorc*), or the relation between rune names and the sound values of the runes could be distorted by a series of sound changes (which determined the fate of the Viking-Age sixteen-grapheme *futhorc*). Consider, for instance, the rune name **wunju* (G *Wonne* ‘joy, delight’), which underwent *w*-loss and later was dispensed with in the sixteen-character Viking *futhorc*. Succinctly, Gnanadesikan suggests that the Anglo-Saxon *futhorc* — like the Ogham alphabet — was “probably inspired by the Roman alphabet” (244). This is certainly correct, and her account would have further profited from a glance at the Latin *scriptoria* that enabled the systematic augmentation of the Anglo-Frisian rune row — hence an interaction of two writing systems. Besides, this input must have been largely absent in the Viking society of early Scandinavia (cf. Schulte 2009). As Tineke Looijenga puts it,

England became closely connected with the Latin *scriptoria*, demonstrated by ecclesiastical runic monuments and an abundant use of runes in manuscripts (Looijenga 2003: 273-274)

Moreover, it must be stressed that there was neither a standard Anglo-Saxon *futhorc*, nor a standard Viking *futhorc*. Illustration 13.2 on the Anglo-Saxon runes (containing 31 characters) is an abstraction at best (244). The reference points of our handbooks are merely idealizations that highlight individual inscriptions or — what is worse — take a reconstructed system as their point of departure (see Schulte 2010). Obviously, both the Anglo-Frisian and the Nordic systems were in a state of flux. Prominent examples of the Anglo-Frisian *futhorc* include the Thames scramasax, an iron sword inscribed with a twenty-eight-rune *futhorc*, and the Vienna Codex also containing twenty-eight runes (cf. Page 1999: 80-81). Moreover, Looijenga (2003) points to the extension of the rune row to over thirty-three characters which means that she includes the manuscript traditions as well. Another issue worth mentioning is that runic traditions in Scandinavia survived even after the Reformation (Nordby 2001), whereas the fate of the Anglo-Saxon *futhorc* was sealed with the Norman invasion of 1066 CE (244).

Greek serendipity

Havelock (1982: 9) had claimed that the evolution of Greek alphabet literacy was a decisive step that set Greek culture off from other written cultures in the Near East. His ‘literary revolution’ hinges on the systematic introduction of vowel symbols in the Greek alphabet. It is positive that Gnanadesikan is aware of Havelock’s oneness as he is “strangely dismissive of Near Eastern scripts, literacy, and literature” (293). What might be regarded as a writing revolution or a paradigm shift in the sense of Kuhn (1962), is merely one step in a long-term development — whether being a conscious invention or a serendipitous discovery.¹¹ To exemplify this, Gnanadesikan fancies a meeting between a Phoenician and a Greek:

The Greek, not knowing Phoenician, missed the glottal stop [in ‘*alef*; M.S.] entirely. As in English, it made no difference to a Greek word whether it started with a glottal stop or not. It was the [a] which the Greek perceived to be the first sound of the letter’s name. As he copied the scratchings, he struggled to pronounce the strange word. The aspirated Greek [p^h] was as close as he could get to [f], but he had trouble to ending [sic] a word in a plosive consonant. What he finally managed, and what he remembered later, was something like [alp^ha]. (210)

Indeed this ‘fanciful tale’ (214) is both insightful and didactic. Gnanadesikan suspects that “the voweled Greek alphabet — a new form of writing at the time — was to some extent an accident caused by misconception” (214). I believe that the author ignores the cognitive dimension of the entire process which is likely to be a long-term restructuring below the threshold of consciousness. Also, she disregards the fact that already in the early times of the Semitic alphabet, experiments began with methods for writing vowels by adding small extra letters, or else dots, lines or hooks sprinkled over the consonantal letters to indicate selected vowels (cf. Diamond

¹¹The adaption of writing systems, it seems to me, allows for both conscious and subconscious transformation processes. As I have argued elsewhere, the rise of the sixteen-grapheme Viking *fupark* constitutes a usage-based, collective change below the threshold of consciousness, whereas the Anglo-Frisian augmented *fuporc* involves deliberate intent due to Latin ecclesiastic learning and scribal exercise. See Schulte (2009, 2010).

1997: 227). To be fair, Gnanadesikan concedes that “semivowels and laryngeals are easily elided or used for vowels in many languages, as witness the Aramaic invention and subsequent widespread use of *matres lectiones*” (293). In an evolutionary typology, I hazard to say that we are dealing with a systematic restructuring over time rather than a single event, viz. “the misunderstanding of a foreigner” (293). Compare the type of change represented by the transformation of the Scandinavian *fupark* (see above).

Finally, Gnanadesikan discusses Gutenberg’s printing press and the ‘Gutenberg galaxy’ — a coinage by Marshall McLuhan (1968) to whom the author does not refer (249-272). All in all, the book under review is a valuable contribution to the history of writing. Despite some simplifications, Gnanadesikan highlights crucial aspects of the history of writing technology and written culture. It is my guess that the book will find its way into the curriculums of historical linguistics and related disciplines.

References

Brink, Stefan

- 2008 Law and society: Politics and customs in Viking Scandinavia. In: Stefan Brink and Neil Price (eds.) *The Viking World*, 23-31. New York: Routledge.

Diamond, Jared

- 1997 *Guns, Germs and Steel. The Fates of Human Societies*. New York: Jonathan Cape.

Havelock, Eric A.

- 1982 *The Literate Revolution in Greece and its Cultural Consequences*. Princeton, New Jersey: Princeton University Press.

Kiparsky, Paul

- 1976 Oral poetry: Some linguistic and typological considerations. In: Benjamin A. Stolz and Richard Stoll Shannon, III. (eds.) *Oral Literature and the Formula*, 73-106. Ann Arbor: University of Michigan.

KJ = Krause, Wolfgang, with Herbert Jankuhn

- 1966 *Die Runeninschriften im älteren Fupark*. Göttingen: Vandenhoeck and Ruprecht.

Kluge, Friedrich

- 1995 *Etymologisches Wörterbuch der deutschen Sprache*. 23rd ed., revised by Elmar Seebold. Berlin and New York: De Gruyter.

- Kuhn, Thomas S.
1962 *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.
- Looijenga, Tineke
2003 *Texts & Contexts of the Oldest Runic Inscriptions*. Leiden: Brill.
- McLuhan, Marshall
1968 *The Gutenberg Galaxy. The Making of Typographic Man*. London: Routledge and Kegan.
- Nordby, K. Jonas
2001 *Etterreformatoriske runeinnskifter i Norge: opphav og tradisjon* [Post-reformation Runic Inscriptions in Norway: Origin and Tradition; Norwegian original]. MA thesis, University of Oslo.
- Page, Raymond I.
1999 *An Introduction to English Runes*. 2nd ed. Woodbridge: Boydell.
- Polomé, Edgar C.
1991 The names of the runes. In: Alfred Bammesberger (ed.) *Old English Runes and their Continental Background*, 421-438. Heidelberg: C. Winter.
- Postgate, Nicholas, Tao Wang, and Toby Wilkinson
1995 The evidence for early writing: utilitarian or ceremonial? *Antiquity* 69: 459-480.
- Sampson, Geoffrey
1985 *Writing Systems. A Linguistic Introduction*. Stanford, California: Stanford University Press.
- Schulte, Michael
2008 Literacy in the looking glass: Vedic and skaldic verse and the two modes of oral transmission. *Scripta Islandica* 59: 181-199.
2009 Neue Überlegungen zum Aufkommen des jüngeren *Fuparks*. Ein Beitrag zur Schriftgeschichte 'von unten'. *Beiträge zur Geschichte der deutschen Sprache und Literatur (PBB)* 131.2: 1-23
2010 The rise of the younger *fupark*. The invisible hand of change. *NOWELE* 60 [in press].

Michael Schulte
Volda University College

Frederik Kortlandt, *Italo-Celtic origins and prehistoric development of the Irish language*. Amsterdam & New York: Rodopi 2007, s.215. ISBN - 13: 978-90-420-2177-8

This volume, the 14th in the Leiden Studies in Indo-
The Journal of Indo-European Studies

European Series, comprises a collection of important essays on Celtic studies by Frederik Kortlandt, the well-rounded Dutch Indo-Europeanist and expert in Armenian, Slavic, Baltic, Germanic, and Celtic languages. This publication, which its author dedicated to his friend, outstanding Celtologist David Greene, contains 17 articles dealing mostly with Celtic sound changes, the morphology of the Old Irish verb, the relative chronology of Irish innovations, and commentary on Italo-Celtic affinity. In addition, Kortlandt has attached an appendix of Old Irish verbal paradigms with a reconstruction of Insular Celtic endings.

The earliest article was written in 1978, the two most recent are dated 2006. These last two are published here for the first time, while all of the others have already been published, largely in *Ériu* or *Études Celtiques*. At first sight, the topics of the articles might seem non-unified. Kortlandt deals with Lachmann's law (in 2 articles: "Lachmann's law", pp. 87-89 and "Lachmann's law again", pp. 121-123), as well as with Old Irish mutations ("Phonemicization and rephonemicization of the Old Irish mutations", pp. 51-64), and with specific phonetic features of Insular Celtic, as in "The alleged early apocope of *-i in Celtic" (pp. 99-106) and "Posttonic *w in Old Irish" (pp. 75-79). Then, seemingly with no link, he discusses Old Irish expressions *ol* and *fedá* ("Old Irish *ol* 'inquit'", pp. 113-115, and "Old Irish *fedá*, gen. *fedot* 'Lord' and the 1st sg. absolute ending -a in subjunctives and futures" pp. 129-132). He then turns to the broad issue of the Old Irish verb, as represented in a number of articles: "The Old Irish absolute and conjunct endings and questions of relative chronology" (pp 1-23), "Old Irish subjunctives and futures and their Proto-Indo-European origins" (pp 65-74), "Absolute and conjunct again" (pp 91-97), "Thematic and athematic verb forms in Old Irish" (pp 107-111), "Three notes on the Old Irish verb" (pp 125-128), and "More on the Celtic verb" (pp. 133-147). One is surprised by the unexpected inclusion of "The origin of the Slavic imperfect" (pp 81-85) in this collection of works on Italo-Celtic and early Irish. The mosaic of articles is completed by the more germane contributions to the question of a common origin for Celtic and Italic languages ("More evidence for Italo-Celtic", pp 25-50 and "Italo-Celtic", pp 149-157); both articles on Lachmann's law also pertain to this question.

But the careful reader will certainly not miss Kortlandt's

underlying theme that can be traced as an unmistakable line from the first article presented here from 1978 up to his most recent essays. It is the issue of the relative chronology of sound changes, mostly Proto-Celtic and Old Irish. In his early work, he establishes a scenario with 22 points, a plan of scholarly inquiry which has been elaborated, specified, and revised in all his later work on Celtic. During this same period, Kortlandt has also been reacting to the objections or proposed variant chronologies of other scholars. Thus, we can follow, for example, his polemic with his colleagues Peter Schrijver and Kim McCone (pp. 99-106). The article "On the relative chronology of Celtic sound changes" (pp. 117-120) is a direct reaction to McCone's rival chronology and offers a comparison of these two systems. Another of Kortlandt's major concerns, mentioned above, is an examination of the Old Irish verb, an interpretation of its forms, and an analysis of their relation to other Indo-European counterparts. This perspective justifies an inclusion of the essay "The origin of the Slavic imperfect" in the present volume; the analysis presented there is important for an interpretation of the Old Irish *ā*-preterit. On this issue, he balances his opinion mostly against the great American Indo-European linguist Warren Cowgill (e.g. pp 91-97); later, he reacts, for example, to Stefan Schumacher and his monograph on the Celtic verb (pp 137-140). Nevertheless, Kortlandt can still turn a critical eye upon himself: he is able to admit his errors and sometimes change his previous standpoint. He gives us a summary of such revisions on pages 146-7.

The last but not least sphere of Kortlandt's interest is verification of the Italo-Celtic hypothesis. He adopts Cowgill's (1970) propositions and assumes a "relatively short period of common development followed by a long period of divergence" (p. 25) of Celtic and Italic languages. Concerning shared features, he focuses his attention mostly on the shortening of Indo-European long vowels and resonants in Italic, Celtic, and partly also in Germanic and Balto-Slavic, as opposed to Greek and Indo-Iranian (pp 25-44). Thus, Kortlandt presents to western scholars at that time (his article was written in 1980) practically unknown results from Russian linguists V.A. Dybo and V.M. Illič-Svityč. He adds his own comments to their observations and further (on pages 44-50) he offers an explanation of the transitive middle forms of the

Italic and Celtic verb (with due consideration to the interesting parallel in Old Irish and Armenian). In later years, Kortlandt set Italo-Celtic issues aside, but he had never forgotten about them, as can be seen in both notes to Lachmann’s law (pp 87-89 and 121-123). He returns to this subject again after a quarter century and analyzes primarily verbal forms to state that “Italo-Celtic represents an archaic branch of Indo-European which did not take part in major innovations of the central dialects such as the creation of an elaborate middle voice. Though specific Italo-Celtic innovations are few, the languages of this branch developed along parallel lines and preserved important traces of an original linguistic system (p. 157).” Therefore, he supports the marginal theory.

Frederik Kortlandt is known as a very productive researcher who is able to start with an exhaustive analysis of seemingly partial features and finish with an important generalization. In the present volume, this fact is well-illustrated in the Appendix (pp 159-178), which presents Kortlandt’s reconstructions of the Old Irish verbal system and his projections for Proto-Insular Celtic. Consider, for example, the present tense forms of *berid* “carries” (p. 160, see also pp. 13-14):

	absolute	Proto-Insular Celtic	Late Indo-European	conjunct	Proto-Insular Celtic	Late Indo-European
1 sg.	<i>biru</i>	* <i>berōs</i>	* <i>b^herō+est</i>	- <i>biur</i>	* <i>berō</i>	* <i>b^herō</i>
2 sg.	<i>birī</i>	* <i>berēis</i>	* <i>b^herēi+est</i>	- <i>bīr</i>	* <i>berēi</i>	* <i>b^herēi</i>
3 sg.	<i>berid</i> ¹⁾	* <i>berē[ti]s</i> ¹⁾	* <i>b^herēt+est</i>	- <i>beir</i>	* <i>berē</i>	* <i>b^herē</i>
rel.	<i>beres</i>	* <i>berē[s]so</i>	* <i>b^herēt+est+so</i>			
1 pl.	<i>bermai</i>	* <i>beromos[i]s</i>	* <i>b^heromos+est</i>	- <i>beram</i>	* <i>beromos</i>	* <i>b^heromos</i>
rel.	<i>bermae</i>	* <i>beromoses</i>	* <i>b^heromos+est+so</i>			
2 pl.	<i>beirthe</i>	* <i>bereteses</i>	* <i>b^heretes+est</i>	- <i>berid</i>	* <i>beretes</i>	* <i>b^heretes</i>
3 pl.	<i>berait</i>	* <i>berontes</i>	* <i>b^heront+est</i>	- <i>berat</i>	* <i>beront[o]</i>	* <i>b^heronto</i>
rel.	<i>bertae</i>	* <i>beronteso</i>	* <i>b^heront+est+so</i>			

Notes: 1) The prospective Goidelic form **berēh* was rejected by paradigmatic analogy in favor of the form **berēih*.

Kortlandt accepts Cowgill’s idea that the sigmatic extension of the absolute forms are derived from the Indo-European primary forms by adding of the particle *(*e*)*s* < **est* according to Wackernagel’s Law. Considering the relative forms, Kortlandt identifies the relative particle with the PIE anaphoric pronoun **so*, fem. **sā*, as he shows in Old Irish *in fer tēte* “the man he

goes" < **sindos wiros steikti so* (p. 21).

Concluding, we can state with pleasure that the present book provides a concentrated and focused collection of Kortlandt's contributions to the field of Celtic linguistics, works which were previously distributed, in fragmented fashion, across a range of periodicals and memorial volumes. It serves as an impressive illustration of Frederik Kortlandt's linguistic insight and erudition.

References

Cowgill, Warren.

- 1970 Italic and Celtic superlatives and the dialects of Indo-European. In: G. Cardona, H. Hoenigswald, A. Senn (eds.). *Indo-European and Indo-Europeans: Papers*. Philadelphia: University of Pennsylvania Press. 113-153

Marcela Karlíková
Václav Blažek
Department of Linguistics and Baltic studies
Masaryk University, Brno, Czech Republic

The Journal of Indo-European Studies

MONOGRAPH SERIES

Visit our web site <http://www.jies.org> for a complete list of
Journal articles published since 1973

Proto-Indo-European — The Archaeology of a Linguistic Problem: Studies in Honor of Marija Gimbutas

Monograph 001 — Edited by: Susan Nacev Skomal and Edgar C. Polomé

A. Richard Diebold, Jr.: Linguistic Ways to Prehistory; **Winfred P. Lehmann:** Linguistic and Archaeological Data for Handbooks of Proto-Languages; **János Nemeskéri and László Szathmáry:** An Anthropological Evaluation of the IE Problem; **Nikolai Ja. Merpert:** Ethnocultural Change in the Balkans in the Eneolithic; **Sándor Bökönyi:** Horses and Sheep in the Copper and Bronze Ages; **Homer L. Thomas:** The Indo-Europeans—Some Historical and Theoretical Considerations; **János Makkay:** The Linear Pottery and the Early Indo-Europeans; **Eric P. Hamp:** The Pig in Ancient Northern Europe; **Ralph M. Rowlett:** Grave Wealth in the Horodenka Group; **Christopher Hawkes:** Archaeologists and Indo-Europeanists—Can They Mate?; **Edgar C. Polomé:** Who are the Germanic People?; **Gregory Nagy:** The IE Heritage of Tribal Organization—Evidence from the Greek *polis*; **Bruce Lincoln:** On the Scythian Royal Burials; **Calvert Watkins:** Linguistic and Archaeological Light on Some Homeric Formulas; **T.L. Markey:** Morning, Evening, and the Twilight Between; **Wolfgang P. Schmidt:** 'Indo-European'—'Old European'; **Colin Renfrew:** Old Europe or Ancient Near East? Clay Cylinders of Sitagroi; **Edgar C. Polomé:** Marija Gimbutas, A Biographical Sketch.

ISBN 0-941694-29-1

1987 (1994), Pages 400,

Paperback with illustrations: \$52.00

Indo-European Origins: The Anthropological Evidence

Monograph 002 — Edited by John V. Day

A comprehensive survey of the evidence from biological anthropology for Indo-European origins, based on the author's Ph.D. thesis prepared under Professor James Mallory. The author first considers the various ways that languages can spread and the possible biological implications of these expansions. He then embarks on an exhaustive survey of over 2,600 books and articles relating to the physical anthropology of the earliest identified speakers of Indo-European languages, based on ancient texts, artworks and lexicons. Covering Europe and Asia from the Neolithic onwards, His study surveys dermatoglyphics, mummified corpses, skeletal remains and genetic material for evidence of ancient population movements. An attempt is then made to integrate findings from biological anthropology with data from linguistics, archaeology and social anthropology to test the validity of migration theories in relation to the dispersal of the Indo-European languages and the possible location of a hypothesized proto-Indo-European language. The bibliography lists over 2,600 books and articles.

ISBN 0-941694-75-5

2001, Pages xxvi +546, Paperback, 41 figures: \$68.00

Volume 37, Number 3 & 4, Fall/Winter 2009

Proto-Indo-European Syntax: The Order of Meaningful Elements

Monograph No. 1 — By Paul Friedrich

The Argument; AN; NG; Comparison – SA~AS; MC RC; SVO; Homeric Greek and PIE as Greenberg's III; NG; SA~AS; MC RC; SVO; Preverbs and Prepositions – the Locative Auxiliaries; The Eurasian Type III Linguistic Area; Armenian; Iranian (1) – Old Persian; Iranian (2) – Avestan; Indic and Dravidian; Anatolian and its Area; A Special Digression – Tocharian Syntax; The Crucial Evidence of Italic (e.g., Latin); The Evidence of Old Irish; From PIE to Old Irish; Proto-Slavic; Conclusions – Overview; The Trichotomization of PIE; Diachronic Perdurability; Recapitulation; Methodological Postscript – Indeterminacy in Syntactic Derivation.

ISBN 0-941694-25-9

1975 (1996), Pages 76, Paperback: \$18.00

Linguistic Reconstruction: Its Potentials and Limitations In New Perspective

Monograph No. 2 — By Henrik Birnbaum

Linguistic structure – entities, levels processes; Methods of reconstruction; Diachrony – reconstruction and prediction; Grouping – genealogy and typology; Phonological reconstruction; Morphological reconstruction (and the nature of linguistic change); Syntactic reconstruction; Semantic reconstruction; Distant genetic relationship and typology – toward the reconstruction of 'preprotolanguages' – the case of Nostratic; Linguistic change and reconstruction.

ISBN 0-941694-26-7

1977, Pages 78, Paperback: \$20.00

Homage to Georges Dumézil

Monograph No. 3 — Edited by Edgar Polomé

Jean Haudry: Comparative Mythology and Comparative Philology; **Jaan Puhvel:** The Warrior at Stake; Honi Soit Qui Mal y Pense; **Udo Strutynski:** From Swords in the Earth to the Sword in the Stone; **C. Scott Littleton:** A Possible Reflection of an Alano-Sarmatian Rite of Passage in the Arthurian Tradition; **Bruce Lincoln:** Places Outside Space, Moments Outside Time; **Alf Hiltebeitel:** Brothers, Friends, and Charioteers—Parallel Episodes in the Irish and Indian Epics; **François-Xavier Dillmann:** Katla and Her Distaff—An Episode of Tri-Functional Magic in the Eyrbyggja Saga?; **J.C. Rivière:** The Three Counsels; **T.L. Markey:** The Cosmology of Lear and His Daughters; **Eric P. Hamp:** Beowulf 2863a [g].

ISBN 0-941694-28-3

1983, Pages 144, Paperback: \$30.00

Essays In Memory of Karl Kerényi

Monograph No. 4 — Editor, Edgar C. Polomé

Edgar C. Polomé: Karl Kerényi—A biographical sketch; **Edgar C. Polomé:** Some thoughts on the methodology of Comparative Religion, with special focus on Indo-European; **R. Panikkar:** Yama—A Myth of the Primordial Man; **Frithjof Hallman:** The Labyrinth; Mythology and landscape; **Hellmut Sichtermann:** Kerényi's humanistic approach to ancient religion; **Johannes Kleinstück:** Mythical night and night of a myth; **Furi Jesi:** Reflections on the Pseudo-Euripidean Rhesos; **Godó Lieberg:** The *Theologia Tripertita* as an

intellectual model; **Geo Widengren**: “Was Not Then Our Heart Burning in Us?”; **Hans Peter Isler**: The animal frieze in archaic Greek art.
ISBN 0-941694-20-8 1984, Pages 144, Paperback: \$25.00

**The Evolution of Indo-European Nomenclature
For Salmonid Fish:**

The Case of ‘Huchen’ (Hucho Spp.)

Monograph No. 5 — By A. Richard Diebold, Jr.

Preamble – Dramatis Personae; Novel referents – conceptual and lexical gaps, and lexical-semantic change; Novel faunal species; Filling lexical gaps; ‘Ethnoscience’ and ‘folk biological taxonomy’; IE Salmonid semantic domains and word-fields; Salmonid referents – what are the ‘Salmonids?’; A metaterminology for Salmonids; Indo-Europeans and *Salmonids huchen* etymologies; Slavic ‘Bighead’ Hungarian *Galóca*; Czech *Siven* as ‘Gray(Fish)’; Serbocroatian *Mlādica*; German ‘Lurker’? ‘Taunter’? ‘Jughead’; Rumanian *Lostrita*; Russian *Taiment*; Russian *Cevica Goi*; Huchen Hypernymy; Bibliography.

ISBN 0-941694-24-0 1986, Pages 66, Paperback: \$20.00

Essays on Germanic Religion

Monograph No. 6 — By Edgar C. Polomé

Introduction; The Indo-European Component in Germanic Religion; Some Comments on *Völuspá*, Stanzas 17-18; Divine Names in Indo-European; Germanic Religion; Postscript.

ISBN 0-941694-34-8 1989, Pages 148, Paperback, Illustrated: \$30.00

**Perspectives on Indo-European Language, Culture and
Religion
Volume 1:**

Studies in Honor of Edgar C. Polomé

Monograph No. 7 — Edited by Roger Pearson

Mohammad Ali Jazayery: Edgar C. Polomé—A Biographical Sketch; **Homer Thomas**: Indo-European—From the Paleolithic to the Neolithic; **Emily Lyle**: Markedness and Encompassment in Relation to Indo-European Cosmogony; **V. N. Toporov**: Indo-European **eg’h-om* (**He-g’h-om*) – **men-*. 1 Sg. Pron. Pers. in the Light of Glossogenetics; **Hans Henrich Hock**: On the Origin and Early Development of the Sacred Sanskrit Syllable OM*; **G.A. Klimov**: The Kartvelian Analogue of Proto-Indo-European **sumb(h)ō* ‘spongy, porous’; **Vitaly Shevoroshkin**: On Carian Language and Writing; **F. Villar**: The Numeral ‘Two’ and Its Number Marking; **Onofrio Carruba**: Searching for Woman in Anatolian and Indo-European by; **H. Craig Melchert**: Death and the Hittite King; **Jos Weitenberg**: The Meaning of the Expression “To Become a Wolf” in Hittite by; **Pierre Swiggers**: The Indo-European Origin of the Greek Meters—Antoine Meillet’s Views and their Reception by Émile Benveniste and Nikolai Trubetzkoy; **K.R. Norman**: “As Rare as Fig-Flowers”; **Guy Jucquois**: Règles d’échange, voeux monastiques et tripartition fonctionnelle; **Wolfgang Meid**: *Ethnos und Sprache*.

ISBN 0-941694-37-2 1991, Pages 254, Paperback: \$36.00

Apollo the Wolf-God*Monograph No. 8 — By Daniel E. Gershenson*

Apollo and the Wolf; Evidence for the Wind-wolf; The Wolf-name in Toponymy; Heroes of Greek Myth who bear the Wolf-name or partake in its wider context; The Dolphin and the Wolf; The Wolf and Death; Werewolf-confraternities and wind evidence; Epilogue; The Stoic Explanation of the epithet Lykeios; The Trial of Old Thies, 1691; Lykos and Lykeios—Notes toward a theory of the forms of ancient Indo-European religiosity; Indexes.

ISBN 0-941694-38-0

1992, Pages 156, Paperback: \$30.00

Perspectives on Indo-European Language, Culture and Religion
Volume 2:

Studies in Honor of Edgar C. Polomé*Monograph No. 9 — Edited by Roger Pearson*

Kenneth G. Zysk: Reflections on an Indo-European Healing Tradition; **Peter Buchholz:** Ancient Lore—Oral Tradition in Medieval Scandinavia; **Dominique Briquel:** Twins and Twins in the Legend of the Founding of Rome; **Elmer Seebold:** Was Haben die Germanen unter einer Braut verstanden?; **Stephan Zimmer:** On Language Genesis—The Case of Afrikaans; **Joe Salmons:** Northwest Indo-European Vocabulary and Substrate Phonology; **Hans F. Nielsen:** 'Continental Old English' and S-Plurals in Old and Middle Dutch; **Daniel Dubuisson:** Les enjeux d'une exegèse; **Françoise Bader:** Boire de l'eau; **Norbert Oettenger:** Der Wolf im 'Helmbrecht'; **Karl Horst Schmidt:** Zur Vorgeschichte des Keltischen und Germanischen; **Riccardo Ambrosini:** On The Wanderer and The Seafarer Once Again, but from a Numerological Point of View; **Viktorija N. Jarceva:** The Problem of Existence of the Literary Language in Anglo-Saxon Britain; **Régis Boyer:** Sur la construction d'Ásgarðr.

ISBN 0-941694-39-9

1992, Pages 256, Clothbound: \$50.00

**The Glottalic Theory:
 Survey and Synthesis**

Monograph No. 10 — By Joseph C. Salmons

The Prehistory of the Glottalic Theory; *THE GLOTTALIC THEORY:* Classic Statements of the Theory; Critical Responses; Refinements & Additional Variants. *IMPLICATIONS OF THE GLOTTALIC THEORY:* Reformulating Some Laws of IE; Dialectal Developments; Distant Genetic Relationships; *KEY ISSUES AND SOME MIDDLE GROUND:* The Traditional Plain Voiced Series; The Traditional Voiced Aspirate Series; *THE CHRONOLOGICAL SOLUTION:* On the Role of Typology in Reconstruction; Theoretical Issues; Phonetics & Phonology in Reconstruction; A Note on Linguistic Methodology; Summary; Conclusion, and Outlook.

ISBN 0-941694-40-2

1993, Pages 88, Paperback: \$25.00

**The Anthropomorphic Stelae of the Ukraine:
The Early Iconography of the Indo-Europeans**

Monograph No. 11 — By D. Ya. Telegin & J. P. Mallory

THE COPPER AGE STELAE OF THE UKRAINE: Introduction; Simple Stelae; Statue-Menhirs; Altar Sanctuaries; The Creators of the Stelae. *IMAGERY AND MYTH:* Context; Anatomy and Dress of the Statue-Menhirs; Anatomy and Mythology; The Stela as Royal Figure; Indo-European Deities?; Diffusion?. *STELA-OBELISKS OF THE CIMMERIANS:* Introduction; Single-Headed Stelae; Deer Stones of the North Caucasus; The Function of the Cimmerian Stelae. *STELAE OF THE SCYTHIANS AND SARMATIANS:* Introduction; Statue-Stelae; Schematic Stelae and Statutory Reliefs; The Georgiyevka Stela. *SLAVIC STELAE:* The Zbruch Idol; The Sanctuary on Bogt Mountain. *STONE 'BABAS' OF THE POLOVTSIANS.* Conclusions; Appendix—A Catalogue of Copper Age Stelae.

ISBN 0-941694-45-3

1994, Pages 134, Clothbound, Illustrated: \$40.00

**Linguistic Typology, Universality
and the Realism of Reconstruction**

Monograph No. 12 — By Frederick W. Schwink

Relationship and Reconstruction; Principles of Typology; Typology and Reconstruction; Indo-European Phonology; Morphology; Indo-European Nominal Morphology; Indo-European Verbal Morphology; Bibliography.

ISBN 0-941694-43-7

1994, Pages 134, Paperback: \$28.00

**The Sigmatic Aorist in Indo-European:
Evidence for the Space-Time Hypothesis**

Monograph No. 13 — By Bridget Drinka

Introduction; Indo-Iranian; Old Church Slavonic; Latin; Greek; Other Languages (Hittite, Tocharian, Armenian, Celtic); Conclusion, Language Specific and General.

ISBN 0-941694-46-1

1995, Pages 228, Paperback: \$40.00

**A Student Guide to the Genitive of the Agent
in Indo-European Languages**

Monograph No 14 — By William R. Schmalstieg

ISBN 0-941694-47-X

1995, Pages 52, Paperback: \$18.00

An Introduction to Old Russian

Monograph No 15 — By William R. Schmalstieg

The Cyrillic Alphabet; Brief Remarks on Phonology; The Adjective, Pronoun and Numeral; The Noun; The Verb; A Few Remarks on Syntax; Reading Selections; Vocabulary; References.

ISBN 0-941694-49-6

1996, Pages 312, Paperback: \$46.00

Indo-European Religion after Dumézil*Monograph No. 16 — Edited by Edgar C. Polomé*

N. J. Allen: Romulus and the Fourth Function; **Wouter Belier:** The First Function—A Critical Analysis; **Enrico Campanile:** Today, after Dumézil; **Daniel Dubuisson:** Penser Les Mythologiques (Dumézil, Eliade, Lévi-Strauss); **Emily Lyle:** Broadening the Perspective on Dumézil's Three Functions; **Edgar C. Polomé:** Indo-European and non-Indo-European Elements in Germanic Myth and Religion; **Jaan Puhvel:** After Dumézil, What?; **William Sayers:** Tripartition in Early Ireland—Cosmic or Social Structure?; **Jens Peter Schjødt:** Archaeology, Language and Comparative Mythology.

ISBN 0-941694-51-8

1996, Pages 195, Paperback: \$36.00

The Indo-Europeanization of Northern Europe*Monograph No. 17 — Edited by Karlene Jones-Bley and Martin E. Huld*

ANTHROPOLOGY: **J.P. Mallory:** The Indo-European Homeland Problem—A Matter of Time; **Einar Østmo:** The Indo-European Question in a Norwegian Perspective; **Algirdas Girininkas:** The Narva Culture and the Origin of Baltic Culture; **Rimute Rimantiene and Gintautas Cesnys:** The Pan-European Corded Ware Horizon (A-Horizon) and the Pamarių (Baltic Coastal) Culture; **Algimantas Merkevičius:** Burial of the West and East Balts in the Bronze and Early Iron Ages; **Ize Loze:** Some Remarks about Northern Europeans in the Forming of the Balts; **Aleksander Koško:** The "Vistulian-Dnieper Community of the Sub-Neolithic Cultures"; **Karlene Jones-Bley:** Ceramics and Age—A Correlation in Early European Pottery. **LINGUISTICS:** **Martin E. Huld:** Meillet's Northwest Indo-European Revisited; **Saulius Ambrazas:** The Ancient Relationship of the Baltic and Germanic Languages from the Standpoint of Word Formation; **Erika Sausverde:** "Seewörter" and Substratum in Germanic, Baltic and Baltic Finno-Ugrian Languages; **Angela Della Volpe:** Indo-European Architectural Terms and the Pre-Indo-Europeans; **Krzysztof Tomasz Witczak:** The Pre-Germanic Substrata and Germanic Maritime Vocabulary. **CULTURE AND MYTHOLOGY:** **Norbertas Velius:** Marija Gimbutas—the Investigator of Baltic Mythology; **Miranda Aldhouse Green:** Concepts of Sacrifice in Later Prehistoric Europe; **Elvyra Usačiovaite:** Customs of the Ancient Prussians in German; **Walter L. Brenneman Jr.:** Religious Authenticity at the Holy Wells of Ireland—A Methodological Problem; **Miriam Robbins Dexter:** Dawn-Maid and Sun-Maid—Celestial Goddesses among the Proto-Indo-Europeans; **Adrian Porciuc:** Indo-European Implications of an Old English Document; **Romualdas Apanavičius:** Ancient Baltic According to Ethnoinstrumentological Data. **PHYSICAL ANTHROPOLOGY:** **Gintautas Česnys:** Anthropological Substratum of the Balts in Prussia and Lithuania; **Irene Balčiūntene:** The Odontological Characteristics of Lithuanian Balts and their Roots; **Ken Jacobs, Jeffrey M. Wyman and Christopher Meiklejohn:** Multi-Ethnicity in Pre-Indo-European Northeast Europe—Theoretical and Empirical Constraints on the Interpretation of Human Biodiversity; **Rimantas Jankauskas and Adomas Butrimas:** Changes of Population Biological Status

during the Indo-Europeanization of Lithuania; **Raymond V. Sidrys:** The Light Eye and Hair Cline—Implications for Indo-European Migrations to Northern Europe.

ISBN 0-941694-52-6

1996, Pages 362, Clothbound: \$56.00

ISBN 0-941694-53-4

1996, Paperback: \$48.00

The Kurgan Culture and The Indo-Europeanization of Europe

Monograph No. 18 — Papers by Marija Gimbutas

Edited by Miriam Robbins Dexter and Karlene Jones-Bley

On the Origins of North Indo-Europeans; The Indo-Europeans—Archaeological Problems; The Relative Chronology of Neolithic and Chalcolithic Cultures in Eastern Europe North of the Balkan Peninsula and the Black Sea; Proto-Indo-European Culture—The Kurgan Culture During the Fifth, Fourth, and Third Millennium B.C.; Old Europe *c.* 7000-3500 B.C.—The Earliest European Civilization Before the Infiltration of the Indo-European Peoples; The Beginnings of the Bronze Age of Europe and the Indo-Europeans 3500-2500 B.C.; An Archaeologists View of *PIE in 1975; The First Wave of Eurasian Steppe Pastoralists into Copper Age Europe; The Three Waves of the Kurgan People into Old Europe, 4500-2500 B.C.; The Kurgan Wave #2 (*c.*3400-3200 B.C.) into Europe and the Following Transformation of Culture; Primary and Secondary Homeland of the Indo-Europeans, Comments on Gamkrelidze-Ivanov Articles; Remarks on the Ethnogenesis of the Indo-Europeans in Europe; Accounting for a Great Change; Review of *Archaeology and Language* by C. Renfrew; The Collision of Two Ideologies; The Fall and Transformation of Old Europe.

ISBN 0-941694-56-9

1997, Pages 406, Paperback: \$52.00

Varia on the Indo-European Past:

Papers in Memory of Marija Gimbutas

Monograph No. 19 — Edited by Miriam Robbins Dexter and Edgar C. Polomé

Miriam Robbins Dexter: Introduction; **E.J.W. Barber:** On the Origins of the *vily/rusalki*; **Frank Battaglia:** Goddess Religion in the Early British Isles; **Kees W. Bolle:** The Great Goddess; **Angela Della Volpe:** The Great Goddess, the Sirens and Parthenope; **Miriam Robbins Dexter:** The Frightful Goddess—Birds, Snakes and Witches; **Michael Herity:** Irish and Scandinavian Neolithic Pottery Vessels—Some Comparisons; **Martin E. Huld:** The Childhood of Heroes—An Essay in Indo-European Puberty Rites; **Karlene Jones-Bley:** Defining Indo-European Burial; **W. P. Lehmann:** Frozen Residues and Relative Dating; **Wolfgang Meid:** Der mythologische Hintergrund der irischen Saga; **Edgar C. Polomé:** Animals in IE Cult and Religion.

ISBN 0-941694-58-5

1997, Pages 255, Paperback: \$48.00

**Studies in Honor of Jaan Puhvel — Part One:
Ancient Languages and Philology**

Monograph No. 20 — Edited by Dorothy Disterheft, Martin Huld and John Greppin

Preface; **Philip Levine**: Bibliography of Jaan Puhvel—Dear Jaan. **ANATOLIAN MATTERS**: **Harry A Hoffner Jr.**: On Safari in Hittite Anatolia; **Michael Kearns**: A Lydian Etymology for the Name Croesus; **Calvert Watkins**: Luvo-Hittite *lapan(a)*. **CULTURAL INVESTIGATIONS**: **Angela Della Volpe**: Problems of Semantic Reconstruction – PIE **deik-* ‘to show’; **Robert L. Fisher**: The Lore of the Staff in Indo-European Tradition; **John A.C. Greppin**: A Note on the Etymology of English ‘Horehound’; **Martin E. Huld**: Magic, Metathesis and Nudity in European Thought; **Colin Ireland**: The Ambiguous Attitude toward Fosterage in Early Irish Literature. **GRAMMATICAL STUDIES**: **Dorothy Disterheft**: The Evolution of the Indo-European Infinitives; **Eric P. Hamp**: Intensive and Perfective *prō-* in Latin; **Craig Melchert**: Denominative Verbs in Anatolian; **Erich Neu**: Zu einigen Pronominalformen des Hethitischen. **INDOLOGICAL RESEARCH**: **Jay Jasanoff**: Where Does Skt. *bhāvati* Come From?; **Andrew L. Sihler**: The Myth of Direct Reflexes of the PIE Palatal Series in Kati; **Cheryl Steets**: *Ājahād u dvā mithuna*—a note on Rgveda 10.17.1-2. **THE LEXICAL DOMAIN**: **E. J. W. Barber**: On *āy* as ‘protection’; **Karlene Jones-Bley**: Red for the Dead—a Corpse of a Different Color; **J. P. Mallory**: Some Aspects of Indo-European Agriculture.

ISBN 0-941694-54-2 1997, Pages 266, Paperback: \$48.00

**Studies in Honor of Jaan Puhvel — Part Two:
Mythology and Religion**

Monograph No. 21 — Edited by John Greppin and Edgar C. Polomé

John A. C. Greppin: For an Indo-Europeanist, Upon His Retirement; **Françoise Bader**: Voix Divines—Reflexions Métalinguistiques Indo-Européennes; **Walter L. Brennemann, Jr.**: The Drunken and the Sober—A Comparative Study of Lady Sovereignty In Irish and Indic Contexts; **Miriam Robbins Dexter**: Born of the Foam—Goddesses of River and Sea in the ‘Kingship in Heaven’ Myth; **Dorothy Disterheft**: Irish Evidence for Indo-European Royal Consecration; **Angelique Gulermovich Epstein**: The Morrigan and the Valkyries; **Stephanie W. Jamison**: A Gāndharva Marriage in the Odyssey—Nausicaa and her Imaginary Husband; **Linda A. Malcor**: First Bath—The “Washing of the Child” Motif in Christian Art; **C. Scott Littleton and Linda A. Malcor**: Did the Alans Reach Ireland? A Reassessment of the Scythian References in the *Lebor Gabála; Erenn*; **Dean A. Miller**: In Search of Indo-European Inter-Functional War; **Edgar C. Polomé**: Some Reflections on the Vedic Religious Vocabulary; **William Sayers**: Psychological Warfare in Vinland (*Eriks saga rauða*); The Sins of Siegfried; **Udo Strutynski**: Echoes of Indo-European War Crimes in the *Nibelungenlied* and its Analogues.

ISBN 0-941694-55-0 1997, Pages 286, Paperback: \$48.00

**Indo-European, Nostratic and Beyond:
Festschrift for Vitalij V. Shevoroshkin**

*Monograph No. 22 — Edited by Irén Hegedűs, Peter A. Michalove
and Alexis Manaster Ramer*

Vitalij Viktorovich Shevoroshkin: Selected Publications; **Raimo Anttila:** Beating a Goddess out of the Bush?; **Václav Blažek:** Indo-European ‘Seven’; **Claude Pierre Boisson:** The Phonotactics of Sumerian; **J. C. Catford:** The Myth of the Primordial Click; **Madhav M. Deshpande:** Pānini and the Distinctive Features; **Joseph H. Greenberg:** Does Altaic Exist?; **Eric P. Hamp:** A Far-Out Equation; **Irén Hegedűs:** On Grammaticalization in Nostratic; **Pramila Hemrajani:** Three Kisses; **Peter Edwin Hook:** Relative Clauses in Eastern Shina; **Vyacheslav Vs. Ivanov:** Luwian Collective and Non-Collective Neutral Nouns in *-ar*; **Brian D. Joseph:** Macrorelationships and Microrelationships and their Relationship; **Mark Kaiser:** Rigor or Vigor—Whither Distant Linguistic Comparison?; **Leonid Kulikov:** Vedic *mriyāte* and other pseudo-passives—Notes on an Accent Shift; **Alexis Manaster Ramer:** The Polygenesis of Western Yiddish—and the Monogenesis of Yiddish; **Karl Heinrich Menges:** Etymological Problems with Words for ‘Blood’ in Nostratic and Beyond. **Peter A. Michalove:** Altaic Evidence for Clusters in Nostratic; **Vladimir Orel:** New Albanian Etymologies (Balkan Etymologies 116-145); **Ilya Peiros:** Macro Families—Can a Mistake Be Detected?; **Richard A. Rhodes:** On Pronominal Systems; **Merritt Ruhlen:** Proto-Amerind *KAPA ‘Finger, Hand’ and Its Origin in the Old World; **Sergei A. Starostin:** On the “Consonant Splits” in Japanese; **Alexander Vovin:** Some Japanese Etymologies.

ISBN 0-941694-59-3

1997, Pages 346, Paperback: \$56.00

Festschrift for Eric P. Hamp — Volume One

Monograph No. 23 — Edited by Douglas Q. Adams

Douglas Q. Adams: On the PIE Antecedents of Verbal Accent in Tocharian B; **Francisco R. Adrados:** Verbo Celta Antiguo y Verbo Indoeuropeo; **Françoise Bader:** Autour de gr. *εεδνα* phonétique historique des laryngales et prosodie; **Philip Baldi:** The Morphological Implications of Certain Prosodic Rules in Latin; **Alfred Bammesberger:** Celtic *BOIOS*; **Thomas V. Gamkrelidze:** A Relative Chronology of the Shifts of the Three Stop Series in Indo-European; **Henrik Birnbaum:** The PIE Nominal Stem Formations in *-i/iy-*, *-u/uw-*, *-i/yā-* and Some Related Issues—The Slavic Evidence; **Henry M. Hoenigswald:** Analogy in Cyrene and Elsewhere; **Jean Haudry:** Religious Polemics In the Heroic Age—Some Linguistic Hints; **Martin E. Huld:** *Satom*, *Centum* and *Hokum*; **Stephanie W. Jamison:** Sanskrit *pārināhya* ‘household goods’—Semantic Evolution in Cultural Context; **Jay H. Jasanoff:** An Italo-Celtic Isogloss—The 3 Pl. Mediopassive in **-ntro*; **Guy Jucquois & Christophe Vielle:** Illusion, Limites et Perspectives du Comparatisme Indo-Européen—Pour en finir avec le mythe scientifique des proto-langues/-peuples.

ISBN 0-941694-57-7

1997, Pages 184, Paperback: \$48.00

The Development of Verbal Reduplication in Indo-European*Monograph No. 24 — By Mary Niepokuj*

Preface; Introduction; Overview; Note on Proto-Indo-European transcription. THE HISTORICAL BEHAVIOR AND GRAMMATICALIZATION OF REDUPLICATIVE SYSTEMS CROSS-LINGUISTICALLY: Introduction; Compounding reduplication; Turkish, Diyari, Lardil; Fixed-segment reduplication; Fixed-vowel reduplication; Tarok nominal reduplication, Salish, Fe?Fe? Bamileke, Other Niger-Congo languages, Nez Perce, Malay nouns denoting similarity, Synchronic descriptions, Malay, Javanese, Georgian; Initial fixed-consonant reduplication; Fixed affix-final consonant; Affixes with two or more fixed segments; Theoretical approaches to reduplication, The copy-and-association model, The full-copying approach; The grammaticalization of reduplicative affixes. THE SEMANTIC BEHAVIOR OF REDUPLICATION: Introduction; Plurality of some sort; Intensification; Children's reduplication; Expressives and ideophones; Echo-words; Reduplication for strictly grammatical reasons; Conclusion. THE INDO-EUROPEAN PERFECT: AN OVERVIEW: Introduction; Vedic Sanskrit; Gathic Avestan; Greek; Latin; Germanic; Armenian; Old Irish; Tocharian; Balto-Slavic. INDO-EUROPEAN PERFECT REDUPLICATION: THE SHAPE OF THE PREFIX: Introduction; The Old Irish prefix; The Latin prefix; The Sanskrit prefix, The Proto-Indo-European reduplicated prefix—a new analysis. THE DISTRIBUTION OF PERFECT REDUPLICATION IN PROTO-INDO-EUROPEAN: Introduction; Reduplication and o-grade vocalism in Greek and Indo-Iranian; Reduplicated perfects in Western Indo-European, Old Irish, Latin, Gothic; Perfects based on *TeT-* roots; Germanic, Old Irish, Sanskrit, Tocharian, Conclusion. PRESENT-TENSE REDUPLICATION IN INDO-EUROPEAN: Introduction; The Vedic Data; The Greek Data—Athematic verbs; Reduplicated thematic stems; Forms with the suffix **-ske/o-*; The shape of the present reduplicating prefix in Proto-Indo-European; Other issues. INDO-EUROPEAN INTENSIVES: Introduction; Hittite; Typological parallels; Comparative evidence; The linking vowel *-i-*. Conclusion; Further prospects. Bibliography; Index.

ISBN 0-941694-60-7

1997, Pages 240, Paperback: \$48.00

Festschrift for Eric P. Hamp — Volume Two*Monograph No. 25 — Edited by Douglas Q. Adams*

Jared S. Klein: Early Vedic *áthā* and *átho*; **Frederik Kortlandt:** PIE—Lengthened Grade in Balto-Slavic; **H. Craig Melchert:** PIE Dental Stops in Lydian; **T. L. Markey:** Deixis, Diathesis, and Duality—Shifting Fortunes of the IE 1st and 2nd Plural; **Mary Niepokuj:** Differentiating Synonyms—Some Indo-European Verbs of Cutting; **Alan J. Nussbaum:** A Note on Hesychian *τερυ* and *τερρα*; **Edgar C. Polomé:** A Few Notes on the Gmc. Terminology Concerning Time; **Don Ringe:** On the Origin of 3pl. Imperative *-vrou*; **Helmut Rix:** The Pre-Luconian Inscriptions of Southern Italy; **Joseph C. Salmons:** Naturalness Syndromes and PIE 'Voiced Stops'; **Bernfried Schlerath:** Name and Word in Indo-European; **William R. Schmalstieg:** Slavic *kamy* and the First Person Singular Ending; **Karl Horst Schmidt:** Zur Definition des Inselkeltischen; **Kazuhiko Yoshida:** A Further Remark on the Hittite Verbal Endings; I pl. *-wani* and 2 pl. *-tani*; **Calvert Watkins:** Just Day Before Yesterday

ISBN 0-941694-62-3

1997, Pages 198, Paperback: \$48.00

**The Bronze Age and Early Iron Age Peoples
Of Eastern Central Asia**

*Monograph No. 26 — Edited by Victor H. Mair
(in two volumes)*

VOLUME 1: ARCHEOLOGY, MIGRATION AND NOMADISM, LINGUISTICS: Map of Eastern Central Asia. *INTRODUCTION:* **Victor H. Mair:** Priorities. *ARCHEOLOGY:* **AN Zhimin:** Cultural Complexes of the Bronze Age in the Tarim Basin and Surrounding Areas; **Elena E. Kuzmina:** Cultural Connections of the Tarim Basin People and Pastoralists of the Asian Steppes in the Bronze Age; **David W. Anthony:** The Opening of the Eurasian Steppe at 2000 BCE; **Asko Parpola:** Aryan Languages, Archeological Cultures, and Sinkiang—Where Did Proto-Iranian Come into Being and How Did It Spread?; **Fredrik T. Hiebert:** Central Asians on the Iranian Plateau—A Model for Indo-Iranian Expansionism; **SHUI Tao:** On the Relationship between the Tarim and Fergana Basins in the Bronze Age; **HE Dexiu:** A Brief Report on the Mummies from the Zaghunluq Site in Chärchän County; **J.P. Mallory:** A European Perspective on Indo-Europeans in Asia; **Colin Renfrew:** The Tarim Basin, Tocharian, and Indo-European Origins—A View from the West. *MIGRATION AND NOMADISM:* **Karl Jettmar:** Early Migrations in Central Asia; **Natalia I. Shishlina and Fredrik T. Hiebert:** The Steppe and the Sown—Interaction between Bronze Age Eurasian Nomads and Agriculturalists; **Jeannine Davis-Kimball:** Tribal Interaction between the Early Iron Age Nomads of the Southern Ural Steppes, Semirechive, and Xinjiang; **Claudia Chang and Perry A. Tourtellotte:** The Role of Agro-pastoralism in the Evolution of Steppe; Culture in the Semirechye Area of Southern Kazakhstan during the Saka/Wustum Period (600 BCE-400 CE); **Tzehtley C'hiou-Peng:** Western Hunan and Its Steppe Affinities. *LINGUISTICS:* **Eric P. Hamp:** Whose Were the Tocharians?—Linguistic Subgrouping and Diagnostic Idiosyncrasy; **Werner Winter:** Lexical Archaisms in the Tocharian Languages; **Georges-Jean Pinault:** Tocharian Languages and Pre-Buddhist Culture; **Douglas Q. Adams:** On the History and Significance of Some Tocharian B Agricultural Terms; **Alexander Lubotsky:** Tocharian Loan Words in Old Chinese—Chariots, Chariot Gear, and Town Building; **Don Ringe, Tandy Warnow, Ann Taylor, Alexander Michailov, and Libby Levison:** Computational Cladistics and the Position of Tocharian; Juha Janhunen, The Horse in East Asia—Reviewing the Linguistic Evidence; **John Colarusso:** Languages of the Dead; **Kevin Tuite:** Evidence for Prehistoric Links between the Caucasus and Central Asia—The Case of the Burushos; **LIN Meicun:** Qilian and Kunlun—The Earliest Tokharian Loan-words in Ancient Chinese; **Penglin Wang:** A Linguistic Approach to Inner Asian Ethnonyms; **William S-Y. Wang:** Three Windows on the Past. **VOLUME 2: GENETICS AND PHYSICAL ANTHROPOLOGY:** **Paolo Francalacci:** DNA Analysis on Ancient Desiccated Corpses from Xinjiang (China)—Further Results; **Tongmao Zhao:** The Uyghurs, a Mongoloid-Caucaseid Mixed Population—Genetic Evidence and Estimates of Caucasian Admixture in the Peoples Living in Northwest China; **HAN Kangxin:** The Physical Anthropology of the Ancient Populations of the Tarim Basin and Surrounding Areas. *METALLURGY:* **Ke Peng:** The Andronovo Bronze Artifacts Discovered in Toqztara County in Ili, Xinjiang; **Jianjun Mei and Colin Shell:** Copper And Bronze Metallurgy in Late Prehistoric Xinjiang; **Emwa C. Bunker:** Cultural Diversity in the Tarim Basin Vicinity and Its Impact on Ancient Chinese Culture; **Katheryn M. Linduff:** The Emergence and

Demise of Bronze-Producing Cultures Outside the Central Plain of China. *TEXTILES*: **E.J.W. Barber**: Bronze Age Cloth and Clothing of the Tarim Basin—The Krörän (Loulan) and Qumul (Elami) Evidence. **Irene Good**: Bronze Age Cloth and Clothing of the Tarim Basin—The Chärchän Evidence. *GEOGRAPHY AND CLIMATOLOGY*: **Harold C. Fleming**: At the Vortex of Central Asia—Mummies as Testimony to Prehistory; **Kenneth J. Hsü**: Did the Xinjiang Indo-Europeans Leave Their Home Because of Global Cooling? *HISTORY*: **Michael Puett**: China in Early Eurasian History—A Brief Review of Recent Scholarship on the Issue; **E. Bruce Brooks**: Textual Evidence for 04c Sino-Bactrian Contact. *MYTHOLOGY AND ETHNOLOGY*: **Denis Sinor**: The Myth of Languages and the Language of Myth; **C. Scott Littleton**: Were Some of the Xinjiang Mummies ‘Epi-Scythians’? An Excursus in Trans-Eurasian Folklore and Mythology; **CHEN Chien-wen**: Further Studies on the Racial, Cultural, and Ethnic Affinities of the Yuezhi; **Dolkun Kamberi**: Discovery of the Täklimakanian Civilization during a Century of Tarim Archeological Exploration (ca. 1886-1996); **Dru C. Gladney**: Ethnogenesis and Ethnic Identity in China—Considering the Uygurs and Kazaks. *CONCLUSION*: **Victor H. Mair**: *Die Sprachmöbe*—An Archeolinguistic Parable. *APPENDIX*: **Victor H. Mair and Dolkun Kamberi**: Place, People, and Site Names of the Uyghur Region Pertinent to the Archeology of the Bronze Age and Iron Age.
ISBN 0-941694-66-6 **1998, Pages 912, Paperback,**
2-volumes, with maps and illustrations: \$96.00

**Proceedings of the Seventh UCLA Indo-European Conference:
 Los Angeles, 1995**

*Monograph No. 27 — Edited by Angela della Volpe
 in collaboration with Edgar C. Polomé*

Henning Andersen: A Glimpse of the Homeland of the Slavs—Ecological and Cultural Change in Prehistory; **Jeannine Davis-Kimball**: Burial Practices Among the Iranian Sarmatians; **Angelique Gulermovich Epstein**: Divine Devouring—Further Notes on the Morrigan and the Valkyries; **John D. Frauzel**: Impersonal Absolutes in Indo-Iranian, Greek, Latin and Baltic and the Origin of the Indo-European Absolute Construction; **Gayané Hagopian**: The Classical Armenian Term *Skndik*; **Yelena Izbitser**: Wheeled Vehicles and the Homeland of the Indo-Europeans; **Anatoly Liberman**: English *Girl* under the Asterisked Sky of the Indo-Europeans; **Dean A. Miller**: Destroyer or Builder and other Bifurcations—Notes on Indo-European Sovereignty; **Marianna Nikolaidou**: Religious Symbols in Minoan Scripts and Iconography—Elements of Formulaic Expression; **Yevgeniy Novitskiy**: Semantic Analysis of the Early Metal Period Sculpture of the Northern Black Sea Region; **Christopher M. Stevens**: The Consonants of German and Germanic.
ISBN 0-941694-64-X **1998, Pages 248, Paperback: \$46.00**

**Proceedings of the Ninth UCLA Indo-European Conference:
 Los Angeles, May 23-24, 1997**

*Monograph No. 28 — Edited by Karlene Jones-Bley, Angela Della Volpe,
 Miriam Robbins Dexter, and Martin E. Huld*

Theo Vennemann: Andromeda and the Apples of the Hesperides; **Vyacheslav Ivanov**: Indo-European Expressions of Totality and the Invitation to the Feast

of All the Gods; **Miriam Robbins Dexter**: Queen Medb, Female Autonomy in Ancient Ireland, and Irish Matrilineal Traditions; **Anna M. Ranero**: An Old Indo-European Motif Revisited—The Mortal Combat between Father and Son; **Christopher Wilhelm**: Prometheans and the Caucasus—The Origins of the Prometheus Myth; **Andrew Minard**: Of Horses and Humans—The Divine Twins in Celtic Mythology and Folklore; **Dean Miller**: The King, The Hero and the Gods—An Exploratory Note on the Functions and the Supernatural; **Martin E. Huld**—Albanian Evidence for the Sigmatic Aorist; **Kazuhiko Yoshida**: Assibilation in Hittite. Index.
ISBN 0-941694-65-8 1998, Pages 242, Paperback: \$46.00

**On the Bifurcation and Repression Theories
of Germanic and German**

Monograph No. 29 — By Christopher M. Stevens

Evidence for the bifurcation and repression theories of German is evaluated and the author presents new evidence in support of the traditional inventory of Proto-Germanic consonants, as well as for the traditional view of the origin and spread of the Second Consonant Shift.
ISBN 0-941694-67-4 1998, Pages 98, Paperback: \$25.00

**Language Change and Typological Variation.
In Honor of Winfred P. Lehmann on the Occasion of his 83rd
Birthday
Volume 1:**

Language Change and Phonology

Monograph No. 30 — Edited by Edgar C. Polomé & Carol F. Justus

Preface; Winfred P. Lehmann – List of Publications; **Mohammad Ali Jazayery**: Winfred P. Lehmann – An Appreciation. **I. ASPECTS OF LANGUAGE CHANGE**: A. *EARLY EUROPE*: **Edgar C. Polomé**: A Few Remarks on Proto-Indo-European Substrates; **Francisco Villar**: Hispanoceltica o Celtibérico. B. *GRAMMATICAL CHANGE*: **Charles J. Bailey**: How Grammars of English Have Miscued; **T. Givón**: Internal Reconstruction, on its Own. C. *GERMANIC DATA*: **Elmer H. Antonsen**: *Reng di þær Vingi* (Am. 4.2) ‘Vingi distorted them’ – ‘Omitted’ runes—A question of typology? **Wolfgang Meid**: *wair* und andere Bezeichnungen für “Mann” im Gotischen. D. *NUMERALS*: **Onofrio Carruba**: Die indogermanischen Zahlwörter—Neue Ergebnisse und Perspektiven; **Vyacheslav Vs. Ivanov**: On Terms for ‘Half, Moiety’ in Indo-European and Germanic; **Eugenio Luján Martínez**: Towards a Typology of Change in Numeral Systems. **II. PHONOLOGY**: A. *PHONOLOGICAL UNIVERSALS*: **Henry M. Hoenigswald**: Secondary Split, Gap-filling & Bifurcation in Historical Phonology; **Gregory K. Iverson & Joseph Salmons**: Umlaut as Regular Sound Change—The Phonetic Basis of “Ingenerate Umlaut”; **Frans Van Coetsam**: Umlaut as a Reflex of Accentual Structure. B. *PHONOLOGICAL TYPOLOGY*: **Thomas V. Gamkrelidze**: Italic Consonantism in the Light of the Glottalic Theory; **Frederik Kortlandt**: Lachmann’s Law Again; **Ladislav Zgusta**: Some Thoughts on the Laryngeal and Glottalic Theories; **Frederick W. Schwink**: On the Role of Typology in Reconstructing Phonological Rules. C. *IE PHONOLOGICAL PARTICULARS*: **Anatoly**

Volume 37, Number 3 & 4, Fall/Winter 2009

Lieberman: *Schärfung / stootoon and Tägheitsakzent / sleeptoon* in the Rhein-Limburg area and Their Scandinavian Analogues; **Françoise Bader:** Fonctions des allitérations; **Werner Winter:** Consonant Harmony in Armenian.
ISBN 0-941694-68-2 **1999, Pages vi + 319, Paperback: \$48.00**

**Language Change and Typological Variation. In Honor of
 Winfred P. Lehmann on the Occasion of his 83rd Birthday
 Volume 2: Grammatical Universals & Typology**

Monograph No. 31 — Edited by Carol F. Justus & Edgar C. Polomé

PREFACE: Grammatical Abbreviations; Bibliographical Abbreviations. **I. UNIVERSAL ISSUES:** **Paolo Ramat:** On Categories and Categorizations; **Pieter A. M. Seuren:** Topic and Comment; **Robert Longacre:** A Footnote to Lehmann's OV/VO Typology. **II. TYPOLOGICAL ISSUES:** *A. CATEGORIES AND RELATIONS:* **Theodora Bynon:** Schleicher's Reconstruction of a Sentence—Back to Pre-Pre-Indo-European; **Francisco R. Adrados:** Hacia una tipología de las combinaciones de rasgos lingüísticos; **Henrik Birnbaum:** On the Relationship of Typology and Genealogy in Language Classification—Some Theoretical Considerations and Applications to Indo-European; **Anthony Aristar:** Typology and the Saussurean Dichotomy. *B. CONSTITUENT ORDER:* **Subhadra Kumar Sen:** On the Syntax of the Anitta Text; **Douglas Mitchell:** Lehmann's Use of Syntactic Typology; **Michael Clyne:** Typology and Language Change in Bilingualism and Trilingualism. *C. ALIGNMENT & CONTENTIVE TYPE:* **Bridget Drinka:** Alignment in Early Proto-Indo-European; **Helena Kurzová:** Syntax in the Indo-European Morphosyntactic Type; **Georgij A. Klimov:** On the Pre-accusative Component of the Structure of the Kartvelian Languages; **Karl Horst Schmidt:** On Congruence in Languages of Active Typology; **László Deszö:** On the Structuring of Early Indo-European in Areal-Typological Perspective; **Bernard Comrie & Maria Polinsky:** Gender in Historical Perspective—Radial Categories Meet Language; **Brigitte Bauer:** Impersonal *Habet* constructions in Latin—At the Crossroads of Indo-European Innovation; **Carol F. Justus:** Indo-European 'have'—a Grammatical Etymology.

ISBN 0-941694-69-0

1999, Pages vi + 321, Paperback: \$48.00

**Proceedings of the Tenth UCLA Indo-European Conference:
 Los Angeles, May 21-23, 1998**

*Monograph No. 32 — Edited by Karlene Jones-Bley, Martin E. Huld,
 Angela Della Volpe, and Miriam Robbins Dexter*

Introduction; **LINGUISTIC INVESTIGATIONS:** **Calvert Watkins:** A Celtic Miscellany; **Vyacheslav Vs. Ivanov:** Palatalization and Labiovelars in Luwian; **Darya Kavitskaya:** Vowel Epenthesis and Syllable Structure in Hittite; **Ilya Yakubovich:** "Stative" Suffix /āi-a/ in the Verbal System of old Indic; **Carol F. Justus:** The Arrival of Italic and Germanic 'have' in Late Indo-European; **Apostolos N. Athanassakis:** *Okeanos* Mythic and Linguistic Origins; **Martin E. Huld:** IE 'bear' *Ursus arctos*, *Ursa Major*, and *Ursa minor*. **STUDIES IN POETIC DICTION:** **Dean Miller:** Kings Communicating - Royal Speech and the Fourth Function; **Thomas R. Walsh:** Towards the Poetics of Potions - Helen's Cup and Indo-European Comparanda; **Ralph Gallucci:** Studies in Homeric Epic

Tradition; **Edwin D. Floyd**: Cometas, On Lazarus—A Resurrection of Indo-European Poetics? **INDO-EUROPEAN EXPANSION**: **Edwin F. Bryant**: The Indo-Aryan Invasion Debate—The Logic of the Response; **Jeannine Davis-Kimball**: Priestesses, Enarees, and Other Statuses among Indo-Iranian Peoples; **Andrew Sherratt**: Echoes of the Big Bang—The Historical Context of Language Dispersal.

ISBN 0-941694-70-4 1999, Pages 289, Paperback: \$46.00

Miscellanea Indo-Europea

Monograph No. 33 — Edited by Edgar C. Polomé

Edgar C. Polomé: Introduction; **Alain de Benoist**: Bibliographie Chronologique des Études Indo-Européennes; **Garrett Olmsted**: Archaeology, Social Evolution, and the Spread of Indo-European Languages and Cultures; **Alexander Häusler**: Nomadenhypothese und Ursprung der Indogermanen; **Françoise Bader**: Homère et le pélasge; **Carol Justus**: Can a Counting System be an Index of Linguistic Relationships?; **Nick Allen**: Hinduism, Structuralism and Dumézil; **Dean Miller**: Who Deals with the Gods? Kings and Other Intermediaries; **Edgar C. Polomé**: IE Initial /b/ & Gmc. Initial /p/; **Edgar C. Polomé**: Views on Developments in Indo-European Religions During the Last Decade of So.

ISBN 0-941694-71-2 1999, Pages 313, Paperback: \$48.00

Sub-Grammatical Survival:

Indo-European s-mobile and its Regeneration in Germanic

Monograph No. 34 — By Mark R. V. Southern

Introduction; The Question; Phonological Distribution; Root Structure. Sandhi—Morphological & Word-Boundary Issues, Phonetics and Language Acquisition; Germanic – Layers of Evidence—The Continuation of the Linguistic Process. The Cross-Cultural Context—Phonetics and Phrasal Domains, Comparative Baltic Evidence, Implications. Summation.

ISBN 0-941694-72-0 1999, Pages 400, Paperback: \$48.00

Proceedings of the Eleventh UCLA Indo-European Conference:

Los Angeles, June 4-5, 1999

Monograph No. 35 — Edited by Karlene Jones-Bley, Martin E. Huld, Angela Della Volpe

Introduction; Language Abbreviations; **Stephanie Jamison**: On Translating the Rig Veda—Three questions; **Jorma Koivulehto**: Finno-Ugric Reflexes of North-West Indo-European and Early Stages of Indo-Iranian; **Olga Petrova**: Grimm's Law in Optimality Theory; **Joshua T. Katz**: Evening Dress—The Metaphorical Background of Latin *vesper* and Greek *ἔσπερος*; **Martin E. Huld**: Reinventing the Wheel—the Technology of Transport and Indo-European Expansions; **Kristin M. Reichardt**: Curse Formulae in Hittite and Hieroglyphic Luwian; **Ilya Yakubovich**: Laryngeals from Velars in Hittite—A Triple-Headed Argument; **David Atkins**: An Alternative Principle of Succession in the Hittite Monarchy; **Christopher Wilhelm**: On the Possible Origins of the Philistines; **Sandra Olsen**: Reflections of Ritual Behavior at Botai, Kazakhstan; **John Leavitt**: The Cow of Plenty in Indo-Iranian and Celtic

c) Survivals of the *κυνή/ λυκή*; *Ἀλκιμώτατοι κύνες*; “*Ver sacrum* bei den [Indo-]Germanen?”; Canine/ lupine qualities; *ODIN ANALOGS*: India; Iran; The Ossetes; The Celts; The Balts and Slavs; Greece; Italy; Mars; Faunus; Veiovis; **teutā*-god and **koryos*-god; *Un rite d’agrégation*; **PART III. THE VRĀTYAS: WARRIOR-BRAHMINS**: An oath-brotherhood; Vratya clothing and weapons; Seasonal activities; The brahmācārin; The education of a brahmin; The vrātyastoma; *Vrātyastoma* and *sattra*; *Sattra*; *Daksinā*; Vrātyas and sattrins; *RUDRA*: Rudra’s armies; *Ganapati*; The rudras; The Maruts; A troop; The Maruts are both like and unlike Rudra; The Maruts as **koryos*; I-Ir. **marXa*; Marut epithets; Priestly activities; War-god; The Wild Hunter; *Canis*; Dogs and the Lord of Dogs; *Dasarā*; *Le jeu du Cheval*; *Têtes coupées*; The hunter with the spear; Some conclusions; Death; Fertility; *Ekstasis*; The Feast of the Changing Year; The Dragon-Slayer; Initiation; *Natarāja*; The *Ekavrātya*; *CHOOSING A LEADER*: The *Sulagava* sacrifice; Two stories; The vrātyas as rudras; The dice game in early India; The “dice”; How it was played; An army of dice; The dog and the dog-killer; Kali, the dog; Kali *eko’kṣaḥ* and *ekākṣa*; The One and the Dog; The ritual dice game; *senānir mahatō ganāsya*; *Sabhā* and *irina*; *Sabhā* and solstice; *Herjann*; *Excursus*—The Vrātyastomas; *DARKNESS, DOGS, AND DEATH*: Conclusion—The Wolf-god and the Eye in the Well; Bibliographies; Primary Sources; Works Cited; Index.

ISBN 0-941694-74-7

2000, Pages 306, Paperback: \$48.00

The Historical Morphology of the Baltic Verb

Monograph No. 37 — By William R. Schmalstieg

The purpose of this book is to suggest a possible scenario for the history of Baltic verbal morphology with relatively little attention to semantics and syntax. The various stages of development from a reconstructed Proto-Indo-European verbal system to the attested systems of the extant Baltic languages are proposed. Various innovative theories of the author and other contemporary specialists in Baltic historical linguistics are discussed and evaluated, in many cases making available the results of their work available in English for the first time. In addition to a large bibliography on the Baltic verb the book is supplied with an index of each word form discussed.

ISBN 0-941694-76-3

2001, Pages 445, Paperback: \$56.00

Greater Anatolia and the Indo-Hittite Language Family:

Papers presented at a Colloquium hosted

by the University of Richmond, March 18-19, 2000

Monograph No. 38 — Edited by Robert Drews

Robert Drews: Introduction and Acknowledgments, Opening Remarks; **E.J.W. Barber**: The Clues in the Clothes—Some Independent Evidence for the Movement of Families; **Paul Zimansky**: Archaeological Inquiries into Ethno-Linguistic Diversity in Urartu; **Peter Ian Kuniholm**: Dendrochronological Perspectives on Greater Anatolia and the Indo-Hittite Language Family; Discussion Session, Saturday Morning; **Colin Renfrew**: The Anatolian Origins of Proto-Indo-European and the Autochthony of the Hittites; **Jeremy Rutter**: Critical Response to the First Four Papers; Discussion Session, Saturday Afternoon; **Margalis Finkelberg**: The Language of Linear A—Greek, Semitic, or Anatolian?; **Alexander Lehrmann**: Reconstructing Indo-Hittite; **Vyacheslav V. Ivanov**: Southern Anatolian and Northern Anatolian as Separate

Indo-European Dialects and Anatolian as a Late Linguistic Zone; **Bill J. Darden**: On the Question of the Anatolian Origin of Indo-Hittite; **Craig Melchert**: Critical Response to the Last Four Papers; Discussion Session—Saturday Morning; **Robert Drews**: Greater Anatolia, Proto-Anatolian, Proto-Indo-Hittite, and Beyond; **Geoffrey D. Summers**: Appendix—Questions Raised by the Identification of Neolithic, Chalcolithic and Early Bronze Age Horse Bones in Anatolia. Index.

ISBN 0-941694-77-1

2001, Page xiv and 305, Paperback: \$52.00

A Definitive Reconstructed Text of the Coligny Calendar

Monograph No. 39 — By Garrett S. Ostmsted

The fragmentary calendar plate from Coligny (near Lyons) apparently dates to the second-century AD, although the Gaulish calendar engraved on this plate is plainly the result of a long transmission process. The 25-year-cycle calendar, the final system of this transmission process, probably originated early in the first-century BC, before Caesar's conquest. It is within this late pre-Roman period that the calendar took on its final form and notation to enter a two-century long transmission process. Since only 40% of the original Coligny calendar survives as a fragmentary mosaic, the reconstruction of the original whole depends upon recognizing repetitive patterns and filling in the missing sequences of these patterns. The most significant of these patterns is that discerned in the schemes of the TII and the N lunar/solar counting marks and their associated notation. Here the chronological cycles implied by these notational patterns are explained in detail. Also provided is a glossary of the functional and etymological significance of terms utilized in these daily notational patterns. The fragmentary calendar is brought to photographic completion utilizing the original wording and engraving found on the surviving fragments.

ISBN 0-941694-78-X

2001, Pages 120, Paperback, 70 plates: \$40.00

Proceedings of the Twelfth Annual UCLA Indo-European Conference: Los Angeles, May 26-28, 2000

Monograph No. 40 — Edited by Martin E. Huld, Karlene Jones-Bley, Angela Della Volpe, Miriam Robbins Dexter

Introduction; Language Abbreviations; **PHONOLOGY AND MORPHOLOGY—SOUND AND SENSE**: The Sound-Systems of Proto-Indo-European, **George Dunkel**; Against the Assumption of an IE “**k^w* *etuóres* Rule”, **Jens Elmegård Rasmussen**; The Reflexes of Indo-European *#*CR*- Clusters in Hittite, **Aleksei S. Kassian and Ilya S. Yakubovich**; Proto-Indo-European Root Nouns in the Baltic Languages, **Jenny Helena Larsson**; Verb or Noun? On the Origin of the Third Person in IE, **Birgit Anette Olsen**; Indo-European **b^h* *uH* in Luwian and the Prehistory of Past and Perfect, **Vyacheslav V. Ivanov**. **EPIGRAPHY AND ETYMOLOGY—WORDS AND THINGS**: The Poggio Sommavilla Inscription, **Giovanna Rocca**; The Etymology of Some Germanic, Especially English Plant Names (*Henbane, Hemlock, Horehound*), **Anatoly Liberman**; ‘Elephant’ in Indo-European Languages, **Václav Blaz’ek**. **MYTHOLOGY AND POETICS—FORM AND FANCY**: The Persistence of the Indo-European Formula “Man-Slaying” from Homer through Gregory of Nazianzus, **Edwin D. Floyd**; Hermes and Agni—a fire-god in Greece?, **Paul-Louis van Berg**; Dumézil, a Paradigm, and *Iliad*, **Thomas R. Walsh**; Dumézil

in 2000—An Outline and a Prospect, **Dean A. Miller and C. Scott Littleton**. **RETHINKING ARCHAEOLOGY—MYTH, CULTURE, AND MODELS:** The Bird Goddess in Germanic Europe, **Mary Lynn Wilson**; Village Life to Nomadism—An Indo-Iranian Model in the Tien Shan Mountains (Xinjiang, China), **Jeannine Davis-Kimball**; Perpetuating Traditions, Changing Ideologies—the Bell Beaker culture in the British Isles and its implications for the Indo-European problem, **Marc M. Vander Linden**; Towards an Understanding of the Indo-European Origin Problem—Theoretical and Methodological Interfaces, **Bryan K. Hanks**. **EPILOGUE—NEW RESEARCH TOOLS:** The Internet and Publication and Research in Indo-European Studies—Present State and Future Prospects, **Deborah Anderson**; Index. ISBN 0-941694-79-8 2001, Pages 326, Paperback: \$46.00

Pre-Indo-European

Monograph No. 41 — By Winfred P. Lehmann

THE BASES FOR RECONSTRUCTING PRE-IE: Advances in the Sciences and Fields Relevant for Indo-European Studies; Pre-Indo-European—an Active Language; Genetics and its Importance for Identifying the Indo-European Speakers in their Spread; Archeology and its Contribution to our Information on the Early Period of Indo-European Speakers; Indo-European as one of the Nostratic Languages; The Primary Bases for Reconstructing Pre-Indo-European. **FROM PIE TO PRE-IE:** The Common Source; The Comparative Method; The Method of Internal Reconstruction for Morphology and Syntax; The Use of Residues; Determination of Chronological Strata in Language; Typological Findings as Guides to Interpretation of Data; Characteristics of Active Languages; Inferences Based on Application of these Methods and Conclusions concerning Language Structures; Earlier Analyses of the Lexicon that Support the Assumption of Pre-Indo-European as an Active Language; Stages of Proto-Indo-European. **RESIDUES IN PIE THAT PROMPT ITS IDENTIFICATION AS A REFLEX OF AN ACTIVE LANGUAGE:** The Importance of Examining Residues as Illustrated by the Clarification of Germanic Phonology by Jacob Grimm and his Successors; Explanations of such Residues by a Historical Approach and the Assumption of Stages in Languages; Pre-Indo-European as an Agreement Language of the Active Sub-type; Doublets as Reflexes of Earlier Active Structure in the Lexicon; Reflexes of Active Languages in Nouns, Verbs, and Particles; Sentence Patterns of Active Structure as Found in the Early Dialects; Morphological Patterns Reflecting the Earlier Active Structure; Previous Recognition and Explanation of Active Language Characteristics in the Indo-European Languages; Conclusion. **LEXICAL STRUCTURE:** The Lexicon in Active Languages—Nouns, Verbs, and Particles; Nouns—Active/Animate and Stative/Inanimate, and the Introduction of Gender Classes; Sets of Nouns in Accordance with their Meaning; Words for the Family and its Arrangements; Verbs—Active and Stative; Involuntary Verbs; Centrifugal and Centripetal Uses of Verbs; Particles; The Particles Proper. **SYNTAX:** Active Language Syntax in Pre-Indo-European; Basic Word Order in the Sentence; Complex Sentences; the Use of Participles and Other Non-finite Verb Forms; Uses of Participles in the Early Dialects; Subordinate Clauses and the Development of Particles to Conjunctions; Classes of Particles; The Meanings and Origins of Selected Particles, and their Application as Morphological Markers; The Position of Particles with Reference to Nouns

Volume 37, Number 3 & 4, Fall/Winter 2009

and Verbs; Examples of Early Texts that Reflect the Syntax of Pre-Indo-European. **DERIVATIONAL MORPHOLOGY:** Attention to Indo-European Derivational Morphology in the Major Handbooks; Theoretical Assumptions in Previous Attention to the Earlier Derivational Patterning; Evidence for the Basic Derivational Processes; The Role of Particles in the Pre-Indo-European Lexicon; Production of the Earliest Suffixed Nouns; Production of the Earliest Suffixed Verbs; Evidence in Compounds; The Increasing Use of Suffixes in the Formation of New Verbs; Conclusion. **INFLECTIONAL MORPHOLOGY:** Views in the Handbooks on Earlier Inflectional Morphology; The Active Verb System of Pre-Indo-European; of the Injunctive that Illustrate those of Earlier Verb Forms in Pre-Indo-European; Uses of the Perfect and of the Hittite *hi*-Conjugation Forms that Illustrate those of their Etymon in Pre-Indo-European; Non-finite Forms of the Verb in Pre-Indo-European; Verbal Nouns; The Development of Inflections in the Noun; Adjectives; Pronouns; Conclusion, with Examples that may Reflect Pre-Indo-European Texts. **PHONOLOGY:** Theoretical Bases of the Phonological Systems Proposed for Proto-Indo-European and Pre-Indo-European; Three Phonological Systems that have been Proposed for Proto-Indo-European; Period of Movable Pitch Accent and its Effect on Ablaut; The Period of Stress Accent and its Effect on Ablaut; Chronology of Ablaut Changes; The Obstruent System; the Glottalic Theory; The Palatals and Velars; The Resonants; The Pre-Indo-European Phonemic System. **THE CULTURE OF THE PRE-INDO-EUROPEAN SPEAKERS:** Evidence for the Civilization and Culture of the Pre-Indo-European Speakers; Criteria for Assuming a Pre-ceramic Neo-lithic Period and its Relevance for Pre-Indo-European; Social and Economic Conditions; Livestock and Agricultural Activities in the Pre-Indo-European Community; Terminology Indicating Gradual Development from Hunting-Gathering to a Settled Society; Tokens, their Distribution, and implications for Settlement Areas of the Indo-European Speakers; Art, Literature and Religion of the Pre-Indo-European Speakers; Life in the Pre-Indo-European Period; Bases of the Preeminence of the Indo-Europeans. **PRE-IE AND POSSIBLE RELATED LANGUAGES:** Pre-Indo-European in Relation to Nostratic and Eurasiatic; Principles to be Observed in Reconstructing Macro-families; The Need to Reconstruct Proto-Languages for Macro-families; References; Index.

ISBN 0-941694-82-8

2002, Pages xvi+ 287, Paperback: \$52.00

The Indo-European and Ancient Near Eastern Sources of the Armenian Epic

Monograph No. 42 — By Armen Y. Petrosyan

INDO-EUROPEAN AND ANCIENT NEAR EASTERN MYTHOLOGICAL PARALLELS: The Sasna C'rer and the "Basic myth"; Covinar, Inara, and *Hner; The Equine Myths; Bull and Cow as the Symbols of the Thunder and Storm Deities; The Sun God, Divine Twins, and Their Sister; The Early Twins and Triplets of the South of Armenia; Sanasar and Baldasar, Indra and Agni, Teššub and Tašmišu; Sanasar, Eruand, and Pirwa; Angel, Nergal, and Kur; The "Third God" Vahagn, Davit', and Asag; The Indo-European "Dog Slayer"—Hayk, Davit' and David. **EPONYMOUS PATRIARCHS, THUNDER GOD, AND "BLACK AND WHITE MYTH":** Aram, the "Black Hero"; Hayk and Aram; The Birth of the "Black Hero"; The "White Hero"; The Myth of the Black and White Cities. **THE "DYING GOD" AND THE ADVERSARIES OF**

The Journal of Indo-European Studies

THE ARMENIAN HEROES: Ara Gelec'ik, Mher, and their Cousins; Adversaries of Heroes. **ARMENIAN AND INDO-EUROPEAN MYTHOLOGICAL PATTERNS:** Black and White, Boar and Dog; The Principal Genealogical Scheme of the Armenian Epics; The Three Functions of Indo-European Mythology; Daredevils of Sasun, Ethnogenic Patriarchs, Urartian and Armenian Gods. **MYTH AND HISTORY:** Historical Prototypes of the Sasna G'eer; Muš and Tarun—"Thraco-Phrygians" and Armenians; Davit', Mušel, and Mušili; The *Iliad* and the Epics of the Sasun-Tarawn. **ETHNOGENESIS AND PREHISTORY:** Cosmogony and Ethnogeny; Ethnonymic *Ar(a)m-* – Armenians and Aramaeans; The Proto-Armenians and the Caucasus; HA.A, Hayaša, Hatti, and Etiu; Hurrians and Urartians; The Ancestors and Descendants of Hayk—Prehistoric Movements. Abbreviations. Works of Medieval Armenian Authors. Bibliography. Index. Note on Armenian Phonology.
ISBN 0-941694-81-X **2002, Pages 236, Paperback: \$52.00**

Indo-European Perspectives

Monograph No. 43 — Edited by Mark Southern

Preface; **Miles C. Beckwith:** Greek verbs in *-ισκο* –A paradigmatic solution; **Hope Dawson:** Deviations from the Greek in the Gothic New Testament; **George E. Dunkel:** Vedic *janapadās* and Ionic *ἀνδράποδοι*: with notes on Vedic *drupadām* and IE **pédom* 'place' and 'fetter'; **Joseph F. Eska:** Remarks on linguistic structures in a Gaulish ritual text; **Benjamin W. Fortson IV:** Linguistic and cultural notes on Latin *Iūnius* and related topics; **John Harkness:** Observations on appositions in *Beowulf*; **Hans Henrich Hock:** Vedic *éta ... stāvāma*: Subordinate, coordinate, or what?; **Brian D. Joseph:** Balkan insights into the syntax of **mē*: in Indo-European; **Carol F. Justus:** Hittite and Indo-European gender; **Ronald Kim:** The distribution of the Old Irish infix pronouns, Cowgill's particle, and the syntactic evolution of Insular Celtic; **Sara Kimball:** Hittite kings *and* queens; **Jared S. Klein:** Homoioteleuton in the Rigveda; **H. Craig Melchert:** Hieroglyphic Luvian REL-*ipa* 'indeed, certainly'; †**Edgar C. Polomé:** Some thoughts about the Indo-European homeland; **Charles Reiss:** Towards an explanation of analogy; **Don Ringe:** Tocharian B *sp* 'and'; **Douglas P.A. Simms:** A word for 'wild boar' in Germanic, Italic, Balto-Slavic and Greek and its possible Semitic origins; **Ann Taylor:** The distribution of object clitics in Koiné Greek; **Bert Vaux:** Szemerényi's Law and Stang's Law in non-linear phonology; **Brent Vine:** On full-grade **-ro-* formations in Greek and Indo-European; **Michael Weiss:** Observations on the South Picene Inscription TE 1 (S. Omero).

ISBN 0941694844

2002, Pages vi + 306, Paperback, \$58.00

Proceedings of the Thirteenth Annual UCLA Indo-European Conference: Los Angeles, November 9-10, 2001

Monograph 44 — Edited by Karlene Jones-Bley, Martin E. Huld, Angela Della Volpe, Miriam Robbins Dexter.

Introduction; Language Abbreviations; **MIGRATION AND LANGUAGE CONTACT:** **J.P. Mallory:** Indo-Europeans and the Steppelands: The Model of Language Shift; **Petri Kallio:** Prehistoric Contacts between Indo-European and Uralic; **IDEOLOGY AND MYTHOLOGY:** **Paul-Louis van Berg and Marc Vander Linden:** Ctesias' Assyriaka: Indo-European and Mesopotamian Royal

Volume 37, Number 3 & 4, Fall/Winter 2009

Ideologies; **Edwin D. Floyd**: Who Killed Patroklos? Expressing the Inexpressible through an Inherited Formula; **Arwen Lee Hogan**: The Modesty of Odysseus; **Dean Miller**: Theseus and the Fourth Function; **LANGUAGE: TYPOLOGY, ETYMOLOGY AND GRAMMATOLOGY: Andrii Danylenko**: The East Slavic 'HAVE': Revising a Developmental Scenario; **Anatoly Liberman**: English *Ivy* and German *Epheu* in Their Germanic and Indo-European Context; **Paul B. Harvey, Jr. and Philip H. Baldi**: *Populus*. A Reevaluation.

ISBN 0-941694-85-2

2002, Pages x + 191, Paperback: \$46.00

**Regional Specifics in Light of Global Models BC —
Complex Societies of Central Eurasia from the 3rd to the 1st
Millennium. Volume 1: Ethnos, Language, Culture; General
Problems; Studying Statistics; Studying Sintashta; The
Eneolithic and Bronze Ages**

Monograph 45 — Edited by Karlene Jones-Bley D. G. Zdanovich

Introductions by Karlene Jones-Bley and D.G. Zdanovich. **I. COMPLEX SOCIETIES OF CENTRAL EURASIA—ETHNOS, LANGUAGE, CULTURE: Colin Renfrew**: The Indo-European Problem and the Exploitation of the Eurasian Steppes—Questions of Time Depth; **E.E. Kuzmina**: Ethnic and Cultural Interconnections between Iran and Turan in the 2nd Millennium BC; **Vyacheslav Vs. Ivanov**: Towards A Possible Linguistic Interpretation of the Arkaim—Sintashta Discoveries; **I.V. Pyankov**: Arkaim and the Indo-Iranian Var; **A.P. Medvedev**: Avestan “Yima’s Town” in Historical and Archaeological Perspective; **Karlene Jones-Bley**: Indo-European Burial, the “*Rig Veda*,” and “*Avesta*”; **L.T. Yablonsky**: Archaeological Mythology and Some Real Problems of the Current Archaeology. **II. COMPLEX SOCIETIES OF CENTRAL EURASIA—GENERAL PROBLEMS: L.N. Koryakova**: Social Landscape of Central Eurasia in the Bronze and Iron Ages—Tendencies, Factors, and Limits of Transformation. **III. COMPLEX SOCIETIES OF CENTRAL EURASIA—STUDING SINTASHTA: G.B. ZDANOVICH AND I.M. BATANINA**: Planography of the Fortified Centers of the Middle Bronze Age in the Southern Trans-Urals according to Aerial Photography Data; **A.V. Epimakhov**: Complex Societies and the Possibilities to Diagnose them on the Basis of Archaeological Data: Sintashta Type Sites of the Middle Bronze Age of the Trans-Urals; **A.V. Epimakhov**: The Sintashta Culture and the Indo-European Problem; **T.S. Malyutina**: “Proto-towns” of the Bronze Age in the South Urals and Ancient Khorasmia; **R.A. Litvinenko**: On the Problem of Chronological Correlation between Sintashta Type and MRC Sites; **V.N. Logvin**: The Cemetery of Bestamak and the Structure of the Community; **D.G. Zdanovich and L.L. Gayduchenko**: Sintashta Burial Sacrifice—The Bolshekaragansky Cemetery in Focus; **P.A. Kosintsev**: Animals in the Burial Rite of the Population of the Volga-Ural Area in the Beginning of the 2nd Millennium BC. **IV. COMPLEX SOCIETIES OF CENTRAL EURASIA—THE ENEOLITHIC AND BRONZE AGES: N.L. Morgunova**: Yamnaya (Pit-Grave) Culture in the South Urals Area; **T.M. Potemkina**: The Trans-Ural Eneolithic Sanctuaries with Astronomical Reference Points in a System of Similar Eurasian Models; **V.T. Kovalyova and O.V. Ryzhkova**: Circular Settlements in the Lower Tobal Area (Tashkovo Culture); **I.I. Dryomov** The Regional

The Journal of Indo-European Studies

Differences of the Prestige Bronze Ages Burials (Peculiarities of the Pokrovsk Group); **N.M. Malov**: Spears—Signs of Archaic Leaders of the Pokrovsk Archaeological Culture; **A.N. Usachuk**: Regional Peculiarities of Technology of the Shield Cheekpiece Production (Based on the Materials of the Middle Don, Volga, and South Urals); Index to Volumes 1 & 2.

ISBN 0-941694-83-62002, Pages xxxviii + 364, Volume 1, with illustrations, \$52.00

**Regional Specifics in Light of Global Models BC —
Complex Societies of Central Eurasia from the 3rd to the 1st
Millennium.**

**Volume 2: The Iron Age; Archaeoecology, Geoarchaeology,
and Palaeogeography; Beyond Central Eurasia**

Monograph 46 — Edited by Karlene Jones-Bley D. G. Zdanovich

V. COMPLEX SOCIETIES OF CENTRAL EURASIA—IRON AGE: **K.A. Akishev**: Archaeological Reference Points in Prognostication of the Structures of Ancient Societies of the Eurasian Steppe; **Bryan Hanks**: Societal Complexity and Mortuary Rituality—Thoughts on the Nature of Archaeological Interpretation; **N.P. Matveeva**: Interpretation of Models of Sargat Culture Settlements in Western Siberia. **VI. ARCHAEOECOLOGY, GEOARCHAEOLOGY, AND PALEOGEOGRAPHY OF CENTRAL EURASIAN COMPLEX SOCIETIES:** **V.A. Demkin and T.S. Demkina**: Paleoecological Crises and Optima in the Eurasian Steppes in Ancient Times and the Middle Ages; **L.L. Gayduchenko**: Organic Remains from Fortified Settlements and Necropoli of the “Country of Towns”; **V.V. Zaykov, A.M. Yuminov, A.Ph. Bushmakin, E.V. Zaykova, A.D. Tairov, and G.B. Zdanovich**: Ancient Copper Mines and Products from Base and Noble Metals in the Southern Urals; **A.V. Matveev, N.Ye. Ryabogina, T.S. Syomochkina, and S.I. Larin**: Materials on the Palaeogeographic Description of the Andronovo Age in the Trans-Urals Forest-Steppe. **VII. BEYOND CENTRAL EURASIA:** **Leif Karlenby**: Communication and Interaction with the East in Bronze Age Scandinavia; **Eva Hjartner-Holdar and Christina Risberg**: Interaction between Different Regions of Europe and Russia during the Late Bronze Age in the Light of the Introduction of Iron Technology; **E. Bánffy**: A Stuck Process—Urbanisation in the Carpathian Late Neolithic; **Marta Guzowska**: The Trojan Connection or Mycenaeans, Pentecoters, and the Black Sea; **Philip Kohl, Magomed Gadzhiev, and Rabadan Magomedov**: Connections between the Caucasus and the West Eurasian Steppes during the 3rd Millennium BC; **V.M. Masson**: Bronze Age Cultures of the Steppe and Urbanized Civilization of the South of Middle Asia; **L.T. Pyankova**: South Tajikistan—Synthesis of Settled and Steppe Cultures at the End of the Bronze Age; **V.I. Sarianidi**: Chamber Graves of the Gonur Necropolis; **Kathryn Linduff**: At the Eastern Edge—Metallurgy and Adaptation in Gansu (PRC) in the 2nd Millennium BC. Index to Volumes 1 & 2

ISBN 0-942694-86-0

2002, Pages xxxviii + 289,
Volume 2, with illustrations, \$52.00

Proceedings of the Fourteenth Annual UCLA Indo-European Conference:

Los Angeles, November 8–9, 2002

*Monograph No. 47 – Edited by Karlene Jones-Bley, Martin E. Huld,
Angela Della Volpe, Miriam Robbins Dexter*

Introduction; Abbreviations; **I. FORM AND MEANING IN INDO-EUROPEAN:** **Helmut Rix:** Towards a Reconstruction of Proto-Italic: the Verbal System; **Joseph F. Eska:** The Distribution of the Old Irish Personal Object Affixes and Forward Reconstruction; **Annamaria Bartolotta:** Towards a Reconstruction of Indo-European Culture: Semantic Functions of IE **men-*; **Nicoletta Puddu:** Reflecting on **se-/s(e)we-*: From Typology to Indo-European and Back; **Jens Elmegård Rasmussen:** The Marker of the Animate Dual in Indo-European; **Brian D. Joseph:** Evidentiality in Proto-Indo-European? Building a Case; **Karl Praust:** A Missing Link of PIE Reconstruction: The Injunctive of **H₂es-* 'to be'; **II. STYLE, SENSE, AND SOUND:** **Craig Melchert:** PIE "thorn" in Cuneiform Luvian?; **Martin E. Huld:** An Indo-European Term for 'harvested grain'; **Giovanna Rocca:** Ideology and Lexis: Umbrian *uhtur*, Latin *auctor*; **Angelo O. Mercado:** A New Approach to Old Latin and Umbrian Poetic Meter; **III. UNMASKING PREHISTORY:** **Jon Christian Billigmeier:** Crete, the Dorians, and the Sea Peoples; **Gregory E. Areshian:** The Zoomorphic Code of the Proto-Indo-European Myth Cycle of "Birth-Death-Resurrection": A Linguistic-Archaeological Reconstruction; **Karlene Jones-Bley:** Basal Motifs and Indo-European Ritual; **IV. MOLDING AND MODELLING THE PAST:** **Paul-Louis van Berg:** Arts, Languages, and Reality in the Mesopotamian and Indo-European Worlds; **Marc Vander Linden:** The Band vs. the Cord, or Can Indo-European Reconstructed Institutions Be Tested against Archaeological Data?; Index

ISBN 0-941694-87-9

2003, Pages 310, Paperback: \$48.00

Dictionary of Some Languages and Dialects of Afghanistan

*Monograph No. 48 – Transliterated, Translated, and Edited by Hamid
Badhghisi*

Introduction by A. Richard Diebold, Jr.

*Originally compiled in Pashto by Shah Abdullah Badakhshi and published
in Kabul in 1960*

A collection of vocabulary from the Ariarii dialects of Manji, Ishkashmi, Wakhi, Sanglichi, Shughni, Farsi, and Pashto with English equivalents.

ISBN 0-941694-88-7

2004, Pages 258, Paperback: \$48.00

ISBN 0-941694-89-5

2004, Pages 258, Hardcover: \$78.00

Proceedings of the Fifteenth Annual UCLA Indo-European Conference

*Monograph 49 — Edited by Karlene Jones-Bley, Martin E. Huld,
Angela Della Volpe, and Miriam Robbins Dexter*

MYTHOLOGY AND CULTURE: **E. J. W. Barber and P. T. Barber:** Why the Flood is Universal but only Germanic Dragons have Halitosis: Using Cognitive Studies to Help Decode Myth; **Paul-Louis van Berg:** Daidalos, Theseus, and the Others: The Melding of Indo-European and Mediterranean Traditions;

The Journal of Indo-European Studies

Gregory E. Areshian: Herakies, the Sun-God-Archer, Týr, and Kerberos; **John McDonald:** The Cow and Her Calf: A Case in Indo-European Poetics and Iconicity; **INDO-EUROPEAN EXPANSIONS: E. E. Kuzmina:** The Genesis of the Indo-Aryans in the Light of Data of Historical Tradition and Archaeology; **Marc Vander Linden:** The Roots of the Indo-European Diaspora: New Perspectives on the North Pontic Hypothesis; **INTERPRETING SOUND: Hans Henrich Hock:** Fish, Push, and Greek *R + y* Clusters: A Return to Danielson 1903; **Michael Rießler:** On the Origin of Preaspiration in North Germanic; **Martin Huld:** An Albanian Reflex of Proto-Indo-European **E₁ékuo-s* 'Horse'; **MORPHOLOGY AND SYNTAX: Hope C. Dawson:** On Generalizations Lost and Found: *-ā/-au* Variation in Vedic *i*-stem Locatives; **Markus Egetmeyer:** The Organization of Noun-Stems, Cases, and Endings in Ancient Cypriote Greek; **Silvia Luraghi:** Null Objects in Latin and Greek and the Relevance of Linguistic Typology for Language Reconstruction; **Olav Hackstein:** From Discourse to Syntax: The Case of Compound Interrogatives in Indo-European and Beyond.
ISBN 0-941694-90-9 Paperback 2005, Pages 298 \$48.00
ISBN 0-941694-91-7 Hardback 2005, Pages 298 \$78.00

Proceedings of the Sixteenth Annual UCLA Indo-European Conference

Monograph 50 — Edited by Karlene Jones-Bley, Martin E. Huld, Angela Della Volpe, and Miriam Robbins Dexter

Victor H. Mair: Recent Physical Anthropological Studies of the Tarim Basin Mummies and Related Populations; **Paul-Louis van Berg:** Spit in My Mouth, Glaukos: A Greek Indo-European Tale about Ill-gotten Knowledge; **Miriam Robbins Dexter and Victor H. Mair:** Apotropaia and Fecundity in Eurasian Myth and Iconography: Erotic Female Display Figures; **Stephanie W. Jamison:** Linguistic Aspects of the Persona of the “*Gāthā* Poet”; **Jared Klein:** Notes on Categories and Subtypes of Phonological Repetition in the *Rig Veda*; **Hans Henrich Hock:** The Insular Celtic Absolute: Conjunct Distinction Once Again A Prosodic Proposal; **George E. Dunkel:** Latin *-pte, -pe, -per, -pse*; IE Limiting **-pó-te, *-pe-r,* and **póti-* ‘master’; **Yaroslav Gorbachov:** The Origin of the Phrygian Aorist of the Type *edaes*; **Valentina Cambi:** The Hittite Adverb *karū* ‘formerly, earlier; already’; **Olga Thomason:** Location, Direction, and Source in Biblical Greek, Gothic, Old Church Slavonic, and Classical Armenian; **Hyejoon Yoon:** The Substantive Present Participles in *-nd-* in Gothic: With the Survey of Other Old Germanic Languages; **Joshua T. Katz:** To Turn a Blind Eel.
ISBN 0-941694-93-3 Paperback 2005, Pages 302 \$48.00
ISBN 0-941694-92-5 Hardback 2005, Pages 302 \$78.00

UKKO: The God of Thunder of the Ancient Finns and His Indo-European Family

Monograph 51 – Unto Salo

The mythology of the ancient Finns and its sources; Iron Age society and its gods; Ukko and other euphemisms for the God of Thunder; Rauni; Ukko behind his euphemism; Ilmari, the God of the Winds; Ilmarinen, forger god and heroic smith; Ukko and shooting the fire; By Hieros gamos; The

testimony of the elliptical fire stones; Ukko's cloak; Thunderbolts; Ukko's wedge, nail, fingernail, arrow, and chisel; Foreign thunderbolts; Ukko's sword; Ukko's hammer, ax, and club; The Thunder God and Mother Goddess; The Battle Axe Culture and the God of Thunder; Tapering-headed battle axes and the God of Thunder; Ukko in the skies of the lake region?; The evidence of the Late Neolithic shaft-hole axes; The Bronze Age shaft-hole axes; Historical-linguistic viewpoints; The Bird God; Ukko's long history; Conclusions, arguments, assumptions; Abbreviations; plus Eighty Illustrations
ISBN 0-941694-95-X Paperback 2006, Pages 146 \$46.00
ISBN 0-941694-94-1 Hardback 2006, Pages 146 \$68.00

Proceedings of the Seventeenth Annual UCLA Indo-European Conference, October 27-28, 2005

Monograph 52 – Edited by Karlene Jones-Bley, Martin E. Huld, Angela Della Volpe, and Miriam Robbins Dexter

Michael Janda: The Religion of the Indo-Europeans; **Gregory E. Areshian:** Cyclopes from the Land of the Eagle: The Anatolian Background of *Odyssey 9* and the Greek Myths Concerning the Cyclopes; **Hannes A. Fellner:** On the Developments of Labiovelars in Tocharian; **Jens Elmegård Rasmussen:** Some Further Laryngeals Revealed by the Rigvedic Metrics; **Ilya Yakubovich:** Prehistoric Contacts between Hittite and Luvian: The Case of Reflexive Pronouns; **Ranko Matasović:** Collective in Proto-Indo-European; **Birgit Olsen:** Some Formal Peculiarities of Germanic *n*-Stem Abstracts; **Chiara Gianollo:** Tracing the Value of Syntactic Parameters in Ancient Languages: The Latin Nominal Phrase; **Martin E. Huld:** Indo-European 'hawthorns'; **Jay Fisher:** Speaking in Tongues: Collocations of Word and Deed in Proto-Indo-European; **Lisi Oliver:** *Lex Talionis* in Barbarian Law; **Katheryn Linduff and Mandy Jui-man Wu:** The Construction of Identity: Remaining Sogdian in Eastern Asia in the 6th Century; Index.

ISBN 0-941694-97-6 Hardback 2006, Pages 250 \$78.00
ISBN 0-941694-96-8 Paperback 2006, Pages 250 \$48.00

Proceedings of the Eighteenth Annual Indo-European Conference, Los Angeles, November 3-4, 2006 (selected papers)

Monograph 53 – Edited by Karlene Jones-Bley, Martin E. Huld, Angela Della Volpe, and Miriam Robbins Dexter

Charles de Lamberterie: Comparison and Reconstruction; **Melissa Frazier:** Accent in Athematic Nouns in Vedic Sanskrit and Its Development from PIE; **Ronald I. Kim:** *Proto-Indo-European *-(V)y '/- Presents in Tocharian*; **Hans Henrich Hock:** Morphology and *i*-apocope in Slavic and Baltic; **Miles Beckwith:** The Old Italic *o*-Perfect and the Tortora Inscription; **Martin J. Kümmel:** The Third Person Endings of the Old Latin Perfect and the Fate of the Final -d in Latin; **Birgit Anette Olsen:** Three Latin Phonological Details; **H. Craig Melchert:** New Light on Hittite Verse and Meter?; **Kazuhiko Yoshida:** Some Irregular Mediopassives in Hittite; **Angelo O. Mercado:** A Lydian Poem (Gusmani 11) Re-Examined; **Jens Elmegård Rasmussen:** A Reflex of **H₁* in Hieroglyphic Luvian?; **Mary R. Bachvarova:** Suffixaufnahme

and Genitival Adjective as an Anatolian Areal Feature in Hurrian, Tyrrhenian, and Anatolian Languages; **Johanna Nichols**: A Typological Geography for Proto-Indo-European; Index, Illustrations.

ISBN 0-941694-99-2 Hardback 2007, Pages 216 \$78.00

ISBN 0-941694-98-4 Paperback 2007, Pages 216 \$48.00

**Proceedings of the Nineteenth Annual Indo-European
Conference, Los Angeles, November 3-4, 2007
(selected papers)**

*Monograph 54 – Edited by Karlene Jones-Bley, Martin E. Huld,
Angela Della Volpe and Miriam Robbins Dexter*

Introduction; Language Abbreviations; List of Illustrations; **Asko Parpola**: Proto-Indo-European Speakers of the Late Tripolye Culture as the Inventors of Wheeled Vehicles - Linguistic and archaeological considerations of the PIE homeland problem; **Sherrylyn Branchaw**: Pwyll and *Purusamedha* - Human Sacrifice in the *Mabinogi*; **Edwin D. Floyd** An Indo-European Component of Literary Analysis in *Odyssey*, 69 Books 19 and 23; **Carlotta Viti**: The Verb-Initial Word Order in the Early Poetry of Vedic and Ancient Greek; **Todd Clary**: Restrictions on the Use of the *Figura Etymologica* in Ancient Greek Epic; **Ana Galjanić**: Greek Priamel and Enumerative Sets; **Hans Henrich Hock**: Early Germanic Agreement with Mixed-Gender Antecedents with Focus on the History of German; **Jared S. Klein**: Numeral Repetition in the Rig Veda; **Ilya Yakubovich**: The Origin of Luwian Possessive Adjectives; **Vyacheslav Ivanov**: Archaic Indo-European Anatolian Names and Words in Old Assyrian Documents from Asia Minor (20th- 18th Centuries BC); **Elisabeth Rieken**: The Origin of the *-l-* Genitive and the History of the Stems in *-il-* and *-ul-* in Hittite; Index

ISBN 978-0-941694-06-3 Hardback 2008 Pages xi 260 \$78.00

ISBN 978-0-941694-19-3 Paperback 2008 Pages xi 260 \$48.00

**The Indo-European Language Family: Questions about its
Status**

Monograph 55 — Edited by Angela Marcantonio

Angela Marcantonio: Introduction; **Henning Andersen**: The satem languages of the Indo-European Northwest: First contacts?; **E. Annamalai and S. B. Steever**: Ideology, the Indian homeland hypothesis and the comparative method; **Edwin Bryant**: The Indo-Aryan migration debate; **Onofrio Carruba**: Indo-European vowel alternations: (Ablaut/ apophony); **Paolo Di Giovine**: Verbal inflection from “Proto-Indo-European” to the Indo-European languages: A matter of coherence?; **Bridget Drinka**: Stratified reconstruction and a new view of the family tree model; **Alexander Häusler**: The origin and spread of the Indo-Germanic people; **Nicholas Kazanas**: Indo-European linguistics and Indo-Aryan indigenism; **Angela Marcantonio**: Evidence that most Indo-European lexical reconstructions are artifacts of the linguistic method of analysis; **Yaron Matras**: Defining the limits of grammatical borrowing; **Rüdiger Schmitt**: Iranian archaisms vs. Vedic innovations – and the Indo-Iranian unity.

ISBN 978-0-941694-03-2 Paperback 2009 Pages 476 \$56.00

ISBN 978-0-941694-02-5 Hardback 2009 Pages 476 \$86.00

**Departure from the Homeland: Indo-Europeans and
Archaeology Selected Papers from the 12th European
Association of Archaeologists Annual Meeting, Krakow, Poland,
19th to 24th September 2006**

Monograph No. 56 — Edited by Marc Vander Linden and Karlene Jones-Bley

Karlene Jones-Bley: Indo-European Archaeology — what it is, and why it is important; **John Collis:** Celts and Indo-Europeans: linguistic determinism?; **Raimund Karl:** The dutch Group — IE **teuteH2*: The evolution of ethnic groups in north-western Europe; **Adolfo Zavaroni:** Word and figure: a lucky combination on the Valcamonica rocks for the study of Pre-Christian symbolism and religion; **Åsa Fredell and Marco V. García Quintela:** Bodily attributes and semantic expressions: knees in rock art and Indo-European symbolism; **Kristian Kristiansen:** Proto-Indo-European Languages and Institutions: An Archaeological Approach; **Marc Vander Linden:** Drinking from the Horn of Plenty: On the use of historical data for prehistoric analogical reasoning; **Sergey Yatsenko:** The Costume of Iranian Peoples of Classical Antiquity and the Homeland of Indo-Iranians.

ISBN 978-0-941694-80-3 Hardback

2009, Pages 185 \$78.00

ISBN 978-0-941694-27-8 Paperback

2009, Pages 185 \$48.00

Journal of Indo-European Studies

Instructions for Contributors

SUBMISSION OF ARTICLES

Articles should be submitted either electronically as PDF and word processor file or in both printed form (three copies) and word processor file to the General Editor:

J P Mallory
Department of Archaeology
Queen's University
Belfast BT7 1NN
Northern Ireland

Articles should not normally exceed 5,000 words although exceptions can be made. Each article should be prefaced with an abstract. Contributors should indicate both their e-mail and Fax numbers on their submission. All articles will be refereed by the appropriate panel.

Submission of a manuscript for publication in *JIES* implies authorization for the journal to distribute this article both in print and electronically, either directly or through agents, and to be entitled to any remuneration received therefrom. Authors retain the right to publish the article or any part of it elsewhere, providing that they acknowledge its prior appearance in *JIES* and withhold such secondary publication for a period of not less than twelve months after its appearance in *JIES*.

Submission of an article by authors shall be accepted as confirmation of the assignment of copyright, on the above terms, to the Institute for the Study of Man, as publisher of *The Journal of Indo-European Studies*, in the event the article is accepted for publication.

SUBMITTED FORMAT:

The preferred format is Microsoft Word for Macintosh or Windows; if any other format is submitted, a copy of the text should also be produced in Rich Text Format (RTF) to facilitate file conversion. Figure captions are treated as text and should be appended to the text of the article. Phonetic marks should be clear and distinct.

All tables and figures should be submitted separately. Illustrations should be submitted on standard size (American 8.5 x 11 inch or International A4 sized paper) and the number of the figure should be written lightly on the back in pencil.

Figures may also be submitted on disc in any format supported by Adobe Photoshop, Illustrator, or InDesign. Authors submitting papers containing complex tables embedded in the text, figures generated by the word processor, rarely used fonts, or constructed phonetic characters will greatly facilitate production if the document can be accompanied by an Adobe Acrobat PDF file properly formatted.

FOOTNOTES:

Footnotes should not be used for referencing but only for additional comment.

TEXT REFERENCES:

Text references should follow the following format:

(Hamp 1990a: 145-150)

Please note:

- a) use of the colon,
- b) full page numbers (not 145-50),
- c) avoid the use of 'ibid', 'op cit', 'loc cit'.

REFERENCES:

References should follow the following formats:

Books

Puhvel, Jaan

- 1987 *Comparative Mythology*. Baltimore and London: Johns Hopkins Press.

Edited Books

Birnbaum, Henrik and Jaan Puhvel (eds.)

- 1966 *Ancient Indo-European Dialects*. Berkeley and Los Angeles: University of California.

Article in edited book

Watkins, C.

- 1966 Italo-Celtic revisited. In: Birnbaum, Henrik and Jaan Puhvel (eds.) *Ancient Indo-European Dialects*, 29-50. Berkeley and Los Angeles: University of California.

Article

Sarianidi, Viktor

- 1999 Near Eastern Aryans in Central Asia. *Journal of Indo-European Studies* 27: 295-326.

INDEX TO VOLUME 37

Adams, Douglas Q.	299
Genitive and Adjective in Tocharian	
Al-Maini, Douglas	89
The Political Cosmology of the <i>Homeric Hymn to Demeter</i>	
Allen, Nick	489
Early Rome and Indo-European Comparison: Dominique Briquel on Two Crises	
Álvarez-Pedrosa, Juan Antonio	164
Krakow's Foundation Myth: An Indo-European theme through the eyes of medieval erudition	
Anghelina, Catalin	277
Viṣṇu's Highest Stride	
Bibliography for The Immovable Olympus	
<i>Volume 36, Numbers 3 & 4, 441A</i>	
Beekes, Robert	191
Pre-Greek Names	
Egeler, Matthias	321
Textual Perspectives on Prehistoric Contacts: Some Considerations on Female Death Demons, Heroic Ideologies and the Notion of Elite Travel in European Prehistory	
Giannakis, Georgios K.	351
(Historical) Linguistics and (Classical) Philology	
Hicks, Ronald	115
Cosmography in <i>Tochmarc Étaíne</i>	
Huld, Martin E.	130
Proto-Indo-Europeans and the Squirrel, <i>Sciurus vulgaris</i>	
JIES Reviews	
Archaeology	225, 509
Culture	233, 515
Linguistics	268, 527
Kulikov, Leonid	141
Vedic <i>piśá-</i> and Atharvaveda-Śaunakīya 19.49.4 = Atharvaveda-Paipalāda 14.8.4: A note on the Indo-Iranian bestiary	

Mumm, Peter-Arnold	
Comment on “A still undeciphered text”	49
Nikolaev, Alexander	
The Germanic word for ‘sword’ and delocalival derivation in Proto-Indo-European	462
Parpola, Asko	
Interpreting the Rigveda: Comments on Karen Thomson’s approach	55
Petrosyan, Armen	
Forefather Hayk in the Light of Comparative Mythology	155
Rahimian, Jalal and Farrokh Hajiani	
Semantic-pragmatic functions of <i>râ</i> in Persian: a diachronic and synchronic study	399
Thomson, Karen	
A Still Undeciphered Text, continued: the reply to my critics	59
A Still Undeciphered Text: How the scientific approach to the <i>Rigveda</i> would open up Indo-European Studies	1
Valério, Miguel	
Palaic <i>fulāsīnanza</i> : One Anatolian Suffix, Two Possible Explanations	421
de Vaan, Michiel	
The derivational history of Greek <i>ἵππος</i> and <i>ἵππεύς</i>	198
West, Emily Blanchard	
Married Hero/Single Princess: Homer’s Nausicaa and the Indic Citrāṅgadā	214
Yamazaki, Yoko	
The Saussure Effect in Lithuanian	430
Zimmer, Stefan	
HIC RHODUS! A brief comment on Karen Thomson, A still undeciphered text: how the scientific approach to the <i>Rigveda</i> would open up Indo-European Studies	53
‘Sacrifice’ in Proto-Indo-European	178